

RESEARCH ARTICLE

IMPACT OF REMITTANCE IN AGRICULTURAL PRODUCTION AND HOUSEHOLD INCOME: A CASE OF ROLPA DISTRICT OF NEPAL

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ABSTRACT

Research was conducted to assess the impact of remittance on agricultural production and household income in Triveni and Paribartan Rural Municipality (RM) of Rolpa district. The study employed the purposeful random sampling technique. Altogether 180 households- 90 from migrating and 90 from non migrating households were selected randomly from the list of all the households using the random number table. A comparative analysis was carried out between migrating and non-migrating households. Simple descriptive statistics tools like mean, standard deviation, and Lorenz curve were used for the data analysis. There is a higher percentage of migrated households that have 0.5 to 1 and 1-2 ha of land. But the lower percentage in 0.1-2, 0.2-0.5 ha of land, and more than 2 ha. Most of the people, i.e., 39.22 percent of migrated people and 42.86 percent of non-migrated people, have 0.5-1 ha of land. Minimum zero and maximum 4 numbers of people are migrated from each household. The male individuals are comparatively more literate in both the migrated and non-migrated households. The ethnic composition is dominated by Janajati, where 44 percent of people are from migrated households and 36 percent from non-migrated households. A major portion of the remittance is invested in real estate, which is followed by luxurious goods. Just three percent of remittance is invested in the agriculture sector. The disparity in income was seen in both the migrating households and non-migrating households. The disparity was seen more in non-migrating households. The Gini Coefficient (G.C) was a little bit higher in non-migrating households (G.C 0.287634) than migrating households (G.C 0.24756). This implies that after migration, the disparity in income distribution has somewhat decreased. Finally, it is concluded that the outmigration of people significantly hampered the agricultural production. Although outmigration negatively effects agriculture production, remittance is the main income source of household expenditure.

KEYWORDS

Rolpa district, Remittance, Migration, Agricultural production, Livelihood

1. INTRODUCTION

1.1 Background

The Nepalese economy is largely based on agriculture, which accounts for around 27% of GDP. About 65% of the total population is engaged in agriculture (MOAD, 2023). Nepal is among the least developed countries in the world. There is widespread poverty and deprivation. Among Asian countries, the highest average HDI value was recorded for Bangladesh (0.81), and the lowest for Nepal 0.54 (Sardar, 2022).

According to the Nepal Labor Migration Report 2022, Nepal ranks 7th among the top remittance recipient countries in the world in terms of gross domestic product, with foreign remittances accounting for about a quarter of the country's economic output. With the increase of migrant workers abroad, remittance receipts in Nepal jumped from 2.1 billion Nepalese rupees (approximately US\$16 million) in 1990/91, and it is reported that Nepal reached Rs. 733.22 billion in the first six months of the fiscal year 2080 (NRB, 2024). This inflow of remittances has thus cemented its position as one of the mainstays of Nepal's economy and is the largest contributor to the country's foreign exchange reserves. According to the World Bank, remittances contributed about 12.3% of Nepal's GDP (World

Bank, 2024). The report also stated that a total of 7960 people (7722 male and 238 female) migrated in fiscal year 2021/22 from Rolpa district.

A study highlighted that the increased remittance revenue does not contribute to the nation's economic development unless it is heavily invested in the productive sectors (Dhungana, 2012). Due to remittance revenue, the Nepalese economy is progressively becoming more consumer oriented. This dependency naturally results in a lack of resources for investment. In order to improve the country's economy, he advised government agencies to develop and implement a remittance utilization policy.

The specific objectives of this study are to analyze the socio-economic determinants of migration, the impact of remittances on agriculture, and the income distribution of migrant and non-migrant households in the study area.

2. MATERIALS AND METHODS

2.1 Description Of Study Area

The study was carried out in Triveni and Pariwartan rural municipalities of Rolpa district. The elevation of Triveni Rural Municipality ranges from

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860 to 2800 meters above sea level. Its perimeter is defined by latitudes 28°12'36" to 28°22'25" north and longitudes 82°12'52" to 82°35'22" east. It is located in the east of Rolpa Municipality, the west of Salyan District, the north of Madi, and the south of Runtigadhi Rural Municipality. Its total area is 205.39 square kilometers. Paribartan rural municipality is situated between 28°23'44" and 28°32'37" N latitude and 82°27'52"- 82°42'41" E longitude, covering an area of 163.01 square kilometers. The altitude ranges from 1125 meters to 3472 meters above mean sea level. (Tribeni Rural Municipality, 2024)

2.2 Data Collection and Sampling Technique

A purposive random sampling technique was used for the study. Migrating households were purposefully selected, among which respondents were selected randomly. Altogether 180 households- 90 from migrating and 90 from non migrating households, were selected randomly from the list of all the households using the random number table. The area was much similar in geographical, socio-economic, and topographical setup; it was conducted by administering a designed questionnaire to 5% of the respondents. Both the primary and secondary data were used in the study. Primary data were collected through the household survey with the help of a pre-tested, semi-structured interview schedule administered to selected farmers. Various published and unpublished sources such as related journals, books, reports, unpublished reports, and theses were reviewed for the secondary information. For supplementary information, many concerned organizations like the District Administration Office (DAO), the District Coordination Committee, and Rolpa were visited. Ministry of Agriculture and Livestock Development, Central Bureau of Statistics (CBS), Agriculture Information and Training Center (AITC), and different websites were visited to collect publications for secondary information. Focus group discussion (FGD) has the advantage of putting researchers into first hand contact with "reality." The FGD was done to check the reliability and validity of the collected information in the study. After the household survey, the focus group discussion was conducted in the study site to understand the perception of migrant families towards the role of remittance on their living standards and its effect on their production. Selected key farmers were assembled and discussed on the study topic with a check list.

2.3 Methods and Techniques of Data Analysis

The information collected from the field will first be coded and then entered into the computer. Descriptive statistics such as mean, standard deviation, percentage, frequency distribution, and the Lorenz curve will be used to describe socio-economic and farm characteristics. Data entry and analysis will be conducted using computer software packages, such as the Statistical Package for the Social Sciences (SPSS) and Microsoft Excel. The analyzed data will then be presented in tables, graphs, and pie charts.

2.4 Socio-Economic Variables

Socio-economic variables of the farmers will be used for a comparative descriptive analysis of the study sample. Variables such as the gender of the household head, family size, occupation, education level, landholding, temporary migration, remittance inflow, household size, irrigation of paddy, livestock, fertilizer usage, age, total land, sex, number of family members, average remittance received, proportion of migrant workers, and the highest education level completed in the household will be analyzed using descriptive tools such as frequencies, percentages, and means.

2.5 Lorenz Curve

The Lorenz curve is used for the representation of the inequality in the study area.

The following formula for the computation of Gini Coefficient for grouped data was used 100²

$$G.C = 1/(100)^2 [\sum X_i Y_{i+1} - \sum X_{i+1} Y_i]$$

Level of education	Migrated HHs			Non-Migrated HHs			Total
	Male	Female	Total	Male	Female	Total	
Illiterate	67(19.71)	70(19.55)	137(19.62)	74(20.39)	75(20.71)	149(20.55)	286(20.09)
Basic	116(34.11)	134(39.41)	250(35.81)	103(28.37)	119(32.90)	222(30.62)	472(33.16)
Secondary	109(32.05)	112(32.94)	221(31.66)	116(31.95)	113(31.21)	229(31.58)	450(31.62)
Higher Education	48(14.11)	42(12.35)	90(12.89)	70(19.28)	55(15.19)	125(17.24)	215(15.10)

Note: Figures in parentheses indicate the percentage of respective category

Where,

X_i = is the cumulative percentage of X (household) variable

Y_i = is the cumulative percentage of Y (income) variable

3. RESULTS AND DISCUSSION

3.1 Population Characteristics of Sample Households

The total population of the sampled households was 1,423. In both cases—migrating and non-migrating households—the number of males (49.89%) was lower than the number of females (50.10%). The average family size was lower in migrating households (7.32) compared to non-migrating households (8.49). Overall, the average family size was 7.91, which is higher than the national average household size for the farm population, which is 4.5 (CBS, 2021).

Respondent category	Male	Female	Total	Average family size
Migrated	316(44.5)	343(48.11)	659(46.31)	7.32
Non-Migrated	394(55.49)	370(51.89)	764(53.69)	8.49
Overall	710(49.89)	713(50.10)	1423(100)	7.91

Note: Figures in parentheses indicate the percentage of respective category
Source: Field survey 2023

3.2 Ethnic Composition

Table 2 presents the ethnic composition of sample households by respondent category. The sample households were categorized into four groups: Brahmin, Chhetri, Janajati, Dalit, and others. The sample population was predominantly Janajati in both migrating and non-migrating households, constituting 44% and 36% of the sample households, respectively. The results showed that Janajati are more likely to migrate than Chhetri, Brahmin, and Dalit.

Ethnicity	Migrated HHs	Non-Migrated HHs	Total
Brahmin	3(3.33)	6(6.67)	9(5)
Chhetri	24(26.67)	27(30)	51(28.33)
Janajati	44(48.89)	36(40)	80(44.44)
Dalit	11(12.22)	12(13.33)	23(12.78)
Others	8(8.89)	9(10)	17(9.44)
Total	90(50)	90(50)	180(100)

Note: Figures in parentheses indicate the percentage of respective category. Source: Field survey 2023

3.3 Educational Status of the Sample Population

Table 3 shows the distribution of the population by literacy, sex, and respondent category. The sample population was divided into seven categories. The illiterate category referred to those with no formal or informal education who cannot read or write. Individuals who have completed up to 5 years of schooling are included in the primary category. Similarly, those who have completed 5 to 10 years of schooling are categorized as secondary, and those who have passed the SLC/SEE are included in the category above SLC/SEE.

There is almost all equal educational status in both migration and non-migration households

3.4 Age Composition

The table shows the age distribution by respondent category. The age of the household population was categorized into three groups. The economically active population was defined as members aged 15-59 years. Although members below 15 and above 59 years play supportive roles in the economic activities of the family, they were not considered economically active members. The study revealed that the majority of the population, i.e., 49.19 percent, was of economically active age. This was higher in migrating households (52.23 percent) compared to non-migrating households (45.69 percent). Similarly, less than one-third of the population (31.27 percent) was below 15 years of age. Household members aged over 59 years were relatively few (19.54 percent).

Age group	Migrant	Non-Migrant	Total
< 15	218(32.98)	227(29.79)	445(31.27)
15 - 59	302(45.69)	398(52.23)	700(49.19)
>59	141(21.33)	137(17.98)	278(19.54)
Total	661(46.45)	762(53.55)	1423(100)

Note: Figures in parentheses indicate the percentage of respective category

3.5 Occupational Status of Households

The findings show that agriculture remains the major occupation (23%) of the sampled households, with 19.34% in migrating households and 27.30% in non-migrating households. However, the prevalence of agriculture as an occupation is lower in migrating households due to a shortage of manpower and less agricultural land. Wage labor is the second source of income (19.26%), followed by foreign employment (14.27%), domestic service (6.82%), and business/trade (5.34%). The economically

inactive group, including children, school-aged individuals, and the elderly, constitutes about 31.27% of the population.

Occupation	Migrated	Non-Migrated	Total
Agriculture	147(19.34)	181(27.30)	328(23.05)
Foreign Employment	203(26.71)	0(0.00)	203(14.27)
Wage Labour	130(17.11)	144(21.72)	274(19.26)
Domestic Service	30(3.95)	67(10.11)	97(6.82)
Business/trade	32(4.21)	44(6.64)	76(5.34)
Not working/School group	218(28.68)	227(34.24)	445(31.27)
Total	760(53.40)	663(46.59)	1423(100)

Note: Figures in parentheses indicate the percentage of respective category

3.6 Land Holding Size

Table 6 shows the land holding patterns of migrated and non-migrated households. No households have less than 0.1 ha of land. Among migrant households, 3.33% have 0.1–0.2 ha of land. Additionally, 15.56% of migrated households and 24.44% of non-migrated households have 0.2–0.5 ha of land. Furthermore, 38.89% of migrated households and 28.89% of non-migrated households have 0.5–1.0 ha of land. In the 1–2 ha category, 36.67% of migrated households and 34.44% of non-migrated households fall into this range. Lastly, 5.56% of migrated households and 7.78% of non-migrated households have more than 2 ha of land. Overall, the land holding size is slightly larger in migrating households compared to non-migrating households.

Land Holding(Ha)	Migrated household (Frequency/percentage)	Non-migrated household (Frequency percentage)	Total land holding
<0.1	0(0.00)	0(0.00)	0(0.00)
0.1-0.2	3(3.33)	4(4.44)	7(3.89)
0.2-0.5	14(15.56)	22(24.44)	36(20.00)
0.5-1.0	35(38.89)	26(28.89)	61(33.89)
1.0-2.0	33(36.67)	31(34.44)	64(35.56)
>2.0	5(5.56)	7(7.78)	12(6.67)
Total	90(50)	90(50)	180(100)

Note: Figures in parentheses indicate the percentage of respective category

3.7 Number of Migrated People Per House Holds

Table 8 shows that, out of a sample of 180 households, 90 households have no migration. In 38.89% of households, just one person has migrated. In 8.33% of households, two people have migrated. In 2.22% of households, three people have migrated. Additionally, 0.56% (i.e., one household) have four people who have migrated.

Number of Person Migrated	Number of Household (Frequency)
0	90(50)
1	70(38.89)
2	15(8.33)
3	4(2.22)
4	1(0.56)
Total	180(100)

3.7.1 Destination of Migrated People

Table 9 shows that in terms of the destination of migrated households, most of the people are migrated to Saudi Arabia, i.e., 13.33%, and then to

Qatar, 11.67%. There are 7.78% of people who were migrated to Malaysia, and 6.67% people were migrated to India. Similarly, 5.56% of people migrate towards Dubai and 5% to other countries.

Destination	Number of Migrated people (Frequency)
No migrated	90(50)
India	12(6.67)
Saudi	24(13.33)
Qatar	21(11.67)
Malaysia	14(7.78)
Dubai	10(5.56)
Other Countries	9(5)
Total	180(100)

3.7.2 Determinant of Migration

Most people indicate that the main cause of migration is a shortage of money, with 33.33% of respondents choosing this option. The second most common reason, cited by 30% of respondents, is the need to maintain their livelihood. Additionally, 17.78% of people migrated for better job

opportunities, while 18% were displaced due to political instability. Finally, 8.89% of people migrated because of the influence of neighbors or friends.

Table 9: Determinant of migration	
Determinant	Frequency
Last option for maintaining the livelihood	54(30)
Due to shortage of money	60(33.33)
For a better Job	32(17.78)
Due to political instability	18(10.00)
Due to migration of neighbors/friends	16(8.89)
Total	180(100)

3.8 Remittance Expenditure

Table 10: percentage expenditure of remittance per household (2023)	
Expenditure	Percent
Food	5.4
clothing	9
Education	8.2
Health	5.6
Agriculture	2.6
Luxurious goods	18.8
Festival	10.4
real estate	40
Total	100

Most of the people (23 percent) respond that they spend remittance money to buying the luxurious goods like mobile, television, computer etc. They only spend 8 percent in agriculture.

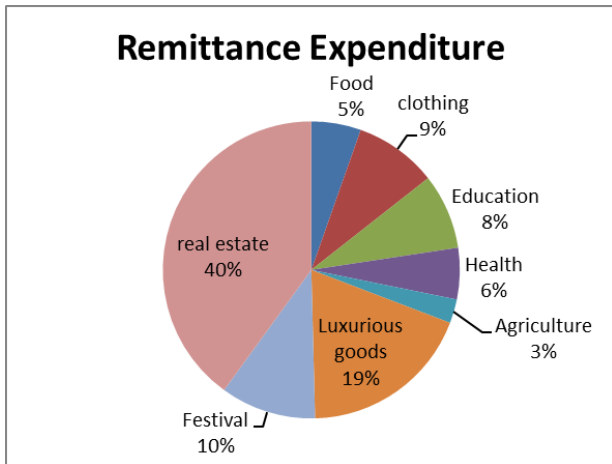


Figure 1: Pie chart Remittance Expenditure

3.9 Income Comparison

3.9.1 Different Source of household income

Income source	Non-Migration		Migration	
	Amount(Rs.)	Percentage	Amount(Rs.)	Percentage
Agriculture	157317.2	79.8	115261.4	21.68
Livestock	9180	4.6	12100	2.28
Remittance	0	0	343900	64.69
Business	16960	8.6	34960	6.58
Service	9120	4.6	19300	3.63
Labour	1360	0.69	3240	0.60
Other	3200	1.62	2800	0.52
Total	197137.2	100	531561.4	100

Average share of remittances in household income among households with migrants was estimated to be 64.69 percent in study area (Table 11).

On average, agriculture (including subsistence production) contributes 21.68% to the total household income of migrating households and 79.80% to the total household income of non-migrating households. The contribution of livestock was 2.27% in migrating households and 4.60% in non-migrating households. In non-migrating households, business contributes 8.60% to total income, while in migrating households, business contributes 6.58% to total household income.

On average, 79.80% of income in non-migrant households and 21.68% of income in migrant households comes from agriculture. Livestock contributes 4.65% to income in non-migrant households and 2.27% in migrant households. The share of remittance in migrant households is 64.69%. The share of income from business is 8.60% in non-migrant households and 6.58% in migrant households. The share of income from service is 4.60% in non-migrant households and 3.63% in migrant households. The share of income from labor is 0.69% in non-migrant households and 0.60% in migrant households. Similarly, the share of income from other sources is 1.62% in non-migrant households and 0.52% in migrant households.

The table shows a significant difference in income levels between migrant and non-migrant households, primarily due to remittances. On average, the total income of non-migrant households is Rs. 197,137.2 per household, whereas it is Rs. 531,561.4 in migrant households.

3.10 Income Distribution

The disparity in income was seen in both the migrating households and non-migrating households. The disparity was seen more among non-migrating households. And the disparity was seen little bit lower in migrating households.

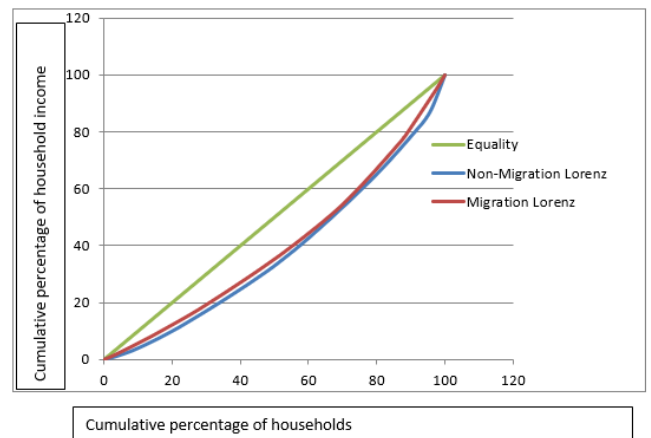


Figure 2: Lorenz curve for distribution of gross income per household of what category

The Gini Coefficient was little bit higher in non-migrating household (G.C 0.287634) than migrating one (G.C 0.24756). It means there is lower economic disparity in migrating household than non-migrating household.

Table 12: Gini-coefficient for gross income per household by respondent category (2023)	
Respondent Category	Gini-Coefficient
Non-Migrating household	0.287634
Migrating household	0.24756

The Gini-coefficient of Non-Migrating Households is found 0.287634. This indicates a certain level of inequality within non-migrating households. The value suggests that there is moderate inequality in the distribution of some resource or income within these households. The Gini-coefficient of Migrating Households is 0.24756. This indicates a slightly lower level of inequality within migrating households compared to non-migrating households. The Gini coefficient for migrating households is lower than that for non-migrating households. This implies that, on average, migrating households experience less inequality in the distribution of the resource or income in question compared to non-migrating households in a study area.

4. CONCLUSION

The study was conducted in the Triveni and Pariwarta rural municipalities of Rolpa district. The study shows that there is a significant

clarity into the socio-economic characteristics of migrating and non-migrating households, and that highlighting the impact of migration on family structure, sources of income, and expenditure pattern of remittance in various sector. The analysis of various socioeconomic variables indicate that migration is first driven by poverty and economic necessity, with remittances playing a main role in uplifting the living standards of migrant families, despite a notable reliance on agriculture as a primary occupation. The study also suggested that on average, migrating household's experience little bit inequality in the distribution of the resource or income in compared to non-migrating households in a study area.

REFERENCES

- Central Bureau of Statistics (CBS), 2011. Statistical yearbook Nepal. National Planning Commission.
- Dhungana, B. R., 2012. Remittance and Nepalese economy. *Journal of SMC*, 12, Pp. 1-10.
- Government of Nepal, Ministry of Labour, Employment and Social Security., 2022. Nepal labor migration report. https://moless.gov.np/storage/files/post_files/Nepal%20Labour%20Migration%20Report_2022.pdf
- Ministry of Agricultural Development (MOAD), 2023. Statistical information on Nepalese agriculture (2011/2012). Government of Nepal, Ministry of Agricultural Development, Agri-Business Promotion and Statistics Section.
- Nepal Rastra Bank, 2024. Remittance inflows report: FY 2080/81. <https://www.nrb.org.np>
- Paribartan Rural Municipality, 2023, July 9. Introduction. <http://paribartanmun.gov.np>
- Sardar, S., Khan, D., Khan, A., and Magda, R., 2022. The influence of aid for trade on human development in South Asia. *Sustainability*, 14(19), Pp. 12169. <https://doi.org/10.3390/su141912169>
- Triveni Rural Municipality, 2023, July 9. Introduction. <http://trivenimunrolpa.gov.np>
- World Bank., 2024. Nepal's remittance inflow and its impact on GDP. <https://data.worldbank.org/country/nepal>

