Assessing the Impact of National Health Insurance Scheme on Out-of-Pocket Payments for Healthcare in Nepal

A

Faculty Research Report

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July, 2025

DECLARATION

We hereby declare that the study entitled *"Assessing the Impact of National Health Insurance on Out-of-Pocket Payments for Healthcare in Nepal"* is our original work and has been carried out in fulfillment of the requirements for the faculty research of Tikapur Multiple Campus, Research Management Committee. This study has not been submitted previously, either wholly or in part, to any other institution for the award of any academic degree or diploma. Likewise, all data used in this study were collected directly from household respondents during the period of January to April 2025 in Tikapur Municipality, and due ethical considerations were observed during data collection, analysis, and reporting stages. We have appropriately cited all published and unpublished sources used in the preparation of this study report and have taken care to avoid any form of plagiarism.

We take full responsibility for the content, analysis, and interpretation presented herein and affirm that the views and conclusions expressed are entirely my own and do not necessarily reflect the views of the affiliated institution or any other individual.

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ABSTRACT

This study assesses the impact of national health insurance on out-of-pocket (OOP) payments for healthcare in Nepal, with empirical evidence drawn from 120 households in Tikapur Municipality. In this regard, the study is guided by four core objectives: to assess beneficiaries' perceptions regarding healthcare services and financial protection under the insurance scheme; to analyze the socio-economic and demographic determinants of health insurance enrollment and their association with OOP payments for healthcare; to estimate the contribution of health insurance in reducing OOP healthcare payments; to identify determinants of insurance enrollment and healthcare utilization; and to assess the socio-economic determinants of healthcare utilization in the study area.

The regression analysis reveals that healthcare utilization (lnHCU) and chronic disease presence significantly increase OOP payments for healthcare, while higher household income (lnHHi), insurance enrollment, and education level of the household head (lnEdu) significantly reduce OOP payments for healthcare burden. Moreover, the model shows high explanatory power ($R^2 = 0.855$), affirming its policy relevance. Likewise, logit model findings show that higher OOP payments for healthcare costs and income levels are negatively associated with insurance enrollment, whereas healthcare utilization, chronic illness, and employment status positively influence uptake. However, education, household size, and gender were not statistically significant predictors. The model fits well, with a McFadden R^2 of 0.461.

Additionally, healthcare utilization of households was significantly influenced by OOP payments for healthcare, income, chronic illness, education, and insurance enrollment. The empirical model explains 80.8 percent of the variation ($R^2 = 0.808$), and Durbin-Watson value 2.15 reflects no autocorrelation issues. These findings highlight that economic status, health needs, and insurance coverage are critical in shaping healthcare spending and utilization, offering evidence-based insights for improving financial protection policies in Nepal's health system. These finding may be useful national priority issue healthcare financing optimization. Furthermore, the findings align with Nepal's national priority to achieve universal health coverage by reducing financial hardship of low income households in accessing healthcare. These insights support evidence-based reforms to strengthen Nepal's health financing system and improve insurance uptake.

Table of Contents

LIST OF TABLE

LIST OF FIGURE

ABRIVATION

Abbreviation	Full Form
NHIS	National Health Insurance Scheme
NHIP	National Health Insurance Program
OOP	Out-of-Pocket (Payments for Healthcare)
HH	Household
HHI	Household Income
HS	Household Size
HIE	Health Insurance Enrollment
HU	Healthcare Utilization
GHH	Gender of Household Head
UHC	Universal Health Coverage
GDP	Gross Domestic Product
MoH	Ministry of Health
CHE	Current Health Expenditure
USD	United States Dollar
WHO	World Health Organization
HIB	Health Insurance Board
PHCC	Primary Health Care Center
IMIS	Insurance Management Information System
SD	Standard Deviation
WTP	Willingness to Pay
LMICs	Low and Middle Income Countries
OLS	Ordinary Least Squares
RMC	Research Management Committee
TMC	Tikapur Multiple Campus

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

This study assesses the impact of the National Health Insurance Program (NHIP) on household out-of-pocket (OOP) payments for healthcare in Nepal. Nepal, being a low income country, healthcare expenditure optimization is a pertinent issue. In this context, human health is one of the important dimensions of human capital (Fahad et. al., 2023) and it is one of the main determinants of economic growth and productivity for any economy (Cole & Neumayer, 2006). Hence, as a component of human capital development, improved healthcare delivery contributes to labor productivity of a nation (Amiri et al., 2021; Khan et al., 2016) and a healthy population is a result of better public healthcare provision made by the government (Ayer et al.,2024; Subedi & Adhikari, 2025; Shadmi, et al., 2020). Therefore, within the realm of health economics, by allocating sufficient resources to healthcare sector, countries try to achieve twin goals; firstly, reduction of financial burden of OOP payments for healthcare to ensure better healthcare utilization access meant for ensuring preparation of healthier, more capable and productive workforce and secondly, fostering economic growth and productivity (Yellaiah, 2013; Raghupati & Raghupati, 2020; Magnusson, 2009).

This study assesses the impact of the National Health Insurance Program (NHIP) on household OOP payments for healthcare in Nepal. Nepal, being a low income country, healthcare expenditure optimization is a pertinent issue. The research, based on empirical evidence from Tikapur Municipality, aims to understand how enrollment in the NHIP affects OOP payments for health and healthcare utilization, highlighting the ongoing challenge of affordable healthcare access in Low and Middle Income Countries (LMICs). The research, based on empirical evidence from Tikapur Municipality, aims to understand how enrollment in the NHIP affects OOP payments for health and healthcare utilization, highlighting the ongoing challenge of affordable healthcare access in Low and Middle Income Countries (LMICs).

Health is a critical component in gauging the living standards of the population of any nation and plays crucial role for economic development, and economic development has an important impact on health outcomes (Ahangar et al., 2018; WHO, 2015). In this context, human health is one of the important dimensions of human capital (Fahad et. al., 2023) and it is one of

the main determinants of economic growth and productivity for any economy (Cole & Neumayer, 2006). Hence, as a component of human capital development, improved healthcare delivery contributes to labor productivity of a nation (Amiri et al., 2021; Khan et al., 2016) and a healthy population is a result of better public healthcare provision made by the government (Shadmi, et al., 2020). Concerning this matter, by allocating sufficient resources to healthcare sector, countries try to achieve twin goals; firstly, reduction in the burden of diseases, thereby preparing healthier, more capable and productive workforce and secondly, fostering economic growth and productivity (Raghupati & Raghupati, 2020; Magnusson, 2009).

Nepal's healthcare system faces a significant reliance on household out-of-pocket (OOP) payments, creating substantial financial burdens for its citizens particularly low income section of society. In other words, government expenditure in the healthcare sector accounts for only 2.4 percent of GDP (MoPH, 2022), while Current Health Expenditure (CHE) per capita is USD 65.30 (WHO, 2023). In this context, household OOP payments constitute 57.9 percent of CHE, with a per capita expenditure of NPR 3,642.9 (USD 31.2) in FY 2018/19 (MoPH, 2023). It is worth noting, OOP payments are direct expenses made by households for healthcare services and goods, such as medicines, consultation fees, and diagnostic tests, paid from primary income or savings at the point of care (Ruggeri et al., 2020; WHO, 2011; Wagner et al., 2011). This method of health financing disproportionately affects low-income households, increasing financial hardships and limiting access to healthcare facilities (Łyszczarz & Abdi (2021). Furthermore, per capita OOP healthcare expenditure increased from NPR 3,344.4 (USD 29.6) in FY 2018/19 to NPR 3,642.9 (USD 31.2) in FY 2019/20. Thus, the high dependency on OOP payments is evident in Nepal’s health financing structure. These figures highlight the critical role of OOP payments in the healthcare system of Nepal and creating regressive impact on health equity, necessitating urgent measures to reduce financial barriers and enhance access to healthcare services.

The Constitution of the Federal Democratic Republic of Nepal (2015) guarantees the right to basic health care services at free of cost and non-deprivation of emergency healthcare services. Nepal's transition from a centralized unitary to a decentralized federal government system requires reforms in healthcare service delivery (Thapa, 2019; Subedi, 2018). Government of Nepal introduced the National Health Insurance policy in 2014 to reduce the burden of OOP

payments for health. Thereafter, separate Health Insurance Act in 2017 was formulated and implanted for effective execution of health insurance scheme in Nepal (Pokharel & Silwal, 2018).

1.2 Overview on the Evolution of Health Insurance in Nepal

The first effort of health insurance in Nepal dating back to 1976 in Patan Hospital in Lalitpur District. The second initiative was made by BP Koirala Institute of Health Sciences in 17 different communities of Morang and Sunsari districts in 2000. As the third initiative, the Government of Nepal implemented a health insurance program in six primary health care centers (PHCCs) in 2003. Similarly, in 2007, the Government of Nepal introduced a free health care program. This program provided all health care services up to PHCC level as well as 35 basic medicines for free. Despite these initiatives, the financial burden of health care expenditure on households continued to increase. To overcome this, Social Health Insurance Policy in 2013 was introduced. The Social Health Security Development Committee was formed in 2015 and the Social Health Insurance Program was launched in 2016. Later on, the program was integrated into the Health Insurance Board (HIB) in 2017. The main goal of this was providing quality health care services, protecting households from financial hardship, and increasing accountability among health care providers (Ayer et al., 2024). Hence, UHC would be far cry if this issue of OOP payment for health is not addressed. Therefore, Nepal’s healthcare system heavily depends on OOP payment for health (WHO, 2021). Thus, Nepal's healthcare system is suffering from this pressing issue.

Table 1

Key Features of the Health Insurance Scheme in Nepal

Characteristics	Key Features
Provider-Purchaser Split	The Health Insurance Act grants autonomy to the Health Insurance Board (HIB).
Revenue Source	Budget allocations from the Government of Nepal and insurance premiums.
Enrollment	Mandatory for all citizens under the Health Insurance Act.
Subsidy	Full subsidies for defined target groups.[1]
Contribution	NPR 3,500 annually for a family of five members. NPR 700 per additional member.
Benefit Coverage	NPR 100,000 annually for up to five family members. NPR 20,000 per additional member, with a maximum benefit of NPR 200,000.
Co-Payment	Yes (*specifics apply*)[2].
Services Covered	Outpatient, emergency, inpatient, medicines, laboratory and diagnostics, and emergency transportation.
Service Delivery Sites	Accredited public and private healthcare facilities.
Gatekeeping	Primary healthcare centers or the nearest public health facility.
Provider Payment Mechanism	Fee-for-service and diagnostic-based payment.
Information Management	Open IMIS**(**Open Insurance Management Information System**)** software is used for membership registration, renewals, claims management, and reporting.
Claim Management	Health facilities submit claims to the HIB through Open IMIS. Claims are reviewed and approved by HIB.

***Notes*.** This table provides health insurance related key features across various characteristics relating to service provision and contribution of beneficiary. Source: Health Insurance Board of Nepal, 2022.

1.3 Current Status of Health Insurance Coverage in Nepal

The current status of health insurance coverage is given below in Table 2. It is evident, approximately 7.2 million people (24.7% of the population) were enrolled in health insurance by FY 2022/23, showing moderate coverage across the country. Likewise, enrollment increased by

20.5 percent from FY 2021/22 to FY 2022/23, indicating significant growth in program uptake. Out of the total insured, 74.5 percent (16% of the total population) remained active, reflecting good retention but leaving room for improvement in coverage. Similarly, about 2.2 million households (33.19% of all households) were enrolled, with a 21 percent increase compared to the previous fiscal year. Among enrolled households, 74 percent remained active, accounting for 25 percent of total households nationwide, highlighting substantial program participation. The household renewal rate was 69 percent, while the population renewal rate was 59 percent, indicating that retention efforts are working but could be enhanced further. A very low percentage (0.35%) of renewals was done online, suggesting the need for greater adoption of digital platforms for convenience and efficiency.

Table 2

Health Insurance Coverage Scenario in Nepal (till FY 2022/23)

S.N.	Coverage Indicators	Status
1	Total population enrolled till FY 2022/23	7,215,098
2	Total percentage of population enrolled till FY 2022/23	24.7%
3	Increment of insures from FY 2021/22 to FY 2022/23 (percentage)	20.50%
4	Total active insures in FY 2022/23	4,658,331
5	Percentage of active insures out of total insures in FY 2022/23	74.5%
6	Percentage of active insures out of total population of the country	16%
7	Total number of households enrolled till FY 2022/23	2,212,814
8	Percentage of households enrolled till FY 2022/23	33.19%
9	Increment in percentage of households from FY 2021/22 to FY 2022/23	21%
10	Total number of active households in FY 2022/23	1,638,917
11	Percentage of active households out of total insured households in FY 2022/23	74%
12	Percentage of active households out of total households of the country	25%
13	Household renewal rate in FY 2022/23	69%
14	Population renewal rate in FY 2022/23	59%
15	Percentage of online renewal	0.35%

***Note*.** This analysis highlights national health insurance enrolment coverage scenario of Nepal based on the data of Health Insurance Board of Nepal 2023.

1.4 Statement of the Problem

Despite the introduction of health insurance in Nepal as a means to protect citizens from high OOP payment for healthcare, enrollment rates remain below expectations, limiting the program's effectiveness in enhancing financial protection and access to healthcare. Health insurance enrollment is crucial in a low-resource setting like Nepal, where a significant portion of healthcare costs is borne directly by individuals, often leading to catastrophic expenses and a

push into poverty for vulnerable populations. However, factors influencing individuals' decisions to enroll are not fully understood, including socio-economic, demographic, cultural, and awareness-related barriers.

Understanding the determinants of health insurance enrollment is essential to address this gap and ensure that health insurance programs are accessible, acceptable, and widely utilized. By identifying these factors, policymakers can develop targeted interventions to boost enrollment rates, thereby reducing the financial burden on households and improving equitable access to healthcare services. This study aims to investigate the determinants of health insurance enrollment in Nepal, providing insights into how socio-economic characteristics, awareness levels, healthcare access, and perceptions of insurance influence enrollment decisions among Nepalese households.

OOP payments for healthcare are a significant burden on households in Nepal, where a substantial proportion of healthcare costs are paid directly by individuals. This financial pressure often leads to reduced access to necessary healthcare, delayed treatments, and, in severe cases, pushes families into poverty. While health insurance schemes have been introduced in Nepal to alleviate these burdens, it remains unclear to what extent health insurance effectively reduces OOP expenses and protects families from healthcare-related financial hardships. The efficacy of health insurance in reducing OOP payments depends on factors such as enrollment rates, coverage adequacy, and service utilization patterns. However, limited empirical research has been conducted to quantify the impact of health insurance on OOP payments in Nepal, creating a gap in knowledge that hinders policy improvements. This research seeks to address this gap by estimating the extent to which health insurance contributes to reducing OOP payments, providing evidence to guide policy and enhance the effectiveness of health insurance programs in alleviating healthcare burdens on Nepali households.

1.5 Research Questions:

1. What are the perception of service receivers on health insurance scheme in alleviating healthcare financial burdens including the problems faced by health insurance enrollee in study area?

2. How do socio-economic and demographic characteristics of service receivers' households affect the health insurance enrollment in OOP in the study area?
3. To what extent does health insurance enrollment reduce OOP payments for healthcare in in the study area?
4. What are determinant of health insurance enrollment and determinants of healthcare utilization?
5. What are the socio-economic determinants of healthcare utilization in the study area?

1.6 Research Objectives

The general aim of the study was to explore the role of health insurance in reducing financial burdens on households, improving access to healthcare, and identifying key factors influencing its effectiveness in the context of Nepal's healthcare system. The specific objectives are as follows:

1. To assess the perception of health insurance enrollee toward the healthcare service as a beneficiary and in alleviating healthcare financial burdens in study are including problem faced in the study area.
2. To analyze the socio-economic and demographic factors influencing health insurance enrollment and their association with out-of-pocket (OOP) healthcare expenditures in the study area.
3. To estimate the contribution of health insurance scheme in reduction of OOP payments for healthcare in the study area.
4. To identify the socio-economic determinants of healthcare utilization in study area.

Thus, the research questions and objectives provide a clear framework for investigating the impact of health insurance on OOP payments in Nepal, followed by determinants of health insurance enrollment and healthcare utilization in Nepal.

1.7 Research Hypotheses

Based on the objectives, the research hypotheses can be stated as follows:

Research Hypothesis 1 (H_1):

H_1: $\beta \neq 0$

Household out-of-pocket (OOP) payments for healthcare are significantly affected by health insurance enrolment status, HH income, HH size, educational level of the HH head, employment status of the HH head, gender of the HH head, and healthcare utilization in the study area.

Research Hypothesis 2 (H_2):

H_2: $\beta \neq 0$

Health insurance enrolment status of HH is significantly influenced by HH income, household size, educational level of the HH head, employment status of the HH head, gender of the HH head, healthcare utilization, and household OOP payments for healthcare in the study area.

Research Hypothesis 3 (H_3):

H_3: $\beta \neq 0$

Healthcare utilization by household members is significantly affected by the health insurance enrolment status, household OOP payments for healthcare, HH income, household size, educational level of the HH, employment status of the HH head, and gender of the HH head in the study area.

1.8 Limitations and Delimitations of the Study

Limitations refer to the potential constraints in the study that are beyond the control of researchers. The limitations of the current study are as follows:

- The current study is based on data from only 120 households of study area, which may limit the statistical power and generalizability of the findings to larger populations.
- The current study uses of cross-sectional data collected between January and April 2025 restricts the ability to infer causality and observe changes over time.
- This study is reliant on household self-reported information for OOP payments for health, health insurance status, and healthcare utilization may suffer from recall bias and social desirability bias.
- Factors such as traditional healing practices, informal care, differences in health-seeking behavior may not be fully captured, potentially affecting the accuracy of estimated effects.

- Findings from Tikapur municipality may not reflect conditions in more urbanized and remote rural areas of Nepal with different healthcare infrastructures or insurance coverage levels.
- Variations in health insurance benefit packages, provider access, and administrative implementation across different regions may influence OOP payments but were not controlled for in this study.

Delimitations refer to the boundaries intentionally set by the researcher to narrow the content and ensure more of the focus. The delimitations of the current study are as follows:

- The current study is confined to Tikapur municipality, chosen for its representative features and practical feasibility, excluding other districts or provinces of Nepal.
- The current study is based on the data collection during the period between January and April 2025, and the study does not account for seasonal and annual variations in healthcare utilization or OOP payments for health.
- Population focus of the study is only households enrolled or eligible for the National Health Insurance scheme were included, excluding those using private or community-based insurance options.
- The study specifically examines the impact of health insurance on OOP payments for health, and does not explore broader impacts on health outcomes, service quality, and healthcare provider behavior.
- The study uses predominantly quantitative survey method, and does not incorporate qualitative insights that might offer deeper understanding of perceptions or experiences.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The OOP payment for healthcare refers to a direct payment for healthcare goods and services from the household primary income or savings, where the payment is made by the user at the time of the purchase of goods or direct health care services, such as medicines, consultation fees, and laboratory diagnostic tests (Ruggeri et al., 2020; WHO, 2011; Wagner et al., 2011). In this regard, this section outlines pertinent theoretical frameworks that elucidate the dynamics of OOP payments in healthcare.

2.1 Theoretical Foundation

The health insurance schemes generally help to reduce OOP payments for health and improve in healthcare access, quality, and reduce disparities and increase effectiveness, particularly among different socioeconomic groups. In this context, the theories relating to OOP for healthcare discussed subsequently. The catastrophic health expenditure arises when OOP payments exceed a certain threshold of household income and eventually that lead to financial hardship to the households. This theoretical framework emphasizes the need for public policies that can protect households from catastrophic health costs (Agregbeshola and Khan, 2018, Xu et al.,2003). Catastrophic coverage theory states that insurance coverage is often designed to protect against catastrophic health expenses, significantly reducing OOP costs for severe health care phase, thus preventing financial ruin (Feenberg & Skinner, 1992).

Health insurance makes mechanism for risk pooling, where the financial risk of healthcare expenses is distributed among all insured individuals. This pooling system reduces the financial burden on any single person. This system potentially lower OOP payments for health when health issues arise (Arrow, 1978).

Theory of moral hazard asserts that individuals with health insurance might consume more healthcare services than necessary because of the full cost coverage of healthcare, potentially leading to inefficiencies resources and higher overall healthcare costs (Cutler, 2000). Theory of adverse selection assert that individuals who expect high medical expenses are more likely to purchase insurance, potentially leading insurers to raise premiums. This situation could

diminish the financial protection that insurance aims to provide (Nyman, 2004; Pauly, 1968). In other words, adverse selection in insurance markets is situation, where individuals with higher risks are more likely to purchase insurance, leading to market inefficiencies and potential market failure. Therefore, Rothschild and Stiglitz (1978) proposed solutions like pooling and separating markets to improve efficiency in asymmetric information.

Newhouse (1993) emphasizes the importance of understanding the factors driving healthcare expenditures, including technological advancements, the role of insurance, and consumer behavior as demand-side factors. Moreover, he advocates for more innovative strategies that go beyond cost-cutting and focus on improving the efficiency and quality of care. Furthermore, Newhouse highlights the complexity of healthcare systems and suggests that reforms should consider the diverse factors contributing to healthcare costs.

Theoretical models of the Rand Health Insurance Experiment highlighted how cost-sharing can affect healthcare utilization in the society. The theory postulates that individuals with higher cost-sharing reduce their use of both necessary and unnecessary services. This indicates that OOP payments can distort healthcare consumption patterns. Therefore, the Rand Health Insurance Experiment provided valuable insights into the dynamics of health insurance and highlight the effects on healthcare utilization and health outcomes pay attention for careful consideration of cost-sharing structures in health policy of country (Newhouse, 1993).

Based on the, through review of theoretical foundation, with in the realm of health economics and considering the nature of current study, two prominent theories are applied for this study. They are Health Demand Model of Grossman (1972) and Behavioral Model of Health Services Use as postulated by Anderson (1995). In other words, the current study is focused on assessing the contribution of Nepal's National Health Insurance (NHI) program in reducing OOP payments for healthcare. This is an integrated theoretical model combining Health Demand Model of Grossman (1972) and Behavioral Health Services Use Model of Andersen (1995) would be appropriate.

Firstly, Grossman (1972) model conceptualizes health as both a consumption and an investment good. Essentially, individuals demand healthcare services not only for current well-being but also as an investment in future health capital. This model combines factors such as income of household, education level, age, and health status of family members influence health-

related behaviors, demographic factors including healthcare expenditure and healthcare utilization.

Secondly, Behavioral Model of Health Services Use as postulated by Andersen (1995) that explains healthcare utilization through three components: predisposing factors such age, gender, education; enabling factors such as income, insurance status; and need factors such as illness or perceived health status. This model aligns well with this current study objective of exploring determinants of OOP payments for healthcare, determinants of health insurance enrollment and determinants of healthcare utilization, as it captures the socio-demographic and economic influences shaping these behaviors. Therefore, integrating these models provides a comprehensive lens to examine how household-level factors simultaneously determine health insurance participation, healthcare utilization, and OOP payments for healthcare. In other words, this combined theoretical approach has been successfully applied in similar contexts (Binnendijk et al., 2012; Kimani et al., 2014), making it suitable for the Nepalese healthcare setting where both economic constraints and access barriers play significant roles.

In conclusion, theoretical frameworks explaining OOP payments include the risk-pooling theory, which distributes healthcare financial risks among insured individuals, reducing individual healthcare financial burdens (Arrow, 1978). The moral hazard theory indicates that health insurance may encourage overconsumption of healthcare services due to full cost coverage, potentially leading to inefficiencies (Cutler, 2000). The adverse selection theory underscores that individuals expecting high medical expenses are more likely to purchase insurance, causing insurers to raise premiums, which can undermine financial protection (Nyman, 2004; Pauly, 1968). The catastrophic coverage theory advocates on protecting individuals from catastrophic healthcare costs, preventing financial wastage (Feenberg & Skinner, 1992). Newhouse (1993) emphasizes the importance of understanding the factors driving healthcare costs, including technology, insurance, and consumer behavior. It advocates for strategies that enhance care efficiency and quality rather than just reducing costs.

2.2 Empirical Review

The empirical literature subsequently explores the impact of health insurance on reducing OOP payments and improving healthcare access across diverse national settings. Sepehri et al. (2006) found contribution of health insurance to reduce OOP payments for health at leat16 percent to 18 percent and the reduction in expenditure is more pronounced for individuals with lower incomes. Parmer et al. (2013) found that the Indian National Health Insurance Scheme reduced OOP payments for health by 13 percent in India. Aji et al. (2013) states that Indonesia introduced three large health insurance schemes namely Askes (for civil servants introduced in 1968), Jamsostek (for private formal employees introduced in 1992), and Askeskin (for poor people introduced in 2005). These health insurance schemes in Indonesia contributed to increase healthcare access, and also contributed to reduce the OOP payments with mixed effect. The evidence showed, *Askeskin* decreased OOP payments for health by 34 percent, *Askes* by 55 per cent compared with non-*Askeskin* and non-*Askes*, respectively. But, *Jamsostek* was found to bear a non-significant effect on OOP payments expenditures.

Goldman et al. (2018) study found that mean OOP payments for healthcare decreased by 11.9 percent in the first two years after insurance expansions, mainly among Medicaid and cost-sharing eligible individuals, and Medicaid-eligible households. Okoroh et al. (2018) findings demonstrated that the uninsured paid 1.4 to 10 times more in OOP payments for health as compared to insured and were more likely to incur CHEs than the insured. Similarly, Kanmiki et al. (2019) investigated the effect health insurance scheme in Ghana and concluded that OOP payment for health services and medications decreased by 63 percent and 62 per cent respectively and concluded that Ghana's national health insurance program has made significant contribution to reduce OOP payment for primary healthcare in public health facilities. Similarly, Tirgil et al. (2019) estimated about 33 percent reduction in OOP payments for health and it led to reduction in the incidence of catastrophic expenditures by nearly 50 percent.

Thuong et al. (2020) found health insurance policy helped increase in outpatient care utilization and reduction in OOP. The study estimated cost sharing for the poor decreased from 5 per cent to zero percent, and contributed to the poverty reduction from 20 per cent zero 5 per cent. Harish et al. (2020) study found significant reduction in OOP payments for health of health insurance insured persons. The study concluded improvements in enrolment and use of health insurance

would ultimately result in improved patient satisfaction. Thapa and Pandey (2020) identified household size, educational status, and type of illness as main determinants of catastrophic health expenditure in Nepal.

Sarkodie (2021) findings that National Health Insurance Scheme(NHIS) in Ghana contributed to increases healthcare utilization by 26 percent and decreases OOP payment for health by 4 percent. Likewise, the study also identified income, age, sex, education, and location of residence as the main determinants of enrolling onto the NHIS. Similarly, Al-Hanawi et al.(2021) findings indicated that health insurance reduces OOP expenditure on health by 2.0 per cent and OOP expenditure on medicine by 2.4 percent amongst the general population in Saudi Arab. Duc Thanh et al. (2021) study finding revealed that health insurance provision reduced OOP payments foe health by about 21 per cent. The study also suggested that health insurance for the near-poor should be modified to increase their enrollment so as to promote universal health coverage in Vietnam.

Lee and Ko (2022) concluded that public health insurance reduced OOP payments for health expenditure by 30 per cent without accompanying increases in healthcare utilization. But, Hooley (2022) study is contrasting with other study as this could not find the significant contribution of health insurance to reduce in OOP payments for health.

Sapkota et al. (2023) found that informal occupations and rural residency were significantly linked with lack of financial protection and lower healthcare utilization under Nepal's current health financing system.

Cheng et al. (2025) investigated healthcare service use under Indonesia's national health insurance and found that utilization of outpatient/inpatient and maternal–child care was significantly influenced by wealth status, insurance type, age, gender, self-rated health, and rural–urban residence.

To sum up, the empirical literature highlights the significant role of health insurance in reducing OOP payments for healthcare across diverse national contexts. Evidently, the studies show reductions OOP payments for healthcare ranging from 11.9 percent to 63 percent, with the effects more pronounced among low-income groups. In Indonesia, programs like Askeskin and Askes reduced OOP by 34 percent and 55 percent, respectively, while Jamsostek had no

significant impact. Similarly, Ghana's NHIS reduced OOP payments by up to 63 percent, while India's and Vietnam's health insurance schemes achieved reductions of 13 percent and 21 percent, respectively. Notably, health insurance expansion in countries like Saudi Arabia yielded modest OOP reductions of 2 percent and 11.9 percent. Moreover, programs in Vietnam and Turkey significantly lowered catastrophic health expenditures. Despite broad positive impacts, some studies, like Hooley (2022), found no significant effect. Overall, health insurance schemes have proven effective in reducing financial burdens, improving healthcare access, and enhancing patient satisfaction, especially in low- and middle-income countries. But, the existing body of literature did not demonstrate the literature in Nepalese context.

2.3 Research Gap Identification

There is consensus amongst the economist that low investment in public healthcare sector causes deterioration of living standard of people and fall in human capital formation. Therefore, substantial expenditure in public health is a critical component in gauging the living standards of the population of any nation and plays crucial role for economic development, and economic development has an important impact on health outcomes (Ahangar et al., 2018; Subedi, 2018; WHO, 2016). The existing literature presents the significant role of health insurance in reducing OOP payments for health and improving healthcare access, with varied nature of results across different countries. However, there is a remarkable gap in understanding the impact of National Health Insurance Scheme(NHIS) in the context of Nepalese in general and the selected study are in particular. The empirical studies from countries like India, Ghana, and Vietnam demonstrate positive reductions in OOP payments due to health insurance schemes, but such evidence for Nepal remains scarce. Moreover, the theoretical models discussed and summarized above, such as risk pooling, adverse selection, moral hazard, and catastrophic coverage, have not been extensively tested in the context of Nepalese healthcare system. In this regard, further research is required to explore how the National Health Insurance Scheme in Nepal affects OOP payments for healthcare, considering financial protection, and improvement healthcare access. Therefore, this research has contributed for drawing valuable insights for improving the effectiveness and coverage of health insurance policies in Nepal.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Design

The research utilizes a quantitative approach to analyze the relationship between National Health Insurance (NHI) enrollment and OOP payments for healthcare. In this context, this research employs a cross-sectional survey design based on the data collection from household heads through a single-contact survey regarding their household healthcare expenditure and socio-economic and demographic status. Moreover, a cross-sectional design is appropriate as the study aims to capture a snapshot of OOP payments for health and insurance status at a single point in time. Moreover, the design allows for a comparative analysis between insured and uninsured households. In this context, it is causal comparative research design. Likewise, based on the reference period, it is a retrospective design. This adopts experiential group as NHI enrollee and non-enrollee as control group.

3.2 Selection of Study Site

The aims of this research was to explore this impact specifically within the context of the Tikapur Municipality Kailali district, Nepal. Rationale of selecting this area as being the first phase health insurance scheme beneficiary local level government of Nepal.

3.3 Nature and Source of Data

This research is predominantly quantitative in nature. The quantitative data were collected using structured questionnaire to explore the impact of health insurance scheme on OOP payments for health in the study area and to identify the determinants of healthcare utilization. The in-depth interview will also be conducted for collecting experience of beneficiaries of the program. This method is particularly well-suited for this investigation as it allows for an in-depth examination of real-world phenomena within their natural context, capturing the complexity and richness of the subject matter.

3.4 Philosophical Foundation of the Study

The philosophical root of this study guides the research design, choice of methodology, data analysis and interpretation, and the overall analytical framework of the dissertation. Research philosophy involves articulating underlying beliefs, assumptions, and approaches for conducting research (Al-Ababneh, 2020). Moreover, the core components of the research philosophy are ontology, epistemology, axiology, and methodology that are discussed below that aligns with the nature and objectives of this dissertation.

3.4.1 Ontological Foundation

Ontology refers to the nature of reality which aligns with the realistic perspectives and focus on what can be known about the subject of study (Guarino et al., 2009). In this context, this study assumes that the variables like socio-economic and demographic characteristics, health insurance enrollment, and OOP payments for healthcare are objective phenomena that can be observed and measured. Similarly, the constructs like 'health insurance enrollment,' 'financial burden,' and 'perceptions of service receivers' are real and measurable. These are considered objective reality about healthcare and its financial impacts in Nepal.

3.4.2 Epistemological foundational

Epistemology concerns the nature and sources of knowledge and how it can be obtained (Audi et a., 2010). In this regard, a positivist approach is emphasized, where knowledge is derived through empirical observation and statistical analysis. The current study relies on quantitative mostly data from surveys, household-level socio-economic and demographic information, and OOP payments for healthcare records. Similarly, qualitative insights are gathered for understanding perceptions and challenges related information. Finally, the findings are generalizable and reliable, after obtaining inference through rigorous data collection and hypothesis testing.

3.4.3 Axiological foundation

Axiology addresses the role of values and ethics in the research process (Hart, 1971). In this regard, the study aims to be value-neutral, focusing on factual relationships amongst the

construct without bias. Similarly, ethical principles are crucial, especially regarding the privacy and confidentiality of data and information provided by the respondents, informed consent from participants. Therefore, the study has expected to ensure that the findings benefit policymakers and service users without harm.

3.4.4 Methodology Foundation

Methodology outlines the processes, tools, and techniques for conducting the research (Kettinger, 1997). In this context, the current study followed a predominantly, quantitative approach followed by qualitative approach to analyze the estimated outcome results. Therefore, it employs a mixed-methods approach combining both quantitative and qualitative methods.

3.5 Population and Samples

The population for this study is all the beneficiaries of NHIP in Tikapur Municipality Kailali district. Amongst, them 120 samples were selected as sample of the study. Among 120, 62 respondents were from experimental group and 58 were control group. In other words, experimental group implies the beneficiaries of health insurance enrollee and remaining 58 were from non-enrollee of health insurance. The primary data for this study were collected from nine wards of Tikapur Municipality of Kailali district using a proportionate stratified sampling technique based on the health insurance enrollee of each ward using a structured questionnaire during first quarter of 2025. The within the strata sample were selected using purposive sampling, which involves selecting cases based on their relevance to the research objectives.

3.6 Sampling Strategy

The sampling strategy involve purposive sampling, wherein health insurance enrollee was surveyed. The health insurance enrollee were experimental group and non-enrollee were control group. To improve questionnaire design, researcher used shorter recall periods, event anchoring, breaking down questions, memory cues, and cross-verify responses. Similarly, researcher used calendars, diaries, ask for monthly or weekly spending instead of total annual expenditure, and compare responses with secondary data or alternative sources.

3.7 Methods and Instrument of Data Collection

The structured questionnaire was prepared and it was administered through Google form to collect data. The enumerators were deployed to collect data. The enumerator was given orientation for data collection. The rapport was built with respondents to elicit insights into the impact of health insurance on OOP payments of healthcare. The researcher utilized triangulation, standardize recall periods, and handle missing data to improve accuracy in healthcare utilization data analysis.

3.8 Variables and Measurement

The variables, their operational definition, nature and sources are of this study are presented the following Table 3.1.

Table 3.1

Variables and their Measurement

Variable Code	Operational Definition	Nature of Variable	Measurement Scale	Data Source
OOP	Out-of-Pocket payments for heat	Target variable	Continuous Scale	Field Survey
HiE	Health Insurance Enrollment	Target Variable	Binary	Field Survey
HU	Healthcare Utilization	Target Variable	Continuous Scale	Field Survey
HHi	Household Income	Variable of interest	Continuous Scale	Field Survey
HHs	Household Size	Variable of interest	Continuous Scale	Field Survey
Gen	Gender of household head	Variable of interest	Binary(Male=1, female=0)	Field Survey
Chr	Prevalence of chronic disease in HH	Variable of interest	Binary(Yes=1, No=0)	Field Survey
Emp	Employment status of HH Head	Variable of interest	Binary(Employed=1, No=0)	Field Survey

Note. Table 3.1 above describes about variables used in the study, their nature, operational definition and sources.

3.9 Methods and Tools of Data Analysis

The study employed mixed-methods approach to analyze the impact of the National Health Insurance Scheme on OOP payments for healthcare in Nepal. Therefore, quantitative data was analyzed using econometric techniques, specifically the logit model to identify the

determinants of health insurance enrollment and OLS model to estimate the effect of health insurance to reduce and OOP payments for health. Similarly, to summarize the data, descriptive statistics was used, while regression analysis evaluates the scheme's effectiveness across socioeconomic groups. Similarly, to collect perception of respondents, Likert scale information was used measures central tendency. Furthermore, the researcher compared quantitative survey data with qualitative narratives to cross-check consistency. This discrepancy can be analyzed further to ensure reliability.

3.10 Conceptual Framework of the Study

This study is designed primarily to assess the contribution of the NHIP of Nepal in reducing OOP payments for healthcare in Nepal. In this regard, the conceptual framework is grounded in the theoretical underpinnings of Health Financing Theory and the Andersen Behavioral Model of Healthcare utilization, which suggest that individual character, households' status, and prevalent system-level factors influence health insurance enrollment, healthcare utilization, and OOP payments for healthcare. In general, to assess the overall beneficiary satisfaction and continuity of NHIS as a function of perceived financial protection, coverage of service, access to healthcare, process quality, perceived effectiveness and satisfaction and continuity is outlined as follows.

Figure 3.1

Conceptual Framework to Display Factors Associated with Continuity Health Insurance

Note. The conceptual framework presented in the figure illustrates the key components influencing the success of the National Health Insurance Program (NHIP)**.** It identifies six critical factors.

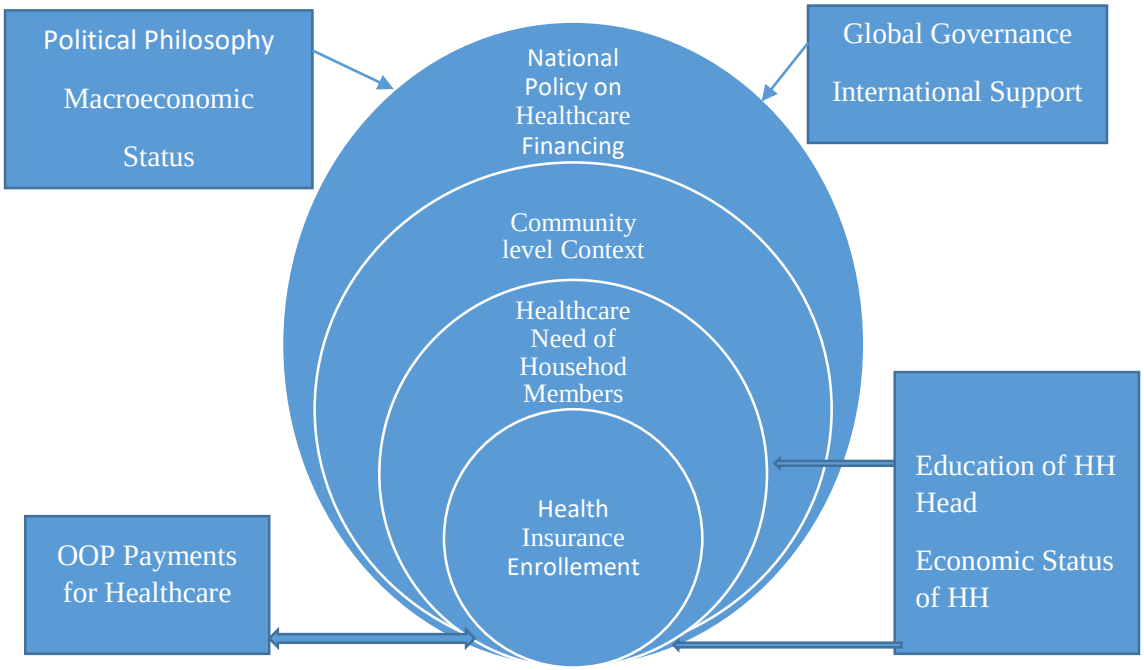
The conceptual framework illustrated in Figure 3.2 presents a multi-level structure and factors influencing continuity in health insurance enrollment. This framework emphasizes that health insurance continuity is determined by a simultaneous combination of macro, meso, and micro-level factors that interact in complex ways. Essentially, at the macro level, political philosophy of governing political force and macroeconomic conditions give shape to national policies on healthcare financing. Moreover, government commitment to public health sector investment, influenced by political priorities and economic capacity, that directly impacts the structure and sustainability of health insurance programs of a country. Additionally, global governance and international support such as foreign aid, partnerships, and technical assistance also play crucial roles in shaping the health policy environment and resources available for national health insurance schemes.

Likewise, at the meso level, the community-level context influences individual and household behavior towards healthcare utilization will affect health insurance enrollment. Likewise, social norms, peer influence, availability of healthcare services, and local administrative effectiveness can also affect community perception and participation in health insurance schemes. Essentially, the healthcare needs of household members, such as the presence of chronic diseases issue or vulnerable groups such as elderly and children, further drive the perceived necessity to maintain continuous health insurance coverage.

Moreover, at the micro level, household characteristics like the economic status of the household and the education level of the household head are critical determinants. Generally, while better economic status improves affordability and willingness to pay premiums regularly and higher education enhances awareness and understanding of the benefits of health insurance. Conversely, economically poor and less educated households may face barriers to maintaining enrollment. Eventually, a key outcome of these interacting factors is health insurance enrollment continuity, which in turn influences OOP payments for healthcare. In conclusion, improved insurance coverage continuity is expected to reduce OOP payments for healthcare, offering financial protection against unexpected health costs. Therefore, the conceptual framework given in Figure 3.1 provides a comprehensive lens for analyzing determinants of sustained participation in health insurance programs, especially in low-income and middle-income countries like Nepal.

Figure 3.2

Conceptual Framework in Broader Context for Continuity Health Insurance



Note. The conceptual framework illustrated in the concentric circle diagram represents the multi-layered factors influencing health insurance enrollment**.** At the core is Health Insurance Enrollment**,** which is directly shaped by the Healthcare Needs of Household Members**.**

3.11 Validity and Reliability

Cronbach's alpha value was estimated to assess the internal consistency and reliability of a set of scale or test items used in data collection tool. Cronbach's Alpha Formula is presented as follows:

$$\text{Cronbach's Alpha Formula } \alpha = \left(\frac{K}{K-1}\right) * \{1 - \frac{\Sigma\sigma^2(Y_i)}{\sigma^2 X}\} \qquad \ldots..(1)$$

Where, K = Number of items used in the survey questionnaire

$\sigma^2(Yi)$ = Variance of each items used in survey questionnaire

σ^2X = variance of the total scores of items used in survey questionnaire

It is to be noted that Cronbach's alpha coefficient ranges from 0 to 1. The general guidelines for interpretation of the Cronbach's Alpha coefficients is given below:

Table 3.2

Interpretation of Cronbach's Alpha

Value of Coefficient(α)	**Internal Consistency**
Less Than 0.5	Poor Reliability
0.5 - 0.6	Questionable Reliability
0.6 - 0.7	Acceptable Reliability
0.7- 0.8	Good Reliability
0.8 - 0.9	Very Good Reliability
More than 0.9	Excellent Reliability

Note. The table presents the interpretation of Cronbach's Alpha (α)**,** a measure used to assess the internal consistency or reliability of a set of survey or test items.

3.12 Specification of Regression Model

The following the OLS regression model is estimated to calculate contribution of NHIS for OOP payments reduction and also identify the determinants of OOP payments for healthcare in the study area.

$$\text{OOP Payment}=\beta_0+\beta_1(\text{HiE})+\beta_2(\text{HHi})+\beta_3(\text{Edu})+\beta_4(\text{HHs})+\beta_5(\text{Emp})+\beta_6(\text{HU})+\beta_7(\text{Gen})+\varepsilon \quad ...(2)$$

In equation (2) above, β_0 denotes intercept and β_2, ... B_7 are the slope coefficients to be estimated. Likewise, ε stands for residual of error term.

Logit Model Specification

The logit model estimates the probability of health insurance enrollment as a function of the independent and control variables. In other words, logit model is proposed to identify the determinants of health insurance enrollment.

$$\text{HiE } P(Y=1/X)=1-\frac{e^{(\beta_0+\beta_1 OOP+\beta_2 HHi+\beta_3 Edu+\beta_4 Gen+\beta_5 HHs}+6Chr+\beta_7 HU)}{1+e^{(\beta_0+\beta_1 OOP+\beta_2 HHi+\beta_3 Edu+\beta_4 Gen+\beta_5 HHS}+\beta_6 Chr+7HU)} \quad \ldots (3)$$

In equation (3), HiE implies dependent variable i.e. Health Insurance Enrollment (Binary, 1 = Enrolled in health insurance. 0 = Not enrolled in health insurance). Likewise, OOP denotes independent variable OOP payments for health. Likewise, HHi as income level, and Edu as

education level. Similarly, Gen denotes Gender, HHs as household size, Chr as presence of chronic illness and HU for healthcare utilization. In the equation (3) the numerator represents the exponential of the linear combination of variables and the denominator ensures the probability is bounded between 0 and 1. Therefore, this study uses household-level primary data, logistic regression, and OLS models to analyze healthcare financing behavior in Nepal, bridging gaps and providing a comprehensive understanding.

Moreover, the following the OLS regression model is estimated to calculate determinants of healthcare utilization pattern given the independent and control variables. The model is specified as follows:

$$HU=\beta_0+\beta_1(HiE)+ \beta_2(OOP) +\beta_3(HHi)+\beta_4(Edu)+ \beta_5(HHs)+ \beta_6(Emp)+ \beta_7(Gen)+\varepsilon \quad \ldots\ldots.(4)$$

In equation (4) above, β_0 denotes intercept and β_2, ... B_7 are the slope coefficients to be estimated. Likewise, ε stands for residual of error term.

CHAPTER 4
EMPIRICAL RESULT AND DISCUSSION

This chapter presents the survey data as per the objectives of the study. It presents socio-economic and demographic information of the of the respondents. Thereafter it presents the data collected in the Likert scale. They are discussed subsequently.

4.1 Economic and Demographic Profile of Respondents

The table below presents the socio-economic and demographic profile of households enrolled in the National Health Insurance Scheme (NHIS) provides important insights into the economic capacity, healthcare behavior, and willingness to pay (WTP) for improved insurance services among respondents. In fact, this understanding is important for assessing the sustainability and potential expansion of health insurance programs.

Table 4.1

Socio-economic and Demographic Profile of Respondents

S.N.	Particular	Mean	SD
1.	Monthly average income HH members	8814.93	365.29
2.	HH OOP payments for healthcare	2645.02	586.90
3.	Household Size	4.45	1.54
4.	Average age of HH head (in years)	52.10	14.68
5.	Annual Hospital visit rate	10.35	0.84

Note. The table presents key socio-economic and health-related statistics of the surveyed households in 2025.

Table 4.1 shows that the average monthly income of household members among the sampled respondents was NPR 8,814.93 with a standard deviation (SD) of 365.29, suggesting that most households have relatively similar income levels, with only minor variation across the sample. Evidently, healthcare expenditure, the mean OOP payments for healthcare for healthcare services was NPR 2,645.02 with SD 586.90. This implies that about 30 percent of the household income is spent on health-related expenses, which highlights the financial burden of health services even for insured households. This finding is consistent with the study of Karan et al. (2017)**,** who reported that high OOP payments for healthcare remain a significant barrier to achieving UHC.

The average household size is found to be 4.45 with SD 1.54, which reflects the typical family structure in Nepal, where multi-generational households are common. Likewise, the mean age of the household head was estimated to be 52.10 years with SD 14.68 years, indicating that most household heads are elderly. Probably, they may have higher health service needs and risk of chronic diseases, possibly their dependency on health insurance coverage.

The average hospital visit rate per year was 10.35 times with SD 0.84 times, reflecting frequent use of healthcare services among the respondents. Essentially, this high utilization rate suggests that the insured population is actively seeking healthcare. This may be possibly encouraged by the NHIS coverage that reduces direct costs at the point of service. This result is also aligning with the findings from Wagstaff et al. (2018)**,** who asserted that health insurance enrollment leads to increased healthcare utilization in low-income and middle-income countries.

4.2 Social and Household Status of Respondents

The information regarding the willingness to contribute more for health insurance, 79.04 percent of NHIS enrollee expressed willingness to pay for an increased premium**,** while 20.96 percent were unwilling. The mean threshold WTP for a premium increase was 6.98 per cent of income with SD 4.22. This provides valuable information for policy adjustments regarding premium rates in future.

Table 4.2

Respondents Status WTP, Education and Chronic Disease

S.N.	**Particular**	**Response Category**	
1.	Respondents with WTP for increased health insurance premium	Yes	79.04
		No	20.96
2.	Threshold of WTP for Increased Premium Health Insurance in percent	6.98	4.22
3.	Education level of HH head (in Percent)	Illiterate	16.10
		Basic and Primary	32.30
		Secondary	27.40
		Bachelor	16.10
		Masters	8.10
4.	Gender of HH Head (in Percent)	Male	61.16
		Female	38.84
5.	Chronic Disease in HH	Yes	51.60

Note. The table presents a detailed overview of the social and household characteristics of respondents enrolled in the National Health Insurance Scheme (NHIS).

Likewise, Table 4.2 shows that, in terms of education, 16.10 percent of household heads were illiterate**,** 32.30 percent had attained basic and primary education, 27.40 percent had secondary education, 16.10 percent were graduates, and only 8.10 percent held a master's degree. Essentially, this educational distribution reflects a predominantly low to moderately educated population and this may influence understanding and perception of health insurance benefits. Likewise, the gender distribution of household heads shows that 61.16 percent were male and 38.84 percent female**,** which is in line with the patriarchal structure of many Nepali households, where males traditionally assume the role of household heads. Finally, 51.60 percent of households reported the presence of chronic diseases**,** while 48.40 percent did not. The high prevalence of chronic illness underscores the importance of health insurance in managing long-term healthcare costs.

4.3 Perception Analysis of NHIS Enrollee

The perception analysis is focused on the six key dimensions of that covers all aspects of the perception analysis of the health insurance service receives. They are financial protection that focus on the reduction in personal health expenditure burden, access to health services that assesses improved physical and financial access to health facilities, coverage adequacy that emphasizes satisfaction with the breadth & scope of services covered. Likewise, perception analysis is also regarding process quality that focus on transparency, claims process, information flow, received effectiveness gives emphasis to perceived improvement in health care quality and service effectiveness and satisfaction and continuity considering beneficiary satisfaction, willingness to renew and recommend insurance. The result of perception analysis is presented subsequently.

4.3.1 Internal Consistency Reliability of Measurement Scales

The Cronbach's Alpha is a measure of internal consistency or reliability of a set of scale or test items. It indicates how well the items in a domain measure the same underlying concept. Table 4.3 presents the reliability analysis results in term of Cronbach's Alpha for the perception scale items used to assess key six dimensions of health insurance among the enrollees in the study area. Evidently, the results indicate that the Cronbach's Alpha values range between 0.798 and 0.889 for all six dimensions**,** indicating acceptable to excellent internal consistency. Comparatively, the dimension 'Coverage Adequacy' has the lowest Cronbach's Alpha value 0.798**.** The overall scale reliability Cronbach's Alpha values is 0.846 suggests that the instrument is consistently measuring the basic constructs related to health insurance perception.

Table 4.3

Reliability Test Result for Item used in Perception Analysis

Dimensions of analysis	Number of items	Cronbach's Alpha	Interpretation
Financial Protection	7	0.846	Very good reliability
Access to Healthcare Service	6	0.811	Good reliability
Coverage Adequacy	5	0.798	Acceptable
Process Quality	5	0.859	Very good reliability
Perceived Effectiveness	6	0.874	Excellent Reliability
Satisfaction and Continuity	4	0.889	Excellent Reliability
Overall	62	0.846	Very good overall

	consistency

Note. Table shows Cronbach's Alpha for Item used Perception Analysis of Health Insurance Service Receiver in the Study area. Source: TMC Faculty Research Survey Data 2025.

The perception analysis instrument demonstrated high internal reliability across all dimensions, with Cronbach's alpha values ranging from 0.798 to 0.889. According to Nunnally and Bernstein (1994), these values indicate acceptable to excellent scale consistency, implying that the items reliably measure their respective constructs. The results align with previous studies such as Alhassan et al. (2016) and Kim et al. (2010), which reported similar alpha values in health insurance perception surveys. However, contrasting findings in contexts like rural India (Aggarwal et al., 2020), and China (Wang et al., 2012) highlight the importance of policy environment and beneficiary understanding in shaping perception consistency.

4.3.2 Perception of National Health Enrollee on Financial Security

The table below presents the descriptive statistics and chi-square test results for the perception of enrollees regarding the financial security on account of health insurance purchase. Evidently, the mean score of respondents remains between 3.58 and 4.06 which far above mean value 3.0 implies that the enrollees have perceived that health insurance provision has improved their financial security and access to healthcare services. The highest mean score 4.06 with standard Deviation (SD) 0.248 was observed for the statement: "*Health insurance has reduced my OOP payments for health services."* Therefore, this suggests strong agreement that insurance coverage is contributing to reduce direct health-related expenditure. The associated chi-square (χ^2) value is 47.03 and $p < 0.01$ is significant, denoting that this perception is statistically distinct from neutral responses.

Table 4.4

Perception on Financial Security of Health Insurance Enrolees

Financial Protection	Mean	SD	χ2-value	P value
Health insurance has reduced my OOP payments for health services.	4.06	0.248	47.03	P<0.01
After participating in health insurance, it has become easier to manage my health expenses.	3.89	0.680	95.83	P<0.01
With health insurance, I experience less financial stress during medical treatments.	3.58	0.897	95.83	P<0.01

With health insurance, my financial burden is bearable.	3.79	0.727	101.25	P<0.01
Despite having health insurance, I still struggle to afford health services.	3.92	0.454	106.67	P<0.01
Health insurance has made it financially easier for me to consider regular check-ups and disease prevention.	3.89	0.515	96.03	P<0.01
Without health insurance, my health care costs would have been unbearable.	3.85	0.507	112.29	P<0.01

Note. Table given above shows Perception on Financial Security of Health Insurance Enrolees based on field survey; Data Source, Field Survey 2025.

Table 4.4 show the lowest mean 3.58 with SD 0.897 for the statement: *"With health insurance, I experience less financial stress during medical treatments."* Although the mean is still above the midpoint of 3, this may indicate that relatively weaker confidence in the financial stress reduction by the insurance. Moreover, statistical result shows that all statements yielded significant chi-square values ($p < 0.01$), implying that the observed distribution of responses for each item significantly differs from what would be expected by chance. Therefore, this strengthens the reliability of the finding that health insurance enrollees' perceptions are meaningfully skewed towards agreement on financial protection. The analysis indicates that while the National Health Insurance scheme of Nepal has been successful in reducing OOP payments for health costs and easing financial barriers to some extent. However, there remain perceived inadequacies in coverage breadth or depth.

The results are consistent with the findings of Kim et al. (2010), who reported that health insurance significantly reduced financial burdens among enrollees in Korea's National Health Insurance. Similarly, Chankova et al. (2008) in their study on West African Mutual Health Organizations also found that insurance coverage led to reductions in out-of-pocket expenses and better financial predictability.

However, the persistent struggle to afford health services even among insured participants aligns with concerns raised by Alhassan et al. (2016) in Ghana and Aggarwal et al. (2020) in India, where benefit ceilings, co-payments, and uncovered services limited the full protective potential of insurance schemes.

4.3.3 Perception on Improvement of Access to Healthcare Services

The estimated result of descriptive statistics on the of health insurance enrollee on the improvement of access to healthcare service. Evidently, the result indicate that Nepal's National Health Insurance Programme has significantly improved access to health services. The mean score for the construct is 3.92 ($p<0.01$), implying that in general respondents agreed that health insurance increased their access to basic health services and made them more willing to seek medical treatment. This suggests that insurance coverage has reduced financial barriers, encouraging people to utilize healthcare services more readily. Similarly, participants also perceived an increase in the availability of health service providers as reflected by mean score 3.85 ($p<0.01$), indicating that the expansion of empaneled facilities under the scheme. Likewise, the insurance has facilitated easier access to nearby hospitals and clinics as reflected by mean score 3.87 ($p<0.01$).

Table 4.5

Contribution of Health Insurance Programme to Improve Access to Health Services

Access to Health Service	Mean	SD	χ2-value	P-value
Health insurance has increased my access to basic health services.	3.92	0.454	162.77	P<0.01
With health insurance, I am more willing to seek medical treatment.	394	0.475	101.25	P<0.01
Health insurance has increased the number of available health service providers for me.	3.85	0.560	47.03	P<0.01
My health insurance enables me to visit nearby hospitals or clinics.	3.87	0.495	58.06	P<0.01
I am satisfied with the scope of health services covered by national health insurance.	3.97	0.254	9.29	P<0.01
Health insurance provides an appropriate coverage limit for my health needs.	3.39	0.930	19.90	P<0.01

Note: Table given above shows Perception on Financial Security of Health Insurance Enrolees based on field survey; Data Source, Field Survey 2025.

The table below shows that mean score for the satisfaction with the scope of services covered by the National Health Insurance is moderately high 3.97 ($p<0.01$). This indicates that the included services largely meet the expectations of enrollees. This result aligns with the findings of Shrestha et al. (2024), who reported that enrollees appreciated the inclusion of outpatient and inpatient care in the benefit package. However, mean score for the perceived adequacy of Health insurance provides an appropriate coverage limit for my health needs is 3.39

with ($p<0.01$) with SD 0.930 suggests some concerns remain regarding whether the financial ceiling sufficiently meets household health needs. This is an important consideration in the Nepalese context of rising healthcare costs and OOP payments and for healthcare. In conclusion, the results imply that while Nepal's health insurance programme has positively impacted access and utilization of healthcare services, at the same time attention is needed to improve the perceived sufficiency of coverage limits to ensure increased financial protection.

The study result can be inferred that Nepal's National Health Insurance Programme has positively contributed to improving access to healthcare services. This finding is consistent with findings from similar studies conducted in low-income and middle-income countries (LMICs) around the world, including Vietnam and Ghana, where insurance coverage significantly reduced financial barriers and encouraged health-seeking behavior people (Onwujekwe, 2012; Jehu-Appiah et al., 2012). In the Nepalese context, studies by Pandey et al. (2023) and Paudel et al. (2021) similarly observed that insured households were more likely to utilize health services compared to uninsured ones, citing reduced OOP payment burden as a key motivating factor.

Satisfaction with the scope of services covered under the scheme was relatively high (Mean=3.97, $p<0.01$), which aligns with the findings of Shrestha et al. (2024), who reported that enrollees appreciated the inclusion of outpatient and inpatient care in the benefit package. However, the perceived adequacy of the coverage limit (Mean=3.39, SD=0.930, $p<0.01$) revealed some dissatisfaction among respondents. This contrasts with study of Wolf et al. (2012) as the study asserted the comprehensive universal coverage has minimized. In Nepal, coverage ceilings are NPR 100,000 per family per year and this has been criticized as insufficient to cover costly treatments, particularly for chronic and catastrophic illnesses.

In conclusion, the health insurance programme in Nepal shows promise in expanding access and reducing financial barriers consistent with global and regional evidence. Similarly, there remain challenges regarding the perceived sufficiency of financial protection. Therefore, these findings suggest the need for the Government of Nepal to consider raising benefit ceilings and expanding the scope of covered services to meet the population's evolving health needs more effectively.

4.3.4 Healthcare Service Coverage Adequacy by National Health Insurance Scheme

Table below shows perception of respondents regarding the adequacy of healthcare service coverage under Nepal's National Health Insurance Scheme (NHIS). The analysis is based on the mean scores**,** standard deviation (SD)**,** chi-square values**,** and p-values for each item. The mean score for across overall coverage adequacy perception ranges from 3.55 to 3.97, indicating that respondents have a positive perception regarding the coverage adequacy of NHIS. Evidently, a mean score greater than 3.0 reflects agreement with the statements.

Table 4.6

Healthcare Service Coverage Adequacy

Coverage Adequacy	Mean	SD	χ2-value	P value
National health insurance generally provides the necessary health services for me.	3.55	0.843	18.645	P<0.01
National health insurance covers most of my medical expenses.	3.69	0.759	104.6	P<0.01
I am satisfied with the scope of health services covered by national health insurance.	3.97	0.254	9.29	P<0.01
The process of claiming health insurance benefits is easy and effective.	3.94	0.356	77.06	P<0.01
The national health insurance program provides transparent information about covered and uncovered expenses.	3.97	0.254	58.06	P<0.01

Note. Table given above shows Perception on Financial Security of Health Insurance Enrolees based on field survey; Data Source, Field Survey 2025.

The Table 4.6 result shows that perception of respondent on NHIS generally provides necessary health services is moderate having mean score 3.55 with SD. The relatively SD shows variability in perception, possibly indicating coverage gaps for certain services or sub-populations. Similarly, respondents agree that medical expenses are covered with mean score 3.69 and SD 0.759. But the moderate SD shows differing opinions, possibly reflecting variations in service utilization or scheme benefit limits. Likewise, mean score and SD for perceived satisfaction with scope of covered services is 3.97 and 0.254 respectively. The result shows very high agreement in terms of mean score and very low variation in terms of SD shows a highly consistent perception of satisfaction with coverage breadth. The mean score and SD for claiming process is easy and effective are 3.94 and 0.356 respectively. This indicates strong agreement that the administrative process is easy; low SD indicates consistent satisfaction among

respondents. The chi-square tests for all constructs are significant at $p < 0.01$**.** This indicates that the distribution of responses for each indicator significantly differs from the expected distribution under the null hypothesis. This implies that perceptions are clearly skewed toward positive agreement rather than neutral or random.

These findings space for further discussion. Firstly, align with studies that emphasize the positive role of national health insurance in expanding service access and satisfaction among beneficiaries. In this regard, study of Chankova et al. (2008) in West Africa reported that mutual health insurance members perceived improved access and coverage adequacy compared to uninsured populations. However, the relatively lower mean score as 3.55) and high SD for the item on general provision of necessary services suggest possible gaps in service availability and perceived exclusion of certain health needs. This a concern is echoed in Alhassan et al. (2016), who noted that even insured Ghanaians sometimes faced unmet service needs due to benefit package limitations in the health insurance scheme. Contrasting results come from Savitha and Banerjee (2020) in India, where micro health insurance enrollees reported lower than average satisfaction with claim processing and coverage adequacy, likely due to fragmented and less comprehensive schemes compared to Nepal's nationalized approach.

In summary, the results suggest that service coverage and communication under NHIS are well-received, however there remains some perceived inconsistency in the availability of necessary services. In this regard, policymakers should address service package gaps and ensure equitable service delivery across regions and populations to further enhance enrollee satisfaction.

4.3.4 Perceived Process Quality of Health Insurance Service

This Table 4.7 below presents the perception of health insurance enrollees regarding the process quality of services offered by the National Health Insurance Scheme (NHIS), based on four constructs. The overall mean and SD of perception of healthcare service process quality ranges between 3.44 to 3.97**.** This indicates that the respondents generally have a positive perception towards the process quality of the NHIS. The mean score above 3.0 suggests agreement with the statement, indicating higher than average satisfaction with process-related aspects of health insurance services.

Table 4.7

Perception of Health Insurance Enrolee on Process Quality of Health Insurance Service

Process quality	Mean	SD	χ2-value	P-value
Customer service provided by the health insurance program responds promptly.	3.94	0.356	54.25	P<0.01
The health insurance program provides clear and helpful information about my benefits.	3.82	0.615	96.03	P<0.01
The health insurance program assures me of support during medical emergencies.	3.44	0.898	45.71	P<0.01
Health insurance provision has increased my financial security regarding health expenses.	3.97	0.254	58.06	P<0.01

Note. Table given above shows Perception on Financial Security of Health Insurance Enrolees based on field survey; Data Source, Field Survey 2025.

Table 4.7 shows that the mean score and SD for the construct customer service provided by the health insurance program responds promptly 3.94 and 0.56. Essentially, a mean score above 3.0 suggests agreement with the statement, indicating satisfaction with process-related aspects of health insurance services. Therefore, the result shows high agreement and low SD suggest most respondents consistently perceive prompt service responsiveness. Likewise, the mean score for the construct health insurance program provides clear and helpful are the health insurance program provides clear and helpful information about my benefit are 3.82 and 0.615 respectively. Obviously, the mean score above 3.0 suggests agreement with the statement. However, the positive perception, with higher SD indicates variation; may indicate that some enrollees may find information unclear or incomplete. Moreover, the mean score and SD for the construct the health insurance program assures me of support during medical emergencies are 3.44 and 0.898. The result shows lowest mean and highest SD indicate mixed opinions. This may suggest that some enrollees are not fully confident about emergency support assurance. Finally, the mean score and SD for the construct health insurance provision has increased my financial security regarding health expense are 3.97 and 0.254. The result shows **s**trongest agreement and very low SD for the construct show near-universal perception of improved financial security through insurance coverage.

The Chi-Square Significance for all items exhibit statistically significant chi-square values ($p < 0.01$)**,** indicating that the distributions of responses significantly deviate from neutral expectations. This suggests that the health insurance enrollees are not indifferent but have strong and definite opinions, mostly favorable regarding the process quality of the health insurance scheme.

The finding has given space for the valuable discussion. Firstly, it suggests that process quality aspects of NHIS are generally satisfactory**,** particularly in terms of customer service responsiveness and information clarity. Likewise, this result aligns with Kim et al. (2010)**,** who reported high satisfaction levels with customer service. The comfortable claim processing in Korea's National Health Insurance. However, the relatively lower mean 3.44 and SD 0.898 for emergency support assurance reflect possible concerns or inconsistency in this critical service area. In this regard, similar issues have been identified by the study of Alhassan et al. (2016) in Ghana**,** where Ghanaians also perceived difficulties in accessing prompt insurance support during emergencies juncture, often due to healthcare administrative delays.

Contrasting evidence is reported by Aggarwal et al. (2020)**,** where health insurance enrollees in micro health insurance schemes in India reported significant dissatisfaction with the customer service and claim settlement processes. This is likely due to fragmented and less mature insurance markets compared to NHIS of Nepal. The strong perception of improved financial security under NHIS also aligns with the findings of Chankova et al. (2008)**,** who noted similar benefits in mutual health organizations in West Africa.

In summary, process quality indicators reflect a positive and reliable perception among the insurance enrollees**,** particularly regarding customer service and financial security. However, the perceived inconsistency in emergency juncture support assurance suggests an area for policy and operational improvement to increase enrollee confidence towards the scheme's responsiveness during critical events.

4.3.5 Perceived Effectiveness

The result of the table below provide insight into the construct of perceived effectiveness of the National Health Insurance Scheme (NHIS) based on the responses of enrollees. The mean and SD values across the six indicators of perceived effectiveness range from 3.66 to 3.97 and 0.254 t0 0.788 respectively. This indicates that the respondents generally hold a positive view of the effectiveness of NHIS to ensure access to quality healthcare and reducing financial vulnerability. Essentially, a mean score above 3.5 on five-point Likert scale suggests that the majority of respondents responded agree or strongly agree with the positive statements regarding the NHIS.

Table 4.8
Perceived effectiveness of the National Health Insurance Scheme

Perceived Effectiveness of Service	Mean	SD	χ2-value	P-value
Due to health insurance coverage, I am less likely to need loans or sell property for medical expenses.	3.97	0.254	58.065	P<0.01
The scope of my health insurance allows me to receive good quality health care.	3.68	0.742	28.45	P<0.01
Health facilities I can access provide better services because they are insured.	3.66	0.788	72.80	P<0.01
Because of health insurance, it has become easier and more desirable for me to seek health services.	3.84	0.549	43.61	P<0.01
The services covered by health insurance encourage me to undergo health check-ups.	3.81	0.596	40.32	P<0.01
Because of health insurance, I am motivated to consult a health service provider as soon as symptoms appear.	3.94	0.356	54.25	P<0.01

Note. Table given above shows Perception on Financial Security of Health Insurance Enrolees based on field survey; Data Source, Field Survey 2025.

The mean score and SD for statement "Due to health insurance coverage, I am less likely to need loans or sell property for medical expenses" are 3.97 and 0.254 respectively**,** followed by a statistically significant chi-square value **(**$\chi^2 = 58.07$, $p < 0.01$**).** Obviously, this indicates a strong consensus among respondents that the NHIS provides financial protection against catastrophic health expenditure**.** This finding consistent with the studies by Chankova et al. (2008) in West Africa and systematic review of Ekman (2004) to assess status of community-based health insurance for low income countries in mobilizing resources and providing financial protection**.**

Similarly, mean score and SD for the construct "Because of health insurance, I am motivated to consult a health service provider as soon as symptoms appear " are 3.94 and 0.356 respectively. This suggests that the NHIS positively influences health-seeking behavior of enrollees and they are induced for early treatment**.** This is aligning with findings by Kimani et al. (2014)**,** that reported that health insurance coverage in Kenya led to an increase in early healthcare utilization of the enrollees.

The mean score and SD for the construct "Health facilities I can access provide better services because they are insured" are 3.66 and 0.788 showing relatively low census and higher SD. The relatively higher SD reflects some variability in enrollee perceptions about the quality of insured health facilities. This may suggest that the perceived service quality of healthcare providers under NHIS may not be uniformly high across all service points. Though the chi-square value **(**$\chi^2 = 72.80$, $p < 0.01$**)** still indicates a statistically significant deviation from neutrality. This finding is aligned with Alhassan et al. (2016)**,** hat reported mixed perceptions of service quality among health insurance enrollees of Ghana's NHIS. This is likely due to differences in facility capacity and management.

Moreover, the mean score and SD for the construct "The scope of my health insurance allows me to receive good quality health care" are 3.68 and 0.742**,** reflecting moderate agreement, but SD value suggests that coverage adequacy could be an area needing improvement. In this regard a concern also raised by the study of Kusi et al. (2015) and noted gaps in benefit package coverage under health insurance schemes in low- income and middle-income countries. Moreover, all items in the table demonstrate significant chi-square values ($p < 0.01$)**,** confirming that respondents' opinions on the construct under dimension of perceived effectiveness of the programme are not due to chance**.**

In summary, the NHIS in the study area appears effective in reducing the Household financial burden of healthcare and motivating early health-seeking behavior based on the perception analysis. However, there is also found some evidences of variations in perceived service quality and coverage scope point to areas for policy attention. This is particularly improving the capacity and standardization of healthcare facilities covered under the scheme.

4.3.6 Perceived Satisfaction and Continuity of NHIS

The table displays the descriptive analysis of the Likert-scale data and provides important insights into the perceived satisfaction and continuity intentions of NHIS enrollees**.** The mean scores and SD for all four indicators range from 3.52 to 3.71 and 0.897 to 1.112. The mean score suggests that participants generally agree or somewhat agree with positive statements regarding their satisfaction and intent to continue using the NHIS. This overall positive trend indicates that enrollees of health insurance perceive value in maintaining their insurance coverage. But higher SD values indicate that the NHIS experience is not uniform across enrollees of health insurance**,** indicating potential inequities or inconsistencies in scheme performance**,** service provider behavior, or regional differences.

Table 4.9

Perception Analysis of Perceived Satisfaction and Continuity of NHIS

Satisfaction and Continuity of Enrollment	Mean	SD	χ2-value	P-value
I plan to continue my health insurance in the coming years.	3.66	0.957	37.16	P<0.01
Based on my experience of reduced OOP payments or health, I recommend health insurance to others.	3.52	1.112	28.45	P<0.01
I am willing to pay a reasonable amount to continue my health insurance.	3.69	0.879	85.77	P<0.01
I believe the cost of health insurance is reasonable compared to its benefits.	3.71	0.894	43.32	P<0.01

Note. Table given above shows Perception on Financial Security of Health Insurance Enrolees based on field survey; Data Source, Field Survey 2025.

Table 4.9 shows that mean score and SD for the construct "I believe the cost of health insurance is reasonable compared to its benefits" are **3**.71 and 0.894 respectively. This indicates that the health insurance enrolls mostly view the scheme as affordable relative to the services received**.** The high chi-square value **(**χ^2) 43.32 and $p < 0.01$ suggests that the perception is statistically significant and not a result of random variation. This aligns with the findings of Wagstaff et al. (2018)**,** that observed that affordability and perceived value are critical determinants of health insurance enrollee retention and satisfaction in low- income and middle-income countries.

The mean score and SD for the construct “I am willing to pay a reasonable amount to continue my health insurance” are 3.69 and 0.879 respectively, showings a strong agreement followed by the χ^2 85.77 and $p < 0.01$**.** Essentially, this reflects enrollee's commitment to maintaining their coverage**,** which may be influenced by their prior positive experiences with financial protection and access to healthcare services. This finding is align with the study by Jehu-Appiah et al. (2011) in their study of NHIS of Ghana, where willingness to renew the health insurance was linked to perceived service quality and financial benefits.

Interestingly, the mean score for statement “Based on my experience of reduced OOP payments for healthcare, I recommend health insurance to others” was lowest 3.52 followed by the highest SD 1.112, indicating a slightly more neutral or varied perception about recommending NHIS to peers**.** Moreover, the higher SD indicates greater variability in responses, that might reflect individual differences in claims processing experience or service quality across health facilities**.** This finding is also supported by the study of Alhassan et al. (2016)**,** who noted that inconsistent service delivery of the service providers discouraged positive word-of-mouth recommendations amongst NHIS enrollees of Ghana.

Finally, the mean score and SD of the item “I plan to continue my health insurance in the coming years” are 3.66 and 0.957 followed by the $\chi^2 = 37.16$ and $p < 0.01$**.** This indicates that a general positive outlook toward continuity, but again with some variability. In this regard, factors such as service delays, lack of coverage for certain treatments. This finding is somehow peered with studies like Mebratie et al. (2015)**,** who found dissatisfaction of health insurance enrollee with service quality could limit enrolment renewal intentions in Ethiopia.

In summary, perception of health insurance enrollee demonstrated moderate to high satisfaction with NHIS and an inclination toward continued participation. Despite this, perceived inconsistencies in service delivery and benefit realization may prevent wholehearted endorsement to recommend others. In this regard, policymakers should address these service quality gaps to enhance enrollee confidence and ensure sustainable scheme participation.

4.4 Econometric Analysis

This study estimated two econometric model to fulfill the objectives of the research. They are discussed subsequently.

4.4.1 Determinants of OOP Payments for Healthcare

The following the OLS regression model given in equation (2) is estimated to explore determinants of OOP payments for healthcare and to estimate contribution of NHIS to reduce OOP payments for healthcare. In other words, model was specified as OOP payments for healthcare is a function of health insurance enrollment status, HH income, education level of HH head, HH Size, employment status of HH head, and gender of HH head. The estimated result of the model is given Table 4.10 below.

4.4.1.1 Correlation Matrix of Explanatory Variables

Table 4.10 shows the estimated result the correlation matrix and reveals that none of the independent variables are highly correlated ($|r| < 0.8$) except principal diagonal, suggesting the absence of multicollinearity issues. Hence, this indicates that the estimated coefficients in the logistic regression model provides stable and reliable coefficients, and the relationships among predictors do not distort the model's estimations. In this regard, Dormann et al. (2013) emphasized that multicollinearity can inflate the variance of coefficient estimates, leading to unreliable and biased results. However, since the correlations in this analysis are moderate or low, the risk of such distortions is minimal, ensuring the credibility of the model's inferential statistics and predictions.

Table 4.10

Correlation Matrix of Explanatory Variables

Variables	lnHHi	lnHHs	lnHU	lnEdu	Chr	Emp	Gen	HiE
lnHHi	1.00	0.03	0.05	0.00	0.19	-0.21	0.22	0.03
lnHHs	0.03	1.00	-0.12	-0.01	-0.27	0.06	0.22	0.10
lnHU	0.05	-0.12	1.00	-0.17	0.33	0.12	0.25	0.08
lnEdu	0.00	-0.01	-0.17	1.00	-0.21	-0.15	0.04	0.02
Chr	0.19	-0.27	0.33	-0.21	1.00	0.31	0.14	-0.08
Emp	-0.21	0.06	0.12	-0.15	0.31	1.00	-0.10	0.19
Gen	0.22	0.22	0.25	0.04	0.14	-0.10	1.00	0.09
HiE	0.03	0.10	0.08	0.02	-0.08	0.19	0.09	1.00

Note. Table 4.10 shows the correlation matrix based on data Field Survey, 2025

4.4.1.2 Estimated Result of Empirical Model and Discussion

Table 4 shows the estimated result of OLS regression model where the model was estimated examine relationship between OOP payments for healthcare as the function of household income, household size, health insurance enrollment status, healthcare utilization trends, prevalence of chronic disease in household. Likewise, other control variables were education level, gender and employment status of household head.

Table 4.11

Estimated OLS Model for Estimating Determinants of OOP payments for Healthcare

Dependent Variable: OOP payments for Healthcare				
Variables	Coefficient	Std. Error	t-value	p-value
lnHHi	-0.232	0.018	-12.31	0.00
HiE	-0.067	0.007	-8.92	0.00
lnHHs	0.045	0.024	1.87	0.06
lnHU	0.270	0.013	20.16	0.00
lnEdu	-0.075	0.024	-3.10	0.00
Chr	0.093	0.009	9.86	0.00
Emp	0.055	0.018	3.03	0.00
Gen	-0.008	0.008	-0.98	0.32
Constant	4.393	0.088	49.77	0.00
R-squared	0.855			
Adjusted R-squared	0.846			
F-statistics	97.17			
D-W Statistic	1.90			

Note. Table 4.11 above table presents result of OLS model. Data Source: Field Survey, 2025

Table 4.11 shows the estimated result of OLS regression model where the model explains approximately 85.5 percent of the variability in the log of OOP payments for healthcare (lnOOP) at health level among households. Similarly, D-W Statistics value 1.90 indicates that there is autocorrelation issues in the data series included in the model. The result shows that health

insurance enrollment is significantly associated with a reduction in OOP payments. In other words, health insurance enrollment is contributing to reduce OOP payments for healthcare 6.7 percent. This result is confirming the protective role of insurance as reported by Xu et al. (2003). Household Income (lnHHi) is significantly negative (-0.232, $p<0.01$), indicating that households with higher-income tend to have lower OOP payments. This result is consistent with findings by van Doorslaer et al. (2007) suggesting that richer households have better financial protection and access to pre-paid healthcare like insurance or employer schemes. Household Size (lnHHs) shows a positive but marginally insignificant effect ($p < 0.10$), implying larger families may spend more OOP payments for health, but the evidence is not strong. Moreover, healthcare utilization (lnHU) is positively significant (0.270, $p<0.01$) correlated with OOP payments for healthcare, meaning increased healthcare usage leads to higher OOP payments for healthcare as it is an expected result in OOP financing systems.

Education Level of HH head (lnEdu) is negatively influences OOP payments for healthcare (-0.075, $p<0.01$), indicating that better-educated households are more likely to avoid unnecessary, perhaps by making informed choices. This result is also consistent with the findings by Giedion and Uribe (2009). Presence of Chronic Disease at HH increases OOP payments for healthcare significantly (0.093, $p<0.01$). This result is also in line with global evidence that households with chronic illness burdens have higher financial burden (Wagstaff et al., 2003). The result also show that formally employed household heads are associated with higher OOP payments for healthcare compared to non-formally employed ones with the coefficient (0.055, $p<0.01$) suggests that households with a formally employed head spend about 5.5 percent more on OOP payments than households with non-formally employed heads. The findings of Wagstaff et al. (2003) also confirm this. To sum up, health insurance significantly reduces household OOP payments for healthcare, while higher income and education levels also help in reducing these costs. The prevalence of chronic disease also increases OOP payments for healthcare, whereas the gender of the household head does not play a significant role on OOP payments for healthcare. Therefore, based on the estimated result presented in Table 4.11 above regression model can be presented as follows:

$$\text{OOP Payment}=4.393 -0.232\,(\text{HHi})-0.067\,(\text{HiE}) + 0.045\,(\text{HHs}) + 0.270\,(\text{HU})+ -0.075\,(\text{Edu}) + 0.093(\text{Chr}) +0.055\,(\text{Emp}) -0.008\,(\text{Gen})+\varepsilon \quad ...(1)$$

4.4.2 Determinants of Health Insurance Enrollment

The logit model is estimated the probability of health insurance enrollment as a function of the independent and control variables. In other words, logit model is proposed to identify the determinants of health insurance enrollment.

4.4.2.1 Correlation Matrix of the Explanatory Variables

Table 4.12 shows the estimated result the correlation matrix and reveals that none of the independent variables are highly correlated ($|r| < 0.8$), except principal diagonal suggesting the absence of multicollinearity issues. Hence, this indicates that the estimated coefficients in the logistic regression model provides stable and reliable coefficients, and the relationships among predictors do not distort the model's estimations. In this regard, Dormann et al. (2013) emphasized that multicollinearity can inflate the variance of coefficient estimates, leading to unreliable and biased results. However, since the correlations in this analysis are moderate or low, the risk of such distortions is minimal, ensuring the credibility of the model's inferential statistics and predictions.

Table 4.12

Correlation Matrix of the Explanatory Variable

Variables	lnOOP	lnHHs	lnHHi	lnHU	lnEdu	Gen	Emp	Chr
lnOOP	1	-0.04	-0.48	0.64	-0.21	-0.05	0.37	0.14
lnHHs	-0.04	1.00	0.03	0.07	-0.01	0.22	0.06	-0.27
lnHHi	-0.48	0.03	1.00	-0.11	0.00	0.22	-0.21	0.19
lnHU	0.64	0.07	-0.11	1.00	0.00	0.06	0.18	-0.26
lnEdu	-0.21	-0.01	0.00	0.00	1.00	0.04	-0.15	-0.21
Gen	-0.05	0.22	0.22	0.06	0.04	1.00	-0.10	0.14
Emp	0.37	0.06	-0.21	0.18	-0.15	-0.10	1.00	0.31
Chr	0.14	-0.27	0.19	-0.26	-0.21	0.14	0.31	1.00

Note. Table 412. shows the correlation matrix based on data Field Survey, 2025.

4.4.2.2 Estimated Result of Empirical Model and Discussion

The estimate result of logistic regression model is presented in the Table 4.13 that demonstrates a good overall fit. Evidently, the Log-Likelihood value of -45.93 followed by highly significant Likelihood Ratio (LR) statistic of 78.58 ($p < 0.0000$) indicate the robustness of the estimated output. Additionally, the McFadden R^2 value of 0.461 suggests a strong model fit. Notably, the McFadden R^2 exceeds the commonly accepted threshold of 0.4 for logistic models in economics and social sciences, indicating a good model fit. This implies that the estimated model explains a substantial proportion of the variation in health insurance enrollment decisions pattern among households in the study area.

Table 4.13

Logit Model Estimation for Health Insurance Enrollment

Dependent Variable: Probability of Health Insurance Enrollment		
Variables	Coefficient	p-value
lnOOP	-47.24	0.001
lnHHi	-8.77	0.001
lnHHs	1.76	0.383
lnHU	13.24	0.001
lnEdu	-3.94	0.061
Chr	3.29	0.001
Emp	2.29	0.016
Gender	0.035	0.956
Constant (Intercept)	194.83	0.001
McFadden R^2	0.461	
Log-Likelihood	-45.93	
LR Chi-Square	78.58	

Note. Table 4.13 above presents the estimated result of logit model based on the data collected from study are in first quarter 2025.

Table 4.13 gives estimated result of logistic regression model meant for identifying the determinants of health insurance enrollment of the beneficiaries in the study are. In other words, a 1 percent increase in OOP payment for health, the odds of having insurance decrease dramatically. The estimated result shows that higher OOP payments for health significantly reduces odds of insurance enrollment. In other words, OOP payments for healthcare is negatively

and significantly associated with the health insurance enrollment. This may indicate that households with higher OOP healthcare expenditure are less likely to be enrolled in health insurance, possibly reflecting that uninsured households bear heavier direct costs compared to insured ones. This finding aligns with Wagstaff and Doorslaer (2003).

Likewise, the result found that households with higher income significantly reduces odds of insurance enrollment. This is unique result, probably indicating higher household income reduces the probability of insurance enrollment. In other words, this could suggest that wealthier households might prefer to directly pay for private healthcare services instead of participating national health schemes. This result is supported by the findings of Mathauer and Carrin (2011) and Ekman (2004) and they asserted that wealthier households in low- income and middle-income countries are more likely to bypass national health schemes rather they might prefer pay directly for private care, perhaps seeing it as superior in terms of convenience and quality. However, this result is contrasted with the findings of Jehu-Appiah et al. (2012) and Wagstaff (2007) and asserted that higher income household is positively associated with insurance enrollment, reflecting that wealthier households have a greater ability to pay premiums followed by their awareness of the benefits of insurance. Therefore, the study supports the idea that wealthier households in countries with weak public health delivery services may prefer to choose private healthcare providers, eventually leading to lower insurance enrollment among them.

Moreover, the estimated logit model result shows that in the study are higher healthcare utilization rate is greatly increases odds of the health insurance enrollment. In other words, households with higher healthcare utilization are significantly more likely to enroll in health insurance. This may suggest that those who frequently seek healthcare recognize the financial protection value of insurance. This finding is consistent with Kimani et al. (2014) and Wang et al. (2006). As Kimani et al. (2014) asserted that healthcare utilization rate was positively associated with health insurance enrollment implying that households seeking more care were more likely to enroll insurance plan to reduce OOP payments for healthcare. Likewise, Wang et al.(2006) argued that households with higher healthcare utilization have higher probability of enrolling in insurance schemes**,** showing evidence of adverse selection meaning that more frequent users of care or individual having chronic health issue prefer to be enrolled in health insurance to reduce their financial risks. However, the findings of Jehu-Appiah et al. (2011)

mixed and weak relationship and Dror et al. (2007) found no significant relationship between rate healthcare utilization and healthcare insurance enrollment.

The estimated result indicated that higher education marginally reduces health insurance enrollment in the study area. Generally, the direction causality is unexpected. However, this finding is supported by Asfaw and Jütting (2007) and Dong et al. (2003) and asserted that better-educated household heads have higher probability to enroll in community-based health insurance schemes, possibly because they questioned the scheme's quality or preferred private care. In this regard, Asfaw and Jütting (2007) asserted that higher educated HHs did not significantly increase the probability of health insurance enrollment**.** Rather they prefer private care paid OOP payments for healthcare, viewing community or public health insurance as lower quality. Conversely, the findings of Jehu-Appiah et al. (2011) and Kimani et al. (2014) are contrasting with the findings of current study. In this regard, Jehu-Appiah et al. (2011) has concluded that higher education was strong determinant of health insurance enrollment**,** reflecting educated individuals valued financial risk protection and have better understanding of health financing concepts better. Likewise, Kimani et al. (2014) underscored that higher education is positively associated with health insurance enrollment reflecting more educated individuals have better understanding on the benefits of health insurance and are more likely to enroll.

The estimated result based on the data of HH survey that the households with chronic illness more likely to enroll in insurance in the study area. These results are also supported by Kimani et al. (2014) and Wang et al. (2006) and their synthesized view was chronically ill households are more likely to enroll in health insurance scheme due to their higher medical needs and increasing costs, indicating a positive influence on enrollment decisions. It is also opined as character of moral hazard as the individuals who expect high medical expenses are more inclined to seek health insurance coverage. Conversely, the findings of Dror et al.(2007) and and Jehu-Appiah et al. (2011) are contrasting with these current study findings. In this regard Dror et al. (2007) stated that chronic illness did not significantly predict health insurance enrollment**,** possibly due to income poverty even ill are not able afford insurance premiums**,** despite knowing its benefits. But, Jehu-Appiah et al. (2011) argued different view stating that households with chronic illness may not always enrolled health insurance**,** especially when they perceive inadequacy of insurance coverage.

Finally, the employment status of HH head is also found to be significant predictor of the likelihood of health insurance enrollment. In other words, employed household has higher probability of health insurance enrollment in comparison to unemployed. These findings are supported by the study of Jehu-Appiah et al. (2011) and Kimani et al. (2014) based on their study in Ghana and Kenya. In this regard, Jehu-Appiah et al. (2011) found that formal employment status significantly increased the likelihood of health insurance enrollment in Ghana. Having employed status is attributed to better access to information, followed by financial capacity, and often mandatory workplace-related health insurance coverage. Likewise, Kimani et al. (2014) underscored that in general the formal sector employed individuals have higher income stability and exposure to health benefit schemes that induce to enrollment.

Conversely, Jutting (2004) study in Senegal reported that employment status is not always a significant determinant of insurance enrollment. This happens especially where informal employment was widespread where insurance scheme is not directly linked to employment status at workplaces. Therefore, it can be stated that employment is generally a strong predictor, but its impact can be context based and cross-country policy based.

4.4.3 Determinants of Healthcare Utilization

In the realm of health economics, healthcare utilization is influenced by several factors such as household income, household size, educational level of household head, status of chronic health issue in the family, gender of household health insurance coverage, employment status, and proximity to healthcare facilities so on. This current study has utilized these all factors in the econometric model as specified in equation (4) given in research methodology part. The econometric analysis is presented discussed subsequently.

4.4.3.1 Correlation Matrix of the Explanatory Variables

Table 4.14 below shows the estimated result the correlation matrix and reveals that none of the independent variables are highly correlated ($|r| < 0.8$), except principal diagonal suggesting the absence of multicollinearity issues. Hence, this indicates that the estimated coefficients in the logistic regression model provides stable and reliable coefficients, and the relationships among predictors do not distort the model's estimations. In this regard, Dormann et al. (2013) emphasized that multicollinearity can inflate the variance of coefficient estimates, leading to

unreliable and biased results. However, since the correlations in this analysis are moderate or low, the risk of such distortions is minimal, ensuring the credibility of the model's inferential statistics and predictions.

Table 4.14
Correlation Matrix

Variables	lnOOP	lnHHi	lnHHs	lnEdu	Gen	Emp	Chr	HiE
lnOOP	1.00	-0.48	-0.04	-0.21	-0.05	0.37	0.14	-0.20
lnHHi	-0.48	1.00	0.03	0.00	0.22	-0.21	0.19	0.03
lnHHs	-0.04	0.03	1.00	-0.01	0.22	0.06	-0.27	0.10
lnEdu	-0.21	0.00	-0.01	1.00	0.04	-0.15	-0.21	0.02
Gen	-0.05	0.22	0.22	0.04	1.00	-0.10	0.14	0.09
Emp	0.37	-0.21	0.06	-0.15	-0.10	1.00	0.31	0.19
Chr	0.14	0.19	-0.27	-0.21	0.14	0.31	1.00	-0.08
HiE	-0.20	0.03	0.10	0.02	0.09	0.19	-0.08	1.00

Note. Table 4.14 above presents the estimated result of correlation matrix on the data collected from study are in first quarter 2025.

4.4.4.2 Empirical Result of Estimated Model and Discussion

The Table 4.15 below shows estimated result of OLS model that explains 80.8 percent of healthcare utilization variation, with the explanatory power of the variables included in the model. After adjusting for predictors, it explains 79.5 per cent of variation. The F-statistic value is significant, suggesting joint influence is significant. Likewise, the Durbin-Watson stat is 2.15 implying no problem of autocorrelation.

Table 4.15

Estimated Model for Determinants for Healthcare Utilization

Dependent Variable: lnHU				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnOOP	2.89	0.15	19.17	0.00
lnHHs	0.15	0.08	1.82	0.07
lnHHi	0.64	0.07	8.76	0.00
lnEdu	0.19	0.08	2.34	0.02
Gen	0.04	0.03	1.39	0.17
Emp	0.00	0.04	0.07	0.94

Chr	0.31	0.03	9.19	0.00
HiE	0.22	0.03	8.52	0.00
Constant	-12.42	0.74	-16.76	0.00
R-squared	0.808			
Adjusted R-squared	0.795			
Durbin-Watson stat	2.15			
Prob(F-statistic)	0.004			

Note. Table 4.15 above shows estimated result of OLS model estimated as the determinants of healthcare utilization, Data source: Field Survey, 2025

Table 4.15 above shows that a 1 percent increase in OOP payments for healthcare is associated with an average 2.89 percent increase in healthcare utilization**.** This implies that those who spend more OOP payments are also utilizing more healthcare services, indicating that OOP payments for health remains a necessary means to access care. These results are also supported by Wagstaff et al. (2003) and O'Donnell et al. (2008) as they asserted that state that OOP payments for health is directly linked with increased service utilization in low-income and middle-income countries where insurance coverage is limited. Conversely, Xu et al. (2003) argue that high OOP leads to reduced utilization, particularly among the poor households, due to catastrophic expenditures that prevent health service access.

Likewise, a 1 percent increase in household size is associated with a 0.15 percent increase in healthcare utilization, marginally significant at 10 per cent. Possibly, it is so because larger families need more care collectively. This result is consistent with Abegunde and Stanciole (2008) and the result suggest larger households may have higher healthcare needs. Conversely, the finding is contrasting with Goudge et al. (2009) which indicate that in poor households, larger family size may dilute resources, reducing per capita healthcare utilization.

Moreover, a 1 percent increase in income raises healthcare utilization by 0.64 percent consistent with the idea that higher income facilitates more health service use. The income elasticity of healthcare utilization is less than unity implying that healthcare goods are essential goods in the study area. The result is consistent with Van Doorslaer et al. (2006) which show that richer households are more likely to utilize health services, indicating positive income elasticity. Conversely, Limwattananon et al. (2015) asserted that income differences were minimized through UHC, weakening this relationship.

Similarly, a 1 per cent increase in education level is associated with a 0.19 percent increase in utilization. It can be inferred that education likely improves health awareness and demand for healthcare services. The result aligns with the Health Capital Model of Grossman (1972), as the suggests that higher education increases health service demand as educated people value health more. Likewise, Khan and Van den Heuvel (2007) also show that in South Asia, higher level of education raises maternal and child health service use. Conversely, the findings of Pokhrel and Sauerborn (2004) found no strong link between education and healthcare use when access is universally low.

Moreover, households with chronic disease have 31 per cent higher healthcare utilization**,** as expected due to increased medical need. The finding is supported by Ataguba and Goudge (2012) as the people with chronic diseases in South Africa utilize services more frequently due to ongoing care needs. Finally, households enrolled in health insurance use 22 per cent more healthcare services than uninsured ones as it is consistent with increased access or moral hazard. This result is also consistent with Wagstaff and Lindelow (2008) and Acharya et al. (2013). insurance increases outpatient utilization in Vietnam, due to reduced cost barriers. The study of Acharya et al. (2013) using meta-analysis shows health insurance leads to greater service utilization across lower and middle income countries. Conversely, Devkota and Teijlingen (2010) noted that despite insurance schemes in Nepal, utilization may not increase due to supply-side barriers. To sum up, OOP payments for healthcare**,** household income**,** education of household head**,** chronic illness prevalence in household**,** and health insurance enrollment are significant positive predictors of healthcare utilization.

4.5 Problem Encountered by Health Insurance Enrollee in the Study Area

The survey was also conducted to find out problem faced by the health insurance enrollee. This survey was done using open ended questions providing opportunity to have their regarding their perceived problem. Based the survey of the respondents following major problems regarding health insurance services in Nepal:

a. **Long Waiting Time:** Most of the respondents stated they had to stand in long lines for services like registration, check-ups, lab tests, medicine collection, and wasting the whole day.

b. **Unavailability of Essential Medicines:** Many of the respondent showed grievance non availability of essential medicines prescribed by doctors under insurance coverage, eventually forcing beneficiaries to purchase them at high prices outside.
c. **Insufficient Health Services:** Many of the respondent showed grievance some critical health services such as major surgeries and complex disease treatments were either not covered or referred outside without proper documentation.
d. **Lack of Skilled Staff:** Many of the respondent showed grievance regarding shortage of trained manpower leading to insufficient and delayed service delivery.
e. **Biased Treatment:** Many of the respondent showed grievance discriminatory behavior from the part of service providers in service delivery against insured patients compared to non-insured ones.
f. **Poor Quality of Medicine:** Many of the respondent raised complaints about the low quality of medicines provided under the scheme.
g. **Additional Financial Burden:** Many of the respondent showed grievance on the mandatory 10 percent co-payment and OOP payments for health expenses for unavailable medicines service. They perceived it as causative factor of financial stress.
h. **Problematic Behavior of Staff:** Many of the respondent reported unfriendly and neglectful behavior from hospital staff towards insurance towards service receivers.
i. **Physical Discomfort for Elderly:** Many of the respondent showed grievance against long queues and waiting times particularly it was hard and severe for elderly beneficiaries.
j. **Service Fragmentation:** Many of the respondent showed grievance on lack of one-stop service availability and provision of visiting multiple counters and departments.

4.6 Health Insurance Beneficiary Opinions to Improve Service

This study also included the open-ended survey question to illicit opinion of beneficiaries to improve service quality health insurance from the part of service provider. The summary their top 10 feedbacks and suggestions is presented subsequently:

a. **Separate Counter for Health Insurance Holders:** Most of respondents suggested for managing separate counter for pharmacy, lab, OPD, and registration counters to avoid mixing with non-insured patients.
b. **Making Available of All Medicines and Quality Assurance:** Many of the beneficiaries demanded that all prescribed medicines with good quality should be covered and available in one place under health insurance scheme.
c. **Increase in Insurance Coverage Limit:** Vast majority of the beneficiaries demanded that annual insurance amount (currently NPR 100,000) is considered insufficient; suggestion to increase this coverage up to NPR 200,000 or 300,000.
d. **Inclusion of All Diseases and Treatments:** Many of the beneficiaries expected that all diseases including critical illnesses and treatments should be covered under the scheme.
e. **Staff and Infrastructure Improvement:** Many of the beneficiaries suggested to manage adequate human resources, infrastructure, and ensure round-the-clock i.e. 24-hour service availability.
f. **Online Services:** Most of the beneficiaries requested for online ticketing and billing to reduce crowding and improve service delivery.
g. **Equal Treatment to All Beneficiaries:** Many of the beneficiaries stressed the importance of fair and impartial behavior by staff without any discrimination based on any notion.
h. **Special Provision for the Elderly and Poor:** Many of the beneficiaries demanded for free health insurance for citizens above 60 years and ultra-poor populations.
i. **One-Stop Service Provision:** Most of the beneficiaries showed their preference for all services i.e. registration, check-up, medicine, billing to be provided at a single point.
j. **No Additional Charges after Insurance Payment:** Many of the beneficiaries urged that no extra OOP expenses should be charged after paying the insurance premium.

4.7 Conclusion of the Chapter

This study was about existing status of beneficiary of health insurance enrollee in the study area. The findings reveal that health insurance significantly contributes to financial protection by reducing OOP health expenditures of households and easing the management of healthcare costs. Similarly, respondents reported reduced financial stress and an enhanced

ability to afford preventive care and regular health check-ups due to health insurance provision. They also stated that health insurance provision also improved access to healthcare services by increasing the availability of providers and facilitating hospital visits. Moreover, the health insurance scheme was perceived as adequately covering necessary healthcare services and offering transparent, effective claims processes too. However, they expressed their grievance on the part of service providers. Evidently, overall satisfaction beneficiary was found to be high. In this regard, almost all respondents expressing willingness to continue insurance enrollment and also ready to recommend others for enrolling in health insurance, indicating the perceived value and sustainability of NHIS of the study area.

The estimated regression results reveal significant determinants of OOP payment for healthcare payments. The analysis result showed that Healthcare utilization (ln HCU) and chronic disease presence in household significantly increase OOP payments for healthcare, reflecting higher service use and treatment costs. Household size (lnHHs) shows a positive but marginally significant effect, while the gender of the household head has no significant influence. Conversely, household income (lnHHi), health insurance enrollment, and education level of household head(ln Edu) are negatively associated with OOP payments, suggesting that higher income, insurance coverage, and education reduce healthcare expenditure burden by improving health through preventive care. The econometric model explains a substantial proportion of the variation in OOP payments for healthcare (R^2 = 0.855), indicating good fit and reliability for policy and economic interpretation.

Likewise, the logit model analysis reveals key determinants of health insurance enrollment in the study area. OOP payments for health (lnOOP) and household income (lnHHi) are negatively associated with the probability of enrollment, indicating that wealthier households may prefer direct healthcare payments over insurance schemes in the study area. Conversely, healthcare utilization of household members (lnHU) and presence of chronic disease significantly increase the likelihood of insurance enrollment. Moreover, employment status of the household head also positively influences insurance uptake. Furthermore, education level and household size show no significant effects, while gender is

insignificant for health insurance enrollment. Likewise, the model demonstrates a good fit (McFadden $R^2 = 0.461$), explaining substantial variation in insurance enrollment probability.

Finally, the regression analysis revealed that OOP payments for(lnOOP), household income level (lnHHi), education level of household head (lnEdu), chronic disease prevalence status in household (DumChr), and health insurance enrollment (HiE) significantly influenced healthcare utilization (lnHU) at a 5 percent level of significance. However, the variables such as household size (lnHHs) showed a marginal effect, while gender and employment status of the household head were not statistically significant. The estimated model explained 80.8 percent of the variation in healthcare utilization ($R^2 = 0.808$), indicating a good fit of the model. The Durbin-Watson statistic (2.15) suggested no autocorrelation problem. Therefore, the findings confirm that economic, educational, and health conditions of family members are key determinants of healthcare utilization.

CHAPTER 5

SUMMARY OF FINDINGS CONCLUSIONS RECOMMENDATIONS

The general aims of the current study were to explore the role of health insurance in reducing financial burdens on households, improving access to healthcare, and identifying key factors influencing its effectiveness in the context of Nepal's healthcare system. In other words, this study assesses the impact of national health insurance on out-of-pocket (OOP) payments for healthcare in Nepal, with empirical evidence drawn from 120 households in Tikapur Municipality. In this regard, the study is guided by four core objectives: to analyze the socio-economic and demographic determinants of health insurance enrollment and their association expenditures; to estimate the contribution of health insurance in reducing OOP payments for healthcare; to identify determinants of insurance enrollment and healthcare utilization; and to assess beneficiaries' perceptions regarding healthcare services and financial protection under the insurance scheme. In this regard summary of findings, conclusions and recommendations are presented subsequently:

5.1 Summary of Findings

The summary of the findings of this study is Summarized below:

- Cronbach's Alpha values was calculated to assess the internal consistency of the items used for perception analysis of the respondents that range between 0.798 and 0.889 for all six dimensions**,** indicating acceptable to excellent internal consistency. Comparatively, the dimension 'Coverage Adequacy' has the lowest Cronbach's Alpha value 0.798**.** The overall scale reliability Cronbach's Alpha values is 0.846 suggests that the instrument is consistently measuring the basic constructs related to health insurance perception.
- The study found the average monthly income of household members among the sampled respondents was NPR 8,814.93 with a standard deviation (SD) of 365.29, suggesting that most households have relatively similar income levels, with only minor variation across the sample.
- Healthcare expenditure, the mean OOP payments for healthcare for healthcare services was NPR 2,645.02 with SD 586.90. This implies that about 30 percent of the household

income is spent on health-related expenses, which highlights the financial burden of health services even for insured households. This finding is consistent with the study of Karan et al. (2017), who reported that high OOP payments for healthcare remain a significant barrier to achieving UHC.

- The average household size is found to be 4.45 with SD 1.54, which reflects the typical family structure in Nepal, where multi-generational households are common. Likewise, the mean age of the household head was estimated to be 52.10 years with SD 14.68 years, indicating that most household heads are elderly. Probably, they may have higher health service needs and risk of chronic diseases, possibly their dependency on health insurance coverage.
- The average hospital visit rate per year was 10.35 times with SD 0.84 times, reflecting frequent use of healthcare services among the respondents. Essentially, this high utilization rate suggests that the insured population is actively seeking healthcare. This may be possibly encouraged by the NHIS coverage that reduces direct costs at the point of service.
- The findings show information regarding the willingness to contribute more for health insurance, 79.04 percent of NHIS enrollee expressed willingness to pay for an increased premium, while 20.96 percent were unwilling. The mean threshold WTP for a premium increase was 6.98 per cent of income with SD 4.22. This provides valuable information for policy adjustments regarding premium rates in future.
- Regarding level of education household head, 16.10 percent of household heads were illiterate, 32.30 percent had attained basic and primary education, 27.40 percent had secondary education, 16.10 percent were graduates, and only 8.10 percent held a master's degree. Essentially, this educational distribution reflects a predominantly low to moderately educated population and this may influence understanding and perception of health insurance benefits. Likewise, the gender distribution of household heads shows that 61.16 percent were male and 38.84 percent female, which is in line with the patriarchal structure of many Nepali households, where males traditionally assume the role of household heads. Finally, 51.60 percent of households reported the presence of chronic diseases, while 48.40 percent did not.

- The perception respondents stated that health insurance significantly reduces OOP health expenses and financial stress during medical treatments, making health costs more manageable. However, so some respondents' individuals still struggle with affordability.
- Respondents stated that insurance coverage has increased willingness to seek healthcare, enhanced service availability, and made health facilities more accessible. Overall satisfaction with the scope of services is high, though coverage limits are perceived as needing improvement.
- Respondents are found to be moderately satisfied with the adequacy of service coverage and expense coverage, but concerns remain about the completeness of expense coverage and clarity on claim processes.
- The respondents stated that insurance program provides timely and supportive customer service, helpful information, and ensures financial security during emergencies, although some users find claim procedures complex.
- The respondents stated that insurance coverage reduces the need for financial coping strategies (like loans) and improves the quality and desirability of seeking health services, encouraging regular check-ups and early consultations.
- The respondents stated that most participants intend to continue insurance coverage and recommend it to others, believing the cost is reasonable relative to the benefits received.
- Most of the respondents stated they had to stand in long lines for services like registration, check-ups, lab tests, medicine collection, and wasting the whole day.
- Many of the respondent showed grievance non availability of essential medicines prescribed by doctors under insurance coverage, eventually forcing beneficiaries to purchase them at high prices outside.
- Many of the respondent showed grievance some critical health services such as major surgeries and complex disease treatments were either not covered or referred outside without proper documentation.
- Many of the respondent showed grievance regarding shortage of trained manpower leading to insufficient and delayed service delivery.
- Many of the respondent showed grievance discriminatory behavior from the part of service providers in service delivery against insured patients compared to non-insured ones.

- Many respondents suggested for managing separate counter for pharmacy, lab, OPD, and registration counters to avoid mixing with non-insured patients.
- Many of the beneficiaries demanded that all prescribed medicines with good quality should be covered and available in one place under health insurance scheme.
- Vast majority of the beneficiaries (51%) demanded that annual insurance amount (currently NPR 100,000) is considered insufficient; suggestion to increase this coverage up to NPR 200,000 or 300,000.
- Many of the beneficiaries expected that all diseases including critical illnesses and treatments should be covered under the scheme.
- Many of the beneficiaries suggested to manage adequate human resources, infrastructure, and ensure round-the-clock i.e. 24-hour service availability.
- The estimated econometric model explains a substantial proportion of the variation in OOP payments for healthcare ($R^2 = 0.855$), indicating good fit and reliability for policy and economic interpretation.
- The estimated logit model demonstrates a good fit (McFadden $R^2 = 0.461$), explaining substantial variation in insurance enrollment probability.
- The estimated econometric model explained 80.8 percent of the variation in healthcare utilization ($R^2 = 0.808$), indicating a good fit of the model. The Durbin-Watson statistic (2.15) suggested no autocorrelation problem. Therefore, the findings confirm that economic, educational, and health conditions of family members are key determinants of healthcare utilization.

5.2 Conclusions

The conclusion of the study can be summarized as follows:

Firstly, the estimated regression results reveal significant determinants of OOP payment for healthcare payments. The analysis result showed that Healthcare utilization (lnHCU) and chronic disease presence in household significantly increase OOP payments for healthcare, reflecting higher service use and treatment costs. Household size (lnHHs) shows a positive but marginally significant effect, while the gender of the household head has no significant influence. Conversely, household income (lnHHi), health insurance enrollment, and education

level of household head(lnEdu) are negatively associated with OOP payments, suggesting that higher income, insurance coverage, and education reduce healthcare expenditure burden by improving health through preventive care. The econometric model explains a substantial proportion of the variation in OOP payments for healthcare ($R^2 = 0.855$), indicating good fit and reliability for policy and economic interpretation.

Secondly, the logit model analysis reveals key determinants of health insurance enrollment in the study area. OOP payments for health (lnOOP) and household income (lnHHi) are negatively associated with the probability of enrollment, indicating that wealthier households may prefer direct healthcare payments over insurance schemes in the study area. Conversely, healthcare utilization of household members (lnHU) and presence of chronic disease significantly increase the likelihood of insurance enrollment. Moreover, employment status of the household head also positively influences insurance uptake. Furthermore, education level and household size show no significant effects, while gender is insignificant for health insurance enrollment. Likewise, the model demonstrates a good fit (McFadden $R^2 = 0.461$), explaining substantial variation in insurance enrollment probability.

Finally, the regression analysis revealed that OOP payments for(lnOOP), household income level (lnHHi), education level of household head (lnEdu), chronic disease prevalence status in household (DumChr), and health insurance enrollment (HiE) significantly influenced healthcare utilization (lnHU) at a 5 percent level of significance. However, the variables such as household size (lnHHs) showed a marginal effect, while gender and employment status of the household head were not statistically significant. The estimated model explained 80.8 percent of the variation in healthcare utilization ($R^2 = 0.808$), indicating a good fit of the model. The Durbin-Watson statistic (2.15) suggested no autocorrelation problem. Therefore, the findings confirm that economic, educational, and health conditions of family members are key determinants of healthcare utilization.

5.3 Policy Recommendations for Improvement of NHIS of Nepal

The findings of the current study is strong policy relevance for Nepal’s health system, particularly in light of the national commitment to universal health coverage (UHC) and financial risk protection of low income population as outlined in the National Health Policy of

Nepal 2019. Hence, the evidence confirms that health insurance enrollment significantly reduces OOP payments for healthcare, highlighting the scheme's potential to alleviate healthcare-related financial burdens. However, lower enrollment among higher-income and higher healthcare spending households suggests trust, accessibility, and benefit-package concerns. Therefore, policy reforms must focus on enhancing the perceived value of the insurance scheme, expanding qualitative benefit coverage, and ensuring efficient claim processes. Overall, to fulfill Nepal's national priorities, efforts must be intensified to expand enrollment, improve service quality, and ensure equity in healthcare financing. Moreover, based on the findings, following recommendations can be pointed out to address the relating to NHIS and better implementation:

- Government needs to ensure comprehensive protection, the health insurance scheme need to be widened its benefit package by including preventive, curative, rehabilitative, and palliative services. This expansion must cater to all population groups covering all essential health services, and respond to changing disease patterns. Thus**,** reducing reliance on OOP payments for healthcare and enhancing universal health coverage.
- Government needs to reduce co-payments and remove unnecessary exclusions can make health insurance more affordable and inclusive. This is expected to minimize financial barriers and ensuring wider coverage, the scheme promotes equity and access, particularly benefiting vulnerable populations. This is likely encouraging higher enrollment rates and reduces catastrophic health expenditures, which often push households into poverty.
- Government needs to increase coverage with quality medicines including all essential and prescribed quality medicines without exceptions. Beneficiary expressed their concern over the unavailability of certain medicines within the scheme, suggesting that such drugs should be made consistently accessible at one authorized location to reduce inconvenience and additional costs.
- Government need increase current annual insurance coverage limit of NPR 100,000, stating it to be inadequate in meeting actual healthcare expenses to ensure sufficient financial protection against rising medical costs.

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Annex

Assessing the Impact of National Health Insurance on Out-of-Pocket (OOP) Payments for Healthcare in Nepal

Dear Respondent,

This questionnaire aims to assess the determinants of household out-of-pocket (OOP) payments for healthcare. Your responses will help us understand the financial burden of healthcare expenses and the coping strategies used by households. The information you provide will be kept strictly confidential and used solely for research purposes. Your participation is voluntary, and you may choose to skip any question or withdraw at any time. However, your honest responses will be highly valuable in shaping policies and improving healthcare affordability.

Thank you for your time and cooperation.
Sincerely,
Researcher

1.Personal and Household Information

Name (Optional): Mobile No:

Age:

Gender of HH head	Male	
	Female	
	Others	
Place of Residence	Urban	
	Rural	
House hold Size		
Monthly Income	NPR	
Education level of HH head	No Formal Education	
	Primary	
	Secondary	
	Higher Education	
Employment Status of HH head	Unemployed	
	Daily wage	
	Self-employed	
	Private	
	Government	
Family members with chronic health conditions	Yes	
	No	

Frequency of Healthcare Visits (Last 12 months)		
Health Insurance Enrollment	Yes	
	No	
Health insurance premiums last year	NPR	
Out-of-Pocket Health Expenditures	NPR.	
Types of Medical Services Used Frequently	Consultations	
	Medications	
	Surgery	
	Hospitalization	
	Others	

Respondents are asked to rate each statement on a 5-point Likert scale, ranging from *Strongly Agree (SD=5), A(A=4), Neutral(N=3), Disagree(DA=2) and Strongly Disagree (SD=1).*

Dimension	**Indicator**	**Response Category**				
		SA	**A**	**N**	**DA**	**SD**
Financial Protection	Health insurance has reduced my out-of-pocket expenses for health services.					
	After participating in health insurance, it has become easier to manage my health expenses.					
	With health insurance, I experience less financial stress during medical treatments.					
	With health insurance, my financial burden is bearable.					
	Despite having health insurance, I still struggle to afford health services.					
	Health insurance has made it financially easier for me to consider regular check-ups and disease prevention.					
	Without health insurance, my health care costs would have been unbearable.					
Access to Health Services	Health insurance has increased my access to basic health services.					
	With health insurance, I am more willing to seek medical treatment.					
	Health insurance has increased the number of available health service providers for me.					
	My health insurance enables me to visit nearby hospitals or clinics.					
	I am satisfied with the scope of health services covered by national health insurance.					
	Health insurance provides an appropriate coverage limit for my health needs.					
Coverage Adequacy	National health insurance generally provides the necessary health services for me.					
	National health insurance covers most of my medical expenses.					
	I am satisfied with the scope of health services covered by national health insurance.					
	16. The process of claiming health insurance benefits is easy and effective.					

	The national health insurance program provides transparent information about covered and uncovered expenses.					
Process Quality	Customer service provided by the health insurance program responds promptly.					
	The health insurance program provides clear and helpful information about my benefits.					
	The health insurance program assures me of support during medical emergencies.					
	Health insurance provision has increased my financial security regarding health expenses.					
Perceived Effectiveness	Due to health insurance coverage, I am less likely to need loans or sell property for medical expenses.					
	The scope of my health insurance allows me to receive good quality health care.					
	Health facilities I can access provide better services because they are insured.					
	Because of health insurance, it has become easier and more desirable for me to seek health services.					
	The services covered by health insurance encourage me to undergo health check-ups.					
	Because of health insurance, I am motivated to consult a health service provider as soon as symptoms appear.					
Satisfaction and Continuity	I plan to continue my health insurance in the coming years.					
	Based on my experience of reduced out-of-pocket expenses, I recommend health insurance to others.					
	I am willing to pay a reasonable amount to continue my health insurance.					
	I believe the cost of health insurance is reasonable compared to its benefits.					

Open-Ended questions.

What are challenges you faced during service receiving time as a health insurance beneficiary?

……..

What are the suggestion you want to give as potential measures to resolve the problem you faced during service receiving time as a health insurance beneficiary?

……

Thank you for your time and responses!

Situational Analysis of Educational Governance Practices in Higher Education Institutions in Far Western University

A

Faculty Research Proposal

Submitted by

Associate Prof. Bal Kumar Chaudhary

Associate Prof. Nathu Ram Chaudhary

Submitted To

Tikapur Multiple Campus

Research and Coordination Sub-Committee

Tikapur, Kailali

2025

Abstract

This research investigates the situational analysis of educational governance practices in higher education institutions (HEIs) affiliated with Far Western University, Nepal. The study addresses the growing complexities and challenges facing HEI governance amid rapid sectoral expansion, resource constraints, and increasing stakeholder expectations. Employing a mixed-methods approach, the research analyzes the current governance frameworks, stakeholder roles, underlying causes of governance discrepancies, and the integration of sustainability within institutional structures.

Findings reveal that governance in Nepalese HEIs is characterized by limited stakeholder participation, bureaucratic inefficiencies, and resource mismanagement, which collectively undermine transparency, accountability, and institutional autonomy. Stakeholder influence is significant, yet often constrained by socio-political interference and inadequate policy implementation. The study identifies resource limitations, inconsistent policy enforcement, and communication gaps as primary factors contributing to disparities in governance practices among institutions. Furthermore, while sustainability is acknowledged as a governance priority, its practical integration remains inconsistent and underdeveloped.

The research draws on multiple theoretical perspectives—including Stakeholder Theory, Institutional Theory, New Public Management, Agency Theory, and Corporate Governance models—to contextualize governance challenges and inform the analysis. Empirical evidence from both global and local studies highlights that robust governance structures are essential for fostering academic quality, trust, and institutional performance, but these are often hampered by entrenched bureaucratic mindsets and insufficient stakeholder engagement.

The study concludes that effective governance in HEIs is pivotal for aligning educational objectives with societal needs, ensuring equitable resource distribution, and achieving sustainable institutional growth. It recommends strengthening participatory decision-making, enhancing transparency, and promoting adaptive governance models tailored to the Nepalese context. These measures are expected to bridge existing gaps, build stakeholder trust, and elevate the overall quality and competitiveness of higher education in Nepal.

The research is limited by respondent bias, restricted access to internal data, and its focus on selected HEIs in Far Western Nepal, which may affect the generalizability of findings. Nonetheless, the study provides actionable insights for policymakers, educational leaders, and stakeholders seeking to reform governance practices and advance the quality of higher education in Nepal

Table of Contents

Chapter One

Introduction

Background

Governance in higher education institutions (HEIs) refers to the structure and processes of decision making and the establishment of policies to guide the overall activities of the HEIs (Leal Filho et al., 2021; Mehari, 2010). It is evident that HEIs in Nepal has expanded in the last three decades in terms of the establishment of new HEIs institutions (Regmi, 2021) and with this expansion, inherently issues relating governance in HEIs is emerging day by day. Essentially, governance in HEI is pivotal for fostering academic quality, transparency, and accountability (Aithal & Maiya, 2023; Ntim et al., 2017). Effective governance frameworks help to achieve twin aims as aligning educational goals with societal needs and ensuring equitable resource distribution with sustainable institutional growth (Aithal & Maiya, 2023; Hénard & Roseveare, 2012). Public higher education institutions face several challenges in operational mechanisms and resource utilization and lead to rudimentary governance practices (Rosenau, 2021; Koliba et al., 2017; Anyamele, 2004). Therefore, governance in HEIs encompasses decision-making structures and policy frameworks crucial for fostering academic quality, accountability, and transparency. Undoubtedly, effective governance aligns educational goals with societal needs, ensures resource equity, and supports sustainable institutional growth.

Statements of Problem

Institutional governance in HEI plays a significant role to ensure optimal and effective utilization of resources with transparency, accountability, inclusiveness as a key of good governance. In general parlance, governance in HEIs is often undermined by challenges such as lack of limited stakeholder participation, transparency, resource mismanagement, and bureaucratic inefficiencies. This leads to inefficiencies in resource management, limited technological adoption, and low levels of trust in leadership. These persistent issues hinder their ability and efficacy to maintain global education standards and face serious challenges to meet the expectations of students, faculty members, and external stakeholders.

Moreover, these issues can affect academic freedom, integrity in policy implementation, and institutional performance as well as overall educational outcomes. Furthermore, in developing countries like Nepal, the situation is further worsened by resource constraints, inadequate funding and inherent socio-political interference, inadequate policy implementation, and gaps in communication and decision-making processes. Therefore, a situational analysis of governance practices is essential to identify the root causes of governance bottlenecks, and potential strategies for improvement as per perception stakeholders. In other words, despite the critical role of governance in improving institutional performance of HEIs and fostering trust, there is limited research providing a comprehensive situational analysis of governance practices in HEIs of Nepal. In this context, this study seeks to address these gaps by analyzing the perceptions of key stakeholders and identifying areas for improvement in governance practice of HEIs. In this context, the following pertinent research questions are set for inquiry:

i. What are the current governance practices adopted by higher education institutions in Nepal?
ii. How do stakeholders influence governance in Nepalese HEIs, and how is institutional autonomy maintained amidst external pressures?
iii. What are the underlying causes of discrepancies in governance practices among Nepalese HEIs?
iv. To what extent do Nepalese HEIs incorporate sustainability into their governance frameworks?

Objectives of the Research

The general objective of the research is to conduct a situational analysis of institutional governance practices in HEIs in Nepalese context. The specific objectives are as follows:

i. To analyze the current institutional governance practices in higher education institutions (HEIs) in Far Western Nepal.
ii. To explore the role of stakeholders in governance and assess the balance between stakeholder demands and institutional autonomy in Nepalese HEIs.

iii. To identify the factors contributing to disparities in governance practices among Nepalese HEIs.

iv. To evaluate the integration of sustainability considerations into the governance structures of Nepalese HEIs.

Rationale of the Study

The governance of HEIs is a critical factor that influences overall institutional performance including the quality of education, and research output. In Nepal, the landscape of HEIs has witnessed significant expansion, growth and transformation over the past three decades (Regmi, 2021). In this context, understanding the current state of institutional governance in Nepal's HEIs is essential for several reasons. Firstly, effective governance fosters accountability, transparency, and strategic decision-making, and these all are vital for enhancing higher educational standards and institutional development. Secondly, it impacts stakeholder engagement, including faculty members, students, and administrative staff, which in turn influence the quality of higher education and level of satisfaction of all involved stakeholders.

Moreover, the absence of robust and fair governance mechanisms would lead to corruption, inefficiencies, and a lack of innovation, ultimately restricting the progress of higher education in Nepal. In this context, this proposed study aims to assess the current governance practices in HEIs of Nepal, identify existing gaps and challenges. Eventually, providing recommendations for the improvement of HEIs. Therefore, by conducting a situational analysis, the research expects to contribute valuable insights that can guide policymakers, stakeholders, educational leaders in formulating strategies for more effective governance in HEIs. This, in turn, is expected to enhance the overall quality and performance of higher education institutions in Nepal. In conclusion, assessing institutional governance practices of HEIs will provide valuable insights into challenges, strengths, and areas for improvement.

Limitations and Delimitations

The limitations and delimitations of the study are as follows:

Limitations

- Respondent Bias: Respondents and participants may provide biased responses due to their roles within the institutions.
- Limited Access to Data: Possibly limited access to internal documents and governance reports from some HEIs may restrict the depth of secondary data analysis.
- Time and Resource Constraints: The research has certain timeline and budget. This may affect the scope of data collection, limiting the number of universities and stakeholders involved.
- Geographical Scope: The study focuses on selected HEIs, which may not fully represent the diverse range of higher education institutions across Nepal.

Delimitations

- Focus on Selected HEIs: The study is limited to a small number of HEIs in Nepal, chosen based on the geographical diversity and relevance to the research.
- Stakeholder Groups: The research will focus primarily on students, faculty members, non-teaching staff, and administrators, excluding other potential stakeholders such as alumni.
- Governance Dimensions: The study will specifically examine selected dimensions such as transparency, participation, accountability, resource utilization, and trust in leadership, and excludes other aspects of governance that may also be relevant.

Chapter Two

Review of Related Literature

The literature review examines existing studies on governance in HEIs, considering global perspectives, best practices, and challenges and directed towards identifying gaps specific to Nepal's higher education system. The literature review flows towards theoretical review, empirical review and identification gap.

Theoretical Perspectives

Stakeholder Theory postulates governance frameworks to balance diverse and conflicting interests and emphasizes a transparent decision-making processes and participatory governance models are often promoted to manage stakeholder expectations. It also encourages inclusive governance practices in HEIs such as student and faculty representation in decision-making bodies (Freeman, 1984). Institutional theory governance emphasizes that HEI governance is shaped by a complex interplay of internal traditions and external factors such as social norms, cultural expectations, and institutional pressures **(**DiMaggio & Powell, 1983).

New Public Management promotes the application of private-sector management practices in public-sector organizations, including HEIs and gives emphasis on efficiency, accountability, and performance measurement. It also asserts for streamlined decision-making processes and outcome-based evaluation (Hood, 1991).

Agency Theory underscore that governance structures are designed to ensure accountability and minimize conflicts of interest. It examines the relationship between principals (legislative bodies) and agents (university administrators). In this context, HEIs often face challenges in aligning the interests of administrators, faculty, and external stakeholders. It emphasizes on accountability mechanisms such as performance metrics, audits, and reporting in higher education governance (Jensen & Meckling, 2000).

Corporate Governance Model underscores that governance structure is a mirror of corporate boards and need to focus on accountability and decision-making efficiency. In this context, HEIs adopt governance practices similar to corporate entities, with boards of trustees or

governors playing a central role. Therefore, it encourages professional management and strategic resource allocation (Shattock, 2006).

The theory of global governance covers a complex interplay of institutions, processes, and norms that give a shape to international relations and economic activities. Essentially, it has evolved through three generations of intellectual pursuit, reflecting changes in the global political dynamics. In fact, the first generation focused on conceptual frameworks, while the second emphasized explanatory models and the emerging third generation embraces complexity and non-linearity, moving beyond individual institutions to broader systems of governance (Dingwerth & Pattberg, 2022). In this context, HEIs can better navigate the complex interplay of local priorities and global standards, fostering a balance between academic autonomy, accountability, and collaboration in a globalized academic landscape applying by Global Governance Theory.

Stakeholder Theory advocates for inclusive, transparent, and participatory governance to balance diverse interests. Institutional Theory highlights the influence of internal traditions and external societal pressures on governance practices. New Public Management stresses efficiency, accountability, and performance measurement, promoting streamlined decision-making. Agency Theory focuses on accountability and minimizing conflicts between stakeholders, using mechanisms like audits and reporting. The Corporate Governance Model advocates corporate practices, emphasizing accountability, professional management, and strategic decision-making. Together, these frameworks provide a comprehensive approach to HEI governance. Similarly, HEIs can better navigate the complex interplay of local priorities and global standards, fostering a balance between academic autonomy, accountability, and collaboration in a globalized academic landscape applying by Global Governance Theory. In conclusion, based on the theoretical review the governance in higher education institutions (HEIs) is shaped by diverse theoretical perspectives, each emphasizing unique aspects.

Empirical Review

An empirical review investigates how theoretical perspectives on governance HEIs have been applied or tested in real-world contexts. The empirical review in the form of literature review matrix is presented below:

Literature Review

The governance of higher education institutions (HEIs) has been a topic of increasing importance, as evidenced by numerous studies examining its evolution and challenges. This section reviews the key contributions to the understanding of HEI governance, highlighting trends, challenges, and recommendations.

Amaral and Magalhães (2002) explored the growing influence of external stakeholders in the governance of European HEIs. The study identified significant challenges in maintaining institutional autonomy while balancing diverse stakeholder interests. This necessitates HEIs to adapt to external pressures while preserving their core academic missions, presenting a complex dynamic that underscores the evolving nature of governance.

Pandey (2004) emphasized the critical dimensions of autonomy in higher education: academic, institutional, and financial. Academic autonomy pertains to the freedom faculty members require to foster intellectual excellence, while institutional autonomy relates to the operational and decision-making independence of HEI constituents. Financial autonomy, on the other hand, involves the ability to generate and allocate funds based on institutional priorities. Pandey argued for a balanced approach, where HEIs reconcile the demands of stakeholders, societal expectations, and their need for autonomy.

Goedegebuure and Hayden (2007) underscored the multi-layered nature of higher education governance, which necessitates balancing internal and external demands. Their study highlighted the need for governance structures that address competing expectations from various stakeholders, including governments, students, faculty, and industry partners. They emphasized that institutions must respect their unique contexts while addressing broader challenges related to accountability and globalization.

Hénard and Mitterle (2010) argued that robust governance systems are essential for improving the quality of higher education. Their findings highlighted the importance of integrating governance structures with quality assurance processes to enhance decision-making, strategic alignment, and responsiveness to societal and global demands. Achieving this balance requires careful adaptation to local contexts and challenges, underscoring the complexity of effective governance.

Usman (2014) highlighted the superior performance of private-sector HEIs compared to public-sector institutions in certain contexts. The study recommended promoting good governance and

quality assurance mechanisms in universities to enhance institutional performance and address disparities between public and private institutions.

Ntim et al. (2017) stressed the importance of strong governance structures in enhancing transparency and accountability within HEIs. They concluded that effective governance fosters voluntary disclosures, builds stakeholder trust, and improves institutional performance. This underscores the pivotal role of governance in ensuring public accountability.

Rungfamai (2018) identified the bureaucratic mindset as a crucial contextual factor influencing governance arrangements in HEIs. This factor affects the effectiveness of incentive structures and oversight mechanisms, revealing the challenges posed by entrenched bureaucratic practices in institutional governance.

Subedi et al. (2018) examined discrepancies in the formation and operation of governing bodies in HEIs. Their findings revealed significant variations and deficiencies, particularly in transparency and accountability—hallmarks of good governance. These discrepancies point to systemic issues in governance processes that need to be addressed.

Zubair et al. (2019) focused on the reform journey of higher education in Pakistan, highlighting its tumultuous nature and the challenges faced by various governments over time. The study emphasized the need for a thorough analysis of reforms and policies to ensure sustainable improvements in governance.

Niedlich et al. (2020) emphasized the need for future research on the organizational cultures of sustainability governance within HEIs and their evolution over time. Their findings highlight the importance of understanding cultural dynamics to foster effective governance practices.

Finally, Leal Filho et al. (2021) explored the role of governance in promoting sustainable development within HEIs. Their study suggested that, despite differing opinions and attitudes, governance is regarded as a crucial component in integrating sustainable development considerations into institutional strategies.

The reviewed studies collectively underscore the complexity and multidimensionality of HEI governance. They highlight the interplay between autonomy, accountability, and stakeholder engagement, as well as the critical role of governance in ensuring quality, transparency, and sustainability. The evolving landscape of higher education governance demands continuous adaptation and a nuanced approach to address local and global challenges effectively.

The reviewed literature collectively emphasizes the complexity, challenges, and evolving nature of institutional governance practices in HEIs. Key themes include the integration of governance with external stakeholder demands, the need for autonomy, and the importance of transparency, accountability, and sustainability. Amaral and Magalhaes (2002) and Pandey (2004) stress the increasing influence of external stakeholders in HEIs' governance, highlighting the challenge of maintaining institutional autonomy while balancing stakeholder interests. Additionally, Goedegebuure & Hayden (2007) argue that HEIs operate within multi-layered systems, balancing internal traditions with external demands of accountability and globalization. Hénard & Mitterle (2010) and Usman (2014) highlight the significance of robust governance structures for improving quality assurance and performance. Moreover, Usman (2014) particularly notes the superior performance of private HEIs over public ones. Other studies such as Ntim et al. (2017) and Subedi et al. (2018) asserts the importance of governance structures fostering transparency and accountability, though challenges like poor governance practices persist in many contexts. Furthermore, Rungfamai (2018) and Niedlich et al. (2020) point to the impact of contextual factors and organizational cultures on governance practices, advocating for further research in these areas. Some studies emphasize on corporate governance such as Leal Filho et al. (2021) underscore that governance is crucial for incorporating sustainability into HEI strategies, while Niedlich et al. (2020) call for research on sustainability governance over time.

Identification of Research Gap

Based on the synthesis of literature review presented above, several knowledge gaps exist in the issue, particularly in the context of Nepal. They are presented as follows:

- **Context-Specific Analysis**: Most studies are conducted in European, Asian, and global contexts, with limited exploration of governance practices specific to Nepalese HEIs. There is a lack of situational analysis addressing the unique socio-economic, political, and cultural factors influencing governance in Nepal.
- **Stakeholder Engagement and Autonomy**: The studies discuss on stakeholder influence and autonomy, but their application in Nepalese HEIs remain underexplored.

- **Governance Quality and Disparities**: Few studies identify discrepancies in governance practices in Nepalese HEIs, but there is insufficient research examining their root causes and potential solutions.
- **Sustainability in Governance**: Although sustainability is recognized as a governance priority globally (Leal Filho et al., 2021), research on how Nepalese HEIs integrate sustainable development into governance structures is lacking.

Chapter Three

Research Methodologies

Research Design

This study adopted basically a descriptive and exploratory research design to conduct a situational analysis of governance practices in selected HEIs in Nepal. The main aim is to explore the current governance structures, processes, and practices in these institutions, and analyze how they impact institutional performance, stakeholder satisfaction, and trust in leadership regarding the HEIs of Far Western University.

Research Approach

The research adopts sequential mixed-method approach. In other words, a qualitative approach was used for in-depth analysis, combined with a quantitative approach for collecting and analyzing relevant measurable data. Therefore, this descriptive analysis of the data gathered from various sources offering valuable insights into governance practices in HEIs of Nepal were triangulated.

Population and Sampling

The populations were stakeholders from four HEIs of Far Western University in Nepal. This includes faculty members, administrative staff, and campus/university management authorities, and students. A stratified random sampling technique was used within each selected colleges to ensure representation from all stakeholder groups (faculty-20, staff-4, and administrators-4, university authority 5 and students 100).

Data Collection Tools and Methods

The primary data were collected to full fill the objectives of the research to ensure a comprehensive understanding of governance practices from the stakeholder's perspectives. To collect primary data, Likert scale (both online and paper-based) were distributed to students, faculty members, non-teaching staff, and telephone interview with administrators to gather data on accountability, transparency, resource utilization, stakeholder participation, and trust in leadership. The open-ended questions were asked to all the respondents. In-depth semi-structured

interviews were conducted with the university administrators. This is meant for gaining qualitative insights into the governance processes and challenges faced by institutions.

For the triangulation, review of institutional reports, official documents, policies, and governance structures available on the universities' websites and in internal records were carried out.

Data Analysis Tools and Techniques

The MS Excel and SPSS were used to analyze the data. Initially, the data were coded and categorized based on governance dimensions. The descriptive statistics was used to summarize the responses on Likert scales. Similarly, inferential statistics was used to examine the relationships between governance practices and institutional performance in stakeholder perspectives. Thematic analysis were employed to identify recurring themes and patterns in the interviews. Data were coded and categorized based on governance dimensions such as transparency, accountability, participation, and trust.

Ethical Considerations

The study was made best endeavor to compliance with the ethical guidelines to ensure the integrity and confidentiality of the collected data. Similarly, all respondents and participants were be informed about the purpose of the study, their right to anonymity. Their consent was obtained before data collection. In other words, respondent identities and responses was kept confidential, and data employed solely for research purposes. Similarly, participants were given the opportunity to withdraw from the study at any time without any negative consequences.

Chapter Four

Data Analysis and Interpretation

Demographic description of respondents

The stakeholder groups involved in this study include a diverse mix of individuals who play key roles in the governance of Higher Education Institutions (HEIs). The participants consisted of 20 faculty members, who represent the academic leadership responsible for teaching, curriculum development, and student engagement. In addition, 4 administrative staff were included, contributing insights into operational and support functions essential for institutional management. The sample also comprised 4 campus-level administrators, who are directly involved in implementing governance policies and overseeing daily institutional operations. Furthermore, 5 representatives from university authorities—such as officials from central offices or governing bodies—were included to provide perspectives on policy-making, oversight, and strategic direction. This diverse composition ensures a comprehensive understanding of governance practices from multiple institutional layers.

The respondents in this study represent a diverse demographic profile, encompassing various age groups, genders, ethnicities, and academic disciplines. The sample includes students from different caste and ethnic backgrounds, reflecting the multicultural composition of the institution. Both male and female students participated, with a balanced representation across faculties such as management, education, engineering, humanities, and sciences. Additionally, the respondents vary in terms of their faculties like Humanities, education, management, engineering, agriculture and forestry. This diverse demographic composition ensures that the findings capture a wide range of experiences and viewpoints related to institutional practices. The demographic information of the respondents (students) are shown as below:

Table 1

Demographic description of respondents

	Male	Female	Total
Brahmin	22	13	35
Chetri	19	16	35
Dalit	3	3	6
Janajati	11	10	21
Other	1	2	3
Total	56	44	100

Current Institutional Governance Practices in HEIs

Governance practices in Nepalese higher education institutions have progressively prioritized equitable access through strategic policies, reservation systems, decentralized structures, open and distance learning, community-based models, and inclusive admission efforts. While these mechanisms have expanded opportunities for marginalized and geographically disadvantaged populations, challenges such as inconsistent policy implementation, limited financial autonomy, and weak monitoring of inclusion indicators persist. Strengthening coherence in governance, resource mobilization, and accountability is essential to ensuring that access to higher education is truly inclusive and leaves no one behind.

Equity in Access to Educational Resources

The survey results reveal that a substantial majority (82%) of respondents perceive the administrative body as ensuring equal access to educational resources, reflecting strong institutional efforts and a positive stakeholder view of fairness and inclusivity. However, the 18% of respondents who were neutral or disagreed—comprising 7% neutral, 7% disagree, and 4% strongly disagree highlight areas of concern, possibly stemming from gaps in implementation or communication. While the overall perception is favourable, these dissenting views suggest a need for continued monitoring and targeted interventions to ensure that all student groups,

especially those who may be marginalized or under-supported, truly benefit from equal access initiatives.

Table 2

Equity in Access to Educational Resources

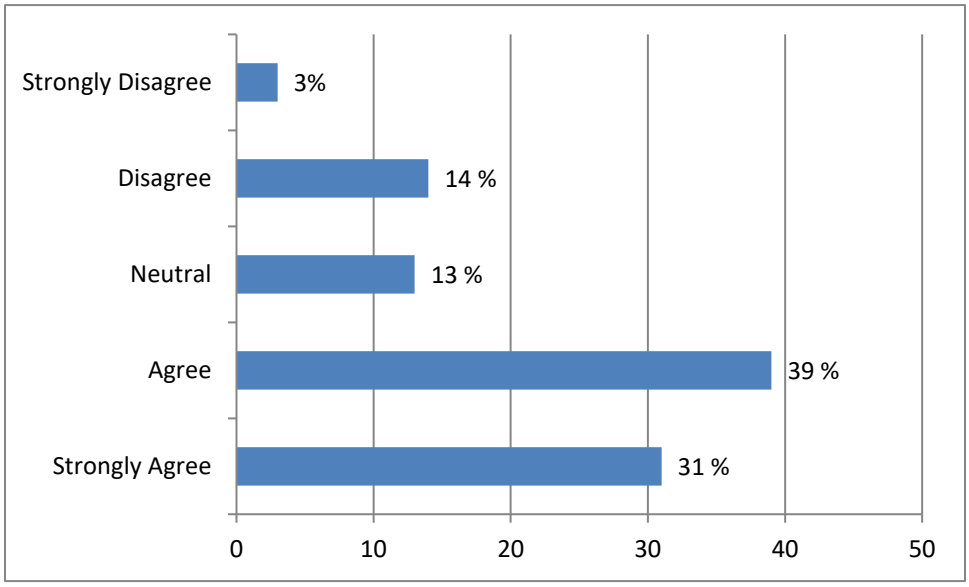
	Response	Frequency	Percent
Equity in Access to Educational Resources	A	48	48
	D	7	7
	N	7	7
	SA	34	34
	SD	4	4
	Total	100	100

Inclusive Admission Policy for Geographical Equity

The findings on the statement regarding inclusive education policy indicates that 70% of respondents believe the institution's admission policies promote access for students from rural and remote areas, reflecting a broadly favorable perception of geographic inclusiveness. However, 13% of respondents remained neutral, possibly due to limited awareness or lack of clear communication about these policies. Meanwhile, 17% expressed disagreement, signaling that a segment of students or stakeholders perceive gaps in either the design, implementation, or effectiveness of such rural-inclusive measures. Overall, while the majority acknowledges the institution's efforts, the presence of critical views underscores the need for improved transparency, targeted outreach, and policy refinement to ensure equitable access for students from rural and remote communities.

Figure 1

Inclusive Admission Policy for Geographical Equity



Equitable Distribution of Financial Support

The survey results for Statement Q1.3 reveal that 64% of respondents perceive scholarships and financial aid as being fairly distributed to support underprivileged students, indicating a generally positive level of trust in the institution's equity efforts. However, 16% of respondents remained neutral, which may reflect limited awareness or direct experience with the financial aid system. Notably, 20% expressed disagreement, pointing to concerns about fairness, transparency, or the criteria used for allocation. Although the majority view is favorable, the combined 36% of neutral and negative responses highlights the need for improved clarity, outreach, and accountability in scholarship processes to build stronger confidence and ensure equitable support for underprivileged groups.

Table 3

Equitable Distribution of Financial Support

Response	Frequency	Percent
A	32	32
D	13	13
N	16	16
SA	32	32
SD	7	7
Total	100	100

Retention and Support for Disadvantaged Students

The results for Statement regarding Retention and Support for Disadvantaged Students show that only 45% of respondents believe the administrative body is actively monitoring and working to reduce dropout rates among disadvantaged students, indicating moderate confidence but not a strong endorsement of these efforts. Meanwhile, 26% remain neutral, possibly due to limited awareness or insufficient visibility of dropout prevention measures. Importantly, 29% of respondents disagree, reflecting significant concern about the adequacy and effectiveness of institutional strategies to retain disadvantaged students. These mixed perceptions highlight the need for the administration to strengthen targeted interventions, improve the visibility of support programs, enhance data tracking and feedback systems, and communicate more clearly with students—particularly those at risk—to better address dropout issues among vulnerable groups.

Table 4

Retention and Support for Disadvantaged Students

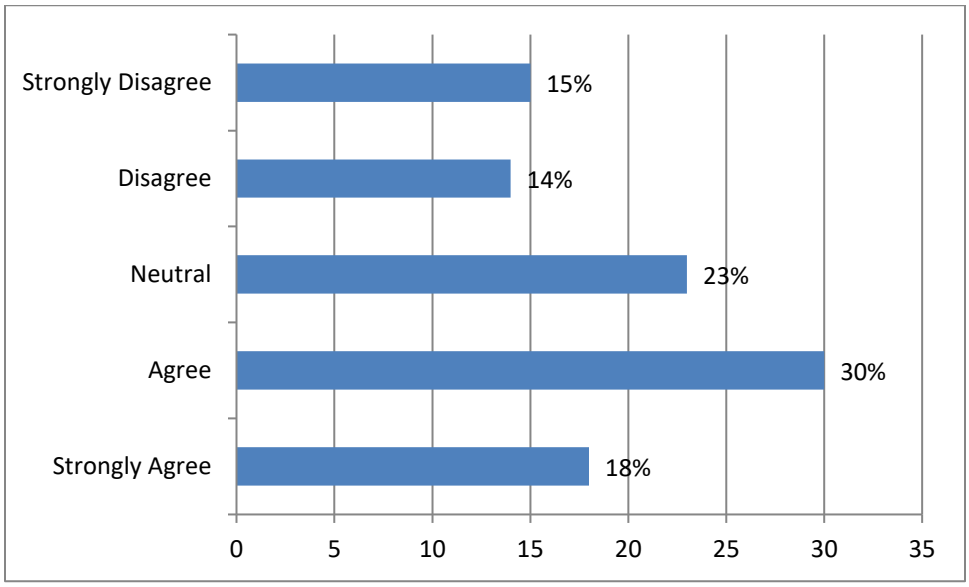
	Frequency	Percent	
Responses	A	26	26
	D	20	20
	N	26	26
	SA	19	19
	SD	9	9
	Total	100	100

Support Systems for First-Generation Students

The findings for Statement regarding Support Systems for First-Generation Students indicate that only 48% of respondents believe the institution provides adequate orientation and mentoring programs for first-generation college students, suggesting that while some support exists, its sufficiency or accessibility may be limited. Nearly a quarter (23%) remains neutral, likely reflecting a lack of awareness or direct engagement with these programs. Meanwhile, 29% of students perceive inadequate support, pointing to potential gaps in program delivery or insufficiently tailored initiatives for first-generation students. Overall, these mixed responses highlight the need for the institution to expand and customize orientation and mentoring efforts, enhance peer and faculty mentoring systems, increase awareness about available resources, and regularly assess program effectiveness through student feedback to better support this vulnerable group.

Figure 2

Support Systems for First-Generation Students



The Survey data from students and interviews confirm that most HEIs in Nepal adopt an administrative-academic collaborative model. Leadership roles typically involve the Campus Chief, Deans, Department Heads, and administrative personnel. Fifty percent Campuses reported

clear hierarchical and participatory structures. Stakeholders emphasized the visible influence of the central government, especially in budgeting and policy direction. Participatory mechanisms, such as executive committees and advisory boards, are operational but require greater transparency and wider stakeholder involvement. Faculty heads and deans underscored the importance of balancing autonomy with practical decision-making through coordination.

Analysis of the role of stakeholders in governance

Quality Enhancement and Supports

Students in Nepalese Higher Education Institutions (HEIs) play an increasingly vital role in governance and quality enhancement through active participation in feedback systems, representation in decision-making bodies, and advocacy for inclusive and student-centred reforms. Institutions that engage students meaningfully tend to offer more responsive academic support, counselling, and career services. However, disparities remain, particularly in resource-constrained or affiliated campuses. At the same time, efforts to uphold institutional autonomy are often challenged by political interference, centralized regulatory controls, and the influence of student politics. Therefore, fostering transparent, inclusive, and data-informed governance frameworks where student voices are respected and external pressures are managed with accountability is essential for sustaining quality and autonomy in Nepalese HEIs.

Academic Support for Diverse Student Success

The results for this statement show that 62% of respondents believe the institution provides sufficient academic support services for students from diverse backgrounds, reflecting a generally positive view of inclusiveness and support systems. However, 13% disagree, indicating that some students perceive gaps in the availability or effectiveness of these services. A notable 25% remain neutral, which may signal limited awareness, inconsistent communication, or lack of personal experience with support programs. This suggests that while the institution's efforts are recognized by most, there is room to improve outreach, accessibility, and tailoring of support to meet the needs of marginalized or underprepared students. Strengthening orientation, mentoring, and specialized programs—along with regularly collecting student feedback—can help ensure these services are equitable, visible, and impactful.

Table 5

Academic Support for Diverse Student Success

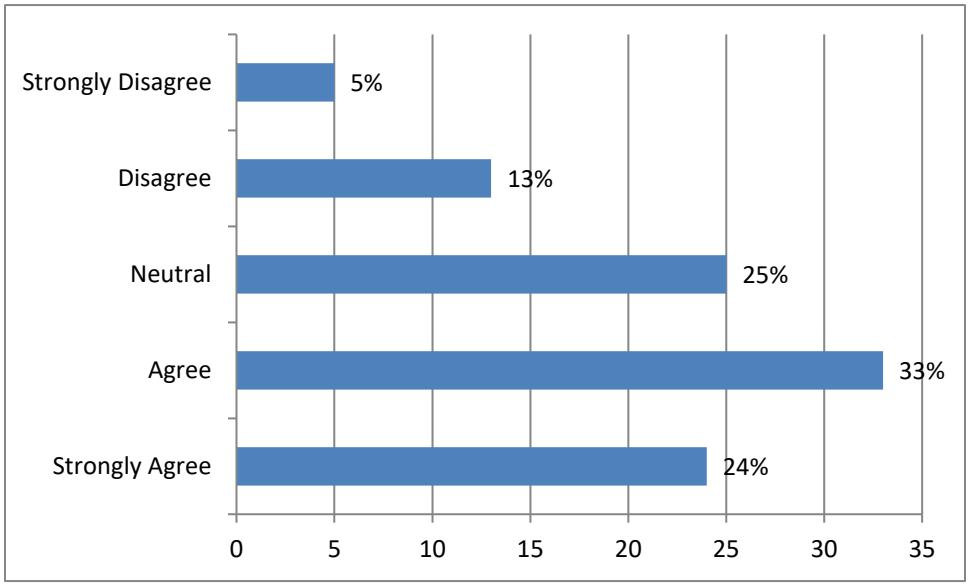
Response	Frequency	Percent
A	47	47
D	8	8
N	25	25
SA	15	15
SD	5	5
Total	100	100

Equitable Quality Enhancement in Education

The results for the above statement indicate that 57% of respondents believe the institution's quality enhancement initiatives address the needs of all student groups equally, suggesting a majority perception of equitable and student-centered efforts. However, 18% disagree, highlighting concerns that some groups—potentially marginalized or non-traditional students—may feel overlooked or underserved. Additionally, 25% remain neutral, which could reflect limited awareness or involvement in quality assurance processes. These mixed perceptions suggest variability in how quality initiatives are experienced across departments or campuses. To strengthen inclusivity, the institution should ensure transparent, participatory quality assurance mechanisms that actively incorporate feedback from diverse student groups, identify underserved populations to tailor improvements accordingly, and increase student awareness of quality enhancement programs and their benefits.

Figure 3

Equitable Quality Enhancement in Education



Promotion of Diversity and Inclusion Awareness

The results for this statement indicate that 57% of respondents (24% Strongly Agree + 33% Agree) believe the institution regularly conducts awareness programs on diversity and inclusion, reflecting a majority perception that these initiatives are present and ongoing. However, 18% (13% Disagree + 5% Strongly Disagree) feel that such programs are insufficient or not regularly conducted, pointing to possible gaps in outreach or frequency. Additionally, 25% remain neutral, which may suggest uncertainty, limited participation, or lack of awareness about these programs. Overall, while more than half acknowledge the institution's efforts to promote diversity and inclusion awareness, the significant neutral and negative responses highlight opportunities to enhance program visibility, accessibility, and impact among the student body.

Table 6

Promotion of Diversity and Inclusion Awareness

Response	Frequency	Percent
A	33	33
D	13	13
N	25	25
SA	24	24
SD	5	5
Total	100	100

The institution regularly conducts awareness programs on diversity and inclusion

The results for this theme indicate that 52% of respondents (37% Agree and 15% Strongly Agree) believe the institution regularly conducts awareness programs on diversity and inclusion, suggesting that a slight majority recognize institutional efforts to foster an inclusive environment. However, 28% (19% Disagree and 9% Strongly Disagree) do not share this view, and 20% remain neutral—highlighting that nearly half of the student body either questions the consistency or visibility of these initiatives or is unaware of them altogether. This reflects a need to enhance both the frequency and communication of such programs. To improve impact and engagement, the institution should increase the visibility of diversity-related activities, ensure broader student participation—especially among underrepresented groups—and share the outcomes and benefits of these initiatives to build awareness, trust, and institutional credibility.

Table 7

The institution regularly conducts awareness programs on diversity and inclusion

Response	Frequency	Percent
A	37	37
D	19	19
N	20	20
SA	15	15
SD	9	9
Total	100	100

Responsive Governance through Student Feedback

The results for this theme reveal that only 47% of respondents believe the administration takes student feedback on access and inclusion issues seriously, indicating that less than half feel their concerns are acknowledged and addressed effectively. Meanwhile, 24% disagree, reflecting a significant portion of students who perceive their feedback as ignored or undervalued. Additionally, 29% remain neutral, which may suggest uncertainty about the feedback process or limited participation in it. These findings point to potential gaps in administrative responsiveness and communication. To improve trust and effectiveness, the institution should enhance transparency around how feedback is collected and used, ensure feedback channels are accessible and well-publicized, actively communicate the outcomes of student input, and engage marginalized student groups more directly to demonstrate genuine commitment to addressing inclusion challenges.

Table 8

Responsive Governance through Student Feedback

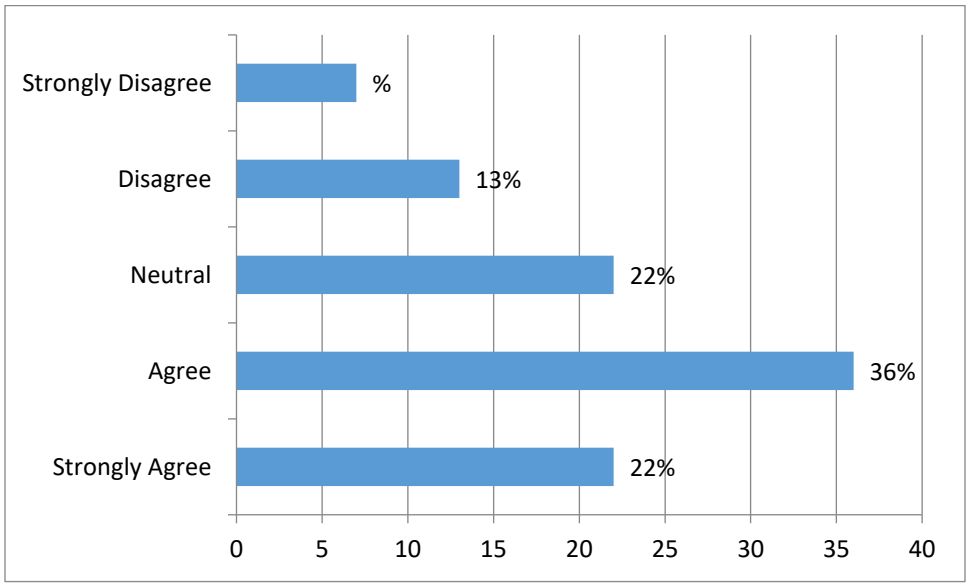
Response	Frequency	Percent
A	30	30
D	16	16
N	29	29
SA	17	17
SD	8	8
Total	100	100

Data-Driven Policy Improvement for Equity and Quality

The results for this theme indicate that 58% of respondents believe the institution effectively uses data and evidence to improve policies on access, inclusion, and quality enhancement, reflecting a majority perception of evidence-based and accountable decision-making. However, 20% disagree, suggesting a significant minority feels that data is underutilized or ignored in policy development. Additionally, 22% remain neutral, likely due to limited visibility or understanding of how data informs institutional decisions. These findings highlight positive progress but also reveal communication gaps and possible inconsistencies in applying data-driven approaches. To strengthen trust and effectiveness, the institution should increase transparency about data collection and its influence on policies, provide regular updates demonstrating evidence-based changes, and actively involve students and stakeholders in reviewing data and shaping policy discussions.

Figure 4

Data-Driven Policy Improvement for Equity and Quality



Policy development across institutions involves expert committees and approval from high-level authorities like Vice Chancellors or University Boards. While there is a structure in place, policy-making is often top-down. Multiple informants, including deans and faculty leaders, acknowledged that although workshops and meetings communicate policies, stakeholder involvement—especially from lower-level staff and students—remains limited. Institutions like Far Western University are moving toward more inclusive practices by integrating community and departmental feedback.

Internal stakeholders—faculty, department heads, students—and external ones such as UGC, local government, and donors—play critical roles in shaping governance. Interviewees emphasized local government and parent involvement through management committees. However, concerns remain over clarity of roles, uneven influence, and reactive participation (e.g., protests). Expanding formal avenues for student and community voice is essential to improving balanced and accountable governance.

Most campuses have academic and internal administrative autonomy but remain dependent on central authorities for financial and policy decisions. Stakeholders from all institutions highlighted the necessity of submitting regular reports to UGC and other bodies to ensure accountability. Although some autonomy exists, universities must still justify decisions publicly. Efforts like public audits, notice boards, and open meetings are used to foster accountability but are inconsistently implemented.

Analysis of Factors contributing to disparities in governance practices

Inclusion and Representation

The discrepancies in governance practices among Nepalese HEIs highlight significant gaps in how inclusion and representation are institutionalized, particularly across dimensions such as autonomy, decision-making, financial aid, gender policies, geographic context, and stakeholder engagement. These variations often marginalize disadvantaged groups and hinder equitable access to higher education. Bridging these gaps requires a holistic and coordinated approach strengthening inclusive governance frameworks, ensuring standardized and transparent scholarship mechanisms, institutionalizing meaningful representation of marginalized groups, building the capacity of rural and remote campuses, and enhancing accountability through regulatory bodies like the UGC and accreditation agencies to promote

Inclusive Representation in Governance

The results for this theme show that 55% of respondents believe students from marginalized communities are adequately represented in institutional decision-making, indicating a moderate level of perceived inclusion and empowerment within governance. However, 23% disagree, signaling concerns about underrepresentation or tokenism, while 22% remain neutral, which may reflect uncertainty or limited awareness of the decision-making processes. This sizable neutral group points to possible communication gaps or a lack of transparency regarding inclusivity efforts. The data suggests that although more than half perceive adequate representation, nearly half of respondents either doubt this or are unsure, highlighting potential systemic or structural barriers to full participation. To address these challenges, institutions should strengthen participatory mechanisms, increase the visibility and influence of marginalized students in committees and policy forums, and implement awareness campaigns, representation quotas, and mentorship programs to better align policy with practice.

Table 9

Inclusive Representation in Governance

Response	Frequency	Percent
A	35	35
D	16	16
N	22	22
SA	20	20
SD	7	7
Total	100	100

Disability Inclusion in Institutional Policy

The survey results for this theme indicate that 66% of respondents perceive the administration as actively promoting inclusive policies supporting students with disabilities, reflecting a generally positive view of the institution's commitment to disability inclusion. However, 15% disagree, suggesting that a minority find current policies or their implementation lacking. Additionally, 19% remain neutral, which may point to limited awareness or unclear communication about these inclusive measures. While the majority acknowledges institutional efforts, the presence of negative and neutral responses highlights the need for improved visibility, accessibility, and effectiveness of support services. To enhance inclusivity, the institution should strengthen communication and outreach, involve students with disabilities in policy development and feedback, and ensure that physical, technological, and academic accommodations are fully available and properly implemented.

Table 10

Disability Inclusion in Institutional Policy

Response	Frequency	Percent
A	38	38
D	11	11
N	19	19
SA	28	28
SD	4	4
Total	100	100

Gender Equity in Educational Access

The results for this theme show that 65% of respondents believe the administrative body ensures gender equity in access to academic programs and campus facilities, reflecting a strong overall perception of gender-inclusive practices. However, 16% disagree, indicating that some students still perceive gender-based disparities or gaps, potentially affecting certain departments or groups such as female or non-binary students. Additionally, 19% remain neutral, which may stem from limited awareness or lack of direct experience with gender equity initiatives. While the majority views the institution's efforts positively, these findings suggest the need for ongoing gender audits and feedback mechanisms to uncover and address subtle inequities. Enhancing communication about gender equity policies, grievance procedures, and support programs—such as gender-neutral facilities and targeted scholarships—along with adopting intersectional strategies that consider caste, ethnicity, and disability alongside gender, can further strengthen inclusivity and fairness across the campus.

Table 11

Gender Equity in Educational Access

Response	Frequency	Percent
A	29	29
D	8	8
N	19	19
SA	36	36
SD	8	8
Total	100	100

Campus Inclusivity and Safe Learning Environment

The findings for theme reveal that a strong majority of 74% of respondents feel safe and respected on campus regardless of ethnicity, gender, or socio-economic status, indicating a generally inclusive and positive institutional climate. Only 7% disagree, suggesting that experiences or perceptions of exclusion or discrimination are relatively rare but still present for a small group. Meanwhile, 19% remain neutral, which might reflect limited personal experience, newness to the institution, or hesitation to share their views. Overall, the data points to significant success in fostering safety and respect, but also highlights opportunities to further reduce negative experiences and engage neutral respondents. To build on this strength, the institution should continue diversity and inclusion training, enhance support and reporting systems for discrimination, and promote intercultural and socioeconomic interactions through inclusive clubs, events, and leadership programs.

Table 12

Gender Equity in Educational Access

Response	Frequency	Percent
A	39	39
D	4	4
N	19	19
SA	35	35
SD	3	3
Total	100	100

Collaborative Efforts for Inclusive Campus Culture

The results for this theme show that 69% of respondents agree that the administrative body collaborates with student organizations to promote an inclusive campus culture, reflecting a strong perception of cooperation and shared responsibility between leadership and students. Only 9% disagree, indicating that a small minority feels such collaboration is lacking, while 22% remain neutral, possibly due to limited awareness or direct involvement in these partnerships. This suggests that although collaboration is generally seen as effective, there is a visibility and communication gap that leaves some students uncertain about the extent of administrative engagement with student groups. To build on this positive foundation, the institution should enhance transparency around joint initiatives, actively include diverse student organizations in planning and decision-making, and foster regular dialogue and feedback channels between student leaders and the administration to strengthen trust and inclusivity.

Table 13

Collaborative Efforts for Inclusive Campus Culture

Response	Frequency	Percent
A	46	46
D	5	5
N	22	22
SA	23	23
SD	4	4
Total	100	100

Similarly, respondents acknowledged persistent inequalities based on geography, gender, and institution type. Rural campuses face severe resource shortages and technological gaps. Political interference, limited representation of women and marginalized groups, and slow bureaucratic processes hinder inclusive governance. Interviewees advocated for reforms that promote inclusivity, stakeholder capacity-building, and decentralized decision-making.

Analysis of integration of sustainability considerations into the governance structures

Administrative Responsiveness and Transparency

Nepalese Higher Education Institutions (HEIs) have made commendable strides in integrating sustainability into their governance through policy alignment, eco-friendly practices, and stakeholder involvement, significant challenges persist in terms of institutional capacity, continuity, and student engagement. To achieve lasting impact, sustainability must be institutionalized as a core governance principle rather than treated as a temporary initiative. Strengthening administrative transparency, adopting data-driven approaches, and fostering inclusive participation will be essential for embedding sustainability deeply into the planning, decision-making, and accountability structures of HEIs across Nepal.

Student-Centered Administrative Responsiveness

The results for theme show that 57% of respondents view the administrative staff as approachable and responsive to student needs, suggesting a generally supportive and student-friendly environment. However, 23% express dissatisfaction, and 20% remain neutral, indicating that nearly half of the student population either does not share this positive perception or lacks sufficient interaction to form an opinion. These figures point to inconsistency in student experiences, which may be more pronounced among marginalized or less confident students who might face greater barriers in accessing administrative support. To enhance responsiveness and inclusivity, institutions should provide training for administrative staff on empathetic, student-centered service, strengthen communication and feedback mechanisms, and regularly evaluate staff performance through student input.

Table 14

Student-Centered Administrative Responsiveness

Response	Frequency	Percent
A	35	35
D	18	18
N	20	20
SA	22	22
SD	5	5
Total	100	100

Transparent Channels for Student Feedback on Access and Inclusion

The results for this theme indicate that 52% of respondents believe there are clear mechanisms for students to voice concerns about access and inclusion, showing that just over half recognize the presence of formal channels for communication with the administration. However, 23% disagree and 25% remain neutral, revealing that nearly half of the students either lack awareness of these mechanisms or question their effectiveness. The high rate of neutrality suggests many students may be unfamiliar with how or where to raise concerns, while the 17% who disagree may feel the existing systems are inaccessible, poorly communicated, or ineffective. These findings highlight the need for improved visibility, accessibility, and trust in feedback and grievance systems. To address this, institutions should clearly publicize all reporting mechanisms, conduct targeted orientation and outreach—especially for marginalized students—and ensure that complaint procedures are confidential, student-friendly, and free from retaliation. Additionally, communicating the outcomes of student feedback and regularly assessing system effectiveness will help build credibility and foster a culture of transparency and responsiveness.

Table 15

Transparent Channels for Student Feedback on Access and Inclusion

Response	Frequency	Percent
A	33	33
D	17	17
N	25	25
SA	19	19
SD	6	6
Total	100	100

Student Engagement in Inclusive Governance

The results for this theme reveal that 55% of respondents believe the administration encourages student participation in governance to improve access and inclusion, indicating a moderate to strong perception of institutional support for inclusive, participatory decision-making. However,

16% disagree, feeling that such encouragement is insufficient, while 29% remain neutral, suggesting a significant portion of students are either unaware of participatory opportunities or uncertain about their effectiveness. Together, these responses indicate that nearly half the student body may be disengaged or sceptical about how genuinely inclusive governance is in practice, possibly due to uneven implementation across departments or limited transparency about student involvement. To enhance participatory governance, institutions should increase the visibility of student roles in decision-making bodies, actively promote diverse representation—especially from marginalized groups—offer capacity-building workshops to empower student participation, and establish clear communication and feedback mechanisms demonstrating how student input leads to real policy or practice changes.

Table 16

Student Engagement in Inclusive Governance

Response	Frequency	Percent
A	41	41
D	10	10
N	29	29
SA	14	14
SD	6	6
Total	100	100

Transparency in Governance and Decision-Making

The results for this theme indicate that 55% of respondents perceive the administration as transparent in decisions related to student welfare and academic quality, reflecting a moderate level of trust in institutional openness and fairness. However, 20% disagree, and 25% remain neutral, meaning that nearly half of the students either question the transparency or lack enough information to assess it. The 11% who strongly disagree suggest notable dissatisfaction, possibly due to unclear communication, unexpected policy changes, or limited student involvement in decision-making. To enhance transparency, the administration should regularly publish decisions and meeting outcomes through accessible channels, actively involve student representatives in

key governance processes, implement clear feedback systems to show how student input shapes policies, and provide detailed explanations of grievance procedures and rationale behind significant decisions, especially those impacting students directly.

Table 17

Transparency in Governance and Decision-Making

Response	Frequency	Percent
A	32	32
D	9	9
N	25	25
SA	23	23
SD	11	11
Total	100	100

Ongoing Enhancement of Student Support Services

The results for this theme show that 54% of respondents believe the administrative body prioritizes continuous improvement in services supporting diverse student needs, reflecting a moderately positive perception of institutional inclusivity and responsiveness. However, 27% remain neutral, which may indicate uncertainty or lack of awareness due to insufficient communication or visibility of these efforts. Additionally, 19% disagree, suggesting that some students feel support is inadequate or that there are gaps in implementation, particularly for marginalized or underrepresented groups. Overall, while a majority recognize ongoing improvement efforts, the notable neutral and negative responses highlight the need for better communication about initiatives, stronger engagement with underrepresented students, and more transparent, inclusive actions that effectively address the diverse needs of the student body.

Table 18

Ongoing Enhancement of Student Support Services

Response	Frequency	Percent
A	31	31
D	9	9
N	27	27
SA	23	23
SD	10	10
Total	100	100

Sustainability is increasingly integrated into institutional goals. Interviewees emphasized initiatives in environmental sustainability (reducing paper use, energy conservation), social inclusion (gender equity, support for disadvantaged students), and economic sustainability (strategic resource use). Community service programs such as health camps and cleanliness drives are being implemented.

Higher education in Nepal is undergoing substantial reforms due to policy shifts and global trends. Interviewees described how digital transformation, the internationalization, and quality assessments are shaping governance. However, these reforms also present challenges such as staff training gaps, resistance to change, and local contextualization. Despite progress, sustained investment in infrastructure, capacity-building, and digital literacy is required to fully realize reform benefits.

Resource planning follows a bottom-up approach where departments propose budgets reviewed by executive committees. Despite this structure, many institutions face resource constraints. Faculty heads and administrators noted heavy reliance on government grants and student fees. Transparency tools such as financial notices, annual reports, and audits are used but are inconsistently shared. Improving alternative funding, staff training, and open financial disclosure were frequently cited recommendations.

Chapter Five

Result and Discussions

This chapter presents the detailed analysis and discussion of survey responses based on student perceptions of governance practices in Nepalese Higher Education Institutions (HEIs), with a focus on inclusion, access, representation, and institutional responsiveness. The results are organized by thematic areas corresponding to key survey statements.

1. Equity in Access to Educational Resources

The findings reveal that 82% of respondents (48% Agree and 34% strongly Agree) believe the administrative body ensures equal access to educational resources. This indicates a generally strong institutional commitment toward equity and inclusiveness in resource distribution. However, the remaining 18%—comprising 7% Neutral, 7% Disagree, and 4% Strongly Disagree—suggest that certain student groups may still face barriers or inconsistencies in accessing these resources. This calls for continuous monitoring and targeted strategies to address remaining equity gaps.

2. Inclusive Admission Policy for Geographical Equity

70% of students agreed that the institution's admission policies promote access for students from rural and remote areas. This reflects a positive perception of inclusivity in geographical terms. Yet, 17% of respondents disagreed and 13% remained neutral, indicating potential gaps in policy effectiveness or communication. This suggests the need for clearer outreach and more comprehensive implementation of rural-inclusive admission policies.

3. Equitable Distribution of Financial Support

A total of 64% of respondents believed scholarships and financial aid are fairly distributed to underprivileged groups. However, 36% expressed neutrality or disagreement, raising concerns about transparency, accessibility, or the selection process. Strengthening awareness, ensuring fair selection criteria, and improving communication regarding scholarship availability and distribution can enhance institutional credibility.

4. Retention and Support for Disadvantaged Students

Only 45% of students agreed that the administrative body actively monitors and works to reduce dropout rates among disadvantaged students. Meanwhile, 26% were neutral and 29% disagreed. This highlights a lack of visibility or effectiveness in dropout prevention strategies. Institutions need to establish robust retention systems, increase visibility of support programs, and improve engagement with at-risk students.

5. Support Systems for First-Generation Students

48% of students agreed that adequate orientation and mentoring programs are provided for first-generation college students, whereas 23% were neutral and 29% disagreed. These mixed responses indicate a need for enhanced, targeted, and better-publicized support mechanisms tailored to the unique needs of first-generation learners.

6. Academic Support for Diverse Student Success

62% of respondents agreed that sufficient academic support services exist for students from diverse backgrounds. However, 25% remained neutral and 13% disagreed. This indicates that while support services are perceived positively overall, greater outreach and tailoring are required to address the diverse needs of all student groups effectively.

7. Equitable Quality Enhancement in Education

57% of students believed that quality enhancement initiatives address the needs of all student groups equally, but 25% were neutral and 18% disagreed. This points to inconsistencies in the experience of quality assurance practices. Enhancing student involvement in these processes and tailoring interventions based on feedback could improve inclusivity.

8. Promotion o**f** Diversity and Inclusion Awareness

52% of students (37% Agree and 15% Strongly Agree) believed that the institution regularly conducts awareness programs on diversity and inclusion. However, 28% disagreed and 20% were neutral. These findings suggest that such programs may lack consistency, visibility, or depth. Institutions should enhance outreach and student engagement in these programs.

9. Responsive Governance through Student Feedback

Only 47% of students agreed that their feedback on access and inclusion is taken seriously. A notable 29% were neutral and 24% disagreed. These figures point to weaknesses in responsiveness and transparency. Institutions must make feedback mechanisms more visible, effective, and inclusive.

10. Data-Driven Policy Improvement for Equity and Quality

58% of respondents believed that data and evidence are used to improve policies on access, inclusion, and quality. Still, 22% were neutral and 20% disagreed. While there is a foundation of data-informed governance, efforts must continue to improve transparency and student involvement in evidence-based decision-making.

11. Inclusive Representation in Governance

55% of students agreed that marginalized communities are represented in institutional decision-making. However, 22% were neutral and 23% disagreed. This shows moderate inclusion but also highlights areas for improvement, such as transparency in representation and engagement of underrepresented groups in governance structures.

12. Disability Inclusion in Institutional Policy

66% of respondents perceived that policies supporting students with disabilities are promoted by the administration. Meanwhile, 19% were neutral and 15% disagreed, indicating a need to improve policy implementation, visibility, and student awareness regarding disability inclusion.

13. Gender Equity in Educational Access

65% agreed that gender equity is ensured in access to academic programs and facilities. Despite this majority, 19% were neutral and 16% disagreed, suggesting a need for ongoing efforts to address gender disparities, especially in certain faculties or among non-binary students.

14. Campus Inclusivity and Safe Learning Environment

A substantial 74% of students felt safe and respected regardless of their identity, while 19% were neutral and only 7% disagreed. This demonstrates a generally inclusive campus environment, though continued monitoring and proactive anti-discrimination measures are needed.

15. Collaborative Efforts for Inclusive Campus Culture

69% of respondents believed that the administration collaborates with student organizations to promote an inclusive campus. However, 22% were neutral and 9% disagreed. Enhancing the visibility and scope of such collaborations can help bridge the perception gap.

16. Student-Centered Administrative Responsiveness

57% of respondents agreed that administrative staff are approachable and responsive, but 20% were neutral and 23% disagreed. This reflects a need for administrative training on student-centered service delivery and improved communication.

17. Transparent Channels for Student Feedback on Access and Inclusion

52% of students recognized the presence of mechanisms to voice concerns. Still, 25% were neutral and 23% disagreed, indicating a need for better communication and effectiveness of grievance redressal systems.

18. Student Engagement in Inclusive Governance

55% of students acknowledged that they are encouraged to participate in governance. However, 29% remained neutral and 16% disagreed. Institutions must enhance participatory structures, especially for marginalized students, and increase awareness of existing opportunities.

19. Transparency in Governance and Decision-Making

55% believed there is transparency in decisions related to student welfare and academic quality. The remaining 45% (25% neutral, 20% disagree) suggests a communication gap that must be addressed through regular updates and participatory processes.

20. Ongoing Enhancement of Student Support Services

54% of students felt the institution prioritizes continuous improvement in support services. Yet, 27% were neutral and 19% disagreed. Institutions should better communicate ongoing reforms and engage students in designing support programs.

Conclusion

This study aimed to examine governance practices in Nepalese Higher Education Institutions (HEIs), with a particular focus on access, inclusion, representation, and transparency from the perspective of student respondents. The findings reveal both commendable progress and critical gaps in institutional governance related to student welfare and equity.

The analysis shows that most students perceive their institutions as making genuine efforts toward inclusive education—evidenced by policies supporting equal access to resources, scholarships for underprivileged groups, gender equity, and inclusion of marginalized communities in governance structures. Notably, a strong sense of campus safety and respect was reported by the majority of respondents, highlighting a positive institutional culture.

However, challenges persist. Significant proportions of students expressed neutrality or disagreement regarding the fairness of financial aid distribution, the adequacy of orientation programs for first-generation students, and administrative efforts to reduce dropout rates among disadvantaged groups. Similarly, perceptions of transparency, responsiveness, and the impact of student feedback on institutional decisions remain mixed.

Another concern is that while the administration is seen as promoting diversity and inclusive policies on paper, actual implementation may be inconsistent or inadequately communicated to the student body. Students from marginalized backgrounds still feel underrepresented in decision-making processes, and a large segment of the student population is either unaware of or disengaged from governance mechanisms.

These findings suggest that while Nepalese HEIs have established a strong foundation in inclusive governance, there is a pressing need for better communication, deeper student engagement, and stronger accountability to bridge the gap between policy and practice.

Recommendations

Based on the findings of this study, the following recommendations are proposed to improve governance practices in Nepalese Higher Education Institutions:

1. Strengthen Inclusive Governance Structures

Ensure active and meaningful participation of students from marginalized communities in decision-making bodies.

Develop clear representation policies, with quotas or affirmative measures where needed.

2. Improve Communication and Awareness

Enhance the visibility of inclusion programs, scholarships, orientation sessions, and feedback mechanisms through student portals, social media, and orientation programs.

Regularly publish updates on decisions, actions taken on feedback, and student participation in governance.

3. Expand and Customize Support Programs

Design targeted orientation, mentoring, and academic support programs for first-generation and underprivileged students.

Develop early intervention systems to identify and support students at risk of dropping out.

4. Promote Equity in Financial Aid and Admission

Conduct regular audits of scholarship distribution to ensure transparency and fairness.

Strengthen admission outreach programs for students from rural, remote, and disadvantaged communities.

5. Institutionalize Diversity and Inclusion Training

Provide regular training on inclusive education, anti-discrimination, and cultural sensitivity for faculty, administrative staff, and student leaders.

Encourage inclusive student clubs and intercultural dialogue activities.

6. Foster Data-Driven Decision-Making

Improve data collection on student demographics, academic progress, and satisfaction to inform institutional policies.

Use disaggregated data to identify inclusion gaps and monitor progress over time.

7. Increase Transparency and Accountability

Establish clear grievance redressal mechanisms that are student-friendly, confidential, and accessible. Engage external bodies (e.g., UGC, QAA) in regular evaluations of governance practices with a focus on inclusion.

8. Encourage Collaborative Initiatives

Promote partnerships between the administration and student organizations to co-create inclusive campus programs and events. Recognize and support student-led initiatives that contribute to institutional inclusivity and well-being.

9. Monitor and Evaluate Continuously

Institutionalize periodic reviews of policies related to inclusion, equity, and student support.

Involve students in policy evaluation through surveys, focus groups, and participatory forums.

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