

Implication of foreign employment on Gross Domestic Product (GDP): Case of Nepal

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ABSTRACT

Introduction: This study investigates the impact of foreign employment on Nepal's GDP, focusing on remittance inflows as a key driver of economic growth and poverty reduction. **Methodology:** Findings reveal a strong positive correlation between the number of Nepalese working abroad and GDP, supported by statistically significant regression results. Remittances have played a crucial role in boosting household consumption, raising living standards, and advancing socioeconomic development. Despite these benefits, challenges persist, including poor working conditions for migrant workers, limited productive use of remitted funds, and regulatory weaknesses in the migration process. **Results:** The study also identifies other factors influencing GDP, such as age dependency, school enrollment, and poverty levels, with poverty negatively affecting economic growth. **Conclusion:** To maximize the benefits of labor migration, the study emphasizes the need to strengthen domestic employment opportunities and implement safer migration practices. These measures will better leverage labor migration for Nepal's sustainable long-term development.

Keywords: *Foreign Employment, GDP, Nepal, Remittances and Statistically Significant*

INTRODUCTION

Foreign employment refers to the movement of workers from their home country to other nations in search of improved job prospects. This migration is influenced by factors such as poverty, lack of jobs, and political unrest. In Nepal, labor migration has notably increased over time, especially after significant treaties and political shifts, with many workers heading to Gulf countries and other destinations (Mahara, 2020).

Foreign employment is a fundamental pillar of Nepalese economy; with remittances from Nepali migrant workers constituting a vital source of national income and socio-economic development. In recent years, Nepal has experienced an unprecedented expansion in labor migration, driven by limited domestic employment opportunities and the aspiration for improved livelihoods abroad (Thapa & Mainali, 2020). According to data, remittances to Nepal reached approximately USD 11 billion, representing over 26 percent of the country's Gross Domestic Product (GDP) in 2023 (IOM UN Migration, 2024). This substantial financial inflow has been instrumental in reducing poverty, enhancing household living

standards, supporting education and healthcare, and contributing to macroeconomic stability and foreign exchange reserves.

Despite the positive economic contribution, foreign employment and remittances present complex challenges and vulnerabilities. The high dependence on remittance inflows renders Nepal's economy susceptible to external shocks such as global economic downturns or geopolitical conflicts affecting host countries. Additionally, ongoing issues include lack of comprehensive skills training among migrants, inadequate pre-departure orientation, unsafe working and living conditions overseas, and inconsistent enforcement of labor rights. There are also socio-demographic concerns like working-age population, including potential labor shortages in certain domestic sectors ([Kunwar, 2020](#)).

Study of the foreign employment and its contribution on GDP is therefore crucial. This paper analyzes, whether the migration in the form of foreign employment do have statistically significant impact on the GDP of Nepal, while considering a bunch of control variables that could reduce possibility of biasness in estimation.

The paper consists an introduction as an overview of foreign employment, its causes, consequences, pros and cons in Nepalese economy. It is followed with review of some literatures written in this issue, objectives of this study is arranged, which is succeeded with synopsis of Nepal including major economic scenarios. Consequently, detail of data analysis, room to research limitations, policy recommendations and concluding sections are properly arranged. Consequently, future scope of this research is mentioned and acknowledgement section is explained. In this study, statistically significant impact of foreign employment on the GDP of Nepal is observed, which is supported with data analysis and the economic significance of migration on GDP has been explained by economists ([Thapa, 2022](#)).

Objective of the Study

This paper aims to investigate the impact of foreign employment on Nepal's GDP, with a particular focus on remittance inflows as a key driver of economic growth and poverty reduction. The study aims to analyze whether labor migration from Nepal, as represented by the number of Nepalese working abroad and the volume of remittances, has a statistically significant effect on the country's GDP. It considers a broad set of control variables such as age dependency, school enrollment, poverty rate, population growth, unemployment, and several other socio-economic factors to minimize bias in the estimation and to better isolate the impact of foreign employment. The study acknowledges the substantial economic role of remittances, which constituted over 26 percent of Nepal's GDP by 2023, underpinning household consumption, raising living standards, and advancing socio-economic development. However, it also recognizes the challenges associated with migration, including poor working conditions for migrant workers, limited productive use of remitted funds, and vulnerabilities posed by external shocks affecting host countries ([Neupane, 2021](#)).

Through rigorous statistical analysis of 50 years of data (1975–2024), the study applies linear regression techniques to quantify the influence of foreign employment on GDP, controlling for various determinants. The study highlights the significant positive correlation found between foreign employment and GDP, emphasizing foreign employment as a fundamental pillar of Nepal's economic framework. It also underscores the need for policy measures that promote safer migration, enhance domestic employment opportunities, and optimize the use of remittances for sustainable economic development. The study's objective is to provide empirical evidence on the importance of foreign employment to Nepal's GDP and to offer policy-relevant insights for maximizing the economic benefits of labor migration while addressing

associated socio-economic challenges. This objective serves to guide policymakers in balancing migration flows and domestic economic growth strategies effectively.

LITERATURE REVIEW

Labor migration has historically been a key socio-economic phenomenon, and in Nepal, it has grown rapidly, especially after the 1980s with liberalization policies such as the Foreign employment of 1985 ([Shrestha, 2021](#)). This act, along with demand from Gulf countries' oil booms, catalyzed a large-scale outflow of Nepalese workers from predominantly agrarian and underdeveloped regions to Middle Eastern and Asian countries. By 2006/07, over one million Nepalese worked abroad officially, mainly in Malaysia, Qatar, Saudi Arabia, and the UAE ([Shrestha, 2021](#)). However, official statistics likely underreport the actual numbers, as many migrants travel through informal channels or migrate for other purposes like study but engage in paid employment abroad ([Shrestha, 2021](#); [Pant, 2006](#)).

This labor mobility has dramatically increased Nepal's remittance inflow—from Rs. 549.7 million in 1990/91 to around Rs. 97 billion by 2005/06—making remittances the dominant source of foreign exchange, surpassing merchandise exports and foreign aid ([Shrestha, 2021](#)). Remittances now contribute about 26% of GDP, one of the highest ratios globally, providing a vital buffer against the country's chronic trade deficits and external debt servicing challenges ([Shrestha, 2021](#)). They also play a significant role in maintaining macroeconomic stability by boosting foreign currency reserves and allowing Nepal to avoid balance-of-payment crises ([Shrestha, 2021](#)).

At the household level, remittances have contributed extensively to poverty reduction and improved living standards. Empirical evidence demonstrates a strong link between rising remittance inflows and declining poverty rates, with regional studies showing areas with increased remittance receiving greater poverty decline ([Shrestha, 2021](#)). Remittances has increased household consumption, better access to education, healthcare, and improved housing conditions. However, remittance income is mostly spent on consumption and repaying migration-related debts, with only a small fraction invested productively in sectors like agriculture or entrepreneurship. Despite the positive impacts, challenges remain. The rapid rise of foreign employment has led to concerns about poor working conditions, exploitation, and lack of social protection for migrant workers. The expansion of manpower agencies without adequate regulation has resulted in increased recruitment fraud and irregular migration pathways. Additionally, the skills acquired by returning migrants are insufficiently harnessed for economic development, missing an opportunity to translate human capital into local productivity ([Shrestha, 2021](#)). The government must play a proactive and coordinated role, integrating economic diplomacy and institutional reforms that can transform remittance-led growth into long-term economic diversification and inclusive prosperity ([Shrestha, 2021](#)).

Migrant labor remittances have become a vital component of economic stability and socioeconomic transformation in South Asia. The World Bank publication "Migrant Labor Remittances in South Asia" by [Mambo et al. \(2005\)](#) provides a comprehensive exploration of the issues, trends, and policy discussions surrounding remittances in the region, with a particular focus on Bangladesh, India, Pakistan, and Sri Lanka.

Since the mid- 1990's, South Asia has witnessed a marked surge in remittance inflows, making countries like India, Bangladesh, Pakistan, and Sri Lanka among the top global recipients, for example, by 2003, India received US\$17.4 billion, Bangladesh US\$3.2 billion, Pakistan US \$4.0 billion, and Sri Lanka US \$1.3 billion in remittances ([Mambo et al., 2005](#)). These flows have often surpassed overseas development assistance (ODA) and sometimes even foreign direct investment (FDI), solidifying remittances as the second most significant financial inflow after FDI ([Maimbo et al., 2005](#)). The growing volume of remittances is partly driven by the large population of semi-skilled and unskilled migrants working in the Persian Gulf, supported by policy frameworks and public institutions

dedicated to facilitating migration. These include legislative measures like India's Emigration Act (1983), Pakistan's Emigration Ordinance (1979), and a network of government agencies that oversee migrant welfare and the process of remitting earnings (Maimbo *et al.*, 2005).

Remittances play a critical role not only in alleviating household poverty but also in broader economic development. In a cross-country growth-poverty model, data analysis results that a 10% increase in total remittances (official and unofficial) can reduce poverty by about 0.9% in South Asia ([Maimbo *et al.*, 2005](#)).

South Asia's remittance infrastructure is distinguished by its extensive state bank branch network, notably in rural areas, and an increasing proliferation of private and foreign banks, money service businesses (MSBs), and the involvement of post offices. State banks have historically dominated the market through monopolistic practices and vast local reach. However, the efficiency and reliability of these formal channels remain inconsistent, especially for rural and poor households, prompting many migrants to use informal means such as courier services, in-kind transfers, and the "hawala" system ([Maimbo *et al.*, 2005](#)).

The study of remittances in Nepal has burgeoned over the past decades, tracing the evolution of external income from private, often informal, transfers to being a cornerstone of national macroeconomic stability and household-level welfare. Existing literature characterizes Nepal as a remittance-dependent economy, reflecting both global and local migration patterns. According to [Kharel, Shrestha, and Limbu \(2025\)](#), remittance inflows to Nepal have grown dramatically, now amounting to over a quarter of the national GDP and serving as the largest source of foreign exchange earnings, surpassing foreign direct investment and official development assistance.

The significance of remittances for poverty alleviation is remarkable. Along with agriculture, road connectivity, and social protection schemes, remittance flows have directly contributed to a reduction in multidimensional poverty in Nepal post-1990's ([Kharel, Shrestha & Limbu, 2025](#)). Empirical data from national surveys and reports confirm that recipient households are generally more likely to invest in children's education, healthcare, and durable goods, translating to long-term welfare gains despite critiques of remittance expenditure as "unproductive" ([Kharel, Shrestha & Limbu, 2025](#)).

The stability of remittance inflows during global crises is another important insight. Scholars underscore how remittances sustained household livelihoods and national balance of payments even during the Asian financial crisis, the Great Recession, and the COVID-19 pandemic ([Kharel, Shrestha & Limbu, 2025](#)). This resilience is attributed to migrants' familial obligations, largely immune to business cycles and economic downturns in host countries ([Kharel, Shrestha & Limbu, 2025](#)).

Still remittance-driven economies like Nepal face classic symptoms of "Dutch disease" where large external inflows can appreciate the currency, undermine export competitiveness, and foster a culture of household dependency. These effects, alongside the risks of an over-reliance on migratory income are noted at the expense of long-term productive investment ([Kharel, Shrestha & Limbu, 2025](#)).

There is also extensive discussion over the policy and institutional framework surrounding remittances. Nepal has made notable advances in formalizing remittance channels, including regulatory improvements and the expansion of remittance service providers, which has reduced the reliance on informal mechanisms such as hundi. The costs of sending remittances to Nepal have fallen over time, though they remain above the global Sustainable Development Goals (SDG) target in several corridors ([Kharel, Shrestha & Limbu, 2025](#); [Adams, 1998](#)).

International migration and remittances have long been focal points in development economics, particularly for countries where domestic employment fails to provide sufficient livelihoods. Migrant remittances—the funds transferred by migrant workers to their home countries—not only provide crucial income for households but also influence macroeconomic stability, fiscal policy, labor markets, and development trajectories ([Lim & Morshed, 2020](#)).

Extensive policy measures taken by developing countries such as Pakistan, the Philippines, India, Bangladesh, and Nepal throughout the second half of the 20th century demonstrate the scope of labor-export strategies; the enormous demand for labor in the Middle East, paired with higher foreign wages, led to mass South Asian migration, and by the 2010's, remittance flows far surpassed intra-regional or traditional Western destinations ([Lim & Morshed, 2020](#)). In 2015, over \$117 billion in remittances flowed to five South Asian countries, more than half coming from the Middle East, highlighting the magnitude of this phenomenon ([Lim & Morshed, 2020](#)).

Theoretical studies on remittances often debate their dual nature: offering substantial benefits such as poverty reduction, income smoothing, and financial development, while also raising concerns over dependency, labor market distortions, and brain drain effects. Empirical work demonstrates the potential for remittances to raise national foreign reserves, impact real exchange rates (Dutch disease), and influence creditworthiness through reduced borrowing premiums ([Lim & Morshed, 2020](#)). The question of taxing remittances and foreign income is long-standing, with intense debate dating back to the 1970's ([Lim & Morshed, 2020](#)). Studies argue that migration reduces the labor-exporting country's tax base, suggesting optimal tax rates on migrant income or remittances may exceed those on domestic income. Several countries have attempted such tax measures—e.g., the Philippines' now-abolished Documentary Stamp Tax and Cuba's 20% "remittance tax"—with limited success and sometimes adverse budgetary effects ([Lim & Morshed, 2020](#)). Conversely, literature mentions remittance-fueled reserves can lower sovereign risk premiums and borrowing costs. Micro econometric evidence indicates that remittances are endogenously related to migration flows, often triggered by adverse income shocks or poor domestic opportunities ([Lim & Morshed, 2020](#)). Migration is shown to reduce the home labor supply, exerting upward pressure on domestic wages. The literature highlights the need to account for the joint household—where migrants' remittances are motivated by collective family welfare rather than individual optimization ([Lim & Morshed, 2020](#)).

In an analysis, using Bangladesh and selected Middle Eastern countries as typologies, extend standard models by examining the strain remittance taxation places on migrant and household welfare and evaluating fiscal policy trade-offs. Results suggest that remittance taxes are generally ineffective for revenue raising and may harm household welfare, whereas domestic growth policies paired with labor income tax cuts produce more robust and equitable gains. Notably, the study provides new insights into the transmission mechanisms by which productivity and policy shocks in one country ripple through labor, consumption, and government budgets in the other—findings with implications for both academic theorists and policymakers seeking to leverage migration for development ([Lim & Morshed, 2020](#)). There is multifaceted roles of migrant labor and remittances in development and macroeconomics, touching on fiscal policy, household welfare, and international macro-financial linkages ([Lim & Morshed, 2020](#)).

NEPAL: Nation Synopsis

Nepal, a landlocked nation situated between two major economic powers, faces significant infrastructural deficiencies, particularly in transportation, alongside a relatively low per capita income, all of which contribute to its classification among the world's least developed countries. The country's economy is highly reliant on the importation of essential commodities, including fuel, construction

materials, fertilizers, metals, and a broad range of consumer goods. In contrast, its exports are predominantly composed of agricultural and forestry products such as rice, jute, timber, and textiles. The manufacturing sector has experienced significant contraction, prompting a considerable number of working-age Nepalese to seek employment opportunities abroad. Nepal's heavy dependence on imports, especially from adjacent countries, coupled with limited export diversification, perpetuates its developmental challenges and economic vulnerabilities ([Rose et al., 2025](#)).

Poverty Rate

Nepal has made notable progress in reducing poverty and inequality, but challenges remain. The Fourth Nepal Living Standards Survey (NLSS-IV) 2022/23 indicates that 20.3% of the population still lives below the national poverty line. Poverty impacts 18.3% of people in urban areas and is more widespread in rural regions, affecting 24.7% of residents ([Government of Nepal, National Planning Commission, 2025](#)).

On a provincial level, poverty rates exceed the national average in Madhesh, Lumbini, Karnali, and Far Western provinces, with Karnali having the highest multidimensional poverty rate of 39.5%. In contrast, Bagmati province has the lowest rate at 7% ([Government of Nepal, National Planning Commission, 2025](#)).

Economic Growth and GDP

Over the last three decades, Nepal has seen consistent economic growth, averaging 4.3 percent annually, contributing to enhanced living standards and strengthening key macroeconomic indicators ([Government of Nepal, National Planning Commission, 2025](#)). Despite the faced hurdles, growth prospects remain cautious but optimistic, with some recent forecasts suggesting a gradual recovery supported by increased domestic demand and sectoral reforms. This underlines the critical need for improved productivity in key sectors to sustain and accelerate economic development. The period reflects Nepal's struggle to balance external disruptions and internal structural weaknesses while pursuing long-term growth objectives ([Government of Nepal, National Planning Commission, 2025](#); [Kafle, 2018](#)).

Literacy Rate

The 2021 National Census reports a literacy rate of 76.3 percent for individuals over five years old and 92 percent for the 15-24 age group. Gandaki, Bagmati, and Koshi provinces are recognized as fully literate and school curricula have been developed in 30 mother tongues ([Government of Nepal, National Planning Commission, 2025](#)).

Enrolment rates are high, with pre-primary at 94.9 percent, basic-level net enrolment at 96.1 percent, and secondary-level (grades 9-12) at 57.4 percent ([Government of Nepal, National Planning Commission, 2025](#)).

Unemployment

Unemployment is a major concern of developing economies including Nepal ([World Bank 2021](#); [Mambo et al., 2005](#)). According to the 2021 National Census, about 67 percent of Nepal's population falls within the productive age group of 15 to 59 years, a demographic trend expected to continue until 2045 ([Government of Nepal, National Planning Commission, 2025](#)).

This represents a vital demographic dividend opportunity for the country. However, due to the limited capacity of the domestic labor market to absorb this workforce over the past 30 years, a significant portion

of the surplus labor force has sought employment abroad. Recently, an increasing number of foreign workers have entered Nepal, which has led to competition and displacement of local workers ([Government of Nepal, National Planning Commission, 2025](#)).

Several factors contribute to this situation, including inadequate analysis of domestic labor market needs, mismatches between labor supply and demand ([Dhakal R., 2021](#)), shortages of skilled workers, a weak work-culture that respects labor, an economy heavily dependent on imports, and insufficient labor inspection and regulation mechanisms ([Dhungana, 2018](#)). The Nepal Labor Force Survey, following International Labor Organization standards, records an unemployment rate of 11.4 percent. Only 36.5 percent of the labor force is employed in the formal sector, with an overall labor force participation rate of 38.5 percent. Notably, women working without pay outnumber men by six times ([Government of Nepal, National Planning Commission, 2025](#)). Thorough efforts have begun to formalize informal jobs, caregiving roles, and the informal economy, significant progress remains elusive. Child labor is declining overall but remains a concern, with approximately 1.1 million children aged 5 to 13 engaged in domestic labor and about 200,000 involved in hazardous work ([Government of Nepal, National Planning Commission, 2025](#)).

Foreign Employment

Foreign employment is a major socio-economic trend in Nepal, with about 3.5 million Nepalese—roughly 14% of the population—working abroad ([Poudel, 2025](#)). Popular destinations include Malaysia, Gulf countries, and India. Remittances from these workers play a crucial role in Nepal's economy, amounting to over NPR 1,445 billion (approximately USD 11 billion) in FY 2023/24, contributing about 25% of the country's GDP ([Poudel, 2025](#)).

In FY 2023/24, more than 741,000 Nepalese received approval for overseas work, with the majority being men (661,125) and a smaller portion woman (80,172) ([Poudel, 2025](#)). The main countries attracting Nepali workers are Malaysia, Qatar, Saudi Arabia, UAE, Kuwait, and India, where no labor permits are required due to open borders ([Poudel, 2025](#)).

While foreign employment remains vital to Nepal's economy, heavy dependence poses risks and is unsustainable. The government aims to balance safe migration practices with strengthening domestic employment options. Efforts focus on promoting entrepreneurship, enhancing vocational training, and developing local industries to gradually reduce reliance on remittances. By fostering sustainable job creation within the country, Nepal seeks to build a resilient economy less dependent on overseas labor migration ([Poudel, 2025](#); [KC & Dhakal, 2020](#)).

Remittances Flow

Remittances have become a crucial component of Nepal's economy, serving as the primary source of foreign exchange earnings from the 1960's through 2024 ([Kharel, Shreshta & Limbu, 2025](#)). While their impact on macroeconomic indicators like tax revenues and capital formation is evident, the connection with GDP has been relatively modest. The most significant effects of remittances are seen at the household level, where funds flow directly to families and contribute substantially to their well-being. Recipient households prioritize remittance spending based on their specific needs, which has helped reduce poverty over the past two decades and improved education, health, and other socioeconomic indicators ([Kharel, Shreshta & Limbu, 2025](#)).

To address disparity and imbalance, national and provincial governments should develop strategies to facilitate migrants' access to higher-income countries, thereby increasing remittance flows to under-

receiving regions and supporting more equitable economic development ([Kharel, Shreshta & Limbu, 2025](#)).

Foreign Employment Policy

The number of Nepalese seeking jobs abroad surged significantly after the restoration of democracy. The Labor Act of 1985 played a key role in promoting foreign employment and encouraging private sector involvement. With the introduction of the Foreign employment in 1985 and the delegation of passport distribution to District Development Offices, migration expanded beyond India ([Shrestha, 2021](#); [Sharma & Paudel, 2023](#)). This shift was further driven by increased labor demand during the Gulf oil boom, leading many Nepalese to seek employment opportunities primarily in Gulf countries ([Shrestha, 2021](#)).

Recognizing the necessity for a dedicated labor policy, His Majesty's Government of Nepal (HMGN) introduced and implemented the National Labour Policy 2056 ([Shrestha, 2021](#)). This policy has provided a solid foundation for organizing and structuring Nepal's labor sector according to the [International Labour Organization's \(ILO\), \(2020\)](#) key principles. It has also fostered a culture of tripartite and bipartite dialogue, accompanied by the establishment of institutional frameworks that support such discussions within the labor administration. Alongside this, growing awareness of child labor and informal sector labor has led to shared understandings among social partners regarding various labor issues. While these developments mark positive progress, there remains a pressing need for further efforts to address challenges in the labor and employment sectors. The labor market and technology landscape have been evolving rapidly in recent years, requiring adaptive measures. Additionally, Nepal's recent accession to the World Trade Organization (WTO) underscores the importance of strengthening labor policies to meet emerging economic and global standards ([Shrestha, 2021](#); [Department of Foreign Employment, Government of Nepal, 2024](#)).

METHODOLOGY

This paper is based on the following variables and data of the past 50 years (1975–2024) of Nepal, taken from World Bank, World Development Indicators, The Sixteenth Plan published by Government of Nepal in 2024, and a joint study conducted and generated report by UK International Development, The Asia Foundation and Centre for the Study of Labour and Mobility, 2025. The data bank of 1012 variables from the World Development Indicators: cleaned in Excel, refined, re-named using short form of variable names. Then, a few dummy variables are constructed to see bias effect. After that, data is analyzed with using statistical tool, running a simple linear regression for the 50 years' dataset considered from 1975 through all the way till 2024 continuously, while some missing information led to smaller observation size.

RESULTS

Variable	Variable Detail	Observations	Mean	Standard Deviation	Min.	Max.	Variable Type
Rat_remgdp	Ratio of Remittance on GDP	31	15.44	10.03	1	27.06	Continuous /Dependent Variable
For_emp	Number of People in Foreign Employment	18	2117249	1459809	242005	4601708	Continuous /Dependent Variable
Age_dep	Age Dependency Ratio	50	73.95	9.59	53.69	82.41	Continuous Variable
GDP	Gross Domestic Product	50	1.21e+10	1.27e+10	1.38e+09	4.29e+10	Continuous Variable
Labor_forcetot	Total Labor Force	35	6711425	1088301	4753607	8435336	Continuous Variable
Unemp	Unemployment Rate	34	10.714	0.5001	10.389	12.975	Continuous Variable
Gini_index	Gini Index	5	34.38	5.69	30	43.8	Continuous Variable
Pop_grow	Population Growth Rate	50	1.56	0.87	-0.15	2.82	Continuous Variable
Sch_enroll	School Enrollment Ratio	19	11.73	6.25	1.15	25.38	Continuous Variable
GDP_grow	GDP Growth Rate (annual)	50	4.19	2.63	-2.98	9.68	Continuous Variable
EmpAgr	Employment in Agriculture Sector	33	69.59	5.45	61.20	77.77	Continuous Variable
HCI	Human Capital Index	3	0.50	0.007	0.49	0.51	Continuous Variable
Poverty_Rat	Poverty Ratio	50	33.29	9.09	18.7	42.5	Continuous Variable
Time	Years	50	0.429	0.5	0	1	Dummy Variable (0 for years with literacy ration less than or equal 50% and equal 1 for literacy ratio greater than 50%)
Fed_Str	Federal Structure	50	0.184	0.3912	0	1	Dummy Variable (0 for years earlier than 2015 and 1 for years 2015 or later)

Table 1: Detail of variables included in this study

Source: Calculations based on World Bank data, World Development Indicators, Sixteenth Periodic Plan published by Government of Nepal and Centre for the Study of Labor and Mobility, Kathmandu, Nepal.

Estimation Strategy and Regression Results

In this study, following regression equation is analysed:

$Y_i = \alpha_0 + \alpha_i X_i + \Omega_i \dots$ (**Equation 1**) with variables detail mentioned below:

The simple linear regression technique is applied in this study with assumptions of linearity and independence between dependent and independent variables with normal distribution of residuals. Besides, robust standard error is observed in the analysis. Robustness of finding is mentioned in a table

in an appendix section, using dependent variable Ratio of remittances on GDP, as a proxy variable (Sharaf, 2014).

$\gamma_i =$	GDP	Gross Domestic Product
	Rat_remgdp	Ratio of Remittance on GDP
$X_i =$	Age_dep	Age Dependency Ratio
	Labor_forcetot	Total Labor Force
	Unemp	Unemployment Rate
	Gini_index	Gini Index
	Pop_grow	Population Growth Rate
	For_emp	Number of People in Foreign Employment
	Sch_enroll	School Enrolment Ratio
	GDP_grow	GDP Growth Rate (annual)
	Emp_agr	Employment in Agriculture Sector
	HCI	Human Capital Index
	Pov_Rat	Poverty Ratio
	Lit_Rat	Literacy Ratio
	Time	Years
	Fed_Str	Federal Structure implemented from 2015

Table 2: Regression analysis of independent variables impact on Ratio of Remittance's on GDP

Source: Calculations based on World Bank data, World Development Indicators, Sixteenth Periodic Plan published by Government of Nepal and Centre for the Study of Labor and Mobility, Kathmandu, Nepal.

Based on the abovementioned regression equation with constants α_0, α_i and error term Ω_i are studied, then following statistical output have been found (See Table 3).

An example of regression equation of column 1 of Table 2 is following:

$$GDP = \alpha_0 + \alpha_i X_i + \Omega_i \dots \text{(Equation 2)}$$

The variables are added and analyzed simultaneously from column 2 to 5, likewise in equation 2.

Variables	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
For_emp	5,878*** (227.4)	5,934*** (1,087)	6,366** (2,149)	4,438** (759.6)	4,438** (759.6)	5,178 (1,154)
Age_dep			1.635e+08 (6.119e+08)	- 5.711e+09*** (5.109e+08)	- 5.711e+09*** (5.109e+08)	- 5.340e+09* (6.810e+08)
GDP_grow			1.820e+08 (1.921e+08)	1.779e+09** (1.988e+08)	1.779e+09** (1.988e+08)	1.717e+09* (2.211e+08)
Pop_grow			-2.454e+09 (3.119e+09)	1.196e+10** (2.050e+09)	1.196e+10** (2.050e+09)	1.160e+10 (2.200e+09)
Urb_pop				-1.471e+10** (2.548e+09)	-1.471e+10** (2.548e+09)	-1.425e+10 (2.739e+09)
Sch_enroll				- 9.478e+08*** (9.504e+07)	- 9.478e+08*** (9.504e+07)	- 9.478e+08* (1.003e+08)
Emp_agr		2.288e+07 (4.321e+08)		3.134e+09** (3.923e+08)	3.134e+09** (3.923e+08)	3.243e+09* (4.316e+08)
Unemp				4.754e+10** (6.811e+09)	4.754e+10** (6.811e+09)	4.425e+10 (8.081e+09)
Poverty_Rat			1.089e+08 (1.423e+08)	-6.341e+08** (1.364e+08)	-6.341e+08** (1.364e+08)	-5.665e+08 (1.627e+08)
Labor_forcetot						3,170 (3,555)
Constant	3.872e+09** * (5.795e+08)	2.189e+09 (3.180e+10)	-1.063e+10 (4.440e+10)	-5.482e+10 (3.824e+10)	-5.482e+10 (3.824e+10)	-8.606e+10 (5.345e+10)
Observations	18	18	18	12	12	12
R-squared	0.977	0.977	0.981	1.000	1.000	1.000

Table3: Impact analysis of independent variables on GDP

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Source: Calculations based on World Bank data, World Development Indicators, Sixteenth Periodic Plan published by Government of Nepal and Centre for the Study of Labor and Mobility, Kathmandu, Nepal.

Figures

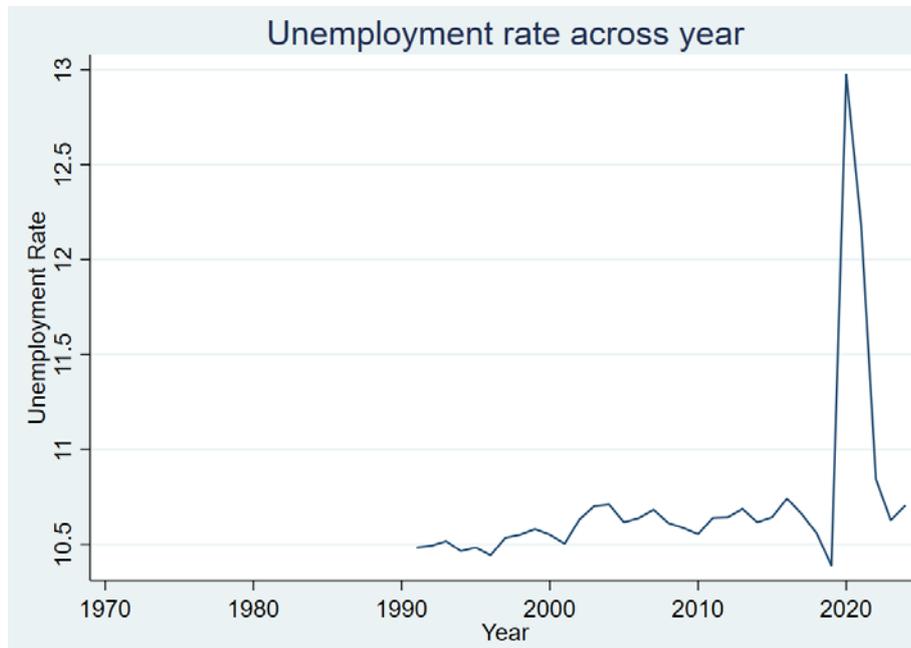


Figure 1: Unemployment ratio over years in Nepal

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan is sued by the Government of Nepal.

Explanation: This figure shows that unemployment rate is increasing over time and during Covid-19 the rate is highest. Unemployment is one of the major cause behind the foreign employment.

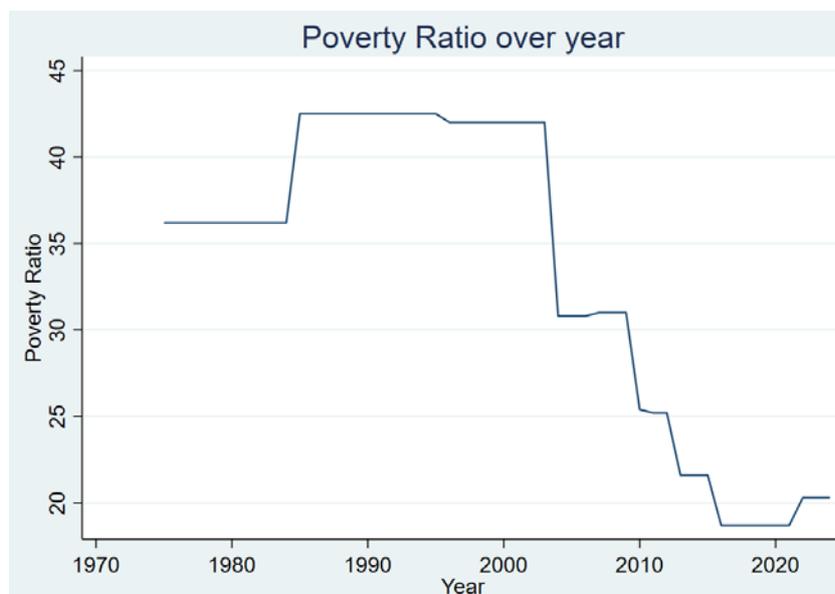


Figure 2: Poverty ratio over years in Nepal

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan is sued by the Government of Nepal.

Explanation: This figure shows that poverty rate is decreasing over time, while it is still about 20 percent. Higher poverty rate is another reason behind foreign employment.

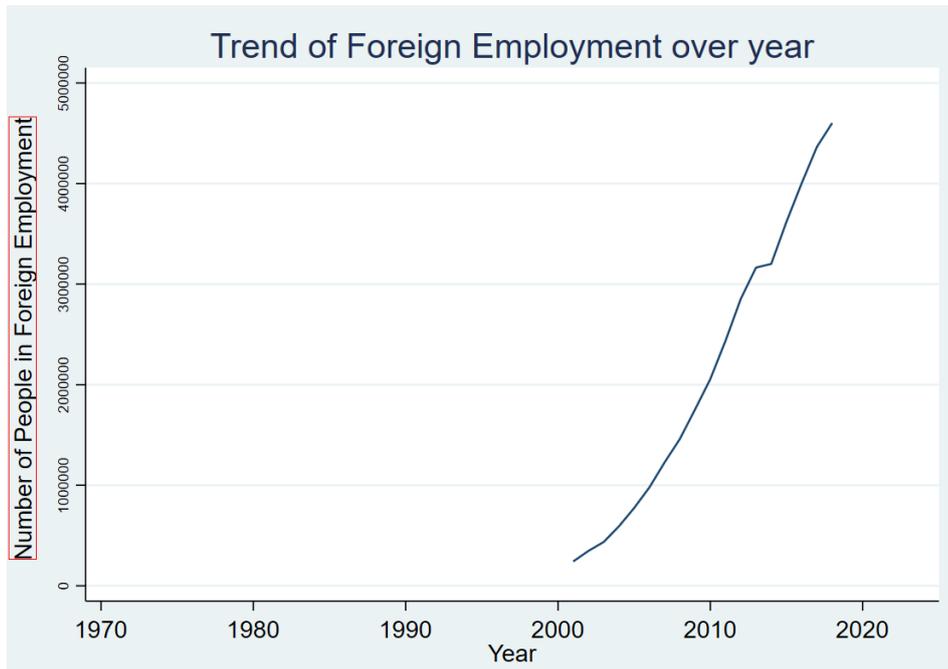


Figure 3: Foreign employment trend over years in Nepal

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan is sued by the Government of Nepal.

Employment: This figure shows steadily increasing trend of foreign employment over time and it is about 5 million in recent decade. Various factors are contributing behind this trend including poverty and unemployment.

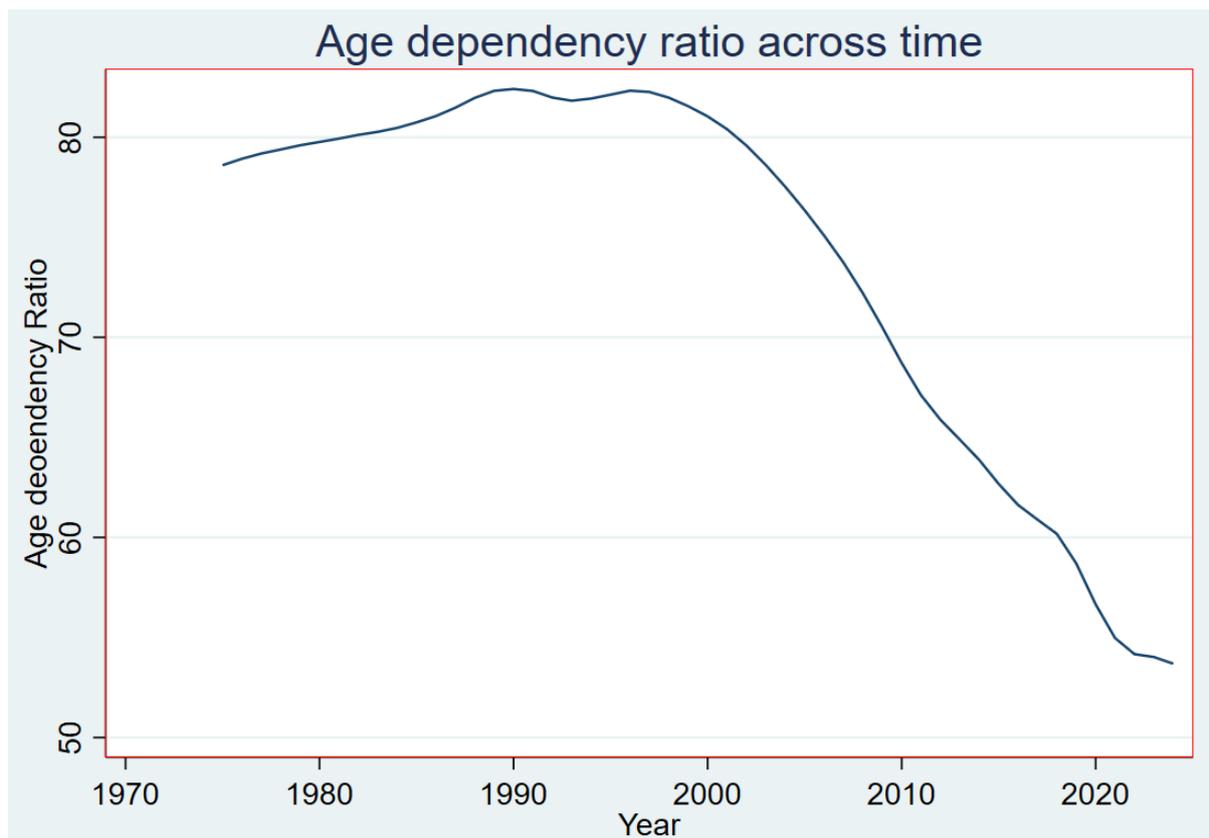


Figure 4: Age dependency ratio in Nepal

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan is sued by the Government of Nepal.

Explanation: Age dependency ratio in Nepal is decreasing over time, while the ratio is above 50 percent. There is larger a chunk of working age population in Nepal and existing higher unemployment ratio is behind growing trend of foreign employment.

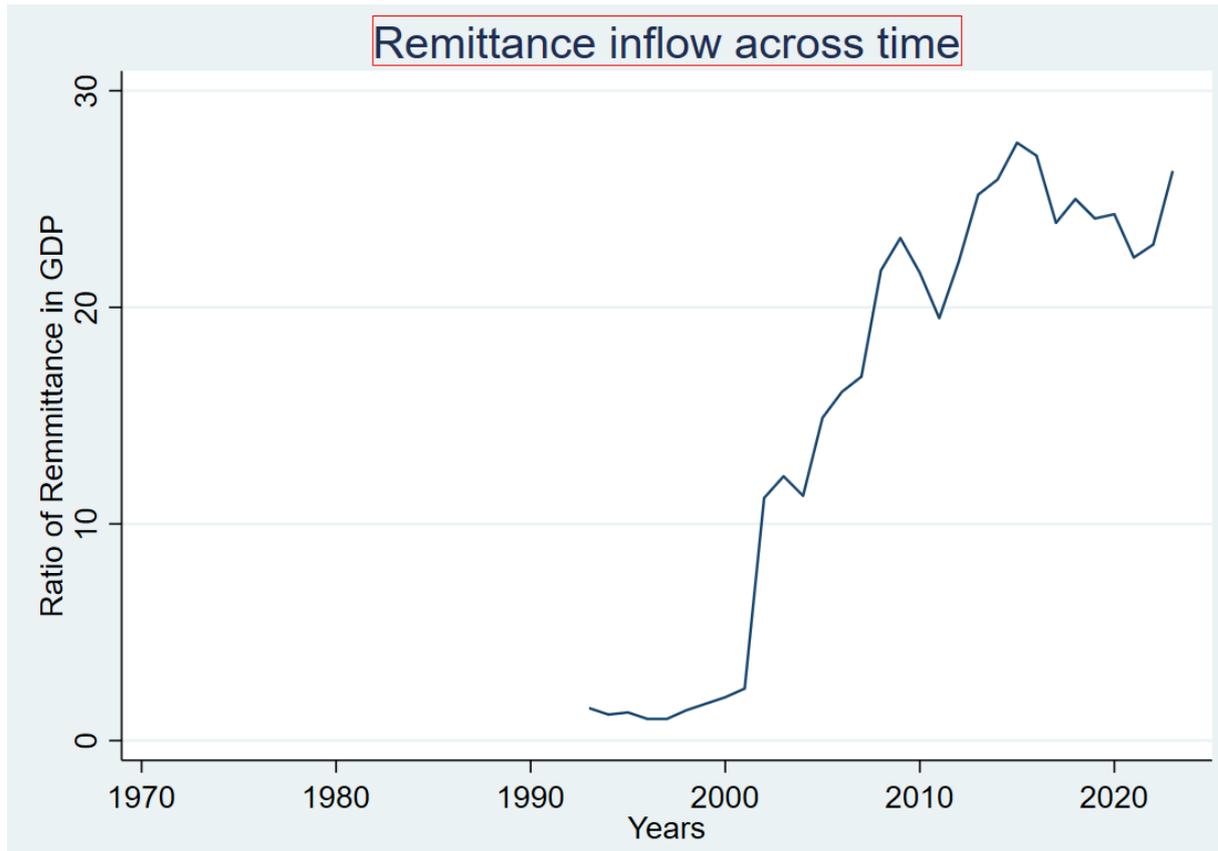


Figure 5: Remittances in flow in Nepal

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan is sued by the Government of Nepal.

Explanation: As foreign employment is in increasing trend remittance inflow is also growing over time. In the recent years it is about 27 percent of GDP.

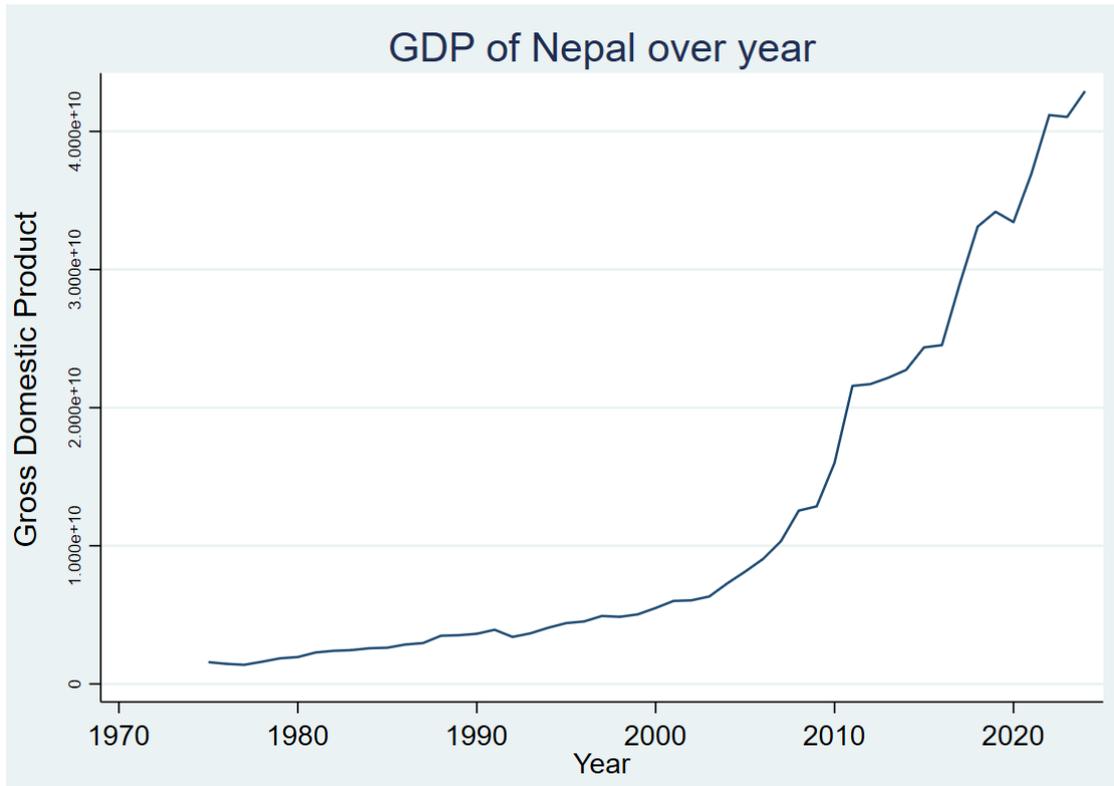


Figure 6: GDP of Nepal over years.

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan issued by the Government of Nepal.

Explanation: Overall size of the economy is increasing and the GDP of Nepal is in growing trend over time. It is above 40 billion. There are multiple contributing factors including remittance.

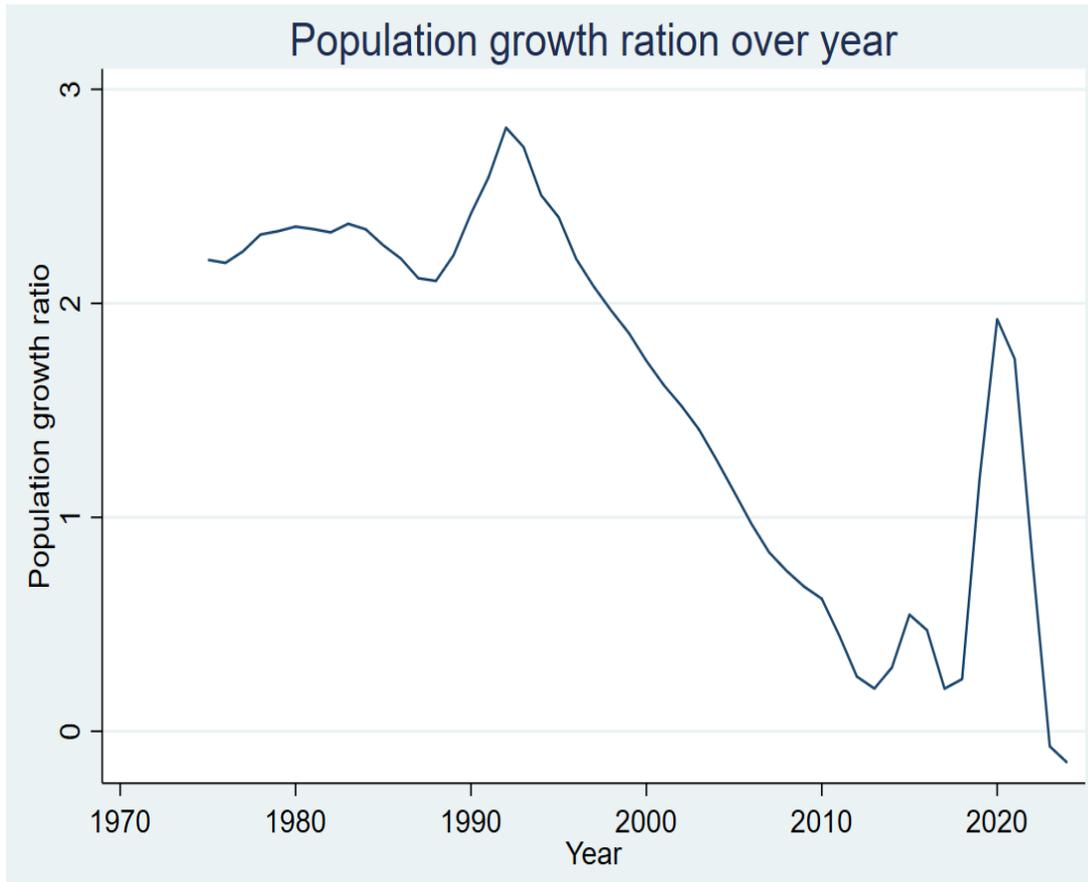


Figure 7: Population growth ratio over years in Nepal

Source: Calculations based on World Bank data, World Development Indicators and The Sixteenth Period Plan is sued by the Government of Nepal.

Explanation: This figure shows that the population of Nepal is steadily decreasing by 2010 and there is fluctuation followed with increasing population growth rate of 2% in 2020. Still the population growth rate of Nepal is below 3 percent from 1990. Lower population growth might be a cause and consequence of growing foreign employment trend.

Variables	Column 1	Column 2	Column 3	Column 4	Column5
For_emp	4.02e-06*** (6.01e-07)	-7.95e-06*** (2.57e-06)	-7.25e-06* (3.73e-06)	-1.14e-05* (4.47e-06)	-1.41e-05 (1.11e-05)
Age_dep		-2.561*** (0.544)	-2.402** (1.034)	2.161 (1.834)	1.426 (4.159)
GDP_grow			-0.279 (0.334)	-0.877* (0.408)	-0.955 (0.674)
Pop_grow			-0.701 (5.330)	-5.488 (4.880)	-7.229 (9.139)
Urb_pop				8.450 (6.862)	10.56 (11.90)
Sch_enroll				1.200 (0.604)	1.125 (1.397)
Emp_agr				-5.112 (2.583)	-5.118 (4.061)
Literacy_rat					1.146 (12.95)
Labor_forcetot					-1.20e-05 (4.17e-05)
Poverty_Rat					
Constant	10.79*** (1.531)	215.4*** (43.50)	204.5** (76.26)	93.42 (236.3)	201.3 (509.0)
Observations	18	18	18	12	12
R-squared	0.737	0.894	0.900	0.978	0.979

Table 4: Impact of dependent variable on Ratio of Remittance on GDP (Robustness check)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: Calculations based on World Bank data, World Development Indicators, Sixteenth Periodic Plan published by Government of Nepal and Centre for the Study of Labor and Mobility, Kathmandu, Nepal.

Explanation: Despite smallest observation size of 18 the table demonstrates statistically significant impact of foreign employment on Remittance. Additionally age dependency ration is also statistically significant on remittance of Nepal, with controlling a bunch of variables like poverty ratio.

DISCUSSION

Foreign employment has been a major concern of Nepalese economy. Most of the households in Nepal have representation in foreign employment, while people's destination in India is beyond record. Despite a set of hassles associated with downsides of such migration, it has become a compulsion as well as an option of better livelihood opportunity of Nepalese people. Bearing all these in mind the paper analyzes significance of foreign employment on GDP of the country. In this statistical analysis, number of people in foreign employment do have statistically significant impact on GDP of Nepal and as a part of robustness test, ratio of remittances on GDP is observed, in which statistically significant impact is observed as mentioned in a table in appendix section. In addition, from column 2 to 4, a bunch of control variables are added and the result is unaltered with statistically significant impact of foreign employment on GDP is observed, however with controlling total labor force there is alteration in the finding.

From recent census conducted by the Government of Nepal to the Living Standard Surveys, explains an increasing trend of foreign employment in Nepal, while this paper examines/tests significance of the foreign employment on the GDP of Nepal. In which, statistically significant impact of foreign employment is observed in 99% confidence interval, and an addition of control variables also leads to an unaltered finding of 95% confidence interval. Additionally, age dependency, GDP growth, population growth, employment in agriculture sector, are some of the variables with statistically significant impact of foreign employment on GDP of Nepal. This shows that an increasing trend of Nepalese youths presence in globe has impact on GDP of the country. Consequently, about one fourth portion of GDP is covered with remittances and the fact is supported by this study. Besides, literatures ([Shrivastava & Chaudhary, 2007](#)) have suggested that remittances do have impact on poverty reduction, which is a major problem of this country. And this paper digs out the statically significant impact of foreign employment on Nepalese GDP, so the article will be an asset in this issue, with evidence based data analysis and its interpretation in case of Nepal.

This aim of this study is to dig out whether there is significance of foreign employment on GDP of Nepal, considering other detrimental factors. The study reveals that there is statistically significant impact of the foreign employment on GDP of Nepal in a positive way, which is supported with economic significance of foreign employment on the economies including Nepal ([Lim & Morshed, 2020](#)). In addition, age dependency ratio, population growth rate, GDP growth rate, urban population, school enrolment ratio, employment in agriculture sector, unemployment rate, poverty rate does have statistically significant impact on GDP. An interesting fact is total labor force, which does not have significant impact on GDP of Nepal, which should be a major policy concern. In addition, despite, smaller sample size of 18 and 12 the robust standard error R is almost 1 in all analysis. Consequently, foreign employment does have statistically significant impact on GDP, while, effect of migration on overall consumption, inflation, poverty reduction, or micro economic impact as well as sectoral impact is not studied, which is a topic of further research. Apart, creation of job opportunities, should be a priority of policies in Nepal. Besides, cooperation and coordination for safe migration, skill development of migrant worker, public awareness campaigns are equally essential. All the efforts would be helpful to enhance foreign employment's contribution on GDP of Nepal ([Pudasaini, 2025](#)).

CONCLUSION

This paper works in a prominent issue of migration and its impact in GDP of a least developed country setting, Nepal, which is about to graduate to developing one in 2026. As unemployment is becoming a major problem of the country and foreign employment is being an option of better livelihood of people. In this circumstance, studying impact of foreign employment in the GDP is essential. Therefore, the paper does significance test of foreign employment on GP, using data from World Development Indicators, Sixteenth Periodic Plan issued by Government of Nepal and data from a report issued by Centre for the Study of Labor and Mobility, Kathmandu is analyzed. A set of controlled variables studied are mentioned in Table 1.

Regardless of smaller sample size, incorporation of bias estimation causing factors, the study reveals that the number of people in foreign employment do have statistically significant impact on GDP of Nepal, which is being developing one. This finding shall be applicable to other economies like Nepal. In addition, other variables like age dependency, school enrollment and poverty ratio do have statistically significant impact on GDP, while poverty ratio do have negative association.

In short, despite limitations including missing information the paper digs out an essential policy insight of creation employment within the country as well as making safer and well managed foreign employment for Nepalese people for significant contribution of migration in GDP through remittances in the future days as well ([Poudel, 2025](#)).

Limitations

Although the dataset ranged between data of 1975 to 2024 of dataset, missing information caused smaller sample size. Lack of data is another concern while working to access actual impact of foreign employment in numeric value. Despite, a set of variables controlled in the analysis, a bunch of determining factors, are stilled beyond, which could be incorporated in extensive research. Due to open border, the record of migration from Nepal to India is hardly maintained, which could impact the actual finding. As there are a number of countries do have higher chunk of remittance in GDP, so study of such countries in a panel dataset could be a more promising finding, which has been beyond scope of this study. Consequently, migration could have negative in economic parameters including GDP as well, which is not incorporated in this study. Assessing quantitative impact of migration in GDP using large panel cross country dataset could provide some remarkable finding, which is a topic of further research.

FUTURE SCOPE

The paper “Implication of foreign employment on Gross Domestic Product (GDP): Case of Nepal” encompasses several promising research directions and policy implications that extend beyond the current study. Firstly, the paper acknowledges the limitation of a small sample size and missing data, pointing to the need for future studies to utilize larger, more comprehensive datasets, possibly through panel data models involving cross-country comparisons of remittance-dependent economies. This would enable a deeper understanding of migration’s macroeconomic effects in diverse contexts. Secondly, further research could explore the sectoral and microeconomic impacts of foreign employment and remittance inflows, including effects on household consumption patterns, inflation dynamics, investment choices, and poverty alleviation at a granular level. Examining the qualitative aspects of migrant workers’ experiences, skill development, and reintegration into the domestic economy can provide insights into maximizing human capital benefits from migration ([Singh, 2025](#)).

Lastly, addressing emerging challenges such as migration to India with less formal records, and the potential negative economic effects, remains critical for building sustainable long-term strategies. Thus, the future scope lies in broadening empirical analysis using method like Difference-in-Difference ([Baker et. al., 2025](#)), policy evaluation, and socio-economic research on migration and development nexus in Nepal and comparable economies. Concurrently, study of cross-country impact of the emerging employment trend on the economies will be an interesting topic in panel dataset ([Singh, 2025](#); [Poudel & Gurung, 2021](#)).

Conflict of Interest

The author declares no conflict of interest regarding the publication of this study.

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