

REMITTANCE INCOME AND EXPENDITURE ON EDUCATION IN NEPAL

BY

VISHAL GUPTA

THESIS

Submitted to

KDI School of Public Policy and Management

in partial fulfillment of the requirements

for the degree of

MASTER OF DEVELOPMENT POLICY

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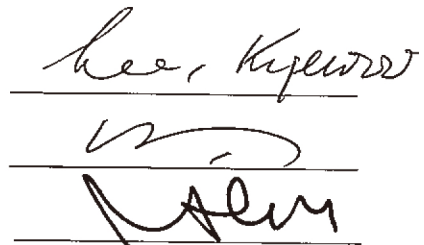
DEVELOPMENT POLICY Committee in

charge:

Professor Kye-Woo LEE, Supervisor

Professor Taejong KIM

Professor Baran HAN



The image shows three handwritten signatures, each on a horizontal line. The top signature is in cursive and appears to read 'Kye-Woo Lee'. The middle signature is a stylized, less legible cursive signature. The bottom signature is also in cursive and appears to read 'Baran Han'.

Approval as of December, 2014

ABSTRACT

The aim of this research is to assess the implication of remittance income on education expenditure of households in Nepal. Remittance income through foreign employment is rising quickly and it has become one of the main contributor to national GDP for developing countries. Nepal was ranked third country for receiving remittance in 2013. Due to high volume of remittance flow to developing countries, it has become a center of attention globally. The illiteracy rate of Nepal is highest among the South Asian countries. Despite of the high inflow of remittance, human capital is not growing accordingly. This research focuses on the association of remittance income and investment in education expenditure if it is growing or not. Using the Nepal Living Standard Survey of 2004 and 2010, the findings show that the education spending is not satisfactory. One of the main reasons is higher expenditure of households on other non-productive purposes.

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ABBREVIATIONS

GDP	Gross Domestic Product
NLSS	Nepal Living Standard Survey
MoU	Memorandum of Understanding
NRB	Nepal Rastra Bank
DFE	Department of Foreign Employment
WB	World Bank
BP Test	Bruesch Pagan Test
S.D.	Standard Deviation

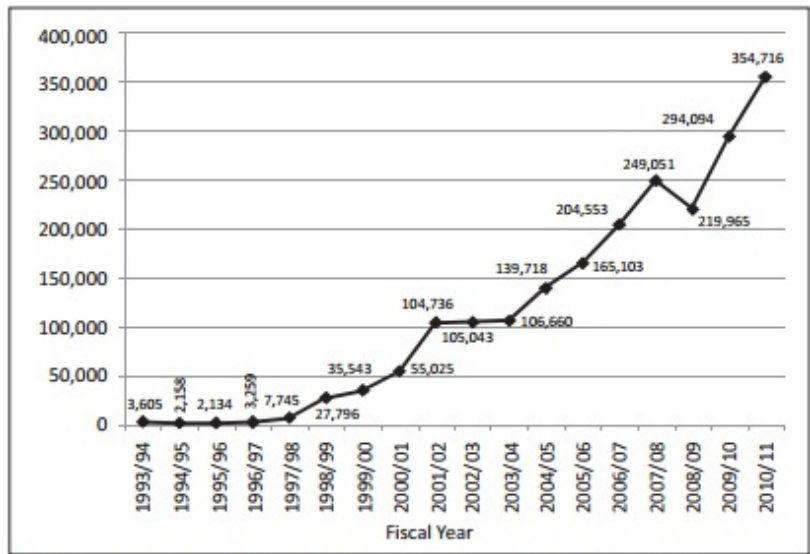
INTRODUCTION

This research aims to study and assess the implication of remittance income on expenditure pattern of households in education. The volume of remittance income is very high and so, the government needs to assess how the remittance income is being utilized; and if it is being used for productive sector or not.

Background

Remittance refers to money and goods transmitted to households by migrant workers working outside of their origin communities. Remittance further can be categorized into domestic and international levels. If the workers migrate within the country, then the money sent back home is domestic remittance and when the workers migrate to overseas, the money sent back home is international remittance.

In the last decade, Nepal has witnessed a new pattern of economic growth. International migration for labor became one of the major sources of the national economy. Currently, with more than 1,000 citizens leaving for overseas employment every day, there are already more than one million citizens working overseas except in India. The data shows that total remittance to Nepal grew from \$ 311 million in 2000 to \$ 3,507 million in 2010 and still rising. And now in 2013, remittance alone contributes for more than 25 percent to national GDP.



Source: Based on data obtained from the Department of Foreign Employment.

Figure 1: Remittance Inflow in Nepal

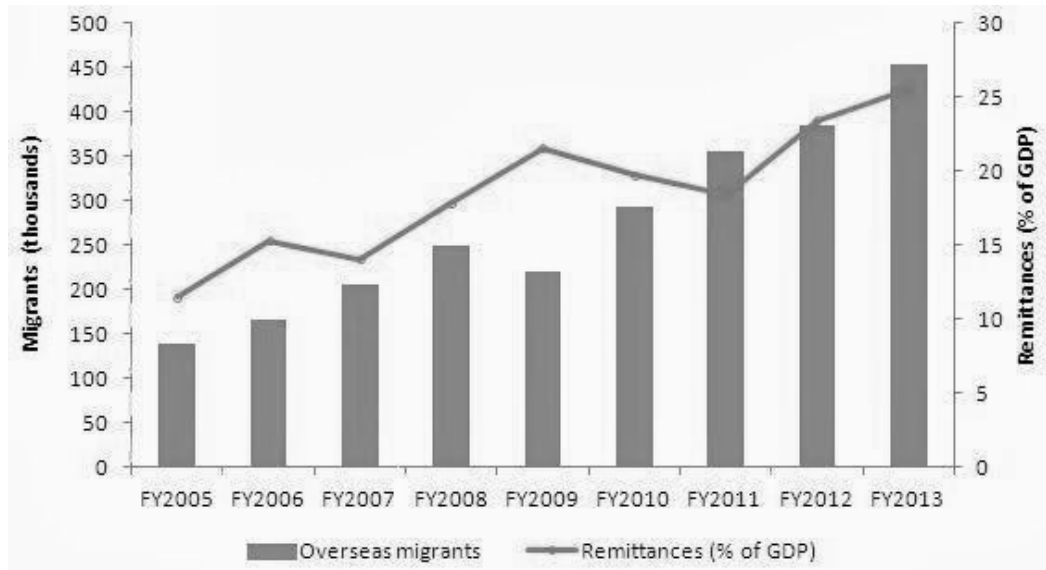


Figure 2: Number of Migrants and Remittance (in % of GDP) in Nepal

Source: Based on data obtained from Department of Foreign Employment and Nepal Rastra Bank

During the time of rising unemployment within the nation in the past, overseas labor migration became very popular as it did not require skilled and literate manpower. Remittance stood out as an opportunity and a hope for sustaining the national economy. Because of which government has been promoting and encouraging overseas labor migration. The government of Nepal has signed MoU's (Memorandum of Understanding) with many countries for labor migration

.The economy of Nepal was boosted sharply due to remittance but the sustainability issues of remittance have been overlooked. Many researchers have argued that remittance has become a good source of income for developing economies in last few decades but if the overall sectors (e.g. Industries, Education, Infrastructure, Health, Trade and so on) of developing economies is not improved along with growth in economy then it results dependency on developed nations. Growth in [over] all sectors along with growth in economy is crucial for the sustainability of the economy in the long run. The result is that the economies of developing economies become vulnerable. For example, if development in human capital is not ensured with growth in national economy, then the economy cannot sustain. And so other sectors like industries, financial and others have to grow along.

Another implication of remittance which has been most talked about is Dutch disease in 1960's. Discovery of natural gas in Netherlands brought enormous foreign currency into the nation but other non-industrial sectors were affected negatively as they could not grow in the same pattern. So, imports of goods exceeded exports with great difference. High inflow of foreign currency resulted into high inflation in domestic economy. If the overall sectors do not grow along with the economic growth, then Dutch disease would prevail which affects the economy at the macro as well as the micro level. To avoid the Dutch disease, the

expenditure or investment pattern of households especially from the remittance income has to be monitored.

The volume of remittance income within the nation has been growing enormously, especially in the rural area. So, the government should keep tracking on the expenditure of this income. The government should know how remittance income has affected the expenditure pattern of households. And if it is being used more for productive sectors or consumption only. It is obvious that the market will rise due to rise in income but, identifying the chances of occurrence of Dutch disease is important. Government can easily influence the expenditure behavior of households using monetary and fiscal policies.

There have been few studies about economics of remittance on expenditure and investment in different countries. The results are varying in different parts of the globe. For example, remittance income in Eritrea, where remittance contributes to more than 40 percent to national GDP, had a very positive influence on investment on education (Kifle, 2007). In some developing economies, the remittance income has found to be used more for consumption purpose rather than investing on human capital and productive investment

Research Question and Significance of Study

In context of Nepal, the trend of rising remittance is new and a comprehensive study on expenditure or investment pattern of remittance income has not been done yet. Report of Nepal Living Standard Survey III (2010) reported that only 4 percent of remittance income has been used for education, which signifies that very small proportion of remittance income is being invested for human capital and productive investment.

. Based on this issue, the research questions of this research are:

- a. Is the expenditure pattern of remittance income on education different than non-remittance income?

Finding answers to the above questions, this paper will try to find out how is the remittance income being used at household level. The purpose of asking these questions is to identify if the increase in income level of households through remittance has affected the expenditure/investment pattern at household levels in Nepal. If yes, then spending on which sectors has been changed at what degree?

I agree with the claim that a smaller proportion of remittance is being used for investment in human capital and productive sectors like education. This research will also try to assess what are the reasons for under- investment in human capital or if any other factors have higher influence along with income. This research will try to study further on the issue. The government has not identified this as a potential problem yet. The government can influence the individuals' behavior of investment through monetary and fiscal policies. The research results are likely to attract the attention of government to emphasize it as an issue to be concerned about.

Theory and Hypothesis

The economy of Nepal has always been regarded as an agrarian economy. The total percent of population engaged in agriculture was more than 80 percent till late 1990s. But after that, a shift in engagement of population in other sectors like industries, services was seen. The latest data reveal that still more than 60 percent of population relies on agriculture for sustaining their livelihood. But, also the major shift in population was observed in overseas labor migration. As the illiteracy rate of Nepal has always remained higher compared to other South Asian nations, the overseas labor migration became a fascinating alternative for

income. Most of the overseas migration was for semi-skilled and non-skilled manpower. The demand of labors from developing economies has been rising as the labor wage paid to them is cheaper, but in contrast, the workers are earning more than they could have earned in their origin country.

On an average, the semi-skilled and non-skilled workers who have migrated overseas, earn more than average skilled manpower within the country. This has positive impact on the macro-economic level of the nation. The deficit in the Balance of Payments has reduced. With higher disposable income with people, the markets in the rural and urban areas have flourished a lot. The access of citizens to information and technology and electronics has risen. These are good indicators of development and economic growth of a nation.

The question to think about is what could possibly be wrong with these then. Most of the remittance income (which is higher than before) is being used more for consumption goods than investment goods. All the goods that are being consumed are imported from developed countries. Result is high inflation within the country and dependent economy on remittance. The domestic economy becomes more vulnerable and trapped into this vicious cycle.

The government has to ensure that the domestic economy is sustainable. If remittance income is only used more for consumption goods, then other domestic sectors can be negatively affected due to Dutch Disease.

The hypothesis for this research paper is:

The proportion of the educational expenditure in total household income from remittance is higher than that of household income from non-remittance sources.

Despite of significant growth in the household income [of households levels due to] depending on remittance [income], the expected growth in productivity has not been attained which is evident as the living standard of people in Nepal has not markedly developed. The living standards of citizens in urban areas is observed to have improved only little. The markets for luxurious goods (electronics goods, automobiles and motorcycles, goods of information and technology) have expanded a lot. This suggests that the expenditure pattern of households is more on the consumption goods rather than on the investment goods.

Previously, investment on real estate market rose very highly with increasing trend in remittance income to the country. The land and house prices doubled and quadrupled in less than two years, especially in the city centers. The loan for real estate from commercial banks was the highest of all the loans. The government identified it as a serious issue as market [governed of] real estate resulted in [to] high inflation of land price. So, government formulated land pricing policies to control this action. The new policy for commercial bank was introduced where loans for real estate was discouraged. The central bank put a ceiling of 20 percent on loans for real estate with land collateral (NRB, 2010).

The market is always sensitive. The activities and trend should always be monitored by the government to take right decisions and actions at the right time. Otherwise, the parable of boiled frog will be observed. Neglecting even small aspects like high expenditure of households on the consumption goods can lead to serious market and economic problems.

LITERATURE REVIEW

This chapter discusses about the understanding of growth of remittance in world economy and other studies that have shown how remittance has affected education investment in Nepal as well as other nations.

Remittances refer to the money and goods that are transmitted to households by migrant workers working outside of their origin communities. In 2006, the total volume of remittance in developing countries was estimated to be \$221 billion per year which is twice as large as official aid-related flows to the developing countries (World Bank., 2008). From standpoint of economic development of developing economies, the basic questions that are always talked about are: How are the remittances used in home country? Are the monies used on newly desired consumer goods back home, or they are invested on human and physical investments in origin countries?

In literature there are three views on how the remittance income is spent. First, money is fungible and the money spent from remittance income is indifferent than the money spent from non-remittance income. The second view is that, remittance income can influence the human behavior on money spending and the remittance income is spent more on consumption goods rather than investment goods. The third and last view, also the recent view suggests that remittance income is spent more on investment goods than consumption, like human and physical investments which contribute positively on the economic development of the nation. (Adams & Cuecuecha., 2010)

Adams and Cuecuecha have studied the spending behavior in Guatemala due to remittance income and looked upon the questions mentioned in former paragraphs. Their empirical research using household survey data concludes that the expenditure of remittance income on

consumption is less compared to non-remittance income. Secondly, the expenditures of remittance income in human and physical goods are higher than that of non-remittance income, for example investment on education is 337 % higher than non-remittance income. And the third is spending of remittance income on housing is also higher than that of non-remittance income.

Nepal is one of the high ranking countries for receiving overseas remittance. The growth of the market and the economy due to remittance income has become obvious. But few of the studies suggest that Nepal is following the second case of the three scenarios mentioned above. The expenditures on consumption purposes from remittance income were greater than those from non-remittance income. And expenditure on education from remittance is only around four percent, which is not a good indicator for a growing economy. The economy can only sustain if the countries can transform to the second and third cases, which are spending more investment goods than consumption.

Remittance has strategic importance at both micro and macro levels. At macro level, remittance happens to be relatively stable sources of external finance for the countries afflicted by economic and political crisis (Kapur, 2003). At micro level remittance has become a solution for semi-skilled and marginalized people to enhance their livelihood by providing alternative source of income. Remittance has direct impact on the communities and has direct impact on the poverty alleviation in a significant way than other sources of income. With sharp increase in number of overseas migrants and volume, remittance has become a reliable source of income contributing 17.3 percent to National GDP in 2010/11. This figure shows that any decline in remittance can potentially disturb national economy at macro level, particularly in external sector (NRB, 2012).

In 1970s and 1980s, theorists had pessimistic view on remittance because it results in brain drain as well as loss of human capital in origin country. Also, they referred that in the long run, the migrated population will settle in the foreign land. But after 1990s, this view has been changed. The demand for labor in developed economies from the developing nations rose sharply and the size of remittance grew as three times that of official aid and foreign direct investment together. The issue of brain drain, especially of the non-skilled and semi-skilled labor has been dominated by the economic growth of labor-receiving nations.

A study conducted by NRB in 2002 revealed that most of the remittance money was used for loan repayment, land and jewelry and depositing into banks. In another study done by Thieme and Wiess in 2005 found out that remittance resulted in [to] increased financial capital, education of children, migration specific knowledge and increased social capital in Western part of Nepal.

Even though, the survey [for this paper] was conducted in only one district covering only 547 households, the results revealed that investment in education due to remittance income was six thousand Rupees higher than non-remittance income which is very highly significant. Another important difference in remittance and non-remittance income was access to information technology. Households with remittance income had more televisions, cell phones which signify that they had better access to information and technology. Land purchase and consumption was higher in remittance income households as well.

The research in remittance is not new but due to the rising volume of remittance [rising] and majority of remittance going to developing countries, it has gained more attention from the perspective of development recently. The volume of remittance also did not show any variance despite the economic recession throughout the globe (The World Bank, 2010).

However, a study done in Albania shows an opposite result. and the research reveals that the investment in education is less from remittance income than non-remittance income (Pihlainen, 2011). The research argues that the household with remittance and foreign employment are more likely to migrate, because of which attention on education expenditure or human capital development in the households with remittance income is less.

From these literatures, it is evident that remittance has a an important contribution to developing nations and it also has positive as well as negative implications. Despite few studies done in Nepal too, comprehensive analysis of its effects on human capital investment has not been done yet. In developing nations, government expenditure on such is not quite enough and the household investment should be guided and regulated properly through policies. Hence, this research will try to assess the change in household education expenditure in 2004 and 2010 in order to find the variation in these two different periods.

METHODOLOGY AND DATA

The research is based on the analysis of Nepal Living Standard Survey (NLSS)¹ Data of 2003/4 and 2010. Hence, cross-sectional data of two time periods, 2004 and 2010 will be analyzed separately for the results.

Variables income from remittance, income from agriculture, income from other sources and household size will be used for regression. All these variables are taken from NLSS data set. Log of the income variables i.e. remittance income, agricultural income and other income sources are taken in the analysis for normalizing the data. As taking log of 0 (zero) changes into missing value in the software, the data set of all income variables has been changed with adding one (1), so that the observation is not deleted and all the observations are accounted for analysis with minimal variation in result.

Ordinary Least Square (OLS) method is carried out to find the association between remittance income and education expenditure. The analysis is done using STATA software package.

¹ NLSS is a comprehensive household survey conducted by World Bank and Government of Nepal. The sample of the survey has accommodated balanced participation of population from all over the country.

ANALYSIS AND FINDINGS

For the Empirical analysis of this research, I have used the following variables which have a significant effect on education expenditure in a household. Education expenditure is the dependent factor and remittance income is the independent variable. Log of the monetary values has been taken to normalize the data set. The variables have been defined as follows:

The regression model used for the analysis is

$$led\ exp = \beta_0 + \beta_1 lrem + \beta_2 lagrinc + \beta_3 lothinc + \beta_4 hhsiz$$

Dependent Variable

- *edexp* means education expenditure made in a household in a year (is also the dependent variable in the regression analysis). Log of education expenditure is put in the regression analysis for normalizing the data and hence, variable *ledexp* is used in the regression².

Independent Variables

- *lrem* is the log of total remittance income in the household within a year³ (in Nepalese Rupees)
- *lagrinc* is the log of total agricultural income in a household within a year⁴ (in Nepalese Rupees)

² Data transformed with adding 1 to avoid removal of observations

³ Data transformed with adding 1 to avoid removal of observations

⁴ Data transformed with adding 1 to avoid removal of observations

- *lothinc* is the log of other sources of income other than agricultural income and nonagricultural income⁵ (in Nepalese Rupees)
- *hhsiz*e if the household size at the respective time period of survey

Before going for the regression, the summary table for the above mentioned variables for year 2004 and year 2010 are as follows:

For 2004

Variable	Obs	Mean	S.D.	Minimum	Maximum
<i>Ledexp</i>	15078	7.517809	1.876956	0	12.90421
<i>Lrem</i>	20279	0.900488	2.714189	0	14.4033
<i>lagrinc</i>	20279	3.516313	4.28502	0	13.05387
<i>lothinc</i>	19638	2.308165	3.744381	0	14.0235
<i>Hhsiz</i> e	20279	6.720006	3.241855	1	32

For 2010

Variable	Obs	Mean	S.D.	Minimum	Maximum
<i>Ledexp</i>	28670	7.558031	3.49351	0	14.02234
<i>Lrem</i>	28670	2.476346	3.820633	0	15.80338
<i>lagrinc</i>	28670	3.525346	4.503774	0	14.69098
<i>lothinc</i>	28670	3.950137	5.331072	0	17.50085
<i>Hhsiz</i> e	28670	5.92466	2.807777	1	21

Now for further analysis, Multiple regression is carried out. After that the regression is checked for the presence of heteroskedasticity using Bruesch-Pagan test. The result reveals

⁵ Data transformed with adding 1 to avoid removal of observations

the presence of heteroskedasticity, which means that the standard errors are biased. So, robust standard errors along with regression executed to relax standard errors and. After the robust regression for both the years (2004 and 2010), the result obtained is as follows:

Dependent Variable: Log on Education Expenditure	2004	2010
log of Remittance	0.0538***	0.0339***
	(10.10)	(6.49)
Log of Income from Agriculture	-0.0307***	-0.0419***
	(-9.03)	(-9.45)
Log of Income from Other sources	0.0766***	0.0527***
	(20.92)	(13.96)
Household size	0.0214***	0.302***
	(4.90)	(44.24)
Constant	7.277***	5.626***
	(184.76)	(104.92)
N	14685	28670

t statistics in parentheses * p<0.05, ** p<0.01, *** p<0.001

All the coefficients in the result table are highly significant. From this table we can see that, one percentage point change increase in remittance income results in 0.053 percentage increase point change in education expenditure in 2004 while the magnitude of the positive effect has decreased in 2010 showing only 0.033 percentage change. The response of the educational expenditure is relatively inelastic with respect to the changes in remittance income.

The data also reveals that there is a negative relationship between agriculture income and education expenditure in both time periods. As agricultural income increases, the educational expenditure decreases. Changes in educational expenditures in response to changes in agricultural income is greater in 2010 than in 2004, i.e. educational expenditure decreases more in 2010.

With respect to changes in other income, educational expenditure shows positive changes, as in the changes in remittance income. There was 0.076 percentage change in 2004 and 0.052 percentage change in 2010 due to one percentage change in income from other sources.

Although the educational expenditure shows positive relationship with respect to both remittance income and other income, educational expenditure is more elastic with respect to changes in other income than in remittance income.

Also, as the household size increases, the educational expenditure increases, especially more in 2010 than in 2004. This is understandable since educational expenditure would increase normally, as the number of children increases.

CONCLUSION

The remittance has resulted in growth of income of households in Nepal to a higher extent contributing to almost 25 percent of national GDP in 2013. This study shows that as remittance income increases, educational expenditures of households in Nepal increased in both 2004 and 2010, although the response of educational expenditures is less elastic in 2010. Such behavior of educational expenditure in response to remittance income changes is a sharp contrast to the changes in traditional income, i.e. agricultural income. As agricultural income increases, educational expenditures decrease sharply, especially in 2010. The educational expenditures show the same pattern of changes in response to changes in both remittance income and other than agricultural income sources.

These findings in Nepal are different from the Albanian study case and more similar to the Guatemala study case. Therefore, increases in remittance income have had a positive effects on educational expenditures. From human development point of view, increases in remittance income have good and positive effects for Nepal and will contribute to the sustainability of income and development.

This is not a complete analysis of the association between remittance income and education expenditure in households of Nepal and more comprehensive study needs to be done to see a proper association between these. The government of Nepal does not have enough resources to channel to all sectors, especially for human development. This is why the government should actively promote remittance income and sustain the development of Nepal by investing more in human development.

BIBLIOGRAPHY

Impact Evaluation of Remittances: A case study of Dhanusha, Nepal Rastra Bank, 2012

Kifle, Temesgen. *Do Remittances Encourage Investment in Education? Evidence from Eritrea*, University of Michigan, 2007

Mara and Stojilovska Ana. *Analysis of literature on the effects of remittances on education and health of family members left behind*. Western Balkans, 2012

Nasir, Tarik and Rehman Faiz-Ur. *The Effect of Foreign Remittances on Schooling: Evidence from Pakistan*. Pakistan Institute of Development Economics, 2011

Nepal Living Standard Survey: Statistical Report, Volume II, Central Bureau of Statistics of Nepal, National Planning Secretariat of Nepal, 2004. Accessed on <http://cbs.gov.np/wp-content/uploads/2012/02/NLSS-II-Report-Vol-2.pdf>

Nepal Living Standard Survey: Statistical Report, Volume II, Central Bureau Statistics of Nepal, National Planning Secretariat of Nepal, 2010. Accessed on http://cbs.gov.np/wp-content/uploads/2012/02/Statistical_Report_Vol2.pdf

Pihlainen, Drew, *Migrants' Remittances and Education: Evidence from Albania*, 2011.

Accessed on <http://www.econ-jobs.com/research/17378-Migrants--remittances-and-education--evidence-from-Albania.pdf>

Richard H. A dams JR. & Alfredo Cuecuecha, *Remittance, Household Expenditure and Investment in Guatemala*, World Development (2010)

Website of Department of Foreign Employment of Nepal. Accessed through <http://www.dofe.gov.np/en/>

Website of Nepal Rastra Bank of Nepal. Accessed through <http://www.nrb.org.np/>