The Impact of Remittances on Economic Growth in Nepal

Dambar Upertey

ABSTRACT

This paper examines the impact of remittances on economic growth in Nepal by using Johansen cointegration and error correction methods. Using annual data of remittances, GDP per capita, consumption and investment for the period of 1976–2013, this study finds the evidence of cointegrating relationship between these variables and that an increase in remittances deteriorates GDP per capita growth in Nepal. The main channel through which remittances influence economic growth is through consumption and investment. There is no evidence that remittances are used for investment; however, they have positive and statistical significant causality to consumption. Domestic production contracts with an increase in remittances. This is because of the exodus of farm workers with the rise in emigration due to Maoist’s insurgency, political instability and unemployment. Besides, demand shifts from traditional Nepali products to differentiated manufactured products with an increase in remittance incomes. The increased demand is met by imports from Indian markets. There is no evidence of association of remittances and investment; however, they are positively associated with consumption. So, an increase in inflows of remittances decreases agro-product, increases consumption and does not change investment leading to deteriorate GDP per capita. Therefore, remittances are curse for economic growth of Nepal.

JEL Classification: F24, O11
Keywords: Remittances, Cointegration, Error Correction

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1. Introduction

Recent period witnesses a steady inflow of remittances to developing countries. Their flows to developing countries occupy second largest source of external finance after foreign direct investment (FDI) (Ahamada and Coulibaly, 2013) and about three times larger than official development assistance (World Bank, 2015c). Officially recorded remittances to developing countries are $435 billion in 2014, an increase of 5 percent over 2013. Total remittances flows to developing countries have increased more than six–fold during the period 1995 to 2015 amounting to $454 billion in 2015 (World Bank, 2015c). In the context of growing remittance flows, it is not surprising to look economic impacts of them in developing countries and brings concerns to the policy makers to consider how best to utilize of these financial flows. The central concern of developing countries is a high and sustainable economic growth; it is pertinent to assess the value of remittances for developing countries in terms of their impact on the economic growth of the recipient country.

The present study concerns the case study of Nepal, which is one of the least developed countries with a small–sized economy the GDP of which equal to $29.3 billion (World Bank, 2015c) and wedged between two Asian emerging economies China and India. The Nepali economy is becoming more remittance–dependent as the inflows of remittances have been continually growing over the last 15 years (Ratha, 2015). In Nepal, the ratio of remittance inflows as a percentage of GDP was only 1.3% in 1995, but reached 28.8 % in 2013 (World Bank, 2015c), making it third highest in the remittance–recipient countries after Tajikistan and the Kyrgyz Republic as a percentage of GDP (World Bank, 2015c).

Nepalese economy has some peculiar characteristics in addition to the common features of other developing economies. First, it is a small and landlocked country bordered by two giant economies China and India. Nepal shares open borders and cultures with India. There is also a tie in terms of language between these two countries. However, Nepal is not taking advantages from the high growth rate of India. This is because of political instability, rampant corruption, insecurity and vested interest of handful Nepali elites who want to keep this economy as it is. The meager growth of Nepal seems to be out of sync with China and India. The open border with India eases Nepalese to import goods whenever their purchasing power increases with an increase in income, for instant an increase in remittances, rather than making efforts at home to meet their increased demand. The accessibility of easy markets for goods and possibility of avoidance custom duties using illegal routes encourage Nepalese not to exert efforts at home. So, one question arises, how remittance income behaves with consumption? Do remittances raise consumption expenditure in Nepal? Second, remitted money to Nepal is from the unskilled Nepali migrants. Most of Nepalese are working in Saudi Arabia, Malaysia, Qatar, and United Arab Emirates as low–skilled workers. Remittances receiving family members back home are uneducated and they do not use the remitted money in investment or any productive activity. So, second question arises: how these unskilled workers’ remittances relate with investment in Nepal? Do remittance recipients invest the remitted money in productive activities? Third, Nepal is witnessing an extreme political instability since the restoration of democracy in 1990. There are 24 governments formed in 25 years of period from 1991–2015. This Jeopardizes development prospect for Nepal and the expectation of Nepalese to catapult a paradigm shift of the socioeconomic condition of the kingdom dashed to the ground. Pessimism is widespread in the country and emigration soars. Fourth, international migration of Nepalese has significantly amplified from the past two decades due to the Maoist insurgency and the consequent insecurity.
and fear from that. About 1500 Nepalese fly every day to Arabian countries and Malaysia for work. Such migration leads to the scarcity of farm workers leading to decrease in agro-product. Agriculture is the mainstay of the economy, providing a livelihood for more than 70% of the population and accounting for a little over one-third of GDP. Therefore, on the one hand, even the fertile lands in Nepal remain uncultivated and on the other hand, the import of agro-commodities is gradually increasing in the country to meet the increased demand for consumption goods. So, the fourth question is how out-migration of Nepali youths seeking work abroad and their remittances affects the GDP growth in Nepal? Do remittance incomes offset the production lost, especially agro-product, due to flight of Nepali workers? These are the questions which serve as impetus to conduct this study.

These unique characteristics of Nepali economy could produce different results of remittances on economic growth. One of the Asia’s poorest nations, Nepal, with unemployment over 40% has been affected by 7.8 magnitude earthquake on 25 April, 2015 (Campbell and Iyengar, 2015). The impact of the earthquake has been devastating. Emigration of Nepalese will certainly rise and as a consequence remittances will upsurge. In addition, there are two recent developments in Nepali economy that cause to skyrocket remittances to Nepal. First, because of the devastating earthquake, the USA grants temporary protected status (TPS) to Nepalese who are already in the USA before June 24 of 2015. This allows work authorization to Nepalese in the US regardless of their status and, therefore, they can remit more money to Nepal. Second, Nepal government is exploring new labor destination countries, establishing bilateral link with the concerned country and setting up diplomatic mission there. Recently, Nepal government added Uzbekistan in the list of work destinations. These all exercises will boost remittances inflows to Nepal. Thus, it is even more pertinent to examine the impact of remittances on economic growth in this quake–and poverty–ridden country.

Despite the fact that remittances may be critical for economic growth, they still remain one of the least studied areas of research in migration literature in the context of Nepal. To the best of this authors knowledge, there is no any study examining the impact of remittances on economic growth through the link of consumption and investment. Therefore, this study explores on how Nepali workers’ remittances leave an impact in Nepal. Do the remittances receiving families back home spend that flows in unproductive activities such as building a house, spend on conspicuous consumption in festivals and in funeral, buying jewelry as a long–standing literature of remittances suggests? Do they invest such hard–earned money in productive activities? The way remittance receiving relatives of the migrants put the remitted money decides the impact of remittances on macro variable in general and economic growth in particular. Therefore, this study is motivated to examine the impact of remittances on consumption, investment and, moreover, on economic growth in Nepal by utilizing Vector Autoregression and Vector Error Correction Model (VAR/VECM) method. This is the first study of Nepal that uses time series techniques such as cointegration and error correction mechanism of remittance effectiveness on growth through consumption–investment channel. The cointegration and error correction mechanism are more appropriate techniques to detect the effectiveness of remittance via short–run dynamics and long–run linkage among the variables.

Remittances data of Nepal are publicly available only from 1993 in World Bank, IMF. However, this paper seeks to provide comprehensiveness in terms of the application of extended data. The current study uses extended time period for the period 1976-2013, a considerably larger period than that used by some earlier studies. This study extends dataset from a newly–
constructed dataset for remittances by Giuliano and Ruiz-Arranz (2009). They constructed the remittances data from 1976 to 2002 for 100 countries. This paper uses their data for the period 1976-2002 and extends it to 2013. From the perspective of data as well, this study of remittances on growth in the context of Nepal is also different than other studies.

This paper utilizes the annual data of four time series variables Gross Domestic Product (GDP), remittances, consumption and investment scaled each of them by the size of population for the period of 1976-2013. These time-series variables are determined simultaneously and therefore, are endogeneous. The study employs VAR/VECM methodology which assumes all variables as endogeneous. When checked unit root by using ADF and PP tests, these variables are found integrated of order one in level, that is I(1), and their first differences is I(0). Lag length is determined by using likelihood ratio (LR) test. Johansen–Juselius cointegration method confirms two cointegrating vectors in lag length 3 in level and 2 in difference which indicates that there is long-run relationship of these variables. Vector error correction (VECM) estimates show that the Error Correction Term (ECT) has a right sign of GDP equation but statistically insignificant which indicates that there is no evidence of the convergence of GDP equation from last period’s disequilibrium to correct disequilibrium. However, from the short term dynamics, the results show that remittance has a negative and statistically significant effect on per capita GDP. Remittances also show negative relationship with investment and consumption expenditure.

The paper begins after this section with a short review of Nepal’s economy highlighting the significance and causes of increasing remittances. The rest of the paper is organized as follows: Section 2 provides background and short literature review. Section 3 mentions the limitations of data and methods of this study. Section 4 describes the data source and variables used. Section 5 is devoted for empirical models with their results and discussions including unit root test, lag selection, test of cointegration, estimation of VECM, diagnostic check and robustness check of the results. Section 7 concludes the study with policy recommendations.

2. Background

Nepal is a tiny Himalayan country slightly outranks the state of Arkansas in the US, located between the two giant economies India and China. It is one of the poorest countries in the world with a population of 28 million and GDP 29.3 billion (World Bank, 2015c). Out of the total Nepali people, 23.7% live below $1.25 per day and 56% below $2 per day (Poverty Threshold, 2015). However, it has a tremendous geographic diversity ranging its land as low as 59 meters elevation to 90 peaks over 7,000 meters high including Earth’s highest 8,848 meters Mount Everest. Agriculture is the main source of livelihood of this economy and is regarded as the backbone of it. More than 80% Nepalese rely on agriculture and unemployment rate is more than 40% (Campbell and Iyengar 2015). Beginning from economic liberalization in 1990 and heightened in the civil war period, foreign labor migration became an essential part for Nepalese. Most rural households now depend on at least one member’s earnings from employment abroad (Nepal’s Dependence on Exporting Labor, 2015).

Already poverty–ridden Himalayan country Nepal further pushed behind due to a decade long Maoist insurgency that began on Feb 12 of 1996 aiming to abolish the then constitutional monarchy for an allegation to be engrossed in massive corruption, injustice, bad governance, abuse of power and misuse of authority (Maoist Insurgency in Nepal: Internal Dimensions, 2015). The Maoist so-called people’s war put the country into severe conflict leading exodus
of Nepalese into the safe place. Thousands of Nepalese sought asylum abroad. The insurgency reached its climax with an alliance of major political parties together with the Maoist party. The alliance dethroned the monarchy. Then the so–called People’s war ended on Nov 21, 2006 with a comprehensive peace accord (Peace Agreements: Nepal, 2015). But during the insurgency period, more than 15,000 Nepalese were supposed to have been killed and hundreds of thousands left the country seeking safe shelter somewhere else. Unemployment soared leading to skyrocketing migration and remittances sharply increased. Nepal is the second remittance recipient country among the low income countries after Bangladesh in dollar terms and is third recipient as a percentage of GDP (29 percent) after Tajikistan (52 percent) and Kyrgyz Republic (31 percent).

Remittances are important source of foreign exchange. They exceed the earnings from exports and finance the significant portion of imports in Nepal (Asian Migrants’ Remittances, 2015). The rising volume and proportion of remittances relative to other external flows such as official development assistance (ODA) and foreign direct investment (FDI) as a percentage of GDP indicates that the macroeconomic effects of remittances may be important for Nepal. The changing structure of information technology coupled with the soaring pace of globalization has created the movement of Nepali workers anywhere in the world. So, remittances constitute a largest source of foreign income relative to other financial flows for Nepal. Nepal relies heavily on remittances. When compared the remittances flows with Official Development Assistance (ODA), Foreign Direct Investment (FDI) and export in Nepal as a percentage of GDP, it depicts FDI to Nepal is almost zero; ODA and export earnings are gradually decreasing. Remittances are increasing over time and are sharply rising in the later years.

Although there is a rising trend of remittance flows to developing countries and is the largest international financial flow excluding China, its effects on economic growth is controversial. There are both positive and negative strands of literature on the role of remittances for growth. There is no general consensus on how remittances affect growth.

On the positive side, (Ajilore and Ikhide, 2012b) investigate both short and long run impact of remittances on financial development in selected five Sub–Saharan African countries namely, Cape–Verde, Lesotho, Nigeria, Senegal and Togo. Using time series Autoregressive Distributed Lag (ARDL) bounds testing approach for testing the existence of co-integration relationships, they find the long-run relationship between remittances and financial development variables and that remittance promote economic development of all the sample countries except Nigeria. Sami (2013) investigates the impact of remittances and economic development on banking sector development in Fiji by employing annual data from 1980–2010 by utilizing time series ARDL approach of cointegration due to Pesaran et al. (2001). This study reveals the long–run relationship between remittances, banking sector development and economic growth. By using vector error correction model (VECM) and Toda Yamamoto Granger Non-Causality Test (Toda and Yamamoto, 1995) to see the direction of causality, if any, the study finds one–way causality from economic growth and remittances to banking sector development. For Sami (2013), remittances inflows improve both financial sector as well as economic development. Kumar (2013) studies the impact of remittances on economic development by using an augmented Solow model and an ARDL bounds test for cointegration. This study explores the short–and long–run effects of remittances, aid and financial deepening on growth in Guyana using annual data for the period 1982–2010 and finds that remittances have a positive and significant effect both in the short and the long run.
On the negative side, researchers argue that remittances increases income inequality thereby increases the gulf of poverty gap by creating pockets of more wealthy remittances receiving households in relatively poor neighbors (Funkhouser, 1995). From the viewpoint of labor supply side, remittance reduces economic growth since it increases income of remittances receiving household and household member incline to work less (Chami, 2008). The other pessimistic view of remittances is that it generates inflationary pressure in domestic economy since most of the remittance is spent on consumption good (Khan and Islam, 2013). Still another disappointing argument about remittance is that it appreciates the domestic currency in small open economy (Lopez et al., 2007). Such appreciation of domestic currency harms the competitiveness of export sector which affects the current account balance adversely.

There is still another spectrum of literate of the effects of remittances on economic development: growth effect of remittances is conditional. Growth effect of remittances depends on financial development of a country (Law and Singh, 2014) and (Ajilore and Ikhide, 2012a). The remittances–financial development–growth nexus asserts that remittances affect growth positively in the long–run if the country is financially well developed (Bettin et al., 2012). Impact of remittance is more pronounced when there is more financial development in a country (Ramirez, 2013). Remittances may follow multiple paths through which growth can be affected negatively or positively rather than a direct effect (Barajas et al., 2009). If a country is not financially well developed, the passage of remittances through financial institutions dissipates before resulting in a significant growth effect. Remittances are supportive more to improve growth in financially less developed country than developed one (Giuliano and Ruiz-Arranz, 2009).

There is limited study of the impact of remittances on economic development in the context of Nepal. Maharjan et al. (2013) study the impact of remittances on subsistence agricultural production in the Western Mid Hills of Nepal, based on a survey conducted among small farm holders with migrating family members. They find negative impact of remittances on major subsistence crops and family labor, positive effects on hired labor, and no impact on material inputs. Sapkota (2013) examines the impact of remittances both at macroeconomic as well as household levels in Nepal and finds that remittances harm Nepal’s tradable sectors via real exchange rate appreciation consistent with Dutch disease; however, there are positive effects of remittances on poverty and inequality reduction. Bhatta (2013) examines the impact of remittances on merchandise import and trade deficit by using the cointegration techniques and a Vector Error Correction Model (VECM) based on the monthly data of merchandise imports, workers’ remittance and trade deficit. This study finds there is a long-run one-way positive causality from remittance to import and a negative impact of remittance to trade deficit. Dahal (2014) analyses the impact of remittances on economic growth in Nepal by examining their effects on financial development, productivity, international trade, and human capital accumulation. This study looks growth effects of remittances through the entrepreneurship and manufacturing channels. The findings reveal a positive association of remittances with entrepreneurship, but a negative association with manufacturing. These mixed effects of remittances on different factors of productivity leads to an inconclusive result.

3. Description of Variables and Data
This study uses time series annual data for the period 1976-2013 thereby 38 observations. The variables used are personal remittances, received (current US$) scaled by the size of population,
GDP per capita (current US$), final consumption expenditure (current US$) scaled by the size of population and Gross capital formation (current US$) as a proxy for investment again scaled by population. All the data are expressed in USD terms at a constant price of 2005. The advantage of using the data in constant dollar term is to take into consideration the impact of depreciation of local currencies, which is not the interest of this study. The impact of inflation of local currency can be overlooked when expressed the data into constant dollar term. All the data are collected from World Bank, World Development Indicator (WDI) online. Variables are transformed to the natural logarithm.

Remittances data for Nepal is publicly available only from 1993. However, Giuliano and Ruiz–Arranz (2009) constructed remittances data of 100 countries for the period 1976–2002. Thus, for the period 1976–2002, this study uses their remittances data and for the remaining period 2003-2013, the data is extended from WDI. The data summary is presented in Table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita</td>
<td>269.145</td>
<td>66.433</td>
</tr>
<tr>
<td>Remittances per capita</td>
<td>28.136</td>
<td>30.643</td>
</tr>
<tr>
<td>Consumption per capita</td>
<td>294.901</td>
<td>261.402</td>
</tr>
<tr>
<td>Investment per capita</td>
<td>121.345</td>
<td>43.086</td>
</tr>
<tr>
<td>Observations</td>
<td>38</td>
<td></td>
</tr>
</tbody>
</table>

4. Empirical Methodology and Results

This study explores the casual relation among GDP per capita, remittances, consumption and investment in Nepal with the aid of a multivariate time series model in the form of a Vector Autoregressive (VAR) model. These variables are simultaneously determined and are endogenous. Therefore, this paper uses VAR in this analysis since VAR treats all variables in the system as endogenous. I consider GDP per capita, remittances, consumption and investment as endogenous variables together with each variable explained by its lagged values and the lagged values of all other endogenous variables. The VAR method has been used for analyzing the dynamic impacts of random disturbances on a system of endogenous variables since Sims (1980) influential work. Standard procedure for VAR analysis suggests that the time series variables should be checked for stationarity, cointegration, stability, autocorrelation etc. Following subsections do the systematic analysis of VAR model.

4.1 Test of Stationarity of Time Series

Stationarity is defined as a quality of a process in which the statistical parameters (mean and standard deviation) of the process do not change with time. A truly stationary (or strongly stationary) process has all higher-order moments constant including the variance and mean. By stationary, this study assumes a weakly stationary of time series. Two methods are used to check stationarity of time series: Line graph plot and Unit root test.

4.1.1 Line graph plots of time series

A sequence of numbers collected at regular intervals over a period of time is a time series. It is always handy to have a look at the graph of time-series data in the first place, which gives us
a visual impression if the data exhibit upward or downward trend or not. Each of the four variables is plotted over an extended period of time (year) to discern any trend or pattern of the variable concerned. Logarithms of GDP per capita, remittances per capita, investment per capita and consumption per capita all have trend with drift.

![Graphs of various variables](image)

Figure 1: Magnitude of Remittances and other Flows

4.1.2 Unit Root Test

The most frequently used unit root test method is Augmented Dickey Fuller test (ADF) – a parametric approach originally proposed by Dickey and Fuller (1981). However, there is a criticism over the power of the ADF method. The ADF method is criticized for having a low power. An alternative method, known as Philips–Perron (PP test), appears to correct the pitfalls of the ADF method. The results of the stationarity tests show that all variables are non-stationary at level. Having found that the variables are not stationary at level, the next step is to difference the variables once in order to perform stationary tests on differenced variables. The results of the stationarity tests on level and differenced of the variables are presented in Table 2. The study uses Augmented Dicky Fuller and Phillipss–Perron unit root test to see the order of integration of each time series variable.

As the ADF and the PP test depict, time series variables are stationary in their first difference at 1% significance level regardless whether variables have both intercept. So, all the variables are integrated of order one, I(1).
4.2 Lag Selection

One can use Akaike Information Criteria (AIC), Likelihood Ratio (LR) test and/or Hannan-Quinn information criterion (HQIC) for appropriate lags selection. This study has multiple variables including four time series. Too many lags could increase the error in the estimation; too few could leave out relevant information. Experience, knowledge and theory are usually the best way to determine the number of lags needed. There are, however, information criterion procedures to determine a proper number. Three commonly used are: Schwartz’s Bayesian information criterion (SBIC), the Akaike’s information criterion (AIC), and likelihood ratio (LR) tests. When all lag selection criteria agree, the selection is clear. If different criteria give different lag lengths, one has to decide appropriate lag length so that our model passes the diagnostic check such as no serial correlation between the residuals, normality and dynamic stability.

All lag selection criteria but LR test agree with one lag as Table 2 depicts. So, lag lengths 3 in level is used in this study as supported by LR test. The reasons for choosing 3 lags instead of 1 are: First, there is a more likely that current remittances affect future GDP for several years, not just one year. Second, if the variable in question is persistent values in the far past, they are still affecting today’s values, more lags will be necessary in this case. GDP per capita in Nepal is persistently low and remittances are persistently high over several years. Using just 1 lag does not produce good result because of this persistency of variables. Third, from the stability of the model and autocorrelation perspective, 3 lags in level and 2 in difference over 1 lag is better.

Table 2: Unit Root Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF (Level)</th>
<th>ADF (First Diff)</th>
<th>PP (Level)</th>
<th>PP (First Diff)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C and T</td>
<td>C</td>
<td>C and T</td>
<td>C</td>
</tr>
<tr>
<td>GDP</td>
<td>-3.064</td>
<td>1.077</td>
<td>-7.833***</td>
<td>-7.404***</td>
</tr>
<tr>
<td>REM</td>
<td>-0.954</td>
<td>0.017</td>
<td>-5.328***</td>
<td>-5.011***</td>
</tr>
<tr>
<td>INV</td>
<td>-0.863</td>
<td>-1.429</td>
<td>-6.264***</td>
<td>-6.14***</td>
</tr>
<tr>
<td>CON</td>
<td>-0.604</td>
<td>-1.793</td>
<td>-5.565***</td>
<td>-5.466***</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Note: *** indicates 1% level of significance, ** 5% level and * 10% level
C and T denote intercept and trend respectively

<table>
<thead>
<tr>
<th>lag</th>
<th>LogL</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.992</td>
<td>NA</td>
<td>1.24e-05</td>
<td>0.057</td>
<td>0.235</td>
<td>0.118</td>
</tr>
<tr>
<td>1</td>
<td>186.739</td>
<td>209.63</td>
<td>6.5e-10*</td>
<td>-9.808*</td>
<td>-9.501*</td>
<td>-8.910*</td>
</tr>
<tr>
<td>1</td>
<td>163.139</td>
<td>274.537</td>
<td>3.32e-09*</td>
<td>-8.1793*</td>
<td>-7.290*</td>
<td>-7.872*</td>
</tr>
<tr>
<td>2</td>
<td>171.731</td>
<td>12.765</td>
<td>5.27e-09</td>
<td>-7.756</td>
<td>-6.156</td>
<td>-7.203</td>
</tr>
<tr>
<td>3</td>
<td>193.939</td>
<td>27.918*</td>
<td>4.10e-09</td>
<td>-8.110</td>
<td>-5.800</td>
<td>-7.313</td>
</tr>
</tbody>
</table>

Note: * indicates lag order selected by the criterion
4.3 Testing Cointegration

After testing stationarity of time series variables and knowing the lag lengths to be used in the model, the next step is to identify whether all the variables included are cointegrated. The framework of cointegration deals with regression models with I(1) data. It is possible for two or more than two variables to be of integrated of order 1, that is I(1), and certain linear combination of these variables to be of I(0). If that is the case, the I (1) variables are said to be cointegrated. If two or more I(1) variables are cointegrated, they must obey an equilibrium relationship in the long-run, although they may diverge substantially from equilibrium in the short-run.

A widely used method for testing for cointegration is Johansen method based on maximum likelihood and eigenvalue statistics. Johansen (1995) method of test for cointegration restrictions in a VAR representation gives us asymptotically efficient estimates of the cointegrating vectors (β) and the adjustment parameters (α). Current paper uses 38 observations spanning for the period 1976-2013 for utilizing Johansen method. A number of studies conducted utilizing Johansen and Juselius Cointegration approach uses annual data observations even less than this study uses in present study. For instance, Aron et al. (2014) examine exchange rate pass-through to the monthly import price index in South Africa using only 30 observations during 1980–2009. Sanjuan and Dawson (2004) examine the long-run relationship between per capita income, food prices and per capita calorie intake using aggregate data for Bangladesh for 1962–97 thereby 36 observations. Similarly, Chang and Caudill (2005) examine the relationship between financial development and economic growth in Taiwan from 1962 to 1998 utilizing Granger causality tests based on vector error correction models. This study has four time series of order I (1) in level and order I (0) in their first difference. As Johansen Cointegration Test is applicable for series that are integrated of the same order I(1) and their differences are integrated of order I (0), so this study is safe to proceed with this test. Table 3 shows the result of trace statistics of Johansen test for cointegration vector. The null and alternative hypotheses from trace statistics are as follows. For no cointegration,

\[ H_0: \text{number of cointegration equation} = 0 \]
\[ H_1: \text{number of cointegrating equations} > 0. \]

The calculated value of trace statistics is greater than critical value at 5% level, so \( H_0 \) of no cointegration is rejected. For one cointegrating vector,

\[ H_0: \text{number of cointegration equation} = \text{at most 1} \]
\[ H_1: \text{number of cointegrating equations} > 1. \]

Calculated trace statistic=19.392 and critical value at 5% level = 29.797. Critical value > trace statistic. \( H_0 \) of 1 cointegrating equation fails to reject. There is 1 cointegrating equation according to trace statistic.

To confirm the results of the Trace test, the study also presents the results of the Maximum Eigenvalue Test in Table 4 below. Following the same procedures in max Eigen value test as in the trace test, 1 cointegrating equations at the 5% level is obtained confirming the Trace Test. Therefore, these two tests confirm one cointegrating relationship among the variables involved in this study.
### Table 4: Johansen Test of Cointegration: Trace Statistics

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.649</td>
<td>56.102</td>
<td>47.856</td>
<td>0.007</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.283</td>
<td>19.392</td>
<td>29.797</td>
<td>0.465</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.182</td>
<td>7.701</td>
<td>15.494</td>
<td>0.498</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.019</td>
<td>0.686</td>
<td>3.841</td>
<td>0.407</td>
</tr>
</tbody>
</table>

*Note: Trace test indicates 1 cointegrating eqn(s) at the 0.05 level*

### Table 5: Johansen Test of Cointegration: Max Eigen Value

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.649</td>
<td>36.71</td>
<td>27.584</td>
<td>0.002</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.283</td>
<td>11.691</td>
<td>21.131</td>
<td>0.578</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.181</td>
<td>7.014</td>
<td>14.264</td>
<td>0.487</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.019</td>
<td>0.686</td>
<td>3.841</td>
<td>0.407</td>
</tr>
</tbody>
</table>

*Note: Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level*

The existence of one cointegrating equation implies that a stable equilibrium relationship among variables is present. If a set of variables are found to have one or more cointegrating vectors then a suitable estimation technique is a VECM represented by equation (3) which adjusts to both short-run changes in variables and deviations from long-run equilibrium. VECM is a way of accounting short term dynamics when one can be assured that there is long-run equilibrium between variables exist. From Johansen test of cointegration, it is found that there is one cointegrating vector of the variables in this study. The VECM model from VAR specification of our 4-variate time series data is deduced.

#### 4.4 Deducing Vector Error Correction Model from VAR System

The study uses VAR/VECM system in this paper to analyze the casual relationship between remittances and economic growth. VAR system considers of all time-series variables as endogenous variables together with each variable explained by its lagged values and the lagged values of all other variables. The reduced form VAR of four-variable time series with lag length 3 can be written in a matrix form as follows:

\[
\begin{bmatrix}
G_t \\
R_t \\
C_t \\
I_t
\end{bmatrix} =
\begin{bmatrix}
a_1 \\
a_2 \\
a_3 \\
a_4
\end{bmatrix} +
\begin{bmatrix}
b_{11} \ b_{12} \ b_{13} \ b_{14} \\
b_{21} \ b_{22} \ b_{23} \ b_{24} \\
b_{31} \ b_{32} \ b_{33} \ b_{34} \\
b_{41} \ b_{42} \ b_{43} \ b_{44}
\end{bmatrix}
\begin{bmatrix}
G_{t-1} \\
R_{t-1} \\
C_{t-1} \\
I_{t-1}
\end{bmatrix}
+ \varepsilon_{gt} + \varepsilon_{rt} + \varepsilon_{ct} + \varepsilon_{it}
\]

\[
\begin{bmatrix}
G_{t-2} \\
R_{t-2} \\
C_{t-2} \\
I_{t-2}
\end{bmatrix}
\]

(1)
where \(Gt\) represents GDP per capita, \(Rt\) represents remittances inflows, \(Ct\) stands for consumption expenditure and \(It\) is for investment. In right hand side, the lagged values of itself and the lagged of other variables are used as explanatory variables. The last matrix represents the error terms of each equation. I assume that these error terms have expected mean zero and are not autocorrelated. I will test for autocorrelation after estimation of VAR/VECM system in order to see whether this assumption holds. Writing equation (1) in a single equation form as

\[
Y_t = A0 + A1Y_{t-1} + A2Y_{t-2} + A3Y_{t-3} + st
\]  

(2)

Equation (2) can be changed to the error correction form as

\[
Y_t = A0 + A1Y_{t-1} + A2Y_{t-2} + A3Y_{t-2} - A3(Yt-2 - Yt-3) + s_t
\]

\[
= A0 + A1Y_{t-1} + (A2 + A3)Y_{t-2} - A3Y_{t-2} + s_t
\]

\[
= A0 + A1Y_{t-1} + (A2 + A3)Y_{t-1} - (A2 + A3)Y_{t-1} - A3Y_{t-2} + s_t
\]

\[
= A0 + (A1 + A2 + A3)Y_{t-1} - (A2 + A3)Y_{t-1} - A3Y_{t-2} + s_t
\]

\[
Y_t - Y_{t-1} = A0 + (A1 + A2 + A3)Y_{t-1} - Y_{t-1} - (A2 + A3)Y_{t-1} - A3Y_{t-2} + s_t
\]

\[
\Delta Y_t = A0 - (A1 - A2 - A3)Y_{t-1} - (A2 + A3)Y_{t-1} - A3Y_{t-2} + s_t
\]

(3)

\[
\Delta Y_t = A0 + \Pi Y_{t-1} + \Gamma 1\Delta Y_{t-1} + \Gamma 2\Delta Y_{t-2} + s_t
\]

where \(\Pi = -(A1 - A2 - A3), \Gamma 1 = -(A2 + A3)\) and \(\Gamma 2 = -A3\)

Here, \(\Pi Y_{t-1}\) is the error correction term of vector error correction model (VECM). The rank of \(\Pi\) is crucial for number of cointegrating vectors. If the rank of \(\Pi\) is equal to zero this means that there is no cointegration, if \(\Pi\) has full rank then all \(Y_t\) must be stationary. When \(\Pi\) has less than full rank but is not equal to zero this implies the case of cointegration and \(\Pi\) can be written as \(\Pi = \alpha \beta t\) where \(\beta\) is the long-run coefficients of the cointegrating vectors and \(\alpha\) is the matrix containing the long-run adjustment coefficients, a speed of adjustment vector, and \(\Gamma i\) represents matrix with coefficients associated to short-run dynamic effects. Lag length 3 in VAR level turns out to be 2 in the difference as shown by equation (3). So, the lag length 2 in VECM estimation is used.

4.5 Results of Estimation of VECM

Since there is only one cointegrating vector that has been identified, it is not the matter of concern to impose restrictions to identify the cointegrating vectors (CVs). At most, there could have been three CVs of four variables, in which case one would have needed total 8 restrictions (r-1) where r is the rank of cointegrating vector \(\beta\). One cointegrating vector is obtained and so just one restriction is needed. One restriction that is imposed is the normalization cointegration equation. Since the study attempts to explore the impact of remittances on GDP, the cointegrating equation is normalized on the GDP.

Table 6 presents the estimates of the cointegrating equation. Parsimonious model is used dropping the insignificant variables.
The first row presents the estimates of the speed of adjustment coefficients, $\alpha$. The error correction term, $\alpha$, describes how log GDP adjusts to disequilibrium since this is normalized to 1 in cointegration equation 1. The explanatory variables, workers’ remittances, consumption and investment are all weakly exogenous variables since, when the system is in disequilibrium, equilibrium will be achieved by the response of one or a combination of these variables. The error correction coefficient is both negative and significant as required and its value of 0.32 suggests that any disequilibria experienced by this model will be corrected approximately 32% for a period and it takes almost 3 years to correct the disequilibrium.

$$
\log GDP = 0.109 \log REM - 0.74 \log CON + 0.40 \log INV + 7.879
$$

(4)

Table 6: VECM Estimates Results

<table>
<thead>
<tr>
<th>Error Correction</th>
<th>$\Delta \log GDP$</th>
<th>$\Delta \log REM$</th>
<th>$\Delta \log CON$</th>
<th>$\Delta \log INV$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ECT_{t-1}$</td>
<td>-0.32***</td>
<td>0.86</td>
<td>-0.568***</td>
<td>-0.966**</td>
</tr>
<tr>
<td></td>
<td>(0.046)</td>
<td>(0.744)</td>
<td>(0.17)</td>
<td>(0.43)</td>
</tr>
<tr>
<td>$\Delta \log GDP_{t-1}$</td>
<td>-2.785</td>
<td>-1.523***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.976)</td>
<td>(0.391)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta \log GDP_{t-2}$</td>
<td>-0.532***</td>
<td>4.152**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.130)</td>
<td>(1.883)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta \log REM_{t-1}$</td>
<td>-0.022**</td>
<td></td>
<td>-0.094</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td></td>
<td>(0.082)</td>
<td></td>
</tr>
<tr>
<td>$\Delta \log REM_{t-2}$</td>
<td>-0.031***</td>
<td>0.383**</td>
<td>0.087**</td>
<td>0.104</td>
</tr>
<tr>
<td></td>
<td>(0.010)</td>
<td>(0.182)</td>
<td>(0.040)</td>
<td>(0.074)</td>
</tr>
<tr>
<td>$\Delta \log CON_{t-1}$</td>
<td>1.217*</td>
<td>0.271**</td>
<td>0.713**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.068)</td>
<td>(0.126)</td>
<td>(0.359)</td>
<td></td>
</tr>
<tr>
<td>$\Delta \log CON_{t-2}$</td>
<td>0.102**</td>
<td>-1.199</td>
<td>-0.300**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.043)</td>
<td>(0.756)</td>
<td>(0.135)</td>
<td></td>
</tr>
<tr>
<td>$\Delta \log INV_{t-1}$</td>
<td>-0.051**</td>
<td></td>
<td>-0.521**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
<td></td>
<td>(0.252)</td>
<td></td>
</tr>
<tr>
<td>$\Delta \log INV_{t-2}$</td>
<td>-0.107***</td>
<td>0.820*</td>
<td>-0.251</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.024)</td>
<td>(0.420)</td>
<td>(0.183)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.037***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.720</td>
<td>0.291</td>
<td>0.538</td>
<td>0.285</td>
</tr>
<tr>
<td>Adj. R-squared</td>
<td>0.619</td>
<td>0.036</td>
<td>0.371</td>
<td>0.028</td>
</tr>
<tr>
<td>F-statistic</td>
<td>7.160</td>
<td>1.143</td>
<td>3.235</td>
<td>1.110</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>102.393</td>
<td>-1.817</td>
<td>48.564</td>
<td>25.538</td>
</tr>
<tr>
<td>Akaike AIC</td>
<td>-5.279</td>
<td>0.675</td>
<td>-2.203</td>
<td>-0.887</td>
</tr>
<tr>
<td>Schwarz SC</td>
<td>-4.835</td>
<td>1.119</td>
<td>-1.759</td>
<td>-0.443</td>
</tr>
</tbody>
</table>

**Note:** Standard error in the parenthesis, * indicates significance at 10%, ** at 5% and *** at 1% level

This is the estimated long-run relationship of variables. Standard errors are in parenthesis. Estimated long-run equation shows a positive and significant impact of remittances on real per capita GDP. This positive effect of remittances on GDP could be due to the reason that
remittance inflows contribute significantly to human capital accumulation by financing to education (Gyimah-Brempong and Asiedu 2015), and also remittances play an important role in improving primary and secondary school attainment (Zhunio et al., 2012). With an increase in disposable income, the stock of human capital increase in the long-run. As long as remittances help build human capital, remittance income has positive and significant effect on growth in the long-run.

The rate of investment is positively and robustly correlated with long-run growth (Levine and Renelt, 1992). Rodriguez and Rodrik (2000) argue that physical investment is generally the most robustly correlate of the long-run growth, even though the relationship tends to be weak in the short run. The role of investment in inducing output and growth becomes more pronounced in a capital-scant and labor-abundant developing economy such as Nepal (Law and Singh, 2014).

Short-run causality is determined with a test on the joint significance of the lagged explanatory variables by using Wald test. The coefficient of joint effects is -0.673. The calculated value of $\chi^2$ of joint effect of $\Delta GDP_{t-1}$ and $\Delta GDP_{t-2}$ is 12.82 while critical value of $\chi^2$ at df=1 is 3.84 which implies that 1% increase in growth of per capita GDP decreases the growth of per capita GDP in the following year by 0.67%. This is consistent with the growth convergence theory.

The key concern is dynamics of remittances and real per capita GDP in the short-run. The joint coefficient of remittances of two lags on real per capita GDP is -0.056. Calculated $\chi^2$ value is 10. The estimated coefficient is significant at 1% level. A 1% increase in remittances decreases real per capita GDP by 0.06% in the short-run. The reason could be that inflows of remittances decrease labor supply and increase production costs of non-tradable sectors, resulting in the rising price of non-tradable goods which creates an expansion of the non-tradable sector at the expense of the tradable sector (Acosta et al., 2009). The negative effects of remittances on per capita GDP could also be due to the existence of moral hazard associated with workers’ remittances. Remittances may cause to have an adverse effect on GDP growth since they are often used as a non-market substitute for wages to help protect recipients against negative income shocks. It is also possible for the recipients to exploit the remitters by cutting down their work efforts and live off remittances (Chami, 2008). Remittances in Nepal may lead a substantial negative effect on labor force participation.

4.6 Granger Causality Test

When more than one time series variables are cointegrated, then there should be Granger causality in at least one direction (X causes Y or Y causes X or both). Granger causality doesn’t give instantaneous causality. X is said to Granger cause Y if lagged values of X are helpful in predicting Y above and beyond the information contained in lagged values of Y alone. The Granger representation theorem, developed in Engle and Granger (1987) suggests that if a set of variables are I(1) and are cointegrated, then there exists a valid error-correction representation of the time series.

The data shows one cointegration relationship among the variables involved in the model. There should be the dynamic causal interactions among the variables in a vector error correction form. The cointegration relationship allows us to assess both long-run and short-run causality running from each of the independent variable to each of the dependent variable. The $\chi^2$-statistics of lagged first differenced terms for each right-hand-side variable shows the short-run
causality while the t-statistics of the error correction term shows the long-run causality. Table 6 depicts both long-run and short-run causality.

Granger causality results show that there is unidirectional causalities from remittances to GDP at 1% level and to consumption at 5% level. Remittances do not Granger cause investment. Similarly, one way Granger causality is found from investment to GDP at 5% level and GDP to consumption at 5% significance level which implies that there is an indirect causality from investment to consumption.

Long-run causality is determined by the error correction term presented in the last column in Table 6. The ECT of GDP equation has correct sign and its significant at 1% level indicates the evidence of long run causality from the explanatory variables REM, CON and INV to the dependent variable GDP. However, the testing of long-run causality between REM and GDP variables is more problematic, as it is impossible to tell which explanatory variable is causing the causality through the error correction term. Level of remittances inflows is negatively associated with the prevalence of working poor (those working for less than US$2 per day) in developing countries (Combes et al., 2014b).

Table 7: Granger Causality Results based on VECM

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>$\chi^2$-statistics of lagged first differenced term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\Delta logGDP$</td>
</tr>
<tr>
<td>$\Delta logGDP$</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>[0.005]</td>
</tr>
<tr>
<td>$\Delta logREM$</td>
<td>3.88</td>
</tr>
<tr>
<td></td>
<td>[0.143]</td>
</tr>
<tr>
<td>$\Delta logCON$</td>
<td>7.75**</td>
</tr>
<tr>
<td></td>
<td>[0.020]</td>
</tr>
<tr>
<td>$\Delta logINV$</td>
<td>0.745</td>
</tr>
<tr>
<td></td>
<td>[0.688]</td>
</tr>
</tbody>
</table>

Note: Standard error in the parenthesis, p-value in the square brackets, and * indicates significance at 10%, ** at 5% and *** at 1% level.

4.7 Diagnostic Tests of VECM

The model diagnostic tests, presented at the bottom of Table 5, do not exhibit any statistical problems. Adjusted $R^2$ shows that the model explains over 62 per cent of variation in GDP, and the F-statistics confirm that the variables used in the model jointly significant to explain it.

4.7.1 Autocorrelation Test

Another diagnostic test of VECM is autocorrelation of the residuals. Autocorrelation test up to lag length 2 shows there is no autocorrelation in the residuals. At lag 1, LM-statistic is
7.687 with probability 0.957 and at lag 2, LM-statistic is 11.36 with probability 0.786. Null hypothesis fails to reject in selected lag order and hence there is no autocorrelation in the estimated residuals of the estimated VECM.

4.7.2 Stability Test

Interpretation of VEC models requires that stability condition be met. If the specified model is stable, it is invertible. If right number of lags is selected, then VEC should be stable. Figure 2 depicts the stability of VECM. All the inverse roots of characteristic polynomial lie inside the unit circle.

Figure 2: Inverse Roots of Characteristic Polynomial

5. Limitation of the Study

The attempt to analyze how remittances affect economic growth of Nepal is not free from weaknesses. First, a large number of Nepali workers who work outside the country are severely limited by lack of data. Illegal out-migration has no record in data and the remittances flows that enter the country through illegal sources are not recorded. Informal remittances include those money transfers which occur through private, unrecorded channels. Such private transfers include remittances brought home by friends, relatives and even the migrants themselves. This study uses the remittances that enter a country through official banking channels which are only a part of total remittances. Second, the endogeneity issue between remittances and economic development is challenging one. To solve this problem to some extent, the paper examines the impact of remittances on GDP per capita in VAR/VECM framework; however, VAR/VECM method is also not free from pitfalls. Instruments of remittances could solve this problem but this is not as easy task to find a good instrument that is correlated to remittances but not with per capita GDP. Third, Johansen vector error correction model, as used in this paper, is very sensitive for lag length selection. Different lag selection criteria such as AIC, SBIC and LR give different selection and the paper uses the result of LR ignoring others. Had all criteria agree to the same lag length, it would not be a problem. But, to pick one lag length between the two conflicting results given by different criteria may not be ideal.
Data limitation may be another issue in this study. The study uses 38 observations spanning from 1976 to 2013 and 4 time-series with two lags thereby total 40 coefficients including constants. This could lead to poor finite sample properties. Short time-series data could be a problem for the asymptotic convergent of log-likelihood function. Maximum likelihood based test requires a large sample. However, there are large number of papers which use even less time series annual data. For example, Chowdhury and Rabbi (2014) use annual data for the period 1971-2008 to employ Johansen test of cointegration in order to investigate the effects of remittances on the external trade competitiveness. Similarly, Ullah et al. (2015) employ Johansen and Juselius Cointegration approach for the period 1995-2013 to explore the long-term dynamic relationship between terrorism and remittances in Pakistan. Mohamed et al. (2013) apply Johansen vector error correction model from 1970-2008 to analyze the long-run causal relationship between foreign direct investment (FDI), domestic investment (DI) and economic growth in Malaysia. Ramirez and Kömüves (2014) investigate the relationship between economic infrastructure, gross fixed capital formation, and FDI inflows to Hungary during the period 1995-2012 by utilizing Johansen test of cointegration. Fifth, the paper imposes linear restrictions on cointegrating equations (4 restrictions for 2 cointegrating vectors) without testing of the validity of the restrictions. Whether the restrictions are suitable for each of the four cointegrating equation remains an issue. Sixth, in multivariate causality tests, the testing of long-run causality between two variables is more problematic, as it is impossible to tell which explanatory variable is causing the causality through the error correction term. Seventh, all four time-series data used in this study are I(1) in level and I(0) in first difference, however, remittances data shows big fluctuations (down and up swings) starting 1990 until 2000 and sharp upswing thereafter.

Because of these unusual behaviors of remittances data, the normality test of residuals fails. Such eccentric remittances data may require some sophisticated econometric methods rather than standard VAR/VECM method.

6. Conclusion and Policy Recommendation

This paper presents an empirical analysis of impact of remittances on economic growth in Nepal using Johansen method of cointegration and error correction mechanism. In particular, it investigates the impact of remittances on per capita GDP, consumption, and investment.

This study finds that remittance is negatively related to per capita GDP in the short-run and there is no evidence of any impact in the long-run. The channels through which remittances affect GDP are consumption and investment. Remittances decrease at least one of the GDP components - consumption or investment - and therefore, there is a negative impact of remittances on GDP in short-run. Demands shift to more differentiated modern type of Indian goods from traditional homogeneous type of Nepali goods with increase in remittance income of Nepali people. At the same time, farm products of Nepali goods contract as more lands remain un-cultivated with the increase in emigration of workers thus reducing the supply of Nepali products and increasing the demand for imported goods. Expenditures on Indian goods of Nepali consumers increase while consumption expenditures in Nepal decrease. This is exacerbated by the open border with India, which makes an easy access to Indian goods with increased remittance incomes.

Although it is often argued in the development arena that remittance flows are important contributing factor for economic growth but the present study did not support this relationship.
Rather remittances impede economic growth in Nepal. This finding has some serious and important policy implications. Labor export agreement of Nepal with other countries in order to receive more remittances cannot necessarily bring economic growth and thus, Government’s effort should not be only towards exporting Nepali workers abroad. Because of the devastating two earthquakes that took place on April 25 and May 12, 2015 of magnitudes 7.8 and 7.3 respectively, migration will definitely proliferate in the future days since disaster has struck the nation and the already high rate of emigration will skyrocket, especially to the gulf countries that have easily accessible low skilled labor employment opportunities.

In this context, remittance is likely to remain a backbone of the country’s economy for many more years to come. But, there is an urgent need to train Nepali youth and equip them with certain skills before sending them abroad. At the same time, the government needs to come up with policies and plans to tap and utilize remittances sent by migrant workers in the investment sector. The fall in the price of oil in international market has resulted into slowdown in demand for Nepali migrant workers. Reports suggest that hundreds of Nepali workers have been laid off in countries like Saudi Arabia and many of them are waiting for their wages. In such a situation, Nepal has to explore new destinations to shift for foreign employment from these countries. The Government also has to establish institutions in destination countries for facilitating labor migration and for the safety of the Nepalese workers abroad. Policy makers have to formulate policies to turn the remittance from the curse to country’s economy into an opportunity and a viable resource. Nepal needs to implement well thought out policy factoring into both domestic and global scenario.
References


