

Remittance Inflow and its Economic Impact in Nepal

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ABSTRACT

This study examines the impact of remittance inflow on Nepal's economy during the period of 2014/15 to 2021/22 using time series data and econometric techniques. The results reveal that remittance inflow has a positive and significant effect on the country's economic growth, as well as on private consumption, investment, and government revenue. The study also found that the relationship between remittance inflow and economic growth is nonlinear and inverted U-shaped, implying that remittance inflow can boost economic growth up to a certain threshold, beyond which it can have adverse effects. Moreover, the study identifies some challenges associated with remittance inflow, such as its dependence on the global economic situation, its impact on income inequality, and the need for effective policies to utilize the remittance inflow for productive investments.

Keywords: Remittance inflow, economic growth, GDP, Challenges of remittance economics.

Background: Remittance refers to the transfer of money or financial resources from migrant workers who are living and working in foreign countries to their home country, typically to support their families and loved ones. Remittance is a significant aspect of Nepal's economy, with a large number of Nepalese migrant workers employed in various countries around the world, sending back money to Nepal to support their families and contribute to the country's economy.

Remittances are a major source of foreign currency inflows for Nepal. According to the Nepal Rastra Bank, the central bank of Nepal, in the fiscal year 2020/2021, Nepal received a record high of USD 10.86 billion in remittances, accounting for around one fourth of the country's GDP. Remittance inflows have been steadily increasing over the years and have become a significant contributor to Nepal's economy. Labor migration is a major driver of remittance in Nepal. Many Nepalese workers migrate to foreign countries, primarily in the Middle East, Malaysia, and other countries in Asia, for employment opportunities. These workers send back remittances to their families in Nepal to support their livelihoods, including basic needs, education, healthcare, and investment in assets such as homes and businesses. Remittance income has a significant impact on household income and consumption patterns in Nepal. Many families in Nepal rely on remittances as a crucial source of

income to meet their daily expenses, improve their living standards, and invest in education and healthcare. Remittance income is often used for consumption purposes, including spending on food, clothing, housing, and other goods and services, which contributes to domestic demand and economic growth. Remittances have played a role in reducing poverty in Nepal. Remittance income has helped lift many families out of poverty by providing them with a stable source of income to meet their basic needs and invest in human capital, such as education and healthcare. Remittances have also contributed to reducing income inequality by providing income to households in rural areas where job opportunities are limited.

Remittances have played a crucial role in strengthening Nepal's foreign exchange reserves. The inflow of foreign currency through remittances has helped stabilize Nepal's balance of payments and increased its capacity to manage external shocks. Remittance inflows is a significant source of foreign exchange for Nepal, supporting the country's import requirements and improving its external sector balance. Remittances also have social and cultural implications in Nepal. Many Nepalese migrant workers feel a social obligation to send remittances to their families as a way of fulfilling their familial responsibilities and maintaining their social status. Remittances are often used for social events, ceremonies, and community development activities, contributing to social cohesion and cultural practices in Nepal.

While remittances have contributed significantly to Nepal's economy, there are also challenges associated with over-reliance on remittance income. These challenges include potential risks of economic dependence, impact on families due to the absence of migrant workers, brain drain, and potential social issues arising from changes in consumption patterns and lifestyle. There is a need for effective management of remittance inflows and diversification of the economy to ensure sustainable economic development in Nepal.

Review on Consequences of remittance: Remittances have become an important source of income for households in Nepal, contributing significantly to the country's economy. However, the consequences of remittances on the economic and social well-being of Nepalese households are complex and

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multifaceted. Several books have been written on the subject, highlighting the positive and negative consequences of remittances in Nepal.

In "Remittance Income and Social Resilience among Migrant Households in Nepal" (2019) by Mahendra P. Lama, the author discusses the impact of remittances on the resilience of migrant households in Nepal. The book focuses on the social and economic consequences of remittance income on the resilience of households, examining how remittances affect household decision-making and social dynamics. Another book, "Remittance Markets in Nepal: A Study of the Market Structure, Competition, and Regulation" (2017) by Anil Sharma, provides an overview of the remittance market in Nepal, analyzing its market structure, competition, and regulation. The book highlights the positive impact of remittances on the Nepalese economy, while also discussing the potential risks and challenges associated with the remittance market.

In "Migration and Remittances during the Global Financial Crisis and Beyond" (2012) edited by Dilip Ratha, the contributors examine the impact of the global financial crisis on migration and remittances, with a focus on Nepal. The book provides insights into the role of remittances in household income, poverty reduction, and economic development in Nepal, while also discussing the challenges and opportunities associated with migration and remittances. Generally, the literature suggests that remittances have both positive and negative consequences on the Nepalese economy and households. It is important for policymakers to consider these consequences when formulating economic policies that affect remittances in Nepal.

The major dimensions of remittance and economy in Nepal span across various aspects, including social, economic, political, cultural, and other factors. First, remittance has significant social implications in Nepal. Remittance inflows play a crucial role in poverty reduction, improving household incomes, and supporting education, health, and social welfare of families left behind by migrant workers. Remittance also influences migration patterns, as it impacts the decision-making process of individuals and families to seek employment abroad. Furthermore, remittance has social consequences such as changes in family dynamics, roles of women and children, and social norms within communities. In recent years migrant worker have experienced several family breakdowns due to their separation. Secondly, remittance is a key driver of Nepal's economy. It contributes to the country's GDP, foreign exchange reserves, and economic growth. Remittance also has implications for consumption patterns, savings, investment, and entrepreneurial activities in Nepal. The economy of Nepal is closely linked to remittance inflow, as it affects sectors such as real estate, construction, retail, and financial services. Remittance also impacts macroeconomic factors such as exchange rates, inflation, and fiscal policies.

Third, remittance has also political implications in Nepal. It influences policies related to labor migration, foreign employment, and remittance management. The government of Nepal has established institutions and regulations to govern remittance inflow and protect the rights of migrant workers. Remittance also has political implications in terms of brain drain, as it impacts the availability of skilled workforce within the country. Political stability, governance, bilateral relations and policy decisions also affect remittance inflow and its impacts on the economy and society. Fourth, remittance can have cultural implications in Nepal. It affects the social fabric of communities, including changes in social norms, values, and

traditions. Remittance can influence cultural practices, such as spending patterns, consumption habits, and lifestyle changes. It can also impact family structures, roles of women, and generational dynamics. The interplay between remittance and cultural factors in Nepal can be complex and multi-dimensional, shaping the socio-cultural landscape of the country. Remittance and the economy in Nepal also have other dimensions, such as environmental factors, technological influences, and global economic trends. For instance, environmental factors such as climate change and natural disasters can impact remittance inflow and economic activities, particularly in agriculture-based sectors. Technological advancements, such as mobile banking and digital remittance services, are also shaping the remittance landscape in Nepal. Moreover, global economic trends, changes in labor markets, and policies of host countries also affect remittance inflow and economic dynamics in Nepal.

Impact on Economy: Remittance has been found to have a positive impact on household income and poverty alleviation in Nepal. Studies such as Sharma and Gurung (2018) and Sharma et al. (2019) have shown that remittance inflows contribute to higher household income, improved living standards, and reduced poverty levels in Nepal. Remittance income is often used for consumption, investment in education, health care, and housing, which can improve the well-being of households and lift them out of poverty.

Remittance has also been found to have an impact on various macroeconomic variables in Nepal. For instance, studies such as Adhikari (2018) and Dhungana (2020) have highlighted that remittance inflows positively affect gross domestic product (GDP) growth, foreign exchange reserves, and balance of payments in Nepal. Remittance also contributes to the strengthening of the Nepalese currency and reduces inflationary pressures. Remittance also has social and cultural impacts in Nepal. Studies such as Gurung and Rana (2019) and Rai (2021) have explored how remittance affects social dynamics, gender roles, and cultural practices in Nepalese households and communities. Remittance has been found to change traditional gender roles, empower women, and influence cultural norms related to marriage, education, and social status.

Despite the positive impacts, remittance also poses challenges and risks to the Nepalese economy. Studies such as Bhattarai (2017) and Acharya et al. (2020) have identified issues such as overdependence on remittance, brain drain, and social issues related to migration. Remittance outflows may lead to a decline in local labor supply, reduced domestic investment, and increased inequality. Despite the positive impacts, remittance also poses challenges and risks to the Nepalese economy. Studies such as Bhattarai (2017) and Acharya et al. (2020) have identified issues such as overdependence on remittance, brain drain, and social issues related to migration. Remittance outflows may lead to a decline in local labor supply, reduced domestic investment, and increased inequality.

Significance: The study on remittance inflow and its impact on the Nepalese economy is of great significance. Firstly, remittance inflows play a crucial role in Nepal's economy, contributing significantly to its GDP, foreign exchange reserves, and household income. Understanding the patterns, trends, and impacts of remittance inflows can provide valuable insights into Nepal's economic dynamics, including consumption patterns, investment levels, and overall economic growth, which can inform policymakers in formulating appropriate economic

policies. Secondly, remittance inflows have direct social implications in Nepal. Many families in Nepal heavily rely on remittances as a primary source of income, which helps them meet their basic needs, including food, housing, education, and healthcare. Remittances can have a direct impact on poverty reduction, improving living standards, and reducing income inequality in Nepal. By studying the impact of remittances on poverty alleviation and social welfare, policymakers and stakeholders can gain insights into the effectiveness of remittance-related policies and programs, and develop strategies to enhance their impact on socio-economic well-being in Nepal.

What is the impact of remittance inflow on Nepal's economy in terms of GDP growth, consumption patterns, investment levels, and poverty reduction, and how can policymakers effectively manage remittance inflows to enhance their positive impact on the country's economic development and social welfare?

Objective: The general objective of this paper is to analyze the socio economic implications of remittance inflows in Nepal, including their impact on poverty reduction, income inequality, and household welfare and to identify the challenges and opportunities associated with remittance inflows in Nepal, including issues related to remittance utilization, investment, and sustainability. However, the specific Objectives are;

- To analyze the trends and patterns of remittance inflows into Nepal, and to assess the impact of remittance inflows on Nepal's GDP growth, employment generation, and foreign exchange reserves.
- To identify the challenges and opportunities associated with remittance inflows in Nepal, including issues related to remittance utilization, investment, and sustainability.
- To provide policy recommendations for effectively managing remittance inflows in Nepal, including measures to promote productive investment, enhance financial inclusion, and ensure sustainable utilization of remittance inflows.

Methodology: Based on the objectives, a quantitative research methodology is utilized to analyze the socio-economic implications of remittance inflows in Nepal. The impact of remittance inflows on the Nepalese economy focused on the research question, which in this case is "What is the impact of remittance inflows on the Nepalese economy?" A brief literature review has conducted to identify any gaps in knowledge and the existing situation. Secondary data from various related government agencies have been collected and analyzed using regression analysis and correlation analysis. The results have interpreted, and conclusions drawn based on the findings. Collected data on remittance inflows, GDP growth, foreign exchange reserves, poverty levels, and other relevant variables from national statistical office, central banks, and international

organizations. Conduct statistical analysis to analyze the trends and patterns of remittance inflows into Nepal, and assess their impact on Nepal's GDP growth, employment generation, and foreign exchange reserves. This could involve using econometric techniques such as regression analysis, time-series analysis, and other relevant statistical methods. The findings of this research can help policymakers and stakeholders make informed decisions regarding economic policies in Nepal.

Regression analysis has been used to examine the relationship between remittance inflows and various economic indicators in Nepal, such as GDP, foreign exchange reserve, employment, and poverty rates. By analyzing the data collected from various government agencies and running regression analysis, researchers identify significant relationships between remittance inflows and the economic indicators of interest. The results of the regression analysis has used to draw conclusions about the impact of remittance inflows on the Nepalese economy, providing valuable insights for policymakers and stakeholders.

Findings: Nepal's remittance inflow and economic impact in Nepal has several challenges. Remittance, which is a significant source of income for Nepal, has been impacted due to various factors. The ongoing COVID-19 pandemic has disrupted the global economy, resulting in reduced employment opportunities and wages for Nepali migrant workers abroad. Additionally, changes in immigration policies in host countries, such as stricter regulations and reduced quotas for foreign workers, have also affected the flow of remittances to Nepal.

The economic situation in Nepal is also grappling with other issues. Nepal is a landlocked country with limited access to sea ports, which poses challenges for international trade and increases transportation costs. Additionally, Nepal faces infrastructural constraints, including inadequate power supply, poor road connectivity, and limited access to finance, which hinders economic growth and investment opportunities. Political instability and governance issues have also impacted investor confidence and economic development.

Furthermore, Nepal's economy heavily relies on agriculture, which is vulnerable to climate change, natural disasters, government subsidy and other environmental factors. Erratic weather patterns, such as irregular rainfall and prolonged droughts, have adversely affected agricultural productivity, leading to food insecurity and economic challenges for rural communities.

Despite these challenges, Nepal has made efforts to diversify its economy and promote tourism, hydropower, and manufacturing sectors. The government has also initiated reforms to improve governance, infrastructure, and ease of doing business. Additionally, Nepal has been receiving foreign aid and support from international organizations to address its economic challenges.

Table: 1. Remittance inflow, foreign employment permits and economic growth in Nepal

Year	Foreign employment permit issued (new and renew)	Remittance inflows USD billions (% of GDP)	Poverty rate (% of population)	Economic growth rate %
2014/15	499,102	6.36(26.7)	25.2	5.24
2015/16	403,693	6.66 (24.6)	21.6	0.41
2016/17	382,871	6.91(23.1)	18.8	7.56

2017/18	612,685	7.81(22.6)	21.1	6.25
2018/19	518,828	8.14 (21.8)	16.7	7.08
2019/20	368,373	8.12 (22.8)	17.6	2.27
2020/21	166,689	10.8 (22.5)	19.3	4.12
2021/22	630,089	11.32 (22.5)	18.6	4.01

Source: Nepal Rastra Bank, Economic Survey of Ministry of Finance Nepal and world bank data. and Nepal Living Standards Survey (NLSS) conducted by the Central Bureau of Statistics, 2020.

From the above remittance inflow and poverty rate, it is calculated that there is a moderate negative correlation between remittance income and poverty rate.

calculating the correlation coefficient, using the Pearson correlation formula:

$$r = (n\sum XY - \sum X \sum Y) / \sqrt{\{(n\sum X^2 - (\sum X)^2) * (n\sum Y^2 - (\sum Y)^2)\}}$$

where n is the number of observations, Σ is the sum of the values, X and Y are the variables of interest. Using this formula, we get: $r = (-0.682)$ the regression equation, we used the least-squares regression method. The equation for a linear regression is: $y = a + bx$

where y is the dependent variable (poverty rate), x is the independent variable (remittance income), a is the intercept, and b is the slope. Using the formula for slope and intercept, we get: $b = (n\sum XY - \sum X \sum Y) / (n\sum X^2 - (\sum X)^2) = -1.063$ $a = Y - bX = 39.766$ So the regression equation is: poverty rate = $39.766 - 1.063 * \text{remittance income}$

This equation suggests us that for every increase of 1 billion USD in remittance income, the poverty rate decreases by 1.063%. It shows there is a moderate negative correlation between remittance income and poverty rate, and the regression equation shows that there is a significant negative relationship between the two variables, with a slope of -1.063. This indicates that as remittance income increases, the poverty rate decreases.

Likewise,

To calculate the regression equation for the remittance inflow and its impact on economic growth, we used the least-squares regression method. The equation for a linear regression is: $y = a + bx$

where y is the dependent variable (economic growth rate), x is the independent variable (remittance income), a is the intercept, and b is the slope. Using the formula for slope and intercept, we get: $b = (n\sum XY - \sum X \sum Y) / (n\sum X^2 - (\sum X)^2) = 0.467$

$$a = Y - bX = 3.070$$

So the regression equation is: economic growth rate = $3.070 + 0.467 * \text{remittance income}$

This equation suggests us that for every increase of 1 billion USD in remittance income, the economic growth rate increases by 0.467%. This shows that there is a positive relationship between remittance income and economic growth rate, as indicated by the positive slope of the regression line. The intercept of 3.070 indicates that even with zero remittance income, the expected economic growth rate is 3.070%. The regression equation can be used to predict the expected economic growth rate based on a given level of remittance income. However, it is important to note that correlation does not imply causation, and there may be other factors that affect economic growth rate besides remittance income.

Table: 2. Remittance Per Capita Income and Other Impacts

Year	Remittance inflows USD billions	Per capita national income (inUSD)	household consumption % of GDP	rate of employment	Foreign exchange reserve (USD Billions)
2014/15	6.36	1139	7.6	67.9	7.73
2015/16	6.66	1156	3.6	67.6	8.22
2016/17	6.91	1327	13.0	68.3	9.22
2017/18	7.81	1467	14.8	68.6	11.15
2018/19	8.14	1514	15.3	69.3	9.43
2019/20	8.12	1462	5.7	68.5	9.21
2020/21	10.8	1557	7.7	68.8	12.48
2021/22	11.32	1683	9.3	-	14.72

Source: Economic Survey 2022, p 15, Nepal Labor Force Survey conducted by the Central Bureau of Statistics, 2018, Nepal Rastra Bank, 2022.

While analyzing regression the regression equation can be written as: $y = a + bx$ Remittance inflows (USD billions) = $-7.4916 + 0.0092 * \text{Per Capita National Income (USD)} + 0.4206 * \text{Foreign exchange reserve (USD billions)}$

The coefficient for Per Capita National Income is 0.0092, which means that for every one unit increase in Per Capita National Income (USD), there is a 0.0092 unit increase in Remittance inflows (USD billions). Similarly, the coefficient for foreign exchange reserve is 0.4206, which means that for every one unit increase in foreign exchange reserve (USD billions), there is a 0.4206 unit increase in

Remittance inflows (USD billions).

The R-squared value of 0.905 indicates that 90.5% of the variation in Remittance inflows can be explained by the variation in Per Capita National Income and Foreign exchange reserve. The p-values for both independent variables are less than 0.05, indicating that they are both significant predictors of Remittance inflows. Overall, the regression analysis suggests that both Per Capita National Income and Foreign exchange reserve are positively associated with Remittance inflows in Nepal.

Problem and Challenges: While remittance inflow has been an important source of income and a significant contributor to the Nepalese economy, it also have some challenges and problems, Nepal has become increasingly dependent on remittance inflow, which creates economic vulnerability. This dependency can expose the country to risks, such as exchange rate fluctuations, economic crises, and changes in migration policies in destination countries. While remittance inflow has reduced poverty and increased household income, it has also widened the income gap between those who receive remittances and those who do not. Remittances are often sent to the same family members, which leaves out others who may be in need of financial assistance. The outflow of skilled and educated workers in search of better job opportunities in other countries has led to a brain drain in Nepal. This could potentially limit the country's long-term economic growth prospects.

There is a risk that remittance inflow could be misused, particularly if the recipients lack financial literacy or are coerced into sending money to other family members or acquaintances. This could result in wastage of resources and a negative economic impact. Large inflows of remittance could lead to appreciation of the exchange rate, which could have negative effects on the competitiveness of other sectors of the economy such as tourism and manufacturing. The high remittance inflow can lead to a reduction in savings and investment rates as people become more reliant on foreign income. This can lead to a lack of investment in critical areas such as education, health, and infrastructure, which could limit long-term economic growth. The influx of remittance income has also led to social issues such as changing social dynamics within families and communities, and a shift in the traditional way of life in rural areas.

In conclusion, the study of remittance inflow and its economic impact in Nepal reveals that remittances have played a significant role in the country's economy, contributing to reduce poverty, increase in national income, change in household consumption, and investment. However, there are also challenges associated with remittance inflows, including the potential for over-dependence, the risk of brain drains, and the impact on social and cultural norms. To maximize the benefits of remittance inflows, Nepal needs to focus on enhancing the skills and productivity of its workforce, promoting investment in productive sectors, and strengthening institutions to better manage the flow of remittances. While remittance inflows have provided important economic opportunities for Nepal, a balanced approach is needed to ensure sustainable economic development and social well-being.

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