The Impact of Remittance on Consumption and Investment: A Case of Province Five of Nepal

Sunita Dhakal* and Sudan Kumar Oli

Abstract

**Background:** Remittance remains a key source of external resource flows for developing countries. Remittance inflows are the addition of migrant remittance inflow and compensation of employees which include current transfers by migrant workers, with wages and salaries earned by non-resident workers. Remittance is an essential aspect of leveraging remittance to promote economic development. In the context of Nepal, remittance recipient households tend to spend more on consumption, health and education as compared to remittance non-receiving households.

**Objective:** This study examines the impact of remittances on the consumption and investment in the context of province five of Nepal.

**Methods:** This study is based on primary sources of data with 570 observations. The primary survey was used to extract the information from the respondents regarding the remittance amount, consumption and investment of individual household from the families of Rupandehi, Dang and Rolpa districts of Nepal whose family members have been working out of country. The regression models are estimated to test the significance and impact of remittances on the investment and consumption. Consumption and investment are the dependent variables. The independent variables are remittance, annual domestic income, household size, family residential area and level of education.

**Results:** The results show that there is a positive relationship between remittances and consumption. This indicates that higher the amount of money inflow as a remittance, higher would be the consumption. Similarly, there is positive relationship between domestic income and consumption which indicates that higher the level of domestic income, higher would be the consumption. Likewise, there is a positive relationship between household size and consumption. It indicates that larger the size of the family, higher would be the consumption. The result also reveals that there is a positive relationship between level of education and consumption. It indicates that higher the level of education, higher would be the consumption.

**Conclusion:** Remittance has been leading to the consumption and investment behavior of rural household in province five. Remittance followed by family size is the most influencing factors that explain the changes in consumption and investment of families in province five of Nepal.

**Implication:** This study can be useful to concerned authorities for further planning of proper investment of remittance.

**Keywords:** Remittance, consumption, investment, domestic income, residential area and education.

**Originality:** The paper is original and has not been published in other publications.

**Paper Type:** Research Paper

**JEL Classification:** F24, E21, E22
Introduction
Remittance refers to the monetary payment transferred by a customer to a business from one place to another (Mafruhah et al., 2012). Remittance inflows are the addition of migrant remittance inflow and compensation of employees which include current transfers by migrant workers, with wages and salaries earned by non-resident workers (Iheke, 2012). Remittance receivers often have a higher propensity to own a bank account and promote access to financial services for the sender and the recipient. Remittance is an essential aspect of leveraging to promote economic development (Adelman & Taylor, 1990). According to the economic survey 2017/18 published by ministry of finance, on an average remittance received from abroad amounts about 28 percent of GDP in a year in Nepal. Particularly, for the rural household, it is the key source of income for their daily expenditure including foods, clothes, education fees, medical expenses and other contingency expenses. However, there is not such evidence which justifies how the remittance amounts are actually being used. Thus, this study investigates the way rural families use their remittance money.

Remittance remains a key source of external resource flows for developing countries, far exceeding official development assistance and more stable than private debt and portfolio equity flows (Ratha et al., 2011). The remittance plays a significant role in the context of developing nations. Increase in remittance reduces poverty through increased incomes, and it allows for greater investment in physical assets and in education and health and enables access to a larger pool of knowledge (Adams, 2011). Waqas (2017) considered the remittances to be backbone for the economic growth of the developing countries in different periods of their history. Due to dependence on remittances, they are able to create better economic conditions. The stability of these inflows also opens an opportunity for developing countries for lower borrowing costs in international capital markets by securitizing future flows of remittances (Gupta et al., 2009). Remittance have a positive effect on the credit rating of a country, provide a large and stable source of foreign currency that can curtail investor panic. It also helps to deal with a balance of payments crisis and can be used for the development projects (Ratha et al., 2011). De Haas (2005) found a positive relationship between the real GDP per capita growth and migrants’ remittances through the improvement on consumption and investment pattern. Similarly, Taylor (1992) and Faini (2003) also found a positive association between remittances and saving, consumption, investment and lifestyle of people.

Carling (2008) found that remittances are strongly associated with sound consumption behavior and investment pattern of migrant family. Adams and Page (2005) found that the international remittances have a statistically significant and positive impact on consumption and investment of people. In contrary, remittance has a greater negative effect in the economy including the unproductive expenditure and the demonstration effect of migrants, domestic currency appreciation and inflation (Ali et al., 2011). Similarly, Easterly (2003) investigated the impact of foreign aid on the growth in consumption and investment. The results indicate that the remittance seems changing the consumption and investment behavior of local people. Taylor (1999) argued that the direct impact of remittances on growth depends
on the use of received funds, effect of emigration on labor market supply and country production, particularly how they would improve local economy.

As the financial system develops, more and more investments are made through access to the domestic financial market, and remittances head towards other non-productive channels (Claessens et al., 2001). Acosta et al. (2009) showed that well-developed financial sectors can more effectively channelize remittances into investment opportunities in a multiple sectors of investments. Similarly, Castaldo and Reilly (2007) found a significant impact of workers’ remittances upon the consumption patterns of Albanian households. According to Adams (1991), international remittances have significant impact on poverty alleviation and income distribution. The study found that international remittances have a small but positive effect on poverty. The results indicate that the number of households living in poverty decline by 9.8 percent when predicted per capita household income includes remittances from the 104 still abroad migrant households and falls by 12 percent when predicted per capita household income includes remittances. According to Buch and Kuckulenz (2010), remittances are positively related to welfare enhancing effect, such as capital investment, consumption, education and health. Additionally, increase in remittances reduce poverty through increased incomes, allow for greater investment in physical assets and in education and health and also enables access to a larger pool of knowledge. Khathlan (2012) showed positive and significant relationship between workers and remittances and economic growth in both the long-run and short-run. This study concluded that as the largest source of foreign capital, workers’ remittances act as a boon to the economy. Likewise, in an empirical study on the remittances and economic growth in Turkey, Karagoz (2009) showed that remittance flow had statistically meaningful but negative impact on growth.

León, Ledesma and Piracha (2004) support the view that remittances have a positive impact directly and indirectly on productivity and employment through its effect on investment for Central and East European (CEE) economies. In addition, Manic (2017) revealed that remittances lead to significantly increasing marginal productive investments in urban regions at the expense of rural regions. Remittances stimulate the economic growth, specifically interacting with remittances and the banking sector development. A well and sound banking system performs a number of key economic functions and their development leads to the development of financial system fostering economic growth. The relationship between remittances and the banking sector can magnify the developmental effect of remittance flows (World Bank, 2006). Taking into account the endogeneity of the number of migrants and remittances received, a larger number of migrant children reduces the values of nonland assets and total expenditures per adult equivalent. However, remittances have a positive impact on housing, consumer durables, nonland assets, total expenditures (per adult equivalent), and educational expenditures, enabling asset accumulation and investment in human capital (Quisumbing and McNiven, 2010). According to Combes and Ebeke (2011), remittances play an insurance role by dampening the effects of various sources of consumption instability in developing countries (natural disasters, agricultural shocks, discretionary fiscal policy, sys-
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Mundaca (2009) explored the aggregate effect of remittances on economic growth within the conventional neoclassical growth framework using an unbalanced panel data spanning from 1980 to 2004 for 37 African countries. The results showed that remittance positively affected the economic growth of African countries. Cooray (2012) found that migrant remittances have a significant positive effect on economic growth in South Asia. A significant positive interactive effect of remittances on economic growth is detected through education and financial sector development. Aggarwal et al. (2006) carried out a study of 99 countries over the period 1975-2003 and found that remittances have a positive effect on bank deposits and credit to GDP. In contrast, Spatafora (2005) found that there is no direct link between per capita output growth and remittances. Meanwhile, in one of the larger cross-country surveys, Chami et al. (2008) concluded that remittances have a negative effect on economic growth across a sample of 113. Moreover, Meyer and Shera (2017) revealed that remittances have a positive impact on growth and that this impact increases at higher levels of remittances relative to GDP. Similarly, Oke et al. (2011) found that remittance inflow positively and significantly influences the financial development in Nigeria. Imai et al. (2011) found a positive relationship between workers’ remittances and economic growth but the volatility of workers’ remittances was found harmful for economic growth. However, the study found a significant negative relationship of workers’ remittances with poverty.

In the context of Nepal, Thapa and Acharrya (2017) examined the effect of remittances on household expenditure patterns applying propensity score matching methods. The study found that the remittance recipient households tend to spend more on consumption, health and education as compared to remittance non-receiving households. According to Dhungana and Pandit (2014), the perceived status of the household in the past migration period is better than that in the pre-migration period. Yearly remittance in a household is significantly associated with other socio-economic variables. Therefore, overseas remittance has brought a qualitative change in children’s education and health status. An improvement in the economic status of migrant’s households, the involvement of the household in community development activities, and participation of the household in social organization have brought a positive change in the overall socio-economic status of the migrant households. In more recent years, remittances have been playing a pivotal role in the country’s economic development by relaxing the foreign exchange constraints and strengthening the balance of payments, among others (Pant, 2006).

Similarly, Bansak, Chezum and Giri (2015) conducted a study that examined how remittances affected household expenditures on human capital investment by using 2010 Nepal Living Standards Survey III. The ordinary least squares (OLS) and instrumental variables (IV) analysis method was used for the empirical data analysis and they concluded that remittance enhanced the household consumptions and contributed to the human capital investment as education expenditure. Chezum, Bansak and Giri (2018) examined the relationship
of remittances and healthcare services usage in Nepal and concluded that the remittance income led to increased expenditures on high priced medical care. Likewise Thagunna and Acharya (2013) concluded that remittance had more causality on the consumption pattern as well as the import pattern, and less on investments.

The discussions above revealed inconsistency in in the findings of various studies concerning the relationship of remittances with consumption and investment. The major purpose of this study is to examine the impact of remittances on consumption and investment in the context of province five of Nepal. Specifically, it examined the relationship of remittance, domestic income, residential area, household size and level of education on consumption and investment province five of Nepal. The findings of the study could be useful for the government agencies, business sector and individual who are interested about remittance and its usage. Due to the constraints on resources, it is limited to the small area of study.

The remainder of this study is organized as follows: Section 2 describes the sample, data and methodology. Section 3 presents the empirical results and, finally, Section 4 draws conclusions and discusses the implications of the study findings.

**Research Method**
The study is based on the primary data, gathered from 570 respondents of three districts of province five by using conveyance non probability sampling technique. The 700 questionnaires were sent to the targeted families and 570 responded i.e., 81.43 percent of the distribution. The respondents’ views were collected on consumption, investment, remittance, annual domestic income, family size, family residential area and the level of education. Table 1 shows the list of districts from province five selected for the study along with number of observations.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Districts</th>
<th>No. of Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rupandehi</td>
<td>260</td>
</tr>
<tr>
<td>2</td>
<td>Dang</td>
<td>180</td>
</tr>
<tr>
<td>3</td>
<td>Rolpa</td>
<td>130</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>570</td>
</tr>
</tbody>
</table>

*Source: Field Survey, 2018*

Thus, the study is based on 570 respondents.

**The Model**
The ordinary least squares (OLS) model has employed for the study. This study assumes that the consumption and investment depend on remittance and other various factors. Moreover, the various factors influencing consumption and investment behaviors are annual remit-
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Remittance money, annual domestic income, household size, family residential area and level of education. Thus, the basic model estimated in this study takes the following form:

More specifically,

\[
C = \beta_0 + \beta_1 \text{REM} + \beta_2 \text{DY} + \beta_3 \text{HS} + \beta_4 \text{DFRA} + \beta_5 \text{EDU} + \epsilon_i
\]

\[
I = \beta_0 + \beta_1 \text{REM} + \beta_2 \text{DY} + \beta_3 \text{HS} + \beta_4 \text{DFRA} + \beta_5 \text{EDU} + \epsilon_i
\]

Where,

C = Consumption is defined as the amount of money used on basic goods and services in a year, rupees in thousands.
I = Investment is defined as the portion of total earning invested in different investment alternatives in percentage.
REM = Total annual remittances rupees in thousands.
DY = Annual domestic income in rupees in thousands.
HS = Family size i.e., the number of members in a family.
EDU = Level of education of a family members.
DFRES = Dummy variable of family residential area is defined as ‘1 if Urban and ‘0’ otherwise.

The following section describes the independent variables used in this study:

**Remittance (REM)**

A remittance is a transfer of money by a foreign worker to his or her home country or simply sending amount from one country to another. Adams and Page (2005) found that the international remittances have positive and statistically significant impact on consumption and investment of people. Similarly, Yang (2008) also concluded a positive relationship of remittance with individual consumption and investment. Likewise, Spatafora (2005) found a positive relationship between the real GDP per capita growth and migrants’ remittances through the improvement on consumption and investment pattern. Based on it, the study develops the following hypothesis.

\[H_1: \text{There is a positive relationship between remittance and consumption.}\]

\[H_2: \text{There is a positive relationship between remittance and investment.}\]

**Domestic income (DY)**

Domestic income is defined as the amount of money earned inside a county by a household. It is the sum of family earning from different sources within a country in a year. Hicks (1937) primarily focused on the importance of people’s disposable income in determining their spending. A rise in real income gives people greater financial resources for consumption and investment. Ravallion and Prem (2008) found that there exists a very strong positive relationship of per capita income growth with investment. Rajan and Zingales (2003) revealed that there is a positive impact of income on consumption and investment. The pattern of consumption and investment behavior of family individual depends on the level of income (Giuliano and Ruiz, 2009). Based on it, the study develops the following hypothesis.
H3: There is a positive relationship between domestic income and consumption.
H4: There is a positive relationship between domestic income and investment.

Family size (HS)

The family size is defined by the number of people living together in a house. Kiran and Dhawan (2015) examined the impact of family size on savings and consumption expenditure of the industrial workers. The study concluded that the saving income ratios of the workers followed a decreasing trend with the rise in the size of the family. The mean monthly savings of the large family size groups (>3 members) were observed to be significantly lower than the smallest family group, which is indicative of declining propensity to save of the workers. Similarly, Kelley (1988) agreed that existence of additional family members in a household result in increased propensity to consume, thereby implying that consumption expenses are positively influenced by the family size. In contrast, investment is negatively affected by larger family size. Based on it, the study develops the following hypothesis.

H5: There is a positive relationship between family size and consumption.
H6: There is a negative relationship between family size and investment.

Level of education (EDU)

Literacy represents the lifelong, intellectual process of gaining meaning from a critical interpretation of written or printed texts. Moore (2005) showed that low education is a key factor in keeping people poor over decades or lifecycles. Literacy level plays a significantly positive role for national economic development through consumption and investment (Yeoh and Chi, 2012). The level of education directly influences the decision on consumption and investment (Rong and Shi, 2001). Similarly, Paintal (2006) established a positive association of literacy rate on consumption and investment decision of an individual. Based on it, the study develops the following hypothesis.

H7: There is a positive relationship between level of education and consumption.
H8: There is a positive relationship between level of education and investment.

Data Analysis and Results

This section presents data analysis results and discussion of the study. This study has employed descriptive and robustness test analysis methods to analyse the data results. The results are based on SPSS outputs.

Descriptive statistics

Table 2 presents the descriptive statistics of selected dependent and independent variables.

Table 2: Descriptive statistics

Table 2 shows the descriptive statistics of dependent and independent variables. The dependent variables are C (consumption is defined as the amount of money spend on basic goods and services in a year, Rs in thousands) and I (Investment is define as the portion of total
earning invested in different investment alternatives, in percentage). The independent variables are REM (Annual amount of remittance is defined as the amount of money received by a family within a year from abroad, Rs in thousands), DY (Annual domestic income is defined as the total amount of money earned within a country by a family members, Rs in thousands) and HS (Household size is defined as the total number of members in a family).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>19.6</td>
<td>1518.57</td>
<td>171.60</td>
<td>110.62</td>
</tr>
<tr>
<td>I</td>
<td>17.00</td>
<td>55.00</td>
<td>27.41</td>
<td>7.31</td>
</tr>
<tr>
<td>REM</td>
<td>40</td>
<td>3800</td>
<td>666.80</td>
<td>1129.40</td>
</tr>
<tr>
<td>DY</td>
<td>10</td>
<td>3,500</td>
<td>1063.63</td>
<td>972.56</td>
</tr>
<tr>
<td>HS</td>
<td>2</td>
<td>22</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

**Correlation analysis**

Having indicated the descriptive statistics, Pearson’s correlation coefficients are computed and the results are presented in Table 3. More specifically, it shows the correlation coefficients between dependent and independent variables.

**Table 3: Pearson’s correlation coefficients matrix**

Table 3 shows the bivariate Pearson’s correlation coefficients between dependent and independent variables. The dependent variables are C (consumption is defined as the amount of money spend on basic goods and services in a year, Rs in thousands) and I (investment is defined as the portion of total earning invested in different investment alternatives, in percentage). The independent variables are REM (annual remittances, Rs in thousands), DY (annual domestic income in rupees, Rs in thousands), HS (family size refers to the number of members in a family), EDU (level of education of a family members) and DFRES (dummy variable of family residential area is defined as ‘1 if Urban and ‘0’ otherwise).

<table>
<thead>
<tr>
<th>Variables</th>
<th>C</th>
<th>I</th>
<th>REM</th>
<th>DY</th>
<th>HS</th>
<th>DFRA</th>
<th>EDU</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>0.097**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REM</td>
<td>0.086**</td>
<td>0.672*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DY</td>
<td>0.091**</td>
<td>0.491*</td>
<td>0.015</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HS</td>
<td>0.261**</td>
<td>-0.351*</td>
<td>0.033</td>
<td>0.003</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFRES</td>
<td>0.016</td>
<td>0.058*</td>
<td>0.015</td>
<td>-0.046</td>
<td>0.019</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EDU</td>
<td>0.013</td>
<td>0.069*</td>
<td>0.046</td>
<td>-0.019</td>
<td>-0.241**</td>
<td>-0.079</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: The asterisk sign (**) and (*) indicate that indicate that the results are significant at 1 percent and 5 percent level respectively.

Table 3 shows that there is a positive relationship between remittances and consumption.
This indicates that higher the amount of money inflow as a remittance, higher would be the spending amount in consumption. Similarly, there is positive relationship domestic income and consumption which indicates that higher the level of domestic income, higher would be the consumption. Likewise, there is a positive relationship between household size and consumption. It indicates that larger the members in a family, higher would be the consumption. The result also reveals that there is a positive relationship between level of education and consumption. It indicates that higher the level of education, higher would be the consumption.

The correlation results also show that there is a positive relationship between remittances and investment. This indicates that increase in remittance leads to increase in investments. Similarly, there is positive relationship domestic income and consumption which indicates that higher the level of domestic income, higher would be the investment. Likewise, there is positive relationship between education level and investment. It indicates that higher the level of education, higher would be the investment. The correlation result also shows that there is negative relationship between household size and investment. It indicates that larger number of family member leads to decrease in family investments.

**Regression Analysis**

Having indicated the Pearson’s correlation coefficients, the regression analysis has been carried out for the robustness test of the data and the results are shown in Table 4. More specifically, it shows the regression results of impact of remittance, domestic income and demographic variables on consumption.

**Table 4: Estimated Regression Results of Remittance, Domestic Income, Household Size, Family Residential Area and Level of Education on Consumption**

These results are based on 570 observations using linear regression model. The model is

\[ C = \beta_0 + \beta_1 \text{REM} + \beta_2 \text{DY} + \beta_3 \text{HS} + \beta_4 \text{DFRA} + \beta_5 \text{EDU} + \epsilon_i \]

where the dependent variable is \( C \) (consumption is defined as the amount of money spent on basic goods and services in a year, Rs in thousands). The independent variables are REM (annual remittances, Rs in thousands), DY (annual domestic income in rupees, Rs in thousands), HS (family size refers to the number of members in a family), EDU (level of education of a family members) and DFRES (dummy variable of family residential area is defined as ‘1 if Urban and ‘0’ otherwise).
Table 4 shows that the beta coefficients are positive for remittance with consumption. It indicates that remittance has positive impact on consumption. This finding is consistent with the findings of Spatafora (2005). Similarly, the beta coefficients for annual domestic income are positive with consumption. It indicates that annual domestic income has positive impact on consumption. This finding is consistent with the findings of Rajan and Zingales (2003). Likewise, beta coefficients for family size are positive with consumption. It indicates that family size has positive impact on consumption. This finding is consistent with the finding of Kelley (1988). The study also reveals that the beta coefficients for level of education are positive with consumption. It indicates that level of education has positive impact on consumption. The finding is similar to the findings of Paintal (2006). The result also shows that the beta coefficients are significant for remittance and annual domestic income at 1 and 5 percent level of significance.

The estimated regression results of remittance, domestic income and demographic variable on investment is presented in Table 5.

<table>
<thead>
<tr>
<th>Model</th>
<th>Intercept</th>
<th>REM</th>
<th>DY</th>
<th>HS</th>
<th>DFRA</th>
<th>EDU</th>
<th>Adj. R_\text{bar}^2</th>
<th>SEE</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.682</td>
<td>0.275</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.182</td>
<td>0.674</td>
<td>9.468</td>
</tr>
<tr>
<td></td>
<td>(6.332)**</td>
<td></td>
<td>(2.680)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10.39</td>
<td></td>
<td>0.104</td>
<td></td>
<td></td>
<td></td>
<td>0.135</td>
<td>0.515</td>
<td>7.167</td>
</tr>
<tr>
<td></td>
<td>(24.65)**</td>
<td></td>
<td>(2.247)*</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>1.652</td>
<td></td>
<td></td>
<td>0.439</td>
<td></td>
<td></td>
<td>0.256</td>
<td>0.571</td>
<td>19.74</td>
</tr>
<tr>
<td></td>
<td>(13.849)**</td>
<td></td>
<td></td>
<td>(3.053)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.594</td>
<td></td>
<td></td>
<td></td>
<td>0.077</td>
<td></td>
<td>0.013</td>
<td>0.863</td>
<td>2.095</td>
</tr>
<tr>
<td></td>
<td>(5.970)**</td>
<td></td>
<td></td>
<td></td>
<td>(0.781)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>11.243</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.471</td>
<td>0.081</td>
<td>1.078</td>
<td>3.707</td>
</tr>
<tr>
<td></td>
<td>(98.210)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.781)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>10.156</td>
<td>0.766</td>
<td>1.332</td>
<td>0.243</td>
<td>0.134</td>
<td>0.296</td>
<td>0.332</td>
<td>0.541</td>
<td>24.511</td>
</tr>
<tr>
<td></td>
<td>(22.460)**</td>
<td>(2.205)*</td>
<td>(2.013)*</td>
<td>(1.391)</td>
<td>(2.393)*</td>
<td>(1.474)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2.321</td>
<td>0.237</td>
<td>0.222</td>
<td></td>
<td>0.163</td>
<td>0.113</td>
<td>0.291</td>
<td>0.566</td>
<td>30.142</td>
</tr>
<tr>
<td></td>
<td>(6.175)**</td>
<td>(3.135)**</td>
<td>(3.266)**</td>
<td></td>
<td>(1.744)</td>
<td>(2.313)*</td>
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<td>(3.710)**</td>
<td>(2.135)*</td>
<td>(3.497)**</td>
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<td>(1.821)*</td>
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<td></td>
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<td>(3.899)**</td>
<td>(2.838)**</td>
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<td>(5.359)**</td>
<td>(0.781)</td>
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</table>

Notes:
i. Figures in parentheses are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at 1 percent and 5 percent level respectively.
iii. Dependent variable is consumption.
Table 5: Estimated Regression Results of Remittance, Domestic Income, Household Size, Family Residential Area and Level of Education on Investment

These results are based on 570 observations using linear regression model. The model is

\[ I = \beta_0 + \beta_1 \text{REM} + \beta_2 \text{DY} + \beta_3 \text{HS} + \beta_4 \text{DFRA} + \beta_5 \text{EDU} + e \]

where the dependent variable is \( I \) (Investment is defined as the portion of total earning invested in different investment alternatives in percentage). The independent variables are \( \text{REM} \) (annual remittances, Rs in thousands), \( \text{DY} \) (annual domestic income in rupees, Rs in thousands), \( \text{HS} \) (family size is number of members in a family), \( \text{EDU} \) (level of education of a family members) and \( \text{DFRES} \) (dummy variable of family residential area is defined as ‘1 if Urban and ‘0’ otherwise).

<table>
<thead>
<tr>
<th>Model</th>
<th>Intercept</th>
<th>Regression coefficients of</th>
<th>Adj. R_\text{bar2}</th>
<th>SEE</th>
<th>F-value</th>
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<td>(5.332)**</td>
<td>(2.280)*</td>
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<td>(2.697)**</td>
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<td>(98.210)**</td>
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<td>(2.135)*</td>
<td>(2.242)**</td>
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<td>1.895*</td>
<td>(3.497)**</td>
<td>(1.978)</td>
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<td>(4.849)**</td>
<td>(2.838)**</td>
<td>(5.359)**</td>
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<td>1.332</td>
<td>0.243</td>
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<td>(12.101)**</td>
<td>(2.205)*</td>
<td>(2.013)*</td>
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<td>(1.391)</td>
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</table>

Notes:
i. Figures in parentheses are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at 1 percent and 5 percent level respectively.
iii. Dependent variable is investment.

Table 5 shows that the beta coefficients are positive for remittance with investment. It indicates that remittance has positive impact on investment. This finding is consistent with the findings of Yang (2008). Similarly, the beta coefficients for annual domestic income are positive with investment. It indicates that annual domestic income has positive impact on
investment. This finding is consistent with the findings of Ravallion and Prem (2008). Likewise, the beta coefficients for family size are negative with investment. It indicates that family size has negative impact on investment. This finding contradicts with the finding of Kelley (1988). The study also reveals that the beta coefficients for level of education are positive with investment. It indicates that level of education has positive impact on investment. The finding is similar to the findings of Rong and Shi (2001). The result also shows that the beta coefficients are significant for remittance and annual domestic income at 5 and 1 percent level of significance.

**Conclusion**

In the worldwide economy, remittances represent one of the major international flows of financial resources. Workers’ remittances constitute an increasingly important mechanism for the transfer of resources from developed to developing countries. Remittances are the second-largest source, behind foreign direct investment, of external funding for developing countries. Remittance refers to the transfer of money by an individual or business from one place to another. The remittance is the major source of income for Nepalese people which covered about 26.6 percentage of total GDP of the country. The study attempted to determine the impact of remittance on the consumption and investment of individual household from the family of Rupandehi, Dang and Rolpa districts of Nepal. This study is based on primary data collected from 570 respondents.

The study shows that remittance, domestic income, level of education, family size and family residential area have positive impact on consumption. Similarly, the result also shows that remittance, domestic income, level of education and family residential area has positive impact on investment. However, family size has negative impact on the investments. The study shows that the family having urban area residency are more aware of spending on consumption and investment on different alternatives in comparison of rural area. The major conclusion of the study is that remittances have significant impact on the consumption and investment in the three districts of province five of Nepal. The study also concludes that remittance followed by family size is the most influencing factors that explain the changes in consumption and investment of families in province five of Nepal. The empirical results have supported all the eight entire hypotheses.

Overall study suggested that the remittance has been leading to the consumption and investment behavior of rural households in province five. The study lay down a foundation stone for the further study extension of rural household remittance taking other variables which have direct and indirect impact to the usage of remittance money.

**Conflict of Interest**

Author declares no conflict of interest existed in this paper.
References


