

# **SANEI WORKING PAPER SERIES**

## **Effects of Foreign Employment on Poverty, Labour Supply and Agricultural Growth in South Asia: A Case of Nepal, India and Bhutan**

**No. 11 - 08**

**KRISHNA PRASAD PANT  
VIJAY LAXMI PANDEY  
DIL B RAHUT**



**SOUTH ASIA NETWORK OF ECONOMIC  
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March 2011



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## Acronyms

ADB	Asian Development Bank
AGDP	Agricultural Gross Domestic Products
CBS	Central Bureau of Statistics
GDP	Gross domestic product
GOI	Government of India
Ha	hectare
HH	Households
ILO	International Labour Organization
IMF	International Monetary Fund
IRs	Indian rupees
IT	Information technology
Lakh	One hundred thousand (100,000)
NA	Not applicable
NRI	Non-Resident Indians
NRs	Nepalese rupees
OCI	Overseas Citizens of India
OEE	output elasticity of employment
OLS	Ordinary Least Square
PIO	Persons of Indian Origin
Root MSE	Root mean square error
UAE	United Arab Emirates
UK	United Kingdom
UNDP	United Nation Development Program
US\$	United States dollar
USA	United States of America
WPI	Wholesale price index

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# Effects of Foreign Employment on Poverty, Labour Supply and Agricultural Growth in South Asia: A Case of Nepal, India and Bhutan

KRISHNA PRASAD PANT  
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## Abstract

*The study analysed labour migration from three South Asia countries namely, Nepal, India and Bhutan and estimated econometrically the effects of foreign employment on poverty and agricultural production especially in the light of recent economic crisis. It also compares agricultural output elasticities of foreign employment and assesses the role of foreign employment on the relationships between growth, poverty and agricultural development. The study uses secondary data from Nepal and India. For Bhutan both secondary and primary data are used. Econometric models at sectoral level are employed to establish the effects of migration on poverty and agricultural production. The results from Nepalese case study shows that migration decreases poverty and at the same time decreases agriculture production whereas the Indian case study shows that foreign employment helps in reducing poverty and also promotes agricultural growth. In Bhutan domestic migration is found to decrease poverty. The study categorized the countries on the basis of the stages of labour migration and made some suggestions for gaining from the foreign employment. The results will be useful for South Asian countries to devise sound policies on migration, poverty and agricultural development.*

**Key words:** *Employment, migration, poverty, agriculture growth, South Asia*

## 1.0 INTRODUCTION

Agriculture is the major source of livelihood for the rural poor. Of the 1.1 billion workers active in agricultural production worldwide, nearly a half of them are in wage labour (International Labour Office 1996) and are poor. Governments in many developing countries are emphasizing poverty reduction through economic growth and agricultural production. But, lack of employment is the missing link in the growth and poverty reduction equation (UN 2005). It is not difficult to hypothesize that until the poor get gainful employment poverty reduction programmes will not be effective. Recent economic crisis and its effects on employment have raised the importance of studies on employment, poverty growth nexus.

In South Asia over 87 percent of the work force is earning less than \$2 a day, even though the region has experienced strong productivity and gross domestic product (GDP) growth rates indicating that many jobs, particularly in the agricultural sector, are still low productive and pay low wages (UN 2005). Studies suggest that countries that made noticeable progress on poverty reduction were those with higher growth rates (World Bank 2000, Dollar and Kraay 2000). Poverty reduction has received increased focus in development debate in the past two decades and progress on poverty reduction has become a major measure of success of development policy (Aigbokhan and Alli 2008). Osmani (2004) demonstrates that sustained and rapid economic growth has invariably been accompanied by reduction of poverty and, conversely, persistent growth failures have invariably been accompanied by persistent



failure to reduce poverty. Raising the rate of growth is thus being increasingly recognized as necessary for poverty reduction (UNDP 2003a, Osmani et al. 2003), McKinley et al. 2003), Weeks et al. 2003 and UNDP 2003b, Rahman and Islam 2003 and Islam 2002). Some other opine that the growth is not enough for poverty reduction and there changes in the structure of growth (Ravallion and Datt 1996, Mellor 1999). In economies with high income inequality the growth in economy is not enough for poverty reduction (Addison and Cornia 2001). In many African countries rising inequality is reported in spite of a decade long efforts on poverty reduction (Cornia and Kiiski 2001). Nigeria achieved economic growth but the poverty incidence increased from 42.7 percent in 1992 to 54.4 percent in 2004 (Aigbokhan and Alli 2008). A high growth alone is not adequate for poverty reduction. What matters for poverty reduction is not just the rate of growth but also what might be called the growth elasticity of poverty i.e. the rate of poverty reduction for any given rate of growth (Osmani 2004). The poverty reduction policy needs to promote both faster rate of growth and a high growth elasticity of poverty. Although there is no consensus on what happened to Indian poverty in the 1990s, there is good evidence both that poverty is falling and that the official estimates of poverty reduction are too optimistic, particularly for rural India (Deaton and Kozel 2005). The extent to which overall GDP growth is transmitted to the rural poor in the form of an increase in their income depends on a variety of factors of which the following are important: (a) the share of the rural economy in the growth in GDP, (b) change in terms of trade for agriculture and other rural economic activities, (c) Macroeconomic policies and their consequences in determining the effect of growth in GDP on the growth in personal income, and (d) other factors affecting the distribution of personal income (Khan 2007b).

The pattern and sources of growth as well as the manner in which its benefits are distributed are extremely important from the point of view of achieving the goal of poverty reduction. The nexus between economic growth, employment and poverty alleviation needs to be fully articulated and empirically substantiated (Islam 2004) particularly in poverty reduction strategy. Policies for using employment as a route out of poverty are not often integrated into poverty reduction strategy papers in South Asian countries. The paper also raises issue that the most of the poor in developing countries do work, but in unproductive, low-paying jobs where they cannot earn enough to raise themselves above the poverty threshold. Agricultural wage workers consistently display the highest incidence of extreme poverty, largely because of the low wages on small farms and seasonal unemployment. Shift of agriculture labour to non-agriculture sector, especially to foreign employment is attributed to poverty reduction (CBS 2004). However, the opportunity of foreign employment is getting unreliable due to economic crisis.

Migration and foreign employment generates financial and human capital which, if leveraged for development, can help reduce poverty. Before developing strategies that can help people benefit more from the migration that is already taking place, it is important to understand more about the process, the way it affects and is used by society, and the flows of remittances (Hoermann et al. 2010). Agriculture in South Asia has become a source of labour force for foreign employment particularly to East

Asian Countries, Gulf Countries and North America. Increased foreign employment opportunities in a decade of time have decreased the labour force in agriculture. Effects of this exodus of labour force to the agriculture productivity have not been adequately studied. Recent economic crisis in the destination countries is decreasing foreign employment opportunities and many of earlier employed are being repatriated to the agriculture sector. Thus, agriculture in the South Asian countries is also a cushion for the labour force expelled from other sectors. Economic crisis affects destination countries through different routes such as down turn of foreign market, reduction in aids flow, reduction in remittance flow and reduction in foreign employment opportunities. The reduction in employment opportunities is believed to affect the poor hardest because the labour is the main asset of the poor. Literatures on the effects of foreign employment on agriculture value addition back home are scanty. This information is required to learn the effects of financial crisis and labour return on agricultural production in the home country. The study is proposed to analyze the effects of such crisis in foreign employment to agriculture employment, poverty and agriculture growth back home.

The main objective of the study is to understand the effects of foreign employment on poverty, labour supply and agricultural growth in South Asia. The specific objectives are to compare the experience of agricultural growth and poverty in relation to foreign employment in Nepal and India; to explore growth-employment-poverty nexus in agriculture sector; to estimate and compare the role of foreign employment on the relationships between growth, poverty and agricultural development. However, in case of Bhutan, there is no enough time series statistics on the number of Bhutanese labour migrated to other countries and analysis is based on cross sectional household data.

## **2.0 FOREIGN EMPLOYMENT, POVERTY, AGRICULTURE NEXUS IN SOUTH ASIA**

Foreign employment is increasing, poverty is decreasing and agriculture is getting sluggish in South Asia. The poverty head count in Nepal declined from 42 percent in 1996 to 31 percent in 2004 (CBS 2004) and 24 percent in 2009, but it is still considered to be very high. In India, poverty declined from 36 percent in 1993/94 to 27 percent in 2004/05 (Planning Commission). Poverty in Bhutan is region specific with more poor in remote mountains and far flung rural villages. However, it is being estimated that 75 percent of the poor still live in rural areas, most of them are daily wagers, self-employed householders and landless labourers. The comparative study of Nepal, India and Bhutan delineates the effects of economic crisis in the countries of different size and set up with different amount of foreign employment.

Agriculture in South Asia is growing slower than the overall economic growth. The comparison of growth and poverty across the five countries (Armenia, Uzbekistan, Vietnam, Indonesia and Bangladesh) confirms that growth is a necessary condition for sustained reduction of poverty (Osmani 2004). However, the responsiveness of poverty to growth varies between countries and within the same country at different periods of time. Analysis of the causes underlying these variations in the responsiveness of poverty to growth has demonstrated the importance of the

employment nexus. Some studies report that the poverty reducing impact of agricultural growth works along three channels (Rahman and Islam 2003). (a) The agricultural growth raises the demand for rural labourers, which results in larger number of days of employment for these workers and also increases wage rates. (b) The growth helps to raise the income of small and tenant farmers. (c) A higher growth reduces the price of foodgrain and helps the poor households who are often net buyers of foodgrain. Since labour is the major asset the poor possess, they can hope to escape poverty only through full and gainful employment of labour. The raising of the return to labour can be achieved either with higher wages or higher rate of return to self-employed. The nexus may transfer labour from low-paid self-employment in subsistence activities to better-paid wage employment (Osmani 2004). For this, labour migration can help in the countries where the development of the rural areas is very slow.

An important challenge is to understand the nature of impediments the poor people face in trying to improve the quantity and quality of their work. Poverty can be more responsive to growth only if these impediments are removed. The poor people everywhere face some common impediments – such as lack of access to resources – there can be special impediment too in particular circumstances. In rural areas, the crucial resource may be land, or it may be credit, or it may be skill – either the general skill level or some specific skill. A pro-poor growth strategy will have to be sufficiently addressing the specific nature of the problem faced by particular groups of people at particular stages of development (Osmani 2004). Micevska and Rahut (2008) find that physical and human capital constrained the household from diversifying into high return non-farm activities.

From a poverty reduction perspective, economic growth must be employment-intensive. Torm (2003) analyzed linkages between economic growth, employment and poverty in the six transition economies (Armenia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan) and concluded that growth should be concentrated in the high-productivity sectors of industry and services. Due to the labour-intensive nature of agriculture and engagement of poor in this sector poverty reduction policy need to be directed at stimulating agriculture growth. Efforts to reduce poverty need to focus on the informal sector which is a starting point for achieving development and poverty reduction (Torm 2003). While two-thirds of the world's poor live in Asia, South Asia is home for most of them. Although some projections (World Bank, 2003) indicate that the Millennium Development Goal of reducing poverty to a half by 2015 (from the benchmark level of 1990) would be attained at the global level, doubts remain about certain countries (Islam 2004). South Asian countries like Nepal, India and Bhutan are struggling for reducing poverty with putting the main policy thrust on it.

Analysis of the relationship between economic growth and poverty reduction has gone through various phases in the literature on development. For example, an important premise of the very early theories of development was that the benefits of economic growth would trickle down to the poor. Since then, questions have been raised on the assumption of an automatic link between growth and poverty reduction, and attempts have been made to understand the mechanisms through which the

benefits of growth may get transmitted to the poor. Some of the latter categories of studies do also refer to the role of employment (Ahluwalia et al. 1979, Fields 1980, Ravallion 1993, Demery and Squire 1995, Dollar and Kray 2001, Khan 2001, Osmani 2002). A rigorous analysis of the role of employment in the linkage between economic growth and poverty reduction appears to be missing (Islam 2004). Following on the Kuznets (1955) hypothesis of an inverted U shape of the relationship between economic growth and income inequality, Adelman and Morris (1973) was one of the earlier studies to question the automaticity of the relationship between economic growth and benefits to the poor. And then came the influential contribution by Chenery et al. (1974), focusing on the importance of redistribution of economic growth. While growth continued to occupy the centre stage in development literature, there have been studies arguing that although growth is necessary for poverty reduction, it is not sufficient (Dagdeviren et al. 2002, Goudie and Ladd 1999, McKay 1997, Ravallion 2001). Some studies point out that the pattern of growth is important from the point of view of its effectiveness in reducing poverty (World Bank 1990, Lipton and Ravallion 1995, Squire 1993, McKay 1997, DFID 1997, Goudie and Ladd 1999). And while talking about the pattern of growth that could be more effective in reducing poverty, some studies mention explicitly the importance of labour-intensive growth (World Bank 1990, Squire 1993, McKay 1997, DFID 1997, ILO 2003). World Bank (1990) points out the importance of labour-intensive growth in reducing poverty. However, none of these studies explicitly examine the employment nexus in the linkage between economic growth and poverty. ILO (2003) argues the case for decent work as the foundation for poverty reduction. Squire (1993, page 381) recognizes that economic growth that fosters the productive use of labour, the main asset owned by the poor, can generate rapid reductions in poverty. Thus, a gap in the literature on the linkage between economic growth and poverty reduction is the absence of an analysis of the role of employment in the working of this link (Islam 2004). Such analysis becomes particularly important in the current context where the rate of poverty reduction needs to be accelerated, and all possible means need to be found to make economic growth more pro-poor. Although the term pro-poor growth is used frequently in the current discourse on development, there have been few attempts to define it. One exception is White and Anderson (2001) study which shows that growth can be characterized as pro-poor only when the share of the poor in the additional output increases, or in other words, when the distribution of income improves. Of course, it is possible for the income of the poor to increase (and the incidence of poverty to decline) even when the distribution of income does not change or worsens (Islam 2004). But the poverty reducing effect of economic growth in such cases would be lower than in the case of growth with improved income distribution. The poor may be able to achieve higher productivity and increase their incomes in their existing occupations, or shift to new occupations involving higher level skills or better technology. According to Islam (2004) the results of the process can be reflected in (i) improved productivity of various sectors and occupations, (ii) a shift in the structure of employment towards occupations with higher levels of productivity, and (iii) increases in real wages, earnings from self-employment, and earnings from wage employment.

Faster growth does not always generate a faster rate of poverty reduction, nor does slower growth always lead to slower rates of poverty reduction (Osmani 2004a). Policies for poverty reduction should therefore promote both a faster rate of growth and a high growth elasticity of poverty (UN 2005). There can be large variations in the poverty reduction impact resulting from the same rate of economic growth (Kakwani 2002). There are many aspects of the linkage between employment and poverty (Khan 2005). The poor can escape poverty when they have (a) an increase in wage employment; (a) an increase in real wage, (c) an increase in self-employment, (d) an increase in productivity in self employment, (e) an increase in the terms of exchange of the output of self employment (Khan 2001), and g) access to high-return non-farm employment (Micevska and Rahut 2010). Poverty declines if the aggregate of all these effects is favorable for the poor.

One can see three distinct ways in which macroeconomic policies can contribute to poverty reduction: a) They can promote higher growth which, given the gross output elasticity of employment, increases employment and/or earnings of the poor, which alleviates poverty. b) They can change incentives in favor of more labour-intensive activities and techniques, thereby increasing employment and/or earnings of the poor, which alleviates poverty. And c) they can directly improve the welfare of the poor, e.g., by changing the allocation of public expenditure to increase income transfer to the poor (Khan 2005).

Literature is still not clear about the role of foreign employment on domestic production and poverty. The agriculture employs and houses most of the poor in South Asian countries. There is a need to boost productivity and reduce the gap in living standards and poverty between agriculture and non-agricultural people. When employment growth in the non-agricultural sector is fast enough to permit a labour shift the process must be hastened by promoting agricultural growth so that the remaining labour force in the sector can achieve a rapid increase in living standards. Without assessing the role of foreign employment in agriculture sector we cannot assess the effects of financial crisis in foreign countries to the poverty in the region most of that are working in agriculture sector. To shed light on such delicate linkages, the study is proposed to analyze the effects of foreign employment of labour force on domestic production and poverty reduction using time series secondary data in Nepal and India, and primary data for Bhutan.

### 3.0 METHODOLOGY

The study explored the effects of labour migration on agricultural production and poverty. It assessed growth-employment-poverty nexus in South Asia and estimated employment elasticity of output. Such information will be useful to the government in South Asia to design recovery programmes for the effects of economic crisis.

The growth-employment-poverty nexus could be assessed using a simple correlation analysis in which the correlation between growth and employment, growth and poverty, and employment and poverty (Aigbokhan and Alli 2008). This nexus can also be assessed by estimating growth elasticity of poverty (Ravallion 2001, Aigbokhan and Alli 2008). To quantify the employment linkage to the poverty, the output elasticity of employment (OEE) is estimated in agriculture sector. This

captures the effects of change in wage employment and change in self-employment opportunities (Khan 2007a). Time series estimates are far better indicators of employment intensity of growth (Khan 2007a). The simplest estimate (arc elasticity) shows the ratio of observed proportionate change in employment to observed proportionate change in output over a period of time.

The sources of data in Nepal were Economic Survey, Government of Nepal; Statistical Information on Nepalese Agriculture, Ministry of Agriculture and Cooperatives; Statistical Handbook, Central Bureau of Statistics; and records of foreign employment, Department of Foreign Employment. Similarly, the sources of data in India include Economic Survey, Department of Economic Affairs, Ministry of Finance, Government of India; Statistical Abstract of India, Ministry of Statistics and Programme Implementation, Government of India; National Sample Survey Organization, Ministry of Statistics and Programme Implementation, Government of India; Census, Government of India and [www.indiastat.com](http://www.indiastat.com).

Time series data on gross domestic production, agricultural gross output, agriculture employment, foreign employment, public expenditure in agriculture, investment in the agriculture and poverty head count ratio were obtained for Nepal, India and Bhutan from secondary sources like Economic Survey, statistical handbooks and publications of the central banks. Following macro-economic models were estimated in case of Nepal and India.

$$\text{Agricultural production} = f(E_f, E_a, P_a, I_a, D, L) \quad (1)$$

$$\text{Poverty headcount} = f(E_f, E_a, P_a, I_a, D, L) \quad (2)$$

$E_f$  = foreign employment (by major destinations) as percent to the total labour force

$E_a$  = labour availability in agriculture as percent to the total labour force

$P_a$  = public expenditure in agriculture per unit of agriculture labour

$I_a$  = investment in agriculture per unit of agriculture labour

$D$  = dependency ratio (non-labour population divided by the labour force)

$L$  = adult literacy rate

Since foreign employment influences the income of the poor, employment in agriculture and foreign countries have been used as explanatory variables. Likewise, dependency ratio has been used as an indicator of the extent of labour force participation. Level of education and skill of the workforce is hypothesized as exerting a positive impact on the income of the poor. However, at the macro level it was not easy to define this variable; and hence a surrogate in the form of adult literacy rate has been used as an indicator of the education variable. For developing the linkages between the growth and poverty, the estimates of equation (1) and equation (2) are compared.

Similarly, the data sources in Bhutan are Poverty Analysis Report (2003, 2007); Statistical Year Book, National Statistical Bureau; Selected Economic Indicators and Annual Report of Royal Monetary Authority of Bhutan; and Labour Survey Report 2005 and 2007. The secondary data sources being insufficient the study was

supplemented with primary survey. Randomly selected 15 villages stratified into western, central and eastern regions were surveyed for primary data collection. From each village, about 8-12 households are sampled randomly, thereby generating a total sample size of about 162 households (Please see details in Bhutan case study in Chapter 6). Due to the lack of sufficient time series macroeconomic data on foreign employment and poverty over time we used micro data (household data) for the analysis on the impact of labour supply and migration on the poverty due to the following reasons. The number of Bhutanese working in foreign countries is very small in number. There are few hundred Bhutanese working in United State of America and most of them are unskilled workers. In very recent years some of the Bhutanese graduates have started working in call centers in Indian cities of Delhi, Kolkota and Banglore but these graduates are not remitting much money back to Bhutan to support their families. In Bhutan, due to the lack of data for the past and the small size of foreign employment at present, it is not possible to conduct empirical analysis using macro data. Currently, the pressing issue on employment in Bhutan is domestic migration rather than the foreign migration. Therefore the Bhutanese section of this research focuses on the impact of domestic migration on welfare rather than the foreign employment. However, one of the sections discussed the rising unemployment in Bhutan and the prospect for foreign employment for the Bhutanese labour force.

For the purpose of focus and clarity, the case studies of Nepal, India and Bhutan are first presented separately in the sections 4, 5 and 6 respectively. Then the results are synthesized in section 7 and finally concluded in section 8.

#### **4.0 CASE STUDY OF NEPAL**

In a country with 28 million populations growing at the rate of 2.1 percent per annum, every year an additional 400,000 individuals enter to the labor market in Nepal. Due to political instability, after effects of armed conflict, stringent labour law and poor investment climate, creation of employment opportunities is very limited in the country. Constitution is being developed, governments are not stable, extortions are commonly reported in news papers, labour law does not permit hire and fire policy, industrial safety is weak leading to limited opportunities of employment. Some of this labour force, with increasing trend, targets for foreign employment. Though the government has opened 108 countries for foreign employment, over 93 percent of the migration is destined only to four countries, namely Malaysia, Qatar, Saudi Arabia and United Arab Emirates.

The migration plays a major role in Nepalese economy with 1.6 million people (5.9 percent of the population) working abroad (Riester 2010). Global financial slow down and their impacts on major labour destinations (Malaysia, Qatar, Saudi Arabia, the United Arab Emirates) caused to return some migrants. It is hard to obtain authentic data on returns. Riester (2010) reported that between June 2008 and March 2009, only 3,000 Nepalese migrant workers returned, mainly from the United Arab Emirates, Macao, Malaysia and Qatar. The returns are reported less from Saudi Arabia. This number, however, includes only regular migrants who returned early and

filed claims for social benefits. Foreign Employment Promotion Board<sup>1</sup> has a social fund for foreign employment to reimburse 40 percent of the costs of migration if the migrant return within six months and reimburse 25 percent if they return after six months but within a year. There is no reimbursement for those who return after a year. Those who return after a year and are not eligible for the claim do not report to the Board and we have no data for such returnees.

The money sent back by the longer term (more than six months) migrants to their families back home is considered as a remittance. The money brought back by the seasonal migrants (being abroad for six months or less) is counted as the current transfer. Thus, the large part of the labour earnings from India falls under the current transfer and not remittance. The current transfer is believed to ease the life supplementing the consumption need and contribute to reduce poverty. The remittances are believed to reduce poverty. It is reported that a 10 percent increase in the share of remittances in a country's GDP can lead to a 1.2 percent decline in poverty (Adams and Page 2005). Though the remittance primarily contributes to the household income it helps the society by increased demand for consumption goods and services.

Nepal Labour Force Survey (2008) with a sample size of 16,000 households shows that the labour force participation rate is 83.4 percent, rate of employment is 97.9 percent and the economically active population is 83.0 percent. Out of those employed, 16.9 percent are engaged in formal salaried/wage earning activities, while the remaining 83.1 percent are self-employed (MOF 2010). Of the total employed 73.9 percent are employed in the agriculture sector (Table 4.1). The agriculture is still a major source of the employment in the country. Only two-thirds of the labour force are fully employed and the problem of disguised unemployment is very high. Since there is no unemployment benefits in the country no authentic data is available for unemployed.

TABLE 4.1  
Labour Force Participation in Nepal

	Major indicators	Percent
1	Labour force participation rate	83.4
2	Economically Active Population Rate	83.0
3	Employment Rate	97.9
4	Employment Growth Rate	2.45
5	Population Employed in the formal sector	16.9
6	Self Employed Population	83.1
7	Population Engaged in Agriculture Sector	73.9
8	Fully Employed Population	66.8

Source: CBS (2009) Nepal Labour Force Survey, 2008

Very scanty literatures are available on the effects of foreign employment in the domestic economy. Pant (2008) argues that the remittances can generate a positive

<sup>1</sup> The Board also provides information and training to the migrants.

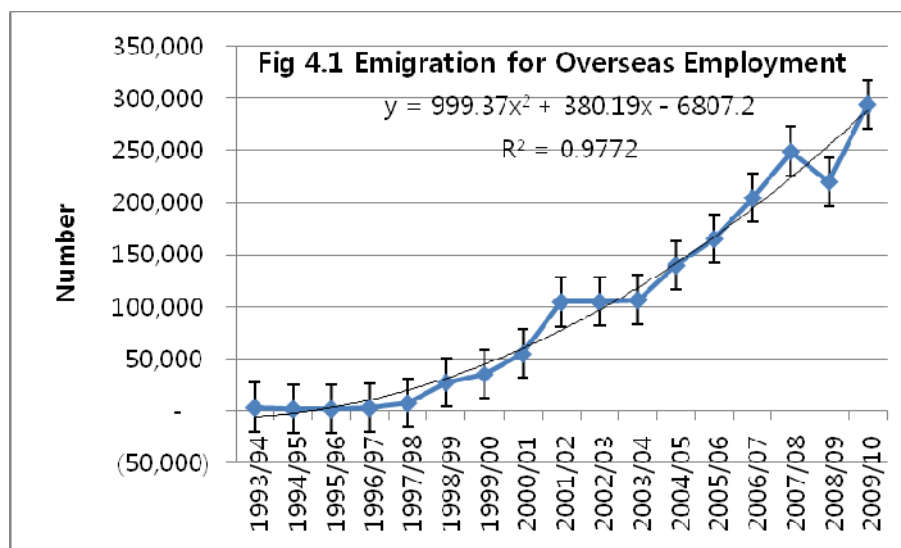


effect on the economy through various channels such as savings, investment, growth, consumption, and poverty and income distribution. Similarly, remittances also contribute significantly to GDP and to stability of the economy by lowering the probability of current account reversals (Pant (2008)). It also create multiplier effects in the domestic economy, by producing employment opportunities and spurring new economic and social infrastructure and services, specially where effective structures and institutions have been set up to pool and direct remittances. However, some studies also pointed out some deleterious impacts of remittances on national economic growth in the medium and longer term (for details see Oxfam Novib 2006, Pant 2008). Some studies estimate that on an average, a 10 percent increase in the number of international migrants in a country's population can lead to a 1.6 percent decline in poverty headcount<sup>2</sup>. Same report also says that a 10 percent increase in the share of remittance in a country's GDP can lead to a 1.2 percent decline in poverty.

Though there are several claims of the beneficial effects of the foreign employment, its effects of domestic agriculture are yet to be analyzed properly. Following sub-sections attempt to analyse status of labour supply, effects on agriculture production and impact on poverty.

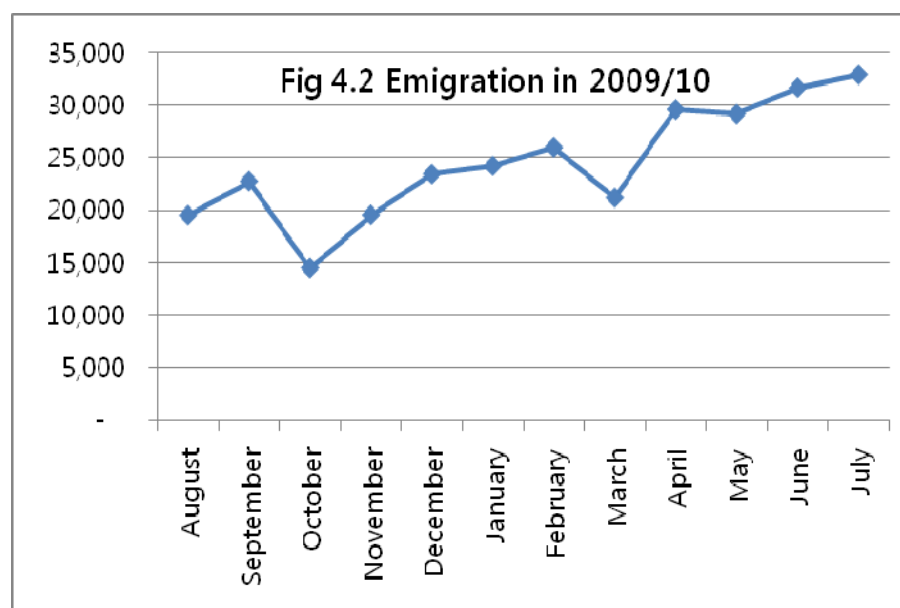
#### 4.1 Status of labour supply

Annual labour migration from Nepal has reached to 294,094 (please see Annex 4.1 for detail). The growth of the labour migration follows a polynomial function of degree two with positive coefficients of second and first degrees (Fig 4.1). The steepness of the migration during 2004/05 to 2007/08 can be attributed to heightened domestic armed conflict. The decrease of migration during the year 2008/09 may be due to two forces. First, at the domestic level there was peace agreement that increases hope of peace in the society that attenuating the push force. Second, at the same time financial crisis at the destination countries weakened the pull force for labour migration.



<sup>2</sup> [http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/MD\\_Brief8.pdf](http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/MD_Brief8.pdf).

In aggregate, 1,620,370 people have gone to different countries for foreign employment by February 2010. In addition, the number of labour migration through unauthorized routes is also assumed to be significant (MOF 2010). Labour migration to India does not come to the national figure. The flow of labour out migration follow seasonal pattern. The flow is lowest during the festival season of October and marriage season of March (Fig 4.2). The seasonal pattern is not affected by crop planting and harvesting seasons of the agriculture. The monthly out migration ranged from 15,000 to 34,000 in the year 2009/10.

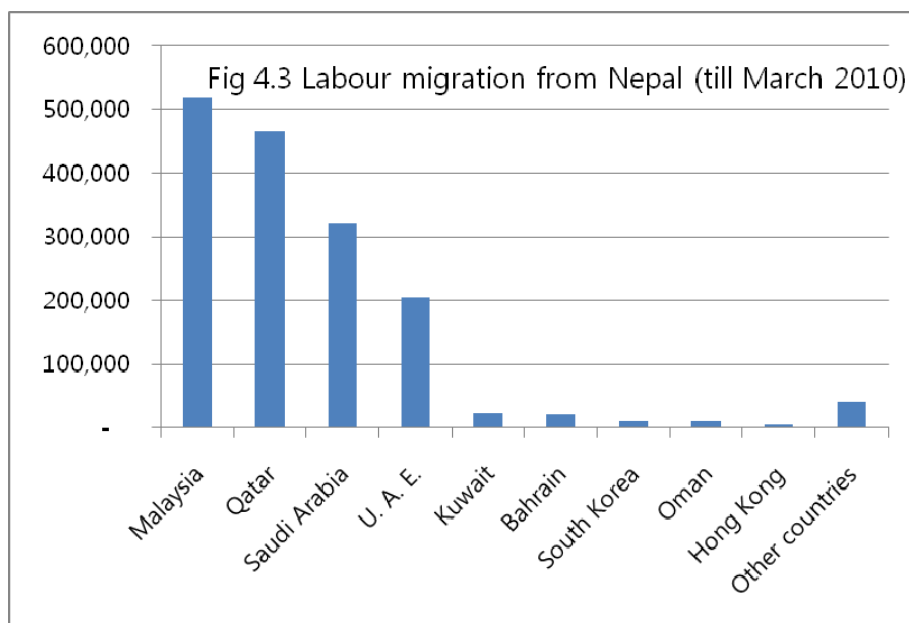


The major destinations of the Nepalese labour force, as already mentioned, are Malaysia, Qatar, Saudi Arabia and United Arab Emirates. These four countries absorb over 93 percent of the labour force migrated from Nepal (Table 4.2). The 32.0 percent of the labour force have gone to Malaysia followed by Qatar (28.7 percent). The third destination is Saudi Arabia with 321,063 (19.8 percent). Similarly, 12.6 percent went to United Arab Emirates (UAE), 1.4 percent to Kuwait and 1.3 percent to Bahrain (Fig 4.2). The migration to South Korea includes those sent under the employment permit system (EPS). The size of unauthorized migration can be guessed from the news that around 30,000 Nepalese workers have managed to enter and work in Iraq in spite of the ban by Nepalese government. In addition, a large number of unskilled labourers migrates every year to India, but the migration statistics do not include this figure. It is not possible to record the movement of labourers from Nepal to India and vice versa due to porous border and free transit between India and Nepal. As they have no visa requirements, their movements are not registered anywhere. Apart from approximately 0.25 million employed in Indian army, it is generally poorer Nepalese migrants who move to neighboring India (Seddon 2005). India is a major destination for very poor labourers who can not afford for abroad travel, particularly those from the far western hill areas of the country.

Table 4.2  
Destinations of Nepalese Labour Force

	Country	Till 2007/08	2008/09	Till 2008/09	Till March 2010	Percent
1	Malaysia	429,240	35,070	464,310	519,145	32.04
2	Qatar	351,536	76,175	427,711	465,289	28.71
3	Saudi Arabia	232,863	48,749	281,612	321,063	19.81
4	U. A. E.	151,283	31,688	182,971	205,537	12.68
5	Kuwait	13,906	2,291	16,197	22,376	1.38
6	Bahrain	11,682	6,360	18,042	20,934	1.29
7	South Korea	6,587	2,888	9,475	10,461	0.65
8	Oman	3,970	4,247	8,217	10,456	0.65
9	Hong Kong	3,903	65	3,968	4,050	0.25
10	Other countries	22,196	12,432	34,628	41,059	2.53
	Total	1,227,166	219,965	1,447,131	1,620,370	100.00

Source: Foreign Employment Department



National Labour Force Survey (2008) reports that the proportion of the households receiving a remittance or current transfer is 30 percent. The households receive the largest share of remittance (17.7 percent) from Qatar, followed by domestic sources (Table 4.3). After the domestic source, the number of the remittance is highest from India but the size is small. Though the number of migrants to India is not easily available, the contribution of remittance and current transfer from India is 11 percent.

The labour force migration from Nepal is large as compared to the labour force in the country. Large chunk of the labour force is migrated to low wage countries. The migration to high wage countries like Japan, North America and Germany is very limited. It clearly shows that the labour force is unable to move to the high wage countries of Europe and America. The expectation of the earning is also not much high.

Table 4.3  
**Number, Size and Share of Remittances from Different Countries**

	Source of remittance	Number of remittance (in a year)	Average size of remittance (NRs 1000)	Total amount of remittance (NRs billion)	Percent
1	Within Nepal	2,232	22.83	16.00	16.8
2	India	1,253	22.04	10.57	11.1
3	Malaysia	480	85.14	15.16	15.9
4	Saudi Arabia	386	90.87	11.81	12.4
5	Qatar	522	90.94	16.85	17.7
6	United Kingdom	49	235.06	1.76	1.8
7	Other	648	146.05	22.76	23.9
8	Do not know	42	29.60	0.24	0.3
	Total	5612	51.56	95.16	100

Source: CBS (2009) National Labour Force Survey 2008, page 172.

#### 4.2 Effects of foreign employment on poverty

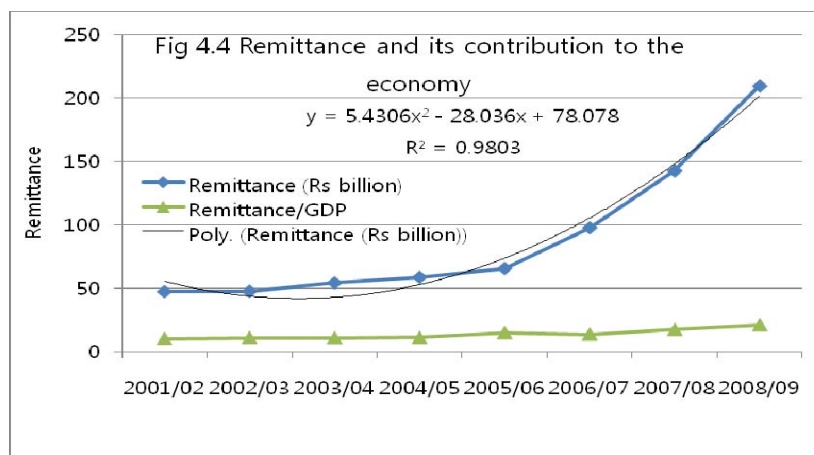
There are claims that the foreign employment reduces poverty. Logically as the migration is taking place voluntarily, the migrating people, if they have full information of the costs and benefits of migration, must have chosen the option better for them. It means, the migration has created option to the labourers and they must have been better off from it.

Remittances by international migrants to Nepal have grown dramatically in recent years and are now the largest source of external finance. It has reached to NRs. 143.96 billion in eight months of fiscal year 2009/10. During the year 2008/09 the remittance income was NRs 209.7 billions. In recent years it is growing by nearly 50 percent per annum (Table 4.4). The growth in the remittance is due to the rise in the number of migrants than the increase in the wage rate. The coefficient (999.37) of the number of migrants (please refer to Fig 4.1) is much larger than the coefficients of the remittance (5.43, please refer to Fig 4.4 for detail). In other words, the compound growth rate of the remittance at current price (21.20 percent) is much smaller than that of the migration (33.52 percent). It means the remittance per head of the migrant has gone down even in the nominal terms.

TABLE 4.4  
**Remittance and its Contribution to the Economy**

	Unit	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Remittance flow	billion NRs	47.22	47.54	54.2	58.59	65.54	97.69	142.68	209.7
Growth rate of remittance	% change		0.7	14.0	8.1	11.9	49.1	46.1	47
Remittance/GDP	%	10.3	11	10.9	11.1	14.9	13.8	17.5	21.2

Source: Ministry of Finance (2010): Economic Survey, Fiscal year 2009/10.



The growth in remittance follows an increasing function of polynomial of order 2 (Fig 4.4). On the basis of the official recorded flow of the money the remittance per unit of GDP is also increasing and by the year 2008/09 it has crossed 21 percent of the GDP. The growth rate of remittance to GDP ratio is increasing by an annual compound growth rate of 9.97 percent. This amount, however, does not include the unofficial transfers, which is estimated to be 50 percent or higher of the officially recorded flows (Pant, 2008). Some other literatures estimate the informal flow as high as 69 percent of foreign remittance (in 2008)<sup>3</sup>. The main informal flow is through 'hundi'<sup>4</sup>. It is an unconditional order in writing made by a person in foreign country directing another person at home to pay a certain sum of money to a person named in the order. Another system of money transfer is the movement of the natural persons carrying the cash to hand it over to the relatives of the sender in Nepal.

It is hypothesized based on the literature that the foreign employment and remittance thereof reduces poverty. The logic behind it is that poor works as the labourer and the remittance goes directly to the poor household. The role of remittances in the economy and poverty reduction was claimed first by the Nepal Living Standards Survey (2004). It showed that the poverty declined from 42 percent in 1995/96 to 31 percent in 2003/04 and attributed the decline to the increasing flow of the remittances. During this period, nothing such spectacular happened in the country to attribute this poverty reduction. Investment, employment and economy were not growing during that period due to the armed conflict in the country.

From the first living standard survey (1995/96) to the second survey (2003/04) the proportion of the households receiving the remittances increased from 23 percent to nearly 32 percent. For those households that received remittances, the share of it on the household income increased from 26 percent to 35 percent during the same period. Considering the population of the country the remittance per capita increased from NRs 625 to NRs 2100, more than three times even after offsetting the population growth (Table 4.5).

<sup>3</sup> <http://www.mof.gov.np/monitoring/publication/NewsandViews.pdf>

<sup>4</sup> The *hundi* refers to informal financial instruments used in credit transactions and remittances for the purpose of transfer of funds from one place to another.

TABLE 4.5  
Contribution of Remittances in Household Income

	Description	Unit	1995/96	2003/04
1	Households receiving remittances	%	23.4	31.9
2	Share of remittances in household income among the recipients	%	26.6	35.4
3	Per capita remittance amount for all Nepal	NRs (nominal)	625	2100

Source: CBS (2006) Nepal Living Standards Survey, 2004

There are several multiplier effects of remittances. The labour migration also created off farm employment within the country. The government has established Department of Foreign Employment and Foreign Employment Promotion Board. By the year 2009, the Department of Foreign Employment has registered 814 manpower companies in the country. Out of them 631 companies are renewed in 2010. These companies employ many people directly and also engaged large number of agents on commission basis. Many of the companies (78) have branches in other parts of the country. The remittance flow also flourished money transfer companies and their agents in the country. Many other people are employed in institutions created for providing training to the aspirant migrants. The study however, does not include the creation of the domestic employment and their income. The Foreign Employment Act (2008) safeguards the rights and interests of workers by making it a safe, well managed, and dignified profession. Foreign Employment Department is established on 31 December 2008 under the Ministry of Labour and Transport Management to look after foreign employment related activities. The Department attempts curbs foreign employment related frauds and ensures that contracts are enforced. Such frauds and malpractices are different area for the study and not covered in this report.

The effects of migration and remittance flow on poverty are explored empirically. Descriptive statistics of the variables used in the econometric model are presented in Table 4.6. All the monetary variables are deflated to 1995/96 price using overall urban consumers' price index. As the market for agricultural products are urban centers, price in the urban areas are the pull forces of agricultural products and more relevant for deflating the monetary values over the year. The average annual remittance for the year 1990/91 to 2008/09 is NRs 233 millions in 1995/96 price. During the same period, the deflated value of agriculture expenditure per agriculture labour is NRs 311 per annum. The agricultural credit disbursed by Agriculture Development Bank Limited per labour is NRs 784 per annum. Data on agriculture credit provided by other sources are not available. The agricultural land is 0.45 ha per labour, which decreased from 0.48 ha to 0.41 ha per labour. The average poverty head count ratio that was 49 percent in 1990/91 decreased to 24.70 percent in 2008/09 and the average for the study period is 36.46 percent. The average agriculture gross output is NRs 21,545 per labour in 1995/96 price. It is not changing much over the years. Average annual migration is 75,380 persons. In the year 1990/91 it was only 363 and over the 19 years it increased to 249,051 per year. These variables are used for modeling the effects of migration on poverty and agricultural production.

TABLE 4.6  
Descriptive Statistics of the Variables Used in the Econometric Models

	Variable	Unit	n	Mean	Std. Dev.	Minimum	Maximum
1	Remittance	NRs million	19	233.90	263.48	32.00	856.71
2	Agricultural expenditure	NRs/labour	19	311.54	93.94	187.30	476.01
3	Agricultural credit	NRs/labour	19	784.15	286.82	305.78	1247.61
4	Cultivated land	Ha/labour	19	0.45	0.02	0.41	0.48
5	Poverty head count	%	19	36.46	7.61	24.70	49.00
6	Agriculture gross output	NRs/labour	19	21545.49	1154.57	19649.28	23493.16
7	Migration	Person	19	75380.24	84865.93	361.00	249051.00
8	Agriculture labour	Person	19	6,602,642	517808.40	5,961,788	7,535,000

**Note:** All the monetary variables are deflated by overall urban consumer price index to 1995/96 price

The results of OLS estimation (Table 4.7) show that remittance decreases the poverty head count significantly. One million increase in the remittance flow decreases the poverty head count by 0.007 percent. Another strong variable that is instrumental to poverty reduction is agricultural credit. Per rupee increase in per labour agricultural credit decreases the poverty headcount by 0.02 percent. However, the agricultural expenditure unexpectedly increases the poverty. It is clear that the agricultural expenditure is not able to reduce poverty in the country. The function estimated explains over 98 percent of the variations in the poverty head count.

TABLE 4.7  
Effect of Labor Migration on poverty head Count

	Variable	Coefficient	Std. Err.	T	P> t	95% Confidence Interval	
1	Remittance	-0.007***	0.002	-3.080	0.008	-0.012	-0.002
2	Agricultural expenditure per labor	0.012***	0.003	4.340	0.001	0.006	0.019
3	Agricultural credit per labor	-0.020***	0.002	-	0.000	-0.024	-0.016
4	Cultivated land per labor	-29.239	20.822	-1.400	0.182	-73.898	15.420
5	Constant	63.010***	9.611	6.560	0.000	42.397	83.623
	F(4, 14)	280.32	n	19	--	--	--
	Adjusted R <sup>2</sup>	0.984	Root MSE	0.959	--	--	--

**Note:** \*\*\* indicates significant at 1% level of significance.

Robustness of the specification is tested. Omitted variables of the model and heteroskedasticity of the study variable are tested. Ramsey RESET test using powers of the fitted values of poverty headcount is not significant at 5% level of significance [F(3, 11) = 3.46 and Prob > F = 0.055]. The model is not having an omitted variable. Similarly, Breusch-Pagan / Cook-Weisberg test for heteroskedasticity test is not significant [chi2(1) = 0.22 and Prob > chi2 = 0.638]. The study variable has a constant variance.

The poverty elasticity of the remittance is -0.04. It is clear that the remittance reduces the poverty. The benefits of remittances are not limited to recipient households, but have a wider impact on the receiving society as remittances are spent, generating demand and jobs for local workers (Hoermann et al. 2010). Remittances increase consumption among the family members and provide insurance to crop failure and other natural calamities at home. The migrants also bring back some new skills. A few examples are that migrants from eastern Nepal to Darjiling brought skills on tea farming and migrants returned from Myanmar brought skills dairy cattle farming. But, many migrants rarely find suitable environment to use the skill they learnt to gainful activities.

### **4.3 Effects of foreign employment on agricultural production**

Large proportion of the agricultural labour force is underemployed. In the most part of the country the agriculture is largely subsistence generating livelihood insufficiently. Nepalese agriculture is characterized by small and fragmented landholdings with mostly nonirrigated land. Low level of technology limits the crop and livestock yields. People traditionally migrate seasonally to nearby countries to supplement their family income. Recently, with the access of labour force to higher wage countries better off people also migrate overseas for better income and also for experiences of being in foreign countries. Literature is not clear how the migration does affect the agricultural production in the country. As most of the labour force that migrates comes from agriculture (though no disaggregated data is available) the migration reduces the labour supply in agriculture. At the initial period when the surplus labour comes out of the agriculture, the productivity of the remaining labour force increases and the agricultural production does not decrease, thereby increasing the marginal productivity of labour. But, over a period of time the labour migration continuously increases as a result the agriculture sector faces labour shortage thereby decreasing the agricultural production. It is hypothesized that the increasing labour migration after certain limit decreases the agriculture production in the country. As the AGDP does not include the intermediate consumption share of which is increasing due to increase in livestock and poultry production, the hypothesis is tested using agricultural gross output as an indicator variable to the agricultural production.

The OLS results (Table 4.8) shows that the migration reduces agricultural gross output. More precisely, one labourer migrated reduces agricultural gross output by NRs 18,000. Though this is much smaller amount as compared to the earning from the foreign employment, this result contradicts with the common believe that labour out migration from agriculture increases the productivity of the remaining labour force.

Among the other confounding factors, the agricultural credit increases the gross agricultural output. One rupee increase in agricultural credit increases the agricultural gross output by NRs 6.00. Larger, the cultivated land per labour, smaller is the gross output per labour. This clearly shows that the land is facing a problem of labour shortage. However, as is the case of poverty, the agricultural expenditure per labour is not doing a favorable job in the economy. The equation thus estimated explains about 85 percent of the variations in agricultural gross output.



TABLE 4.8  
Effects of Emigration on Agricultural Gross Output

	Variable	Coefficient	Std. Err.	T	P> t	95% Confidence Interval	
1	Labour migration	-0.018**	0.006	-2.770	0.015	-0.032	-0.004
2	Agricultural expenditure per labor	-3.025*	1.434	-2.110	0.053	-6.101	0.052
3	Agricultural credit per labor	6.003***	1.417	4.240	0.001	2.964	9.041
4	Cultivated land per labor	-37900.230**	13857.200	-2.740	0.016	-67620.970	-8179.494
5	Constant	36090.040***	5869.403	6.150	0.000	23501.420	48678.660
	F(4, 14)	25.68***	n	19			
	Adjusted R <sup>2</sup>	0.846	Root MSE	453.41			

Note: Agricultural gross output, agricultural expenditure, and agriculture credit are in NRs million per labor in 1995/96 price.

The function estimated has neither omitted variable nor a problem of heteroskedasticity. Ramsey RESET test using powers of the fitted values of deflated agricultural gross output per labour is not significant [ $F(3, 11) = 0.13$  and  $\text{Prob} > F = 0.943$ ]. Hence the model has no omitted variables. Breusch-Pagan / Cook-Weisberg test for heteroskedasticity test is not significant [ $\chi^2(1) = 0.01$  and  $\text{Prob} > \chi^2 = 0.906$ ]. The study variable has constant variance.

The analyses show that the labour migration though brings remittance in term of foreign currency making the balance of payment situation of the country better and reduces poverty, it decreases the agricultural production within the country. This makes the country more dependent on imported food products.

#### 4.4 Future prospects of foreign employment and relation to poverty

Increasing work force in the country continues to look abroad for the chance of gainful employment to make a better living. These flows are likely to grow further in the years ahead. With the labour migration setting to rise in the coming years as a result of globalization, remittances can be expected to grow steadily but it may have mixed implications to the economy. Domestic labour shortage may hamper the production, particularly the labour intensive production like agriculture. Increased remittance will increase the demand for goods and services within the country. The foreign employment has already helped for expansion of telephone and banking networks in village areas for calling to foreign country and for receiving remittance. Decrease in domestic production due to labour shortage will increase the import. Larger the share of import on domestic consumption, larger will be the effects of international price shocks. This will adversely affect the poor who have no access to foreign employment. To overcome such effects on the domestically bound poor people, the wage rate back home should increase. It is expected that when domestic production units face labour shortages, they will increase the wage rate. But, this increase will depend on the labour productivity. In hill and mountain agriculture where the rise in the productivity is not possible under the technology adopted, many farmers have abandoned the farm land. As the productivity of unskilled labour is

hard to increase, the nation should go for massive labour training and technology adoption for domestic industries too. Utilization of the money from remittances for farm mechanization can increase the labour productivity back home.

Though the remittance generated through foreign employment has largely supported the national economy, the remittance per worker is low due to low level skill among migrants labourer. Skill trainings would enhance income and human capital.

## **5.0 CASE STUDY OF INDIA**

In India about 70 percent of population lives in rural areas. Although the share of agriculture and allied sectors in gross domestic product (GDP) has declined steadily from 38.8 percent in 1980/81 to 15.7 percent in 2008/09, this sector continues to be a source of livelihood for 52.1 percent of the workforce. About 46 percent of India's geographical area is under agriculture, and this sector accounted for 10.2 percent of total export and 2.7 percent of total imports in 2008/09 (Economic Survey, GOI, 2009/10). The decline in share of agricultural GDP in total GDP is expected in a developing economy, but the major concern is inability to reduce the dependence of workforce on agriculture significantly by creating enough non-farm employment opportunities to absorb the surplus labour in the rural areas. Fifty percent of those who are engaged in agriculture are illiterate and about five percent have completed education up to Higher Secondary (NSS, 61<sup>st</sup> round). Lowest income and education is being observed for agricultural labourer. Micevska and Rahut (2008) found that the education level and income of the agricultural labour in the Eastern Himalayas of India was the least. Presently, Indian farmers are under serious pressure due to declining agriculture growth rate of production and yield, poor infrastructure, and degrading natural resources. Therefore, even those who are currently engaged in agriculture 40 percent wish to quit it and 27 percent do not like farming as they perceive it to be a non-profitable venture for them (NSS, 59<sup>th</sup> round). The return to investment in agriculture is close to zero and the farming is heavily dependent on factors which are not within control of the farmers, thereby making farming as risky venture.

Further, to add to the plight of the farmers, it is being observed that Indian farms are getting fragmented. The average size of land holdings declined from 1.69 hectares in 1985/86 to 1.33 hectares in 2000/01. The estimated area owned declined from 164 million hectare in 1980/81 to 160 million hectare in 2000/01 (Census 2001). There is 42 percent decline, in average area owned per household including landless households. However, the number of operational holdings has increased from 89 million to 120 million between 1980/81 and 2000/01 (Census 2001). Within different size groups, number of marginal, small and semi-medium holdings has increased and medium and large holdings have declined during the period 19980/81 to 2000/01. There is corresponding increase in area operated under marginal, small and semi-medium holdings. In the year 2001, 6.4 percent of medium and large landowners controlled about 37 percent of the land holdings (Census 2001).

### 5.1 Status of labour supply

The National Sample Survey data show that the total labour force has grown from 277.34 million on usual status basis in 1983 to 466.58 million in 2007/08 (Table 5.1). However, percentage increase in urban labour force was higher than the rural labour force during the same period. The total employment in 1983 was 269.36 million which has improved to 455.20 million in the year 2007/08 (Table 5.1). The improvement in employment was much higher in the non-agriculture sector than the agriculture sector comparing on the basis of current daily status (Table 5.2).

TABLE 5.1

#### Labour Force and Employment on Usual Status Basis in Various NSS Rounds

NSS round	Total Labour force(million)	Total Employment(million)
1983	277.34	269.36
1993-94	343.56	334.54
1999-00	377.88	367.37
2004-05	428.37	415.27
2007-08	466.58	455.20

Source: Various NSS rounds

TABLE 5.2

#### Employment (Agriculture and Non-Agriculture) in Various NSS Rounds (CDS basis)\* (in million)

	Agriculture	Non-Agriculture	Total
1993-94	191.58	122.35	313.93
1999-2000	191.55	146.64	338.19
2004-05	200.40	184.51	384.91

\* CDS estimates not available for earlier NSS Rounds.

Source: Planning Commission of India, GOI, Databook for DCH; 05 April, 2010

Rate of growth of employment has declined sharply in the 1999/00 as compared to the 1993/94. It has come down from 2.04 per cent in 1993/94 to 1.24 per cent in 1999/2000 (Table 5.4). However, it has to be seen in the context of the fact that the rate of growth of labour force too has fallen from 2.28 per cent to 1.47 percent in the same period (Table 5.1). The growth of employment has lagged behind the growth of the labour force. Nevertheless, for the employment in agriculture, highest growth rate was observed for self employment in agriculture during 1999/04. For non-agriculture employment, growth rates were observed highest for the self employment in non-agriculture (5.27 percent) during the period 1999/00 to 2004/05. However, an increase in the growth rate was observed for all types of employment in non-agriculture sector from the period 1993/94 -1999/00 to period 1999/00 -2004/05. Growth in real wage rate were very high for non-agriculture employment as compare to agriculture employment in the period 1993/94 -1999/00 (Table 5.5). Although, a decline in

growth of real wages was observed for both the sector during 1999/00 to 2004/05, but decline was drastically high for non-agriculture. During the same period employment in agriculture registered a higher growth rate (Tables 5.3 and 5.4).

TABLE 5.3  
Agricultural Employment Growth Rates

	1993-94 to 1999-00	1999-00 to 2004-05	1993-94 to 2005-05
Agricultural Self Employment	0.00	2.89	1.01
Agricultural Wage Employment	1.06	-3.18	-0.89
Total agricultural Employment	0.03	0.85	0.40
Real Agricultural Wage Rate (CPIAL deflated)	2.74	1.46	2.15

Planning Commission of India, GOI, Databook for DCH; 05 April, 2010

TABLE 5.4  
Non-Agricultural Employment Growth Rates

		1993-94 to 1999-00	1999-00 to 2004-05	1993-94 to 2004-05
1	Non-agricultural Self Employment	2.34	5.72	3.86
2	Non-agricultural Wage Employment	2.68	3.79	3.18
3	Rural non-agricultural employment	2.26	5.27	3.52
4	Urban non-agricultural employment	3.13	4.08	3.46
5	Secondary sector employment	2.91	4.64	3.70
6	Tertiary sector employment	2.27	4.67	3.35
7	Total non-agricultural Employment	2.53	4.66	3.49
8	Average real non-agricultural Wage Rate (deflated by NAS consumption deflator)	5.03	0.13	2.77

Planning Commission of India, GOI, Databook for DCH; 05 April, 2010

The elasticity of employment to GDP for all sectors as per Planning Commission Report has declined from 0.53 during the period 1977/78 -1983 to 0.15 in the period 1993/94- 1999/00. The elasticity decline in agriculture sector during this period was from 0.45 in 1977/78 -1983 to 0.39 in 1993/94 – 2004/05. However, for the period 1999/2000 – 2004/05 elasticity of employment in agriculture has improved significantly and it was highest as compare to other sectors (Table 5.5).

TABLE 5.5  
Elasticity of Employment to GDP

	Sector	Estimated Elasticity			
		1977-78 to 1983	1983 to 1993-94	1993-94 to 2004-05	1999-00 to 2004-05
1	Agriculture	0.45	0.50	0.39	1.52
2	Mining & Quarrying	0.80	0.69	0.03	0.82
3	Manufacturing	0.67	0.33	0.31	0.34
4	Electricity	0.73	0.52	0.02	0.33
5	Construction	1.00	1.00	0.99	0.88
6	Wholesale & Retail Trade	0.78	0.63	0.57	0.59
7	Transport, Storage & Construction	1.00	0.49	0.45	0.27
8	Finance, Real Estate, Insurance & Business Services	1.00	0.92	0.82	0.94
9	Community, Social and Personal Services	0.83	0.50	0.13	0.28
	All Sectors	0.53	0.41	0.29	0.48

NSS 61<sup>st</sup> round Employment & unemployment Situation in India, 2004-05 p-46

Source: Report of the Task Force on Employment Opportunities, July- 2001 Government of India

The NSS data shows that average annual increments in the organized sector employment during the 1990s was higher than in the previous ten years for all categories of workers. The percentage of regular wage and salary earners increased from 13.9 in 1983 to 48.6 million in 1993/94 and to 15.2 in 2007/08 (Table 5.6). Consistent with this is the estimate that unemployment among educated youth has declined from 18.5 per cent in 1993/94 to 12.5 percent in 2007/08 (Table 5.7).

TABLE 5.6  
Distribution of Workers (Usual Status) by Category of Employment (in %)

Status in employment/ Period	Self-employed			Regular wage/Salaried			Causal Labour		
	Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined
1977-78	62.6	42.4	58.9	7.7	41.8	13.9	29.7	15.8	27.2
1983	61.0	41.8	57.4	7.5	40.0	13.9	31.5	18.2	28.7
1987-88	59.4	42.8	56.0	7.7	40.3	14.4	32.9	16.9	29.6
1993-94	58.0	42.3	54.7	6.4	39.4	13.2	35.6	18.3	32.0
1999-00	55.8	42.2	52.8	6.8	40.0	14.0	37.4	17.7	33.2
2004-05	60.2	45.4	56.9	7.1	39.5	14.3	32.8	15.0	28.9
2007-08	56.3	42.6	53.2	7.5	41.2	15.2	36.2	16.2	31.6

Source: NSS Report No. 531: Employment & unemployment Situation in India: July, 2007-June, 2008

Table 5.7

**Unemployment Rates (%) on Usual Basis amongst Educated Youth (age 15-29 years)**

Year	Secondary Education and above			All types of Technical Education		
	Rural	Urban	Combined	Rural	Urban	Combined
1983	20.4(2.5)	30.0(10.7)	20.7(4.2)	25	23.9	24.4
1987-88	15.9(3.8)	16.6(12.1)	16.2(5.4)	24	20.7	22.1
1993-94	17(2.9)	20.8(10.8)	18.5(4.6)	29	25.9	27.3
1999-00	12.5(3.7)	18.3(11.2)	14.8(5.4)	22.8	24.5	23.7
2007-08	11.1(4.4)	14.6(10.0)	12.5(5.8)	23.9*	13.6*	18.2*

**Note:** 1) Figures in the parentheses show the unemployment rate among youth as a whole.

2) \* Diploma/ Certificate

**Source:** Report of Task Force On Employment Opportunities, Planning Commission, p-29 & NSS Report No. 531: Employment and Unemployment Situation in India: July, 2007-June, 2008.

## 5.2 Effects of foreign employment on poverty

According to the Planning Commission of India, percentage of population below poverty line declined from 36 percent in 1993/94 to 27.5 percent in 2004/05. However, these numbers are quite debatable. Indian government has initiated several programs to alleviate poverty, including subsidizing food and other necessities, increased access to loans, improving farming techniques, price supports, and promoting education and family planning. These measures might have helped reduce absolute poverty levels and illiteracy as per official estimates. The remittances sent back home by the emigrants may also have some impact on poverty reduction. As per the International Monetary Fund (IMF) report 1999, India ranks first in the volume of remittances.

To understand the effects of foreign employment on poverty reduction in India, analysis is carried out. The descriptive statistics of the variables used in the two econometric models are shown in the Table 5.8. All the monetary variables are used at 1999/00 constant prices. Remittances are deflated by WPI at 1999/00 prices. The average annual remittance per unit of agricultural labour force was IRs 2,802 for the period 1987/88 to 2007/08. During the same period average agricultural GDP per unit of agricultural labour was IRs 40,000. Poverty head count ratio has come down to 26.1 percent from 40.7 percent in the same period. Average public expenditure and public investment in agriculture per unit of agricultural labour force was IRs 619.13 and IRs 1044.43. However, average total investment in agriculture was IRs 3867.64 per unit of agricultural labour and indicates that during this period average private investment in agriculture was higher than the average public investment. Agricultural credit per unit of agricultural labour has increased significantly from IRs 1239.28 to IRs 16541.66 during this period with average credit availability per unit of labour being IRs 5172.01. A significant improvement in the number of people migrated during this period is being observed. The average number of people migrated during this period is 4.02 Lakh.

The results of the analysis show (Table 5.9) that remittances sent by the international migrants helped in reducing poverty in India, as this variable is highly significant with negative sign. The results show, with increase in remittances per unit

of agricultural labour by one Indian rupee will reduce the poverty head count by 0.002 percent. The increase in total investment per unit of labour force also has a positive impact on reducing the poverty head count ratio. However, agricultural credit and public expenditure on agriculture has demonstrated no significant impact on poverty headcount. Insignificant impact of agricultural credit can be seen in the light of large scale exclusion of rural poor from institutional credit market (Ramkumar and Pallavi 2007). Whereas, insignificant impact of public expenditure on agriculture in reducing poverty is explained by the fact as about 80 per cent of this expenditure is on irrigation.

TABLE 5.8  
Descriptive Statistics of the Variables Used in the Econometric Models

	Variable	Unit	n	Mean	Standard Deviation	Minimum	Maximum
1	Remittance (real value deflated by WPI)	IRs/agril. labour	21	2802.15	1285.09	705.14	4367.69
2	Agricultural GDP per unit of agricultural labour	IRs in thousands/ agril. Labour	21	40.78	2.11	36.19	45.82
3	Poverty head count	Percentage	21	32.86	5.17	26.10	40.70
4	Public expenditure in agriculture	IRs/agril. labour	21	619.13	178.49	359.04	1093.57
5	Public investment in agriculture	IRs/agril labour	21	1044.43	299.63	690.87	1667.22
6	Total investment in agriculture	IRs/agril. labour	21	3867.64	803.30	2810.36	5380.91
7	Agricultural credit	IRs/agril. labour	21	5172.01	4570.46	1239.28	16541.66
8	Cultivated land (gross cropped area)	Ha/agril. labour	21	2.07	0.42	1.55	2.81
9	Labour availability in agriculture as % of total rural labour force	Percentage	21	25.50	2.34	21.14	28.89
10	Adult literacy rate	Percentage	21	55.30	6.31	45.45	65.00
11	Migration	Lakh	21	4.02	2.00	1.26	8.49

Despite huge investment on irrigation in India, area under irrigation has not grown significantly. Whereas, the analysis shows that private investment which has grown significantly in the post reforms period was able to make dent in poverty reduction. The function estimated was able to explain over 72 percent variations in the poverty head count.

The tests were performed for the omitted variables and the heteroskedasticity in the model. The Ramsey RESET test using powers of the fitted values of poverty was not significant at 5 percent level of significance {  $F(3, 13) = 3.35$  and  $\text{Prob} > F = 0.052$  } hence the model has no omitted variables. Further Breusch-Pagan / Cook-Weisberg test for heteroskedasticity is not significant at 5 percent level, {  $\chi^2(1) = 0.09$  and  $\text{Prob} > \chi^2 = 0.765$  } therefore, the poverty variable has a constant variance.

TABLE 5.9  
Effect of Foreign Employment on Poverty

	Variables	Coefficient	t	P>t	95% confidence interval	
1	Remittance per unit of agricultural labour (IRs in real value deflated by WPI)	-0.002***	-3.13	0.01	-0.004	-0.001
2	Agricultural credit per unit agricultural labour (IRs)	0.001	0.66	0.52	-.0005	.0009
3	Public expenditure in agriculture per unit of agriculture labour (IRs)	-0.01	-1.17	0.26	-.0253	.0073
4	Total investment in agriculture per unit of agricultural labour (IRs)	0.003**	-2.67	0.02	-0.0052	-0.0006
5	Constant	54.99	9.70	0.000	42.968	67.009
	Adjusted R-squared	0.721	N= 21			

Note: \*\* Significant at 5%, \*\*\* significant at 1% level

### 5.3 Effects of foreign employment on agricultural growth

As stated earlier, Indian agriculture is characterised by small and fragmented landholdings. About 60 percent of net cultivated area (142 million ha) is under rainfed condition. Although the growth rate of gross irrigated area improved from 2.3 percent during 1980/81-1990/91 to 2.6 percent during 1990/91- 1996/97, the growth rate declined to 0.5 percent during 1996/97 -2003/04. Agricultural and allied GDP growth rate show an improvement from pre reform period (1980/81 to 1989/90) to post reform period of 1990/91 to 1999/00. However, this has declined during the period 2000/01 to 2007/08 (Table 5.10). Traditionally migration of labour from rural areas is to other rural areas to work as agricultural labour or to urban areas to work as wage labour.

TABLE 5.10  
Trend Growth Rate of Agricultural and Allied Sector GDP (at 1999-2000 prices)

Growth rate	Agriculture and allied GDP
1980/81 to 1989/90	2.9
1990/91 to 1999/00	3.3
2000/01 to 2007/08	3.1

The analysis shows (Table 5.11) that migration of labour to foreign countries has significant impact on improving the agricultural growth. This may be due to the fact that the benefits in the form of technical know-how, development of skills, etc. emerging out of the foreign employment are benefiting agricultural production and growth. Larger the cultivated land per agricultural labour more will be agricultural gross output per labour, this show that land is not facing problem of agricultural labour in India. However, agricultural credit per labour and labour availability in agriculture as percent of total labour force had no significant impact on agricultural



growth. Same way, public expenditure in agriculture per unit of labour and public investment in agriculture had no significant impact on agricultural growth. This may be due to the reasons stated in the section 5.2. The adult literacy rate shows a positive and significant impact on agricultural growth. The result shows that the one percent improvement in adult literacy will increase the agricultural gross domestic product per agricultural labour by IRs 1,568,246.

TABLE 5.11  
Effects of Foreign Employment on Agricultural Growth

	Variable	Coefficient	Std. Err.	T	P> t	95% Conf. Interval	
1	Number of people in foreign employment (Lakh)	727.88*	417.85	1.74	0.105	-174.85	1630.60
2	Cultivated land (gross cropped area) per unit of agricultural labour (ha)	31075.38***	9017.75	3.45	0.004	11593.73	50557.04
3	Adult literacy rate	1568.24***	436.35	3.59	0.003	625.59	2510.90
4	Public expenditure in agriculture per unit of agriculture labour (IRs)	2.83	4.36	0.65	0.527	-6.58	12.25
5	Public investment in agriculture per unit of agriculture labour	-3.34	2.66	-1.26	0.231	-9.10	2.40
6	Labour availability in agriculture as percentage of total rural labour force	71.11	670.19	0.11	0.917	-1376.75	1518.98
7	Agricultural credit per unit agricultural labour (IRs)	-0.08	0.24	-0.35	0.731	-0.60	0.43
8	Constant	-112874	51004.87	-2.21	0.045	-223064	-2685.06
	Adjusted R-squared	0.78	N= 21				

Note: \* Significant at 10% level, \*\*\* significant at 1% level

About 78 per cent of variation in the agricultural GDP can be explained by the variables included in the analysis. The estimated function has no omitted variable as the Ramsey RESET test using powers of the fitted values of poverty was not significant at 5 percent level of significance {  $F(3, 10) = 0.92$  and  $\text{Prob} > F = 0.464$  }. Further Breusch-Pagan / Cook-Weisberg test for heteroskedasticity test is not significant at 5 percent level, {  $\chi^2(1) = 0.74$  and  $\text{Prob} > \chi^2 = 0.389$  } therefore, the poverty variable has a constant variance.

#### 5.4 Future prospects of foreign employment and its relation to poverty

Because of its large, both skilled and unskilled, labour force India is a major contributor in global labour migration. Over the years since 1990s, migration of workers from India has increased considerably. The records of the individuals who get emigration clearance to work in other countries are being maintained by the Government of India, Ministry of Labour. However, there are 17 categories of individuals who do not require emigration clearance, such as Government Gazetted Servants, income tax payers, all professional degree holders, persons possessing certificates of training from Government/ Government recognized institutions etc. Therefore, data set on international flow of labours from India by Office of the Protector General of Emigrants, Ministry of Overseas Indian Affairs, Government of India, does not give a complete picture of emigration. The categories mentioned earlier, which do not require emigration clearance, indicate that the emigration check is mostly required by the unskilled and semi-skilled labourers.

The trend in flow of international labour from India shows that people with technical qualifications and skills generally migrate to developed countries such as USA, UK and Canada either on permanent basis or for temporary employment (Table 5.12). The unskilled or semiskilled migrate as contract workers to high income countries in the Gulf. Recently such flows are also directed towards the high income countries of South East Asia such as Malaysia.

However, IT professionals migrate to the destinations like Germany, France, Australia, Japan and Singapore (ILO, 2008). Immigration statistics data from three industrialized countries (USA, UK, Canada) show that there is a continuous increase in number of Indians immigrating on permanent basis to these countries. The annual labour outflow from the emigration clearance data registers an increasing trend in the number of labour force (mostly unskilled and semi-skilled) after 1999 (Table 5.13). A majority of those who migrate through emigration clearance are employed in Gulf Countries. Kingdom of Saudi Arabia and United Arab Emirates are the major destination for Indian emigrants in the Gulf countries.

TABLE 5.12  
Indians Migrating on a Permanent Basis to Major Industrialised Countries: 1995-2005

Year	USA		U.K.		Canada	
	Indian immigrant	% of total immigrants	Indian immigrant	% of total immigrants	Indian immigrant	% of total immigrants
1995	34,748	4.8	4,680	8.4	18,262	8.6
1996	44,838	4.9	4,620	7.5	21,291	9.4
1997	38,048	4.8	4,645	7.9	19,615	9.1
1998	36,414	5.6	5,430	7.8	15,376	8.8
1999	30,157	4.7	6,295	6.5	17,458	9.2
2000	41,903	5.0	8,045	6.4	26,126	11.5
2001	70,032	6.6	7,280	6.8	27,904	11.1
2002	70,823	6.7	8,005	6.8	28,838	12.6
2003	50,228	7.1	11,460	8.0	24,593	11.1
2004	70,151	7.3	11,870	8.0	25,576	10.9
2005	84,681	7.5	-	-	33,146	12.6

Sources: USA: Yearbook of Immigration Statistics, Office of Immigration Statistics, U.S. Department of Homeland Security; UK: Home office, Government of United Kingdom; Canada: Citizenship and Immigration Canada.



TABLE 5.13  
**Labour Outflows from India by Destination 1988-2009 (numbers)**

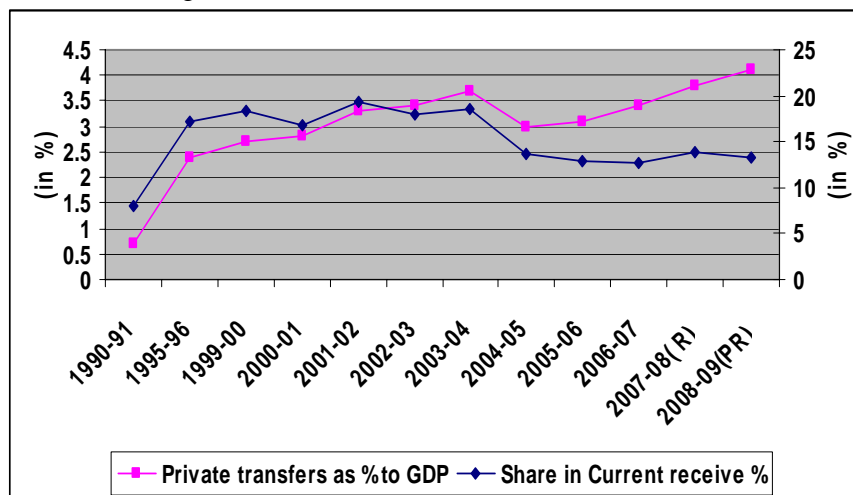
Year	Bahrain	Kuwait	Oman	Saudi Arabia	United Arab Emirates	Others	Total
1988	8,219	9,653	18,696	85,289	34,029	9,348	165,234
1989	8,520	5,679	16,574	49,710	28,189	11,786	120,458
1990	6,782	1,077	34,267	79,473	11,962	6,300	139,861
1991	8,630	7,044	22,333	130,928	15,446	7,121	191,502
1992	16,458	19,782	40,900	265,180	60,493	13,971	416,784
1993	15,622	26,981	29,056	269,639	77,066	19,974	438,338
1994	13,806	24,324	25,142	265,875	75,762	20,476	425,385
1995	11,235	16,439	22,338	256,782	79,674	28,866	415,334
1996	16,647	14,580	30,113	214,068	112,644	26,162	414,214
1997	17,944	13,170	29,994	214,420	110,945	29,951	416,424
1998	16,997	22,462	20,774	105,239	134,740	54,952	355,164
1999	14,905	19,149	16,101	27,160	79,269	42,968	199,552
2000	15,909	31,082	25,155	59,722	55,099	56,215	243,182
2001	16,382	39,751	30,985	78,048	53,673	59,825	278,664
2002	20,807	4,859	41,209	99,453	95,034	106,301	367,663
2003	24,778	54,434	36,816	121,431	143,804	82,193	466,456
2004	22,980	52,064	33,275	123,522	175,262	67,857	474,960
2005	30,060	39,124	40,931	99,879	194,412	144,447	548,853
2006	37,688	47,449	67,992	134,059	254,774	134,950	676,912
2007	29,966	48,467	95,462	195,437	312,695	127,426	809,453
2008	31,924	35,562	89,659	228,406	349,827	113,223	848,601
2009	17,541	42,091	74,963	281,110	130,302	64,265	610,272

**Source:** Compiled from various annual reports of the Ministry of Labour, Government of India.

The trends in the labour outflows during 1988-2009 show a cyclical nature. It is evident that the labour flows had picked up substantial momentum since the initial hiatus in the early 1990s, then a sharp slump during the late 1990s. Thereafter the flows have consistently increased during 2003-2007, on an average 502,035 persons per annum migrated from India to take up contract employment (Shashikumar and Hussain, 2008). However, there is a sudden decline in labour outflow during the year 2009. This may be due to global economic slowdown.

Our analysis shows that foreign employment and remittances helps in reducing the poverty and improving the agricultural production. In 1999, India ranked first in volume of remittances with US\$ 11 billion and its share in GDP of India was 2.6 (IMF, 1999). There was a two fold increase in total remittances from 1999/00 till 2008/09. The contribution of remittances in GDP increased from 2.84 percent in 2000/01 to 4.1 per cent in 2008/09 (Figure 5.2).

Figure 5.2: Share of Remittances in Indian GDP



R: Revised, PR Partially Revised

Source: RBI monthly bulletin February 2008, March 2010

With improvement in literacy rate and skill development of Indian labour force, there is very high possibility of skilled work force going abroad and sending remittances in future also. India follows a regulated system in respect of foreign employment policy. The policy regime mainly addresses temporary and contract migration. The most important policy instrument, the Emigration Act (1983) deals with the emigration of Indian workers for overseas employment on a contractual basis and seeks to safeguard their interest and ensure their welfare. However, Ministry of Overseas Indian Affairs was established in May 2004, to deal with all matters pertaining to overseas Indians, comprising Persons of Indian Origin (PIO), Non-Resident Indians (NRIs) and Overseas Citizens of India (OCI). This step was taken to acknowledge the fact that the overseas Indian community constitutes a significant economic, social and cultural force and needs mainstream attention. The basic mission of this Ministry is to "promote, nurture and sustain a mutually beneficial relationship between India and its overseas community" (MOIA, 2007).

Policy initiatives by the government and banking institutions have helped to achieve a large sustained level of remittances. The initiative has helped in receiving remittances through formal channels. Nevertheless, the remitters are now moving from pure savers to investors' class. It will further help reduce the poverty and boost overall growth of the economy (Chisti, 2008)

Thus from the Indian case study it is evident that international migration has potential to reduce poverty through the remittances which are sent back to home country and helps balance of payment situation. Nevertheless, according to Solimano (2001), emigration will have income equalizing effect by reducing the supply of labour and raising the wages. This will eventually help to reduce poverty. The migration also helps to improve agricultural growth by improving the human capital and investment in agriculture.

## 6.0 CASE STUDY OF BHUTAN

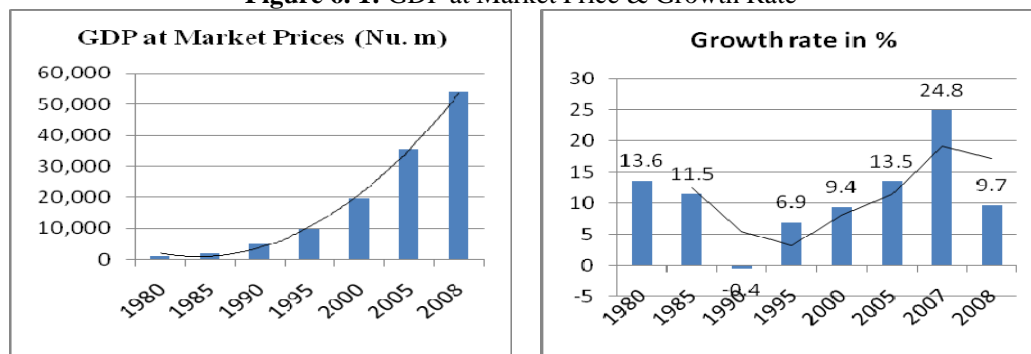
The number of Bhutanese working abroad is very small and foreign employment is a very recent phenomenon. From the informal sources, it is clear that close to 100 Bhutanese are living and working as unskilled labourer in the United States. Most of these Bhutanese working in US are from families above poverty lines as member of poor families will not be able to afford to emigrate to US for employment. Moreover, the remittances from the migrants to US do not lead to spillover effects of the skills in the agriculture as most of the migrants not employed in the agriculture sectors. In recent years, we have also seen that some very small number of Bhutanese student graduating from Indian universities are seeking employment in call centres in Indian cities but income from such jobs are barely enough to sustain their living in India are not able to save and repatriate income back home. In Bhutan the rural-urban migration is very large (over 15 percent of the total population), therefore, in Bhutanese case, we analyze the effect of rural-urban migration and impact of domestic remittance on the well being and poverty.

### 6.1 Socio-Economic Overview of Bhutan

Bhutan is a small land locked country with a population of 695,819 and covers an area of 38,394<sup>5</sup> square kilometers. It is situated in the eastern Hindukush Himalayan range and is surrounded by autonomous region of Tibet China in the north and Indian state of Assam and West Bengal in the south, Arunachal Pradesh in the east and West Bengal (Darjeeling Gorkha Hill Council) and Sikkim in the west. Bhutan has total land boundaries of 1,075 km and shares 470 km boundaries with China and 605 km with that of India.

Ever since Bhutan came out of policy of the self imposed isolation in 1961, Bhutan has made a remarkable progress. The GDP at market price was Nu.1.1 billion in 1980, which increased to Nu.5.3 billion in 1990 and Nu.54.1 billion in 2008. Within a span of about two decades the Bhutanese economy increased by tenfold. The GDP grew at 13.6 percent in 1980 as the economy base was quite small. On an average the Bhutanese economic grew at around 6 percent but it registered a dramatic increase of 13.5 percent in 2005 and 24.8 percent in 2007. The GDP growth of 24.8 percent in 2008 was fuelled by the commissioning of the Tala Hydro Power Project.

**Figure 6. 1: GDP at Market Price & Growth Rate**



Source: RMA Annual Reports and Statistical Year Book of National Statistical Bureau of Bhutan

<sup>5</sup> Bhutan Statistical Yearbook, 2006

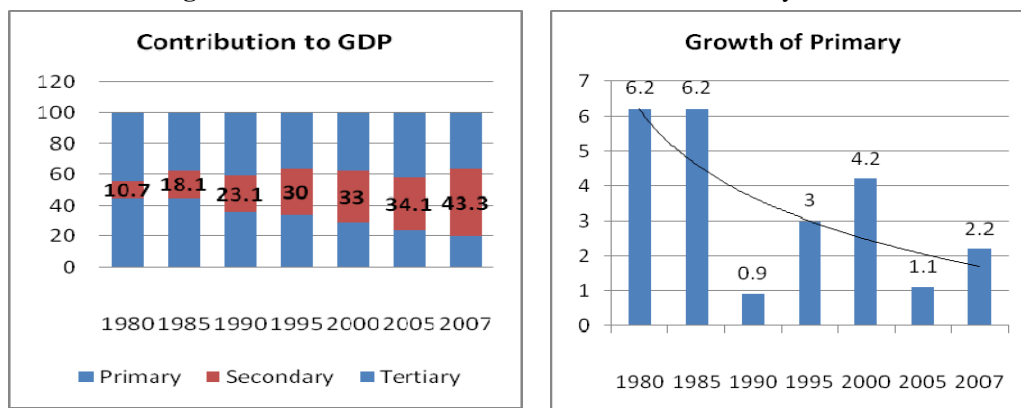
Contribution of the primary sector has declined over a period of time. The contribution of the primary sector to GDP was 44.6 percent in 1980, it declined to 29.3 percent in 2000, 24.1 percent in 2005 and to 20.3 percent in 2007 while the contribution of the secondary sector increased from 10.7 percent in 1980 to 18.1 percent in 1985, 30 percent in 1995, 34.1 percent in 2005 and 43.3 percent in 2007. The contribution by the agriculture sector was 6.2 percent in 1980 and 1985 and in 2007 it was 2.2 percent.

According to Poverty Analysis Report 2003 and 2007, the headcount ratio declined from 31.7 percent in 2003 to 23.2 percent in 2007 while during the same period the agriculture sectors grew by 5 percent from Nu.6158 million to Nu.6422 million at constant price and the contribution of the agriculture to the GDP at market price declined from 25 percent in 2003 to 19 percent in 2007. The GDP at constant price increased by 48 percent from Nu. 24,551 million in 2003 to Nu. 36,267 million in 2007; and the GDP at market increased from Nu. 29,385 million to Nu. 51,522 million.

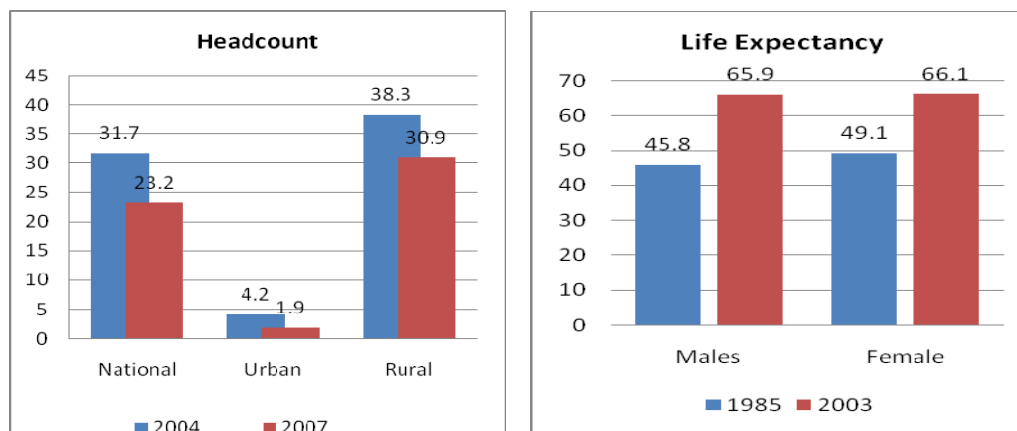
The percentage of population employed in agriculture increased by 47 percent from 144,779 in 2005 to 212,910 in 2009 and the share of employed person depended in agriculture increased from 63 percent in 2005 to 65 percent in 2009 while during the same period, the agriculture sector grew by 3 percent and the contribution of agriculture sector declined from 23 percent to 18 percent. The GDP at constant price increased by 42 percent from Nu.27,834 million in 2005 to Nu.39,579 million in 2009 and the GDP at market increased from Nu.36,485 million to Nu.61,813 million. This indicates that the growth in the Bhutanese economy and poverty reduction is resulting mostly from non-agricultural sectors and the productivity of the marginal productivity of agricultural of labour is declining.

The main engine of economic growth has been the hydropower sector and international developmental assistance. Government of India has been the largest donor during the last 5 decades and has played an important role in the development of Bhutan. Multilateral institution like Asian Development Bank (ADB), World Bank (IDA), United Nation Development Program have also made significant contribution in the development of Bhutan.

**Figure 6. 2: Contribution to GDP and Growth of Primary Sector**



Source: RMA Annual Reports and Statistical Year Book of National Statistical Bureau of Bhutan

**Figure 6.3: Poverty (Head Count) and Life Expectancy**

Source: Poverty Assessment Report 2004 and 2007

The national poverty as measured by the headcount ratio (number of population below the poverty line) has declined from 31.7 percent in 2004 to 23.2 percent, the urban poverty declined from 4.2 percent to 1.9 percent and during the same period the rural poverty declined from 38.3 percent to 30.9 percent. The life expectancy at birth has increased from 45.8 percent in 1985 to 65.9 years for male and from 49.1 year to 66.1 year for female.

The gross school enrollment increased from 71.7 in 2004 to 85.1 in 2007 for male and from 58.9 in 2004 to 79.2 in 2007. During the same period, the unemployment rate for male increased from 3.2 to 3.5 and from 2.6 to 3.9 for female. The growing unemployment is the major problem facing the Bhutanese economy.

## 6.2 Status of Labour supply, Employment and Unemployment

Table 6.1  
Bhutan's Population

Year	Number	Growth rate
2005	634,982	
2006	646,851	1.9%
2007	658,888	1.9%
2008	671,083	1.9%
2009	679,700	1.3%

Source: Population Projection of Bhutan 2005-2030, National Statistical Bureau of Bhutan

The population of Bhutan is estimated to have grown by 1.9 percent annually in 2006, 2007 and 2008 and in 2009 it grew by 1.3 percent. The rapid population growth is expected to create pressure in the Bhutanese job market; the foreign employment particularly in India is going to play an important role unless the government pursue extensive private sector development policy.

TABLE 6.2  
Labour Force Participation

Year	Household population (15 years & over)	Labour Force					
		Total Labour force	Labour force participation rate %	Employed		Unemployed	
				Nos	Rate (%)	Nos	Rate (%)
1998#	-	-	58.9	-	-	-	-
1999#	-	-	69.6	-	-	-	-
2001#	411,196	232,203	56.5	227,681	98.1	4,522	1.9
2003#	361,500	227,200	62.9	223,200	98.2	4,000	1.8
2004#	397,800	216,500	54.4	211,100	97.5	5,400	2.5
2005	425,023*	-	44.0	-	-	-	3.1
2006	372,100	230,100	61.8	222,900	96.8	7,200	3.2
2007	448,033**	-	67.5	-	-	-	3.7
2009	467,700	325,700	68.5	312,800	96.0	12,900	4.0

Source: Labour Force Survey and Population Census 2005; \* Estimated from the population census 2005; \*\* Estimated from population projection 2005-2030. # The first country wide census was done in 2005 and the figures prior to 2005 is estimated and may not be reliable.

The total labour force of the country has been increasing steadily over the years. The unemployment rate has been increasing rapidly. The unemployment rate was estimated at 1.9 percent in 2001, which increased to 3.2 percent in 2006 and 4 percent in 2009. Therefore, the government will have to create employment opportunities to the young Bhutanese graduates through private sectors development, industrialization or else create incentive for Bhutanese to look for foreign employment.

TABLE 6.3  
Unemployed by Gender and Location

	Total			Rural			Urban		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2006	3400	3800	7200	2000	2400	4400	1400	1400	2800
2009	4,400	8,500	12,900	2,700	4,800	7,500	1,700	3,700	5,400

Source: Labour Force Survey 2006 and 2009

In 2006, the number of unemployed females were marginally higher than the unemployed males but in 2009, the number of unemployed females were two times higher than the number of unemployed males. This is because the unemployment rate of females rose much faster than the unemployment rate of the males.

The share of regular paid employee declined from 23.4 percent in 2006 to 20.4 percent in 2009 and the share of unpaid family worker declined from 53.7 percent to 51.8 percent while the share of own-account worker/self-employed increase from 16.9 percent in 2006 to 22.4 percent in 2009.



TABLE 6.4  
Total Employed Persons by Economic Activity and Nature of Employment

		2006			2009		
		Male	Female	Total	Male	Female	Total
1	Regular paid employee	40,300	11,900	52,000	48,500	15,400	63,900
2	Casual paid employee	8,000	5,100	13,000	10,000	6,000	16,000
3	Unpaid family worker	57,800	62,100	119,600	68,300	93,600	161,900
4	Own-account worker/self-employed	20,000	17,700	37,600	35,100	35,000	70,100
5	Employer	400	-	400	500	300	800
6	Total	126,500	96,800	222,600	162,400	150,300	312,700
<i>Share (%)</i>							
1	Regular paid employee	31.9	12.3	23.4	29.9	10.2	20.4
2	Casual paid employee	6.3	5.3	5.8	6.2	4.0	5.1
3	Unpaid family worker	45.7	64.2	53.7	42.1	62.3	51.8
4	Own-account worker/self-employed	15.8	18.3	16.9	21.6	23.3	22.4
5	Employer	0.3	-	0.2	0.3	0.2	0.3
6	Total	100	100	100	100	100	100

Source: Labour Force Survey 2006 and 2009

TABLE 6.5  
Sector Wise Employment (in %)

	Sectors	2006			2009		
		Male	Female	Total	Male	Female	Total
1	Agricultural and forestry	55.81	72.21	62.92	59.11	72.12	65.37
2	Mining and quarrying	0.08	0.00	0.04	0.12	0.20	0.16
3	Manufacturing	1.98	4.24	2.96	1.29	8.38	4.70
4	Electricity, gas & water supply	2.77	0.72	1.88	1.79	0.40	1.12
5	Construction	4.19	0.62	2.64	0.80	0.07	0.45
6	Wholesale & retail trade, repair of motor vehicles, & household goods	4.19	4.75	4.43	0.12	0	0.06
7	Hotels & restaurants	2.37	3.31	2.78	0.92	0.86	0.90
8	Transport, storage & communication goods	3.40	0.62	2.19	0.31	0.27	0.29
9	Financial intermediation	0.71	0.52	0.63	0.43	0.20	0.32
10	Real estate, renting & business activities	0.95	1.24	1.07	0.37	0.13	0.26
11	Public administration & defense	12.25	1.96	7.79	14.66	2.86	8.99
12	Education	3.24	2.89	3.09	3.33	2.59	2.97
13	Health & social work	1.58	0.93	1.30	1.05	0.60	0.83
14	Other community, social & personal service activities	3.08	1.03	2.19	9.73	7.32	8.57
15	Private households with employed persons	3.16	4.96	3.94	5.97	3.99	5.02
16	Extra territorial organizations & bodies	0.24	0.00	0.13	0.00	0.00	0.00

More females are engaged as unpaid family worker compared to male workers in both the time period while more male workers are engaged in the category of regular paid employment.

In 2009 the percentage of Bhutanese population employed in the agricultural and forestry sectors increased from 63 percent to 65 percent due to increase in the percentage of male Bhutanese dependent in agriculture from 56 percent to 59 percent while the percentage of female dependent in agriculture remained same at 72 percent. The public administration and defense employs about 9 percent; other community, social and personal service employs about 8.6 percent; private household with employed person about 5 percent, manufacturing sectors about 4.7 percent and education about 3 percent. Therefore, the Bhutanese economy is still an agrarian economy, where large sections of Bhutanese are dependent on agriculture.

### 6.3 Effects of migration on poverty

The foreign employment is very insignificant numbering to less than 500 and the foreign employment is of recent trend, the data on foreign employment is not available and the size of the foreign employment and remittances is too small to impact the poverty and wellbeing of the Bhutanese population. However, the rising unemployment and entrants of large number of Bhutanese graduates every year, there is large prospect for the foreign employment and its role in Bhutanese economy. Therefore, in this section, we would like to assess the impact of domestic migration rather than foreign migration for employment on the well being and poverty of the Bhutanese population.

The population census 2005 found the number individuals migrated from rural to urban is about 111,770 (18 percent of the total population) and urban to rural is about 19,992 (3 percent) in a population of 634,982. This shows that the rural-urban migration for livelihood is a pressing issue in Bhutan. Therefore this section assesses the impact of the domestic migration for employment and foreign remittances rather than the cross border migration for foreign employment and foreign remittances.

#### 6.3.1 Sampling, Data, and Methodology

TABLE 6.6  
Sampled Villages

Western Region	Central Region	Eastern Region
1. Hongtsho (Thimphu)	6. Tashiling (Trongsa)	11. Sengor (Mongar)
2. Rinchengang (Wangdue)	7. Gyetse (Bumthang)	12. Kilikhar (Mongar)
3. Nobding (Wangdue)	9. Nangor (Bumthang)	13. Yadi (Mongar)
4. Dungdungnasa (Wangdue)	10. Ura (Bumthang)	14. Waynkhar (Mongar)
5. Rukubji (Wangdue)		15. Merphay (Trashingang)

From each village, about 8-12 households are sampled randomly, thereby generating a total sample size of about 162 households. In Dungdungnasa, there were only three households, two of them were migrants from other villages running a shop and a restaurant and were not cooperative. So, we select only one household.

The survey used stratified random sampling method to select the samples. This is because the stratified random sampling is the purest forms of probability sampling as the population has equal and known chance of being selected. It also reduces sampling errors. In the first stage, it stratifies the population based on districts and villages (based on the performance baseline monitoring survey) and from each of these villages, it randomly selects the households.

Using random sampling method 12 households (7 percent of the total sample) were selected from Trashigang, 48 households (30 percent of the total sample) from Mongar, 35 households (22 percent) from Bumthang, 21 households (13 percent) from Trongsa, 36 households (22 percent) from Wangdue and 10 households (6 percent) from Thimphu.

### 6.3.2 Income Portfolio Analysis (Role of domestic remittance in household income)

TABLE 6  
Income Sources (Cash Income)

		2004			2009			% change
		Mean	Cv	Portfolio (%)	Mean	Cv	Portfolio (%)	
1	Total	57,922	1.7		93,345	1.3		61
2	Wage Income	9,852	3.4	18	11,871	3.1	12	20
3	Remittances	4,495	4.8	8	9,737	4.2	10	117
4	Livestock Product	7,892	2.0	14	14,571	2.0	15	85
5	Potatoes	9,171	1.5	16	19,271	1.6	20	110
6	Cereals	1,488	6.3	3	2,975	5.9	3	100
7	Vegetables	1,447	3.9	3	3,786	2.5	4	162
8	Self in non-farm	17,208	4.9	31	27,756	3.6	29	61
9	Weaving	2,109	6.8	4	2,304	6.7	2	9
10	Apples	616	5.7	1	1,392	5.2	1	126
11	Cordyceps	1,453	5.9	3	1,316	4.8	1	-9
12	Almuni	-	.	0	196	10.5	0	

Source: Survey 2010

The farming is the main livelihood activity and some of them are engaged in wage employment, self employed in non-farm like transportation, trading, shop-keeping, weaving, carpentry etc. With rapid development, access to market, financial services, health facilities and school facilities have increased significantly. People are now exposed to more opportunities resulting in a big shift in the livelihood portfolio dynamics. With the development, income has registered an increase basically due to increase in production as well as increase in the price resulting from the increase in the access to market.

The average household income registered an increase by more than 61 percent from Nu 57,922 to Nu 93,345. The main source of such an increase is due to increase in the income from sale of potatoes (110 percent increase), remittances (117 percent), vegetables (162 percent), apples (126 percent), livestock products (85 percent), and self in non-farm (61 percent). The table 6.7 above shows that self in non-farm is the

most important source of cash income contributing to about 31 percent of the total cash income in 2004 and 29 percent in 2009. The other important sources of the cash income are remittances (10 percent), livestock products (15 percent), potatoes (20 percent), wage income (12 percent), vegetables (4 percent), and cereals (3 percent). In absolute value, the cash income from all these sources has increased except for the cordyceps. There has been a dramatic increase by more than 100 percent in the income from the remittances, sale of potatoes, cereals, vegetables and apples. The income portfolio looks more diversified and spread in 2009 compared to 2004.

The remittances basically arises the domestic migration from rural to urban areas. Due to urbanization and rapid growth of the Bhutanese economy, large number of rural population are migrating to urban areas and are remitting funds back to the villages. Bhutan has not witnessed significant international migration due to the abundance opportunity within the country. However, with the rising unemployment among educated youth, many Bhutanese will soon see migration across the borders, which will create impact on the poverty, growth and agricultural productivity like Nepal.

The table 6.8 above on cash income by sources (average among the recipient sources and not the village average) shows that the percentage of households deriving cash income from each of the sources has increased. The percentage of households with wage income has increased from 26 percent to 27 percent, remittances from 26 to 33 percent, livestock product increased from 41 to 46 percent, potatoes increased from 45 to 46 percent, cereals from 6 to 11 percent, vegetables from 20 to 40 percent, self in non-farm income from 18 to 29 percent and apples from 10 to 14 percent.

TABLE 6.8  
**Cash Income by Source**  
(Average of cash income for those receiving the cash income only)

	Variable	Average Income			Percentage of household		
		2004	2009	Percent change	2004	2009	Change in Nos of HH
1	Wage Income	46,431	51,227	10	26	27	5
2	Remittances	23,286	28,667	23	26	33	29
3	Livestock Product	15,051	25,132	67	41	46	12
4	Potatoes	19,857	41,211	108	45	46	3
5	Cereals	17,080	19,044	12	6	11	80
6	Vegetables	6,454	9,896	53	20	40	94
7	Self in non-farm	105,238	97,974	-7	18	29	62
8	Weaving	36,143	39,714	10	4	4	0
9	Apples	9,291	14,482	56	10	14	38
10	Cordyceps	40,000	29,000	-28	2	3	25
11	Almuni	.	21,600		0	1	

From the group discussion and also from the experiences of the other countries, it is expected that the percentage of households deriving cash income from different sources will rise over a period of time, thereby making the household livelihood more diversified and reduced risk.

TABLE 6.9  
Average Cash Income by Quartile

	2004	2009 (Current Price)	2009 (2004 Price)	Percent Change on market price	Percent Change on 2004 price
Quartile 1	8,602	19,345	10,369	125	21
Quartile 2	23,102	50,529	27,084	119	17
Quartile 3	44,379	81,229	43,539	83	-2
Quartile 4	164,234	224,430	120,294	37	-27
Total	57,922	93,345	50,033	61	-14

The analysis on the average cash income by quartile shows that the cash income for lower quartiles has increased dramatically. The lower quartile (poorer group) gained maximum thereby reducing the cash income inequality. This was possible due to easy accessibility to the market and opportunities even for the poorer households. In the first quartile, the average cash income increased by 125 percent, in the second quartile the cash income increased by 119 percent, in the third quartile it increased by 83 percent while in the fourth quartile the cash income increased by 37 percent.

TABEL 6.10  
Income Mobility Matrix (figures in percentages)

		2009			
		Quartile-1	Quartile-2	Quartile-3	Quartile-4
2004	Quartile-1	59	17	12	12
	Quartile-2	26	40	21	12
	Quartile-3	7	32	46	15
	Quartile-4	8	8	21	63

The cash income mobility matrix shows that there has been improvement in the wellbeing of the poorest groups (1<sup>st</sup> quartile). About 59 percent of the households in the quartile 1 remained in quartile 1 but 17 percent of them moved to quartile 2, 12 percent moved to quartile 3 while 12 percent to quartile 4.

The cash income portfolio shows that the remittances is the important sources of income for the rural households and plays an important role in the well being of the rural Bhutanese people.

### 6.3.3: Empirical Analysis on remittances and Well Being

TABLE 6.11  
OLS Estimation: Impact of Remittance on Consumption (Proxy for Welfare)

	Specification 1	Specification 1	Specification 1
Age	0.0179 (0.0133)	0.0153 (0.0134)	0.0154 (0.0134)
Age Square	- 0.0002 (0.0001)	- 0.0002 (0.0001)	- 0.0002 (0.0001)
Literate <sup>ab</sup>	0.2815*** (0.1137)	0.2554** (0.1168)	0.2557** (0.1168)
Male <sup>ac</sup>	- 0.0316 (0.1053)	- 0.0148 (0.1078)	- 0.0146 (0.1079)
Child	- 0.0299 (0.0405)	- 0.0266 (0.0401)	- 0.0267 (0.0401)
Household Size	- 0.0715 ** (0.0313)	- 0.0696** (0.0310)	- 0.0696** (0.0310)
Land Owned (In acres)	0.0293 ** (0.0130)	0.0295** (0.0131)	0.0295** (0.0131)
Ratio of remittance to total income	- 0.0114 (0.1272)	--	--
Dummy remittances <sup>ad</sup>	--	0.1013 (0.0935)	--
Log remittances received	--	--	0.0019 (0.0017)
Trashigang <sup>ae</sup>	- 0.3503 (0.2350)	- 0.3963* (0.2351)	- 0.3958* (0.2349)
Mongar <sup>af</sup>	- 0.0351 (0.1677)	- 0.0749 (0.1655)	- 0.0746 (0.1655)
Bumthang <sup>ag</sup>	- 0.0045 (0.1686)	- 0.0364 (0.1699)	- 0.0358 (0.1698)
Trongsa <sup>ah</sup>	- 0.2471 (0.2356)	- 0.2894 (0.2398)	- 0.2889 (0.2397)
Wangdue <sup>ai</sup>	0.0041 (0.1683)	- 0.0353 (0.1713)	- 0.0350 (0.1712)
Constant	6.7527 (0.3606)	6.8238 (0.3594)	6.9051 (0.3714)
Number of observation	158	158	158
F-Statistics	4.23	4.18	4.18
Prob > F	0	0	0
R-squared	0.188	0.195	0.195
Root MSE	0.500	0.498	0.498

Robust standard errors in parentheses. <sup>a</sup> dummy variables; <sup>b</sup> excluded category: illiterate headed; <sup>c</sup> excluded category: female; <sup>d</sup> excluded category: household not receiving remittances; <sup>e</sup> excluded category: Thimphu districts (Capital of Bhutan). \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level.

TABLE 6.12  
**OLS Estimation: Impact of Type of Migration on Consumption**  
**(As a proxy for poverty)**

	Explanatory variable	Coefficient
1	Age	0.0120 (0.0135)
2	Age Square	-0.0001 (0.0001)
3	Literate <sup>ab</sup>	0.2665** (0.1201)
4	Male <sup>ac</sup>	-0.0332 (0.1047)
5	Child	-0.0113 (0.0417)
6	Household Size	-0.0719** (0.0303)
7	Land Owned in Acres	0.0310** (0.0144)
8	Short term migration <sup>ad</sup>	0.2332** (0.1261)
9	Long term migration <sup>ad</sup>	-0.0796 (0.0939)
10	Trashigang <sup>ae</sup>	-0.3133 (0.2361)
11	Mongar <sup>af</sup>	-0.0230 (0.1627)
12	Bumthang <sup>ag</sup>	-0.0183 (0.1674)
13	Trongsa <sup>ah</sup>	-0.2638 (0.2247)
14	Wangdue <sup>ai</sup>	0.0047 (0.1710)
15	Constant	6.8483 (0.3615)
	Number of observation	158
	F-Statistics	3.770
	Prob > F	0.000
	R-squared	0.230
	Root MSE	0.489

Robust standard errors in parentheses. <sup>a</sup> dummy variables; <sup>b</sup> excluded category: illiterate headed; <sup>c</sup> excluded category: female; <sup>d</sup> excluded category: household not receiving remittances; <sup>e</sup> excluded category: Thimphu districts (Capital of Bhutan). \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level.

We also ran estimation with short and long term migration and found that like earlier estimation the literate head and land holding has positive and significant relation with the well being and the household size has negative and significant

relation with the well being of the household. However, we also find that the short term migration has positive and significant effect on the welfare of the household and hence the poverty reducing effect. The long run migration do not have any effect on the well being and poverty. The long run migrants usually has their own family and remits only small amount of fund back to their brother, sister or parents as a result long term migration do not have significant on the poverty and well being of the families back home. The short run migrants have moved out for some seasonal work and remits the entire earning back home as a result it has significant impact on the welfare of the families and hence have poverty reducing effects..

The migration for employment/livelihood domestically seems to have poverty reducing effects and the foreign migration is also expected to have poverty reducing affect in Bhutan, so foreign employment must be encouraged.

#### **6.4 Future prospects of foreign employment and relation to poverty**

As a result of increasing population and the free education in Bhutan, the number of graduates entering the labour market increases substantially every year. The supply of educated labour will by far exceed the job opportunities that are being created in the country. The engine of the Bhutanese growth has been and will be the hydro power sector, which do not create job opportunities; hence this increasing number of educated Bhutanese will have no option but to migrate across the border for employment and particularly India, where the employment opportunities are in increasing trend. In recent years (during last couple of years) we have seen few Bhutanese seeking employments in the call centers in Indian cities of Bangalore, Delhi, Kolkota. However, these job seekers are young university graduates, who do not save money and remit back home but spend for their own living and fun in these India cities.

Some of the Bhutanese have also migrated to United States and are engaged in petty jobs. These Bhutanese migrants in US are not as a result of poverty but to generate higher income to re-invest back home.

In future, Bhutan will seek a rise in emigrants for employment and livelihood, who would be remitting back their earning to support their families and also for investing in income sources in Bhutan. With the increase in level of education, Bhutan would see rise in professional emigrants for employments.

### **7.0 SYNTHESIS OF THE RESULTS**

The three countries though have diversity by the economy and size, have similar percentage of the people below the absolute poverty line. The poverty head count ration is 24.7 percent in Nepal, 26.1 percent in India and 23.2 percent in Bhutan (Table 7.1). The size of the migration is large from Nepal and India as compared to the size of labour force. But, the labour migration from Bhutan is a recent phenomenon and very small. The labour migration per year is 219,965 from Nepal, 849,000 from India and around 100 from Bhutan. Saudi Arabia and UAE are major common destinations for Nepalese and Indian labourers whereas India is the common destination for Nepalese and Bhutanese labour force. The labour migration from the latter is very small. The remittance per year is Nepalese Rs 210 million in Nepal and



about Indian Rs 808 million in India. The growth of remittance is much higher in Nepal than in India, but such figures are not available for Bhutan. The labour migration from all the three countries Nepal, India and Bhutan is increasing with some fluctuations during the global financial slow down.

TABLE 7.1  
Poverty in and Labour Migration from South Asian Countries

	Indicator	Unit	Nepal	India	Bhutan
1	Poverty headcount (2007 &08)	%	24.7	26.1	23.2
2	Labour migration (2008/09)	No	219,965	849,000	100
3	Total labour in foreign employment (2008/09)	Million (2008/09)	1.60		0.0005
4	Major destinations for foreign employment		Malaysia, Qatar, Saudi Arabia, UAE, India	Bahrain, Kuwait, Oman, Saudi Arabia, UAE	USA, India
5	Remittance (2008/09)	Rs billion	NRs 209.7	IRs 808 (US\$ 22)	NA
6	Growth rate of remittance	%	50.0	4.1	NA

NA = Not Available

The effects of foreign migration on the poverty and agriculture production in Nepal and India are estimated and the figures are summarized in Table 7.2. The remittance coming to Nepal and India decreases the poverty head count ratio significantly. One million Nepalese rupees increase in the remittance inflow in Nepal decreases the poverty head count by 0.007 percent. The poverty elasticity of the remittance is -0.04. It is clear that the remittance reduces the poverty. In India, each million Indian rupees increase in the remittance decreases the poverty headcount by 0.002 percent. The smaller coefficient in India than in Nepal is due to larger economy and larger population in India than in Nepal. Similar figures are not available in Bhutan. But, domestic migrants are found to have more poverty than the non-migrants. This relation may be due to the fact that the poor are likely to migrate for work than the better off households.

The migration of the labour however, is found to decrease agricultural production in Nepal but increase in India. Each labour migrated from Nepal reduces the agricultural production by Nepalese Rs 18,000 whereas in India each labour migrated increases the agricultural production by Indian Rs 7,200. Such contradictory results for these two countries reveal interesting facts. The effect of migration on domestic production does not depend on the number of the labour migrated but on the number of labour migrated relative to the total migration and rate of economic growth in the country. In a small economy of Nepal a migration of 1.6 million labour force has affected the agriculture production adversely whereas in India the present level of migration is still increasing the labour productivity of residual labour in the agriculture. Faster growth of the Indian economy is raising domestic wage rate and the labour migration relative to the size of labour is very small.

TABLE 7.2  
Effects of Migration and Remittances on Agriculture and Poverty

		Unit (NRs for Nepal and IRs for India)	Nepal	India	Bhutan
1	Effect of remittance on poverty head count	Rs per million	-0.007	-0.002	0.233@
2	Effects of migration on agriculture production	Rs per million per labour migrated	-0.018	0.0072	

@ Effects of short term domestic migration on poverty on household consumption.

**Note:** The results are in local currency.

The migration and remittance decreases the absolute poverty in the countries. But, the effect of migration on domestic production is not so simple. The effect of labour migration on domestic production depends on the proportion of the labour migrated and increase in the productivity of the domestic labour. Labour migration can dispose the remaining labour force. If the number of the labour migrated were surplus in the economy the labour migration increases the labour productivity within the country and remittance from migration decreases the poverty and the situation is win-win. If the labour migration exceeds a threshold level say five percent, it decreases the domestic production as well as the poverty (Table 7.3). In this case we have to compare the decrease in the domestic production with the remittance from the migration.

TABLE 7.3  
Stages of Labour Migration

	Stages of migration	First	Second	Third
1	Quantity of labour migration	Very small relative to the domestic labour force (less than 1%)	Small as compared to the domestic labour force (1 to 5%)	Large as compared to the domestic labour force (more than 5%)
2	Domestic production	Labour migration does not affect domestic production	Labour migration increases the productivity of residual labour without decreasing domestic production	Labour migration decreases the domestic production
3	Examples in South Asia	Bhutan	India	Nepal

## 8.0 CONCLUSIONS

Labour migration, poverty and economic growth are found to be highly related in South Asian Economy. The labour migration has phases. Bhutan is in initial phase of labour migration and has little effects on the economy. India is at the second phase of the labour migration. At this stage, remittance from the labour migration reduces poverty and since the ratio of the labour migrated is small to the domestic labour force, increases the productivity of the agriculture. This may be due to the increase in the productivity of the remaining labour force. But Nepal has entered to the third phase of labour migration. It is reducing poverty from the remittances and at the same time is decreasing agricultural production. We recommend for staying at the second stage of

labour migration. It means, theoretically it appears that as Bhutan is in the first stage it can benefit by increasing out migration of small number of labour force. Whereas, Nepal is in the third stage, and it can benefit by attracting some of the labour force back to its agriculture. Since India is at the second stage, it should effort to remain in this stage.

The governments in the region appear happy with the outcome that the labour migration to foreign countries generates remittance that benefits the households and also the economy reducing the poverty in the region. But, this is only one side of the effects of migration in the economy. The governments should learn that if the labour migration increases to a certain threshold level, it may harm the domestic production.

The South Asian governments should come up with policy about the regulation of the out migration for foreign employment to the benefits of the migrants and the economy aggregate. The countries should estimate the threshold of the labour migration and devise the migration policies accordingly. The migration can be encouraged till it takes away the surplus labour from the economy and increases labour productivity without creating labour scarcity in the domestic production. For regulating the labour out flow, we recommend market approaches. Policy of increasing labour productivity at the domestic industries can increase the domestic wage rate that can ration the labour migration. For increasing the labour productivity in the domestic industries, particularly agriculture, credit flow along with the technological packages is recommended.

#### BIBLIOGRAPHY

- Adams, Richard H. (2003) International migration, remittances, and poverty in developing countries No 3179, *Policy Research Working Paper Series* from The World Bank
- Adams, R and J Page (2005) Do international migration and remittances reduce poverty in developing countries? *World Development* 33 (October): 1645–1669.
- Addison, A. and G.A. Cornia (2001) Income Distribution Policies for faster Poverty Reduction, UNU-WIDER Discussion Paper No. 2001/93 (September).
- Adelman, I., and C.T. Morris (1973): *Economic Growth and Social Equity in Developing Countries*. Stanford University Press, Stanford.
- African Development Bank (2006) African Development Review: Aid, Debt Relief and Development in Africa, Tunis.
- African Development Bank (2007) African Development Review: Natural Resources for Sustainable Development in Africa, Tunis.
- Agrawal, Nisha (1996) The Benefits of Growth for Indonesian Workers. Policy Research Working Paper 1637. World Bank, Washington, D.C.
- Ahluwalia, M.S., N. Carter, and H. Chenery (1979) Growth and Poverty in Developing Countries. *Journal of Development Economics*, vol. 6.
- Aigbokhan B E and Alli A (2008). Growth, Inequality and Poverty in Nigeria, ACGS/MPAMS Discussion Paper No.3 Prepared for United Nations Economic Commission for Africa (UNECA) Addis Ababa, Ethiopia
- Aigbokhan, B.E. (2000a) Poverty, Growth and Inequality in Nigeria: a case study, African Economic Research Consortium Research Report No. 102 (October).
- Aigbokhan, B.E., (2000b) Determinants of Regional Poverty in Nigeria:, Development Policy Centre, Ibadan, Working Paper No. 22 (March).

- Aigbokhan, B.E. (2005) Economic Reforms and Poverty Reduction in Nigeria, *Nigerian Journal of Economic and Social Studies* 47, 3 (November) 349 – 364
- Ajakaiye, D.O. and A.F. Odusola (2003) Poverty in a Globalizing Nigerian Economy: the role of rural institutions, Mashiko Nissanke (ed.) *Globalization and Poverty: The Role of Rural Institutions*, Foundation for Advanced Studies on International Development, Tokyo, Japan.
- Andres S (2001) International migration and the global economic order: an interview, No 2720, Policy Research Working Paper Series from The World Bank
- Arnold, Fred (1989) Revised estimates and projections of international migration: 1980-2000 No 275, Policy Research Working Paper Series from The World Bank
- Bales, S., Tung, P. D. and Cuc, H. S. (2001) Sectoral Changes and Poverty, Chapter 3 in D. Haughton, J. Haughton, and Nguyen Phong (eds), *Living Standards during an Economic Boom*. Statistical Publishing House: Hanoi.
- Barro, R.J. (2000) Inequality and growth in a panel of countries, *Journal of Economic Growth* 5 pp. 5-32
- Belser, P. (1999) Vietnam: On the Road to Labour-Intensive Growth. Background Paper for Vietnam Development Report 2000. UNDP: Hanoi.
- Benjamin, D., and Brandt, L. (2001) Agriculture and Income Distribution in Vietnam during the Reform Period. (mimeo.)
- Beresford, Melanie et al. (2004) *The Macroeconomics of Poverty Reduction in Cambodia (draft)*, UNDP, New York.
- Bhalla, Sheila (2003) India's Rural Economy: Issues and Evidence. Joint ODI-Institute for Human Development Working Paper, New Delhi.
- Bigsten, A. and J. Levin (2001) Growth, Income Distribution, and Poverty: A Review, UNU-WIDER Discussion Paper 2001 (129 (November).
- Birdsall, D. Ross, and R. Sabot (1995) Inequality and Growth Reconsidered: Lessons from East Asia, *World Bank Economic Review* 9, 3(September) 477-508.
- Bouche, Nathalie et al (2004) *The Macroeconomics of Poverty Reduction: The Case of China*, UNDP, Beijing.
- Bourguignon, F. (2004) The Poverty – Growth – Inequality Triangle, Indian Council for Research on International Economic Relations, New Delhi, Working Paper No. 125 (March).
- Cattaneo ,Cristina (2008) International Migration, the Brain Drain and Poverty:A Cross Country AnalysisNo 212, KITEs Working Papers from KITEs, Centre for Knowledge, Internationalization and Technology Studies, Universita' Bocconi, Milano, Italy
- CBS (2004) National Living Standard Survey 2003/04, Main Report, Central Bureau of Statistics, Kathmandu.
- Chenery, H., M.S. Ahluwalia, C.L.G. Bell, J.H. Duloy, and R. Jolly (1974) *Redistribution with Growth*. Oxford University Press, New York.
- Chiti, Muzaffar (2008) The rise in remittances in India: A closer look. <http://www.eSocialSciences.com/data/articles/Document11172007150.4938013.pdf>
- Collier, P. (2007) Africa's Economic Growth: Opportunities and Constraints, *African Development Review* 19, 1 (April) 6-25.
- Cornia, G.A. and S. Kiiski (2001) Trends in Income distribution in the post-World War II Period: Evidence and Interpretation, UNU-WIDER Discussion Paper No. 2001/89.
- Dagdeviren, H., Rolph van der Hoeven, and John Weeks (2002) Poverty Reduction with Growth and Redistribution, *Development and Change*, vol. 33, no. 3.
- Datt, G. and M. Ravallion (1992) Growth and Redistribution components of changes in poverty: a decomposition with applications to Brazil and China in 1980s, *Journal of Development economics* 38 pp. 275 – 295.
- Datt, Gaurav; Valerie Kozel and Martin Ravallion (2003) A Model-Based Assessment of India's Progress in Reducing Poverty in the 1990s. *Economic and Political Weekly*, January 25, 2003.

- Deaton, A. and V. Kozel (2005), *Data and dogma: the great Indian poverty debate*, Princeton University. Islam, R. (editor),
- Deaton, A. and V. Kozel (2006), *Fighting Poverty: The Development-Employment Link*, Lynne Rienner Publishers Inc., Boulder, Colorado.
- Deaton, Angus (2003) Adjusted Indian Poverty Estimates. *Economic and Political Weekly*, January 25, 2003.
- Deaton, Angus and Jean Dreze (2002) Poverty and Inequality in India: A Re-Examination. *Economic and Political Weekly*, September 7, 2002.
- De Haas, H (2007a) *Remittance, migration and social development: A conceptual review of the literature*, Social Policy and Development Paper No 34. Geneva: United Nations Research Institute for Social Development
- De Haas, H (2007b) *Impact of international migration on social and economic development in Moroccan sending regions: A review of the empirical literature*. Oxford: University of Oxford, International Migration Institute
- Demeke, Mulat et al. (2003) *Growth Employment, Poverty and Policies in Ethiopia: An Empirical Investigation*, Issues in Employment and Poverty Discussion Paper (IEPDP) 12, ILO, Geneva.
- Demery, L. and L. Squire (1995) *Poverty in Africa: An Emerging Picture*, Mimeo, World Bank, Washington, D.C.
- Department for International Development (DFID) (1997) *Eliminating World Poverty: A Challenge for the 21st Century*. CM 3789. The Stationery Office, London.
- Dhanani, S. and Islam, I. (2000) *Poverty, Inequality and Social Protection: Lessons from the Indonesian Crisis*. UNDP/United Nations Support Facility for Indonesian Recovery (UNSFIR) Working Paper 00/01. United Nations Development Program: Jakarta.
- Dhanani, Shafiq and I. Islam (2002) *Poverty, Vulnerability and Social Protection in a Period of Crisis: The Case of Indonesia*. *World Development*, Vol. 30, No. 7.
- Dollar, D. and A. Kraay (2000) *Growth is Good for the Poor*, World Bank (Mimeo) (March).
- Dollar, David, and Aart Kray (2001) *Growth is Good for the Poor*. Policy Research Working Paper 2587, World Bank, Washington, D.C.
- Dreusse, M; Schlueter, S (2009) *Migration as a livelihood-strategy and debt trap: The socioeconomic impacts of migration in Pyuthan and Rolpa districts: Two case studies from the Mid-western Development Region in Nepal*. Kathmandu: ASA/GTZ-Nepal (PASRA and ReRe)
- Federal Government of Nigeria, FGN (2004) *Nigeria: National Economic Empowerment and Development Strategy – NEEDS*, National Planning Commission, Abuja.
- Fields, G. (1980) *Poverty, Inequality and Development*. Cambridge University Press, New York.
- Gelb, A. and V.Ramachandran (2007) *Stimulating Growth and Investment in Africa: From Macro to Micro Reforms*, *African Development Review* 19, 1(April) 26-51.
- Ghosh, B (2006) *Migrants' remittances and development: Myths, rhetoric and realities*. Geneva: International Organisation for Migration, and The Hague: The Hague Process on Refugees and Migration
- Goudie, A. and Paul Ladd (1999) *Economic Growth, Poverty and Inequality*. *Journal of International Development*, vol. 11.30
- Government of India (2001) *Report of the Task Force on Employment Opportunities*, Planning Commission, Government of India. July 2001.
- Government of India (2009) *Annual report*. Ministry of Labour,. Government of India. New Delhi.
- Griffin, Keith (Editor) (2002) *Growth, Inequality and Poverty in Armenia*, UNDP, Yerevan.
- Griffin, Keith (Editor) (2003) *Poverty Reduction in Mongolia*, Asia Pacific Press at the Australian National University, Canberra.
- Haughton, J. (2001) *Introduction: Extraordinary Changes*, Chapter 1 in D. Haughton, J. Haughton, and Nguyen Phong (eds), *Living Standards during an Economic Boom*. Statistical Publishing House: Hanoi.
- HMGN (2004) *Nepal living standards survey: Statistical report*, Volume 2. Kathmandu: His Majesty's Government of Nepal, Central Bureau of Statistics

- Hoermann B, S Banerjee and M Kollmair (2010) Labour Migration for Development in the Western Hindu Kush-Himalayas Understanding a livelihood strategy in the context of socioeconomic and environmental change, International Centre for Integrated Mountain Development, Kathmandu.
- Huong, P. H., Tuan, B.Q. and Minh, D. H. (2003) Employment Poverty Linkages and Policies for Pro-Poor Growth in Vietnam. Issues in Employment and Poverty, Discussion Paper No. 9. Recovery and Reconstruction Department, International Labour Office: Geneva.
- Huong, Pham Lan, B.Q. Tuan, and D.H. Minh (2003) Employment Poverty Linkages and Policies for Pro-Poor Growth in Vietnam. Issues in Employment and Poverty Discussion Paper 9. Recovery and Reconstruction Department, ILO, Geneva.
- Huong, Pham Lan, B.Q. Tuan, and D.H. Minh, and T.Q. Long (2003b) Decent Work Strategies for Poverty Reduction in Vietnam. Draft paper, Central Institute of Economic Management, Hanoi.
- International Labour Office (1996) Wage workers in agriculture: Conditions of employment and work. Report for discussion at the Tripartite Meeting on Improving the Conditions of Employment and Work of Agricultural Wage Workers in the Context of Economic Restructuring. ISBN 92-2-110126-6. Geneva.
- International Labour Office (2003) *Working Out of Poverty*. Report of the Director General for the International Labour Conference, 2003, ILO, Geneva.
- IOM (2005) *World migration 2005: Costs and benefits of international migration*. Geneva: International Organization for Migration
- Irudaya Rajan,S. 2003 Dynamics of international migration from India: its economic and social implications ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC Ad Hoc Expert Group Meeting on Migration and Development 27-29 August 2003 Bangkok
- Islam, Rizwanul (1990) Rural Poverty, Growth and Macroeconomic Policies: The Asian Experience. *International Labour Review*, Vol. 129, No. 6.
- Islam, Rizwanul (2001) Poverty Alleviation, Employment and Labour Market: Lessons from the Asian Experience and Policies. Paper presented at the Asia and Pacific Forum on Poverty organized by the Asian Development Bank, Manila, 5-9 February 2001.
- Islam, Rizwanul (2003a) Labour Market Policies, Economic Growth and Poverty Reduction: Lessons and Non-lessons from the Comparative Experience of East, South-East and South Asia. Issues in Employment and Poverty Discussion Paper 8, Recovery and Reconstruction Department, ILO, Geneva.
- Islam, Rizwanul (2003b) Revisiting the East Asian Model of Economic Growth and Poverty Reduction: A Labour Market Perspective. Paper presented at the Economics for the Future Conference being organized by the Cambridge Journal of Economics, Cambridge, 17-19 September 2003.
- Islam, Rizwanul (2004) The Nexus of Economic Growth, Employment and Poverty Reduction: An Empirical Analysis, Issues in Employment and Poverty, Discussion Paper 14, Recovery and Reconstruction Department International Labour Office, Geneva
- Islam, Iyanatul (2002) Poverty, Employment and Wages: An Indonesian Perspective. (mimeo) Recovery and Reconstruction Department, International Labour Office: Geneva.
- Islam, Iyanatul and Nazara, S. (2000a) Technical Note on the Indonesian Labour Market: Estimating Employment Elasticity for the Indonesian Economy. ILO Area Office: Jakarta.
- Islam, Iyanatul and Nazara, S. (2000b) Minimum Wages and the Welfare of Indonesian Workers. Occasional Discussion Paper No. 3. ILO Area Office: Jakarta.
- Islam, Iyanatul (2002) Poverty, Employment and Wages: An Indonesian Perspective, in *Labour Market Policies and Poverty Reduction Strategies in Recovery from the Asian Crisis*. Report of a seminar held in Jakarta, 29 April – 1 May 2002. ILO, Bangkok.
- Jemio, Luis Carlos, and M.d.C. Choque (2003) Employment-Poverty Linkages and Policies : The Case of Bolivia. Issues in Employment and Poverty Discussion Paper 12, Recovery and Reconstruction Department, ILO, Geneva.
- Kabann, Kabanukye (2003) Employment-Poverty Linkages and Pro-Poor Policies in Uganda. An Unpublished Paper, Recovery and Reconstruction Department, ILO, Geneva.
- Kabann, Kabanukye et al. (2004) *Economic Growth, Employment, Poverty and Pro-Poor Policies in Uganda*, IEPDP 16, ILO, Geneva.

- Kakwani N (2001) A note on growth and poverty reduction, Asia and Pacific Forum on Poverty: Reforming Policies and Institutions for Poverty Reduction, Asian Development Bank, Manila, 5-9 February 2001.
- Kakwani, N. and Son, H. (2002) Pro-poor Growth and Poverty reduction: The Asian Experience. Paper presented at the 'Poverty Alleviation Workshop', organized by UNDP at Katmandu, October 2002.
- Khan A. R (1997) *Philippines: Employment in a Globalizing and Liberalizing World*, ILO, SEAPAT, Manila.
- Khan A R (2001) Employment Policies for Poverty Reduction. Issues in Employment and Poverty Discussion Paper 1, Recovery and Reconstruction Department, ILO, Geneva.
- Khan A R (2004) *Growth, Inequality and Poverty in China: A Comparative Study of the Experience in the Periods Before and After the Asian Crisis*, Issues in Employment and Poverty Discussion Paper 15, ILO, Geneva.
- Khan A R (2005). Growth, Employment and Poverty, An Analysis of the Vital Nexus based on some Recent UNDP and ILO/SIDA Studies, Issues in Employment and Poverty, Discussion Paper 19, Paper prepared under the joint ILO-UNDP programme on 'Promoting Employment for Poverty Reduction', United Nations Development Programme, New York and Employment Strategy Department, International Labour Office, Geneva
- Khan A R (2007a). Growth, employment and poverty: An analysis of the vital nexus based on some recent UNDP and ILO/SIDA studies, DESA Working Paper No. 49, ST/ESA/2007/DWP/49, United Nations Department of Economic and Social Affairs, New York, <http://www.un.org/esa/desa/papers>, accessed on 12<sup>th</sup> March 2009.
- Khan A. R. (2007b). Asian Experience on Growth, Employment and Poverty: An overview with special reference to the findings of some recent case studies, UNDP Regional Center in Colombo, International Labour Office Geneva.
- Khan A. R and Riskin, Carl (2001) *Inequality and Poverty in China in the Age of Globalization*, Oxford University Press, New York.
- Khan A. R and Sen, Binayak (2004) *The Structure and Distribution of Personal Income and Poverty Reduction: A Case Study of Bangladesh during the 1990s*, Department of Economics, University of California, Riverside.
- Khan A. R. and M. Muqtada (editors) (1997) *Employment Expansion and Macroeconomic Stability under Increasing Globalization*, Macmillan, London.
- Khan A.R., Islam, R. and Huq, M (1981) *Employment, Income and the Mobilizing of the Local Resource: A Study of Two Bangladesh Villages*, Asian Employment Programme, ILO-ARTEP, Bangkok.
- Khatri, SK (2007) *Labour migration, employment and poverty alleviation in South Asia*. Kathmandu: South Asia Centre for Policy Studies and Friedrich Ebert Stiftung
- Krishnamurty J (2005) The labour market and conflict, in *Jobs after war: a critical challenge in the peace and reconstruction puzzle*, Eugenia Date-Bah, ed. (Geneva, ILO, 2005).
- Kim, Ji Hong (2007) The Korean Experience and African Economic Development, *African Development Review* 19, 1(April) 52-95.
- Klasen S (2003) In Search of the Holy Grail: How To Achieve Pro-Poor Growth, in B. Tungodden, et al (eds.) *Toward Pro-Poor Policies*, World Bank, Washington DC pp. 63-93.
- Knowles S (2001) Inequality and Economic Growth: The Empirical Relationship Reconsidered in the Light of Comparative Data, UNU-WIDER Discussion Paper 2001/128 (November).
- Kuznets, S. (1955) Economic Growth and Income Inequality. *American Economic Review*, vol. 45.
- Lewis W A (1954) Economic Development, with Unlimited Supplies of Labour, *The Manchester School of Economic and Social Studies*, No. 22.
- Lipton, M. and M. Ravallion (1995) Poverty and Policy, in *Handbook of Development Economics*, vol. IIIB. North-Holland, Amsterdam.
- Mahmud W (2001) Informal Sector in Bangladesh: A Macroeconomic Perspective. (mimeo.) International Labour Office: Dhaka.

- McKay, Andrew (1997) Poverty Reduction through Economic Growth: Some Issues. *Journal of International Development*, vol. 9, no. 4. 31
- McKinley, T., Weeks, J., Khattry, B., Oktaviani, R., Saparini, H., Lim, J. and Santoso, B. (2003) Pro-Poor Macro Policies in Indonesia. UNDP Regional Project on the Macroeconomics of Poverty Reduction: Kathmandu.
- Mellor J B (1999) The Structure of Growth and Poverty Reduction, (Mimeo) World Bank, Washington D.C.
- Micevska. M and Rahut D. B. (2008) Rural Non-Farm Employment and Income in Eastern Himalayas, *Economic Development and Cultural Change*, 57:163–193, October 2008
- Mulat, Demeke, F. Guta, T. Ferede (2003) Growth, Employment, Poverty and Policies in Ethiopia: An Empirical Investigation. Issues in Employment and Poverty Discussion Paper 11, Recovery and Reconstruction Department, ILO, Geneva.
- National Sample Survey Organization (2008) Employment & unemployment Situation in India: July, 2007-June, 2008 Report no. 531, NSSO, ministry of Statistics and Program Implementation, Government of India, New Delhi
- Nesporova A (2002) Why Unemployment remains so high in Central and Eastern Europe, *Employment Paper* 2002/43, ILO: Geneva.
- Nissanke, M. and E. Thorbecke (2005) Channels and Policy Debate in the Globalization – Inequality – Poverty Nexus, UNU-WIDER Discussion Paper 2005/08 (June).
- Olaniyan, O.A., S.A. Yusuf, and O. Oni (2005) An Evaluation of Social Protection programmes in Nigeria, paper presented at the Annual Conference of the Nigerian Economic Society (August).
- Osmani S R (2002) Exploring the Employment Nexus: Topics in Employment and Poverty. (Mimeo) UNDP, New York and ILO, Geneva.
- Osmani S.R. et al. (2003) Macroeconomics of Poverty Reduction: The Case of Bangladesh. Paper presented at a regional workshop on the Macroeconomics of Poverty Reduction organized by the UNDP, Kathmandu, 4-6 January 2003.
- Osmani S R (2004a). The Employment Nexus between Growth and Poverty: An Asian Perspective, A Report prepared for the Swedish International Development Agency (SIDA), Stockholm and the United Nations Development Programme (UNDP), New York.
- Osmani S R (2004b) Exploring the Employment Nexus: The Analytics of Pro-Poor Growth, in R. Islam (ed.) *Fighting Poverty Through the Employment Route*. Lynne Reinner.
- Osmani S R (2006) Employment Intensity of Asian Manufacturing: An Examination of Recent Trends, Paper prepared for the Asian Regional Bureau of the United Nations Development Programme (UNDP), New York, March.
- Osmani S. R., Mahmud, W., Sen, B., Dagdeviren, H. and Seth, A. (2003) Macroeconomics of Poverty Reduction: The Case of Bangladesh. (mimeo.) UNDP Regional Project on the Macroeconomics of Poverty Reduction: Kathmandu.
- Pant, Bhubanesh (2008) Mobilizing Remittances for Productive Use, NRB Working Paper (Serial No: NRB/WP/4), Nepal Rastra Bank.
- Papademetriou, D G. (1984) Dilemmas in international migration: a global perspective *Environment and Planning C: Government and Policy*, 1984, vol. 2, issue 4, pages 383-398
- Poverty Working Group (1999) *Vietnam Development Report 2000: Attacking Poverty*, Joint Report of the Government-Donor-NGO Poverty Working Group, Consultative Group Meeting for Vietnam, December 14-15, 1999, Vietnam.
- Rahman, R. I. and Islam, K. M. N. (2003) Employment Poverty Linkages: The Case of Bangladesh. Issues in Employment and Poverty, Discussion Paper No. 10. Recovery and Reconstruction Department, International Labour Office: Geneva.
- Ram, Rati (2006) Growth Elasticity of Poverty: Alternative Estimates and a Note of Caution, *KYKLOS* 59, 4 (November) pp. 601 – 610.
- Ramakumar, R. and Chavan, Pallavi (2007) Revival of Agricultural Credit in the 2000s: An Explanation, *Economic and Political Weekly*, 42 (52), December 29, pp. 57-63.
- Rangarajan, C., Padma Iyer Kaul and Seema (2007) Revisiting Employment and Growth Money & Finance, ICAR Bulletin, September, 2007.



- Ravallion M. and S. Chen (1997) What can New Survey Data Tell Us About Recent Changes in Distribution and Poverty? *World Bank Economic Review* 11, 2(May) 357-382.
- Ravallion, M. (1993) Growth and Poverty: Evidence for Developing Countries in the 1980s. *Economic Letters*.
- Ravallion, M. (2001) Growth, Inequality and Poverty: Looking Beyond Averages. *World Development*, vol. 29, no. 11.
- Ravallion, M. and G. Datt (1996) How Important to India's Poor is the Sectoral Composition of Economic Growth? *World Bank Economic Review* 10, pp. 1-25.
- Ravallion, M. and M. Huppi (1991) Measuring changes in poverty: A methodological case study of Indonesia during an adjustment period, *World Bank Economic Review*, Vol. 5, No. 1 (January) 57-82.
- Ravallion, M. and S. Chen (2004) China's Uneven Progress Against Poverty, Washington, DC. World Bank Policy Research Working Paper No. 3408.
- Reserve Bank of India (2010) monthly bulletin February 2008, March 2010 Available online. [www.rbi.org.in](http://www.rbi.org.in)
- Riester A (2010) Impact of the global recession on international labor migration and remittances: Implications for poverty reduction and development in Nepal, Philippines, Tajikistan, and Uzbekistan. In: Bauer A and M Thant (eds) (2010), *Poverty and Sustainable Development in Asia: Impacts and Responses to the Global Economic Crisis*, Asian Development Bank, Manila.
- Round, J I (2007) Globalization, Growth, Inequality and Poverty in Africa: a macroeconomic perspective UNU-WIDER Research Paper 2007/55 (September).
- Sala-I-Martin, X. and A. Subramanian (2003) Addressing the natural Resource Curse: An Illustration from Nigeria, IMF Working Paper 03/139 (July).
- Sashikumar , S. K. and Z Hussain (2008) Managing International labour migration from India: Policies & Prospective , ILO-Asia Pacific Working Paper Series , October ,2008
- Seddon, David. 2005. Nepal's dependence on exporting labour. [www.migrationinformation.org/](http://www.migrationinformation.org/)
- Sherpa, D (2010) *Labour migration and remittances in Nepal*. International Center for Integrated Mountain Development (ICIMOD), Kathmandu:
- SMERU (2001) Wage and Employment Effects of Minimum Wage Policy in the Indonesian Urban Labour Market. (mimeo.) SMERU Research Institute: Jakarta.
- Squire, Lyn (1993) Fighting Poverty. *American Economic Review*, May 1993, Papers and Proceedings of the Hundred and Fifth Annual Meeting of the American Economic Association.
- Sundaram, K. and S. D. Tendulkar (2006) India: Employment-Poverty Linkages and Policy Options, in Islam (Editor).
- Sundaram, K. and S.D. Tendulkar (2002) The Working Poor in India: Employment- Poverty Linkages and Employment Policy Options. Issues in Employment and Poverty Discussion Paper 4. Recovery and Reconstruction Department, ILO, Geneva.
- Torm N (2003) The Nexus of Economic Growth, Employment and Poverty during Economic Transition: An Analysis of Armenia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan and Uzbekistan, Issues in Employment and Poverty Discussion Paper 13, Recovery and Reconstruction Department, International Labour Office, Geneva.
- UN (2005) The centrality of employment to poverty eradication, Report of the Secretary-General to General Assembly, Sixtieth session, Item 58 (a) of the provisional agenda, Eradication of poverty and other development issues: Implementation of the first United Nations Decade for the Eradication of Poverty (1997-2006), USA
- UNDP (2003a) Armenia, UNDP Regional Project on the Macroeconomics of Poverty Reduction: Kathmandu.
- UNDP (2003b) Growth and Poverty Reduction in the Next Decade: A Report to the Government of Uzbekistan. (mimeo.) UNDP Regional Project on the Macroeconomics of Poverty Reduction: Kathmandu.
- UNDP (2002) *The Macroeconomics of Poverty: A Case Study of the Kyrgyz Republic* (draft), UNDP, New York.

- UNDP, Undated draft. *Macroeconomics of Poverty Reduction in Indonesia*, UNDP, New York.
- UNDP, Undated draft. *The Macroeconomics of Poverty Reduction in Nepal*, UNDP, New York.
- Weeks, J., Thang, N., Roy, R and Lim, J. (2003) Vietnam: Seeking Equity with Growth. UNDP Regional Project on the Macroeconomics of Poverty Reduction: Kathmandu.
- Weeks, J et al., *The Macroeconomics of Poverty Reduction: The Case Study of Vietnam, Seeking Equity within growth (draft)*, UNDP, New York. *The ILO/SIDA Case Studies*
- White, H and E Anderson (2001) Growth versus Distribution: Does the Pattern of Growth Matter? *Development Policy Review*, vol. 19, No. 3.
- World Bank (1990) *World Development Report: Poverty* Oxford University Press, New York.
- World Bank (1996) Taking Action to Reduce Poverty in Sub-Saharan Africa: An Overview, Washington D.C.
- World Bank (2000) Attacking Poverty, World Development Report 2001/2002, New York, Oxford University Press.
- World Bank (2000) *World Development Report: Attacking Poverty*. Oxford University Press, New York.
- World Bank (2003) *Global Economic Prospects and the Developing Countries*. World Bank, Washington, D.C.
- World Bank (2003 and 2004). *World Development Indicators 2003 and 2004*, World Bank, Washington, D.C.
- World Bank (1997, 2005 and 2006), *World Development Indicators*.
- World Bank (2009). *Migration and Development Brief 10*. Migration and Remittances Team, Development Prospects Group. Washington, DC. 13 July. <http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1110315015165/Migration&DevelopmentBrief10.pdf>
- [www.Indiastat.com](http://www.Indiastat.com): Access on dated 19th August 2010
- Yang, Dean (2009). International Migration and Human Development United Nations Development Programme Human Development Reports Research Paper July 2009.

**ANNEXES**

## ANNEX 4.1

## Labour migration from Nepal

<b>Year</b>	<b>Migration to overseas</b>
1993/94	3,605
1994/95	2,159
1995/96	2,134
1996/97	3,259
1997/98	7,745
1998/99	27,796
1999/00	35,543
2000/01	55,025
2001/02	104,736
2002/03	105,043
2003/04	106,660
2004/05	139,718
2005/06	165,252
2006/07	204,533
2007/08	249,051
2008/09	219,965
2009/10	294,094

ANNEX 6.1  
Labour Force Indicators in Bhutan

Sl.	Labour Force Indicators	Year		2004	2006	2009
		2001	2003			
1	Population distribution by age structure (%)					
	<15	36.4	35.5	31.3	30.8	31.2
	15-64	60.5	59.5	62.3	60.9	62.6
	65+	3.1	5	6.4	8.3	6.3
2	Rural-Urban Proportion (%)					
	Rural	69.7	73.6	73.1	72.6	75.5
	Urban	30.3	26.4	26.9	27.4	24.5
3	Male-Female Proportion (%)					
	Male	49.8	49.7	48	50.7	49.5
	Female	50.2	50.3	52	49.3	50.5
4	Total Labour Force (%)		40.5	37.4	42.8	50
i	By area					
	Rural		43.4	39.3	44.4	49.5
	Urban		32.6	32.2	38.6	43.3
ii	By gender					
	Male		46	45.6	47.7	49.5
	Female		35.2	29.8	37.7	46.4
5	Labour Force Participation Rate (%)	56.5	62.9	54.4	61.8	68.5
i	By area					
	Rural	51.7	66.5	56	63.5	71.9
	Urban	66.4	52.3	49.7	57.2	63.2
ii	By gender					
	Male	75.2	72.6	67.5	69.8	72.8
	Female	38.4	53.6	42.7	53.9	64.6
6	Unemployment Rate (%)	1.9	1.8	2.5	3.2	4
i	By area					
	Rural	0.6	1.5	2.6	2.5	3
	Urban	4.1	2.9	2	4.9	7.5
ii	By gender					
	Male	1.3	1.6	2.1	2.6	2.6
	Female	3.2	2	3.3	3.8	5.4

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