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Migrant Labourers and Remittances Flow to India

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Abstract

Remittances are defined as the money transmitted from one place to another. Although remittances can also be sent in-kind, the term “remittances” usually refers to cash transfers. Migrant worker remittances are the part of total remittance flows that is transmitted by migrant workers, usually to their families or friends back home. Remittances are an important and stable source of income for households, in particular in developing countries. Analytical studies have shown that the flow of remittances is the least influenced by economic downturn and remains a stable source of income. Remittances have been identified as the third pillar of development as their volume is second to foreign direct investment and higher than overseas development assistance.

Under the altruistic view, the migrant sends remittances home because he cares about the well being of his / her family in the home country, and the remittance satisfies the immigrants concern for the welfare of his family. Opposite to the altruistic motive is the immigrant who sends remittances to the home country mainly for economic reasons and financial self-interest.

This paper tries to focus on choice between formal and informal channels which depends on a variety of factors, including the efficiency, the level of charges and exchange rates, the availability of facilities for transferring funds, the prevalence of political risks and the degree of flexibility in foreign exchange rules. It also put an insight into the size and frequency of total remittance flows determined by several factors, such as: the number of migrant workers, wage rates, economic activity in the host country/region and in the sending country/region, exchange rates, political risk, facilities for transferring funds, marital status, level of education of the migrant, whether or not accompanied by dependents, years since out migration, household income level, relative interest rate between labour-sending and –receiving and peeps into its effect on the BOP of the country.

Key Words: Remittances, Migrant worker, Economic down turn, Altruistic motive

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1. Introduction

Remittances are defined as the money transmitted from one place to another. Although remittances can also be sent in-kind, the term “remittances” usually refers to cash transfers. Migrant worker remittances are the part of total remittance flows that is transmitted by migrant workers, usually to their families or friends back home. Remittances are an important and stable source of income for households, in particular in developing countries. Analytical studies have shown that the flow of remittances is the least influenced by economic downturn and remains a stable source of income. Remittances have been identified as the third pillar of development as their volume is second to foreign direct investment and higher than overseas development assistance. The three main recipient countries are India, Mexico and Philippines. In the other hand US, South Arabia and Germany are the three main source countries. Analytical studies have shown that remittances contribute to poverty reduction in home countries. These are the reasons why remittances have been receiving increasingly the attention of politicians and analysts. “Remittances” has now become a commonly used term, which is however rarely defined. Analytical studies define remittances as the sum of selected balance of payments flows. In the Indian balance of payments context, remittances are identified with the closest proximity with Net Private Transfers.

The concept of remittances in the BoP framework is designed to measure the net receipt by the households from employment-related flows on the primary distribution of income account and relevant current transfers on the secondary distribution of income account. Consequently, the exports and imports of goods and services produced investment income from external assets and liabilities held by households as well as related taxes are excluded from the remittances concept.

The concept of residence is one of the important issues for identifying the BoP flows that are relevant for the study of remittances. The concept of residence in BoP is broadly explained with the concept of residence (long-term migrant) in migration statistics (except for a few exceptions, such as students and patients and crew, who are considered resident of the home countries even if they change their usual residence for more than one year). Broadly speaking, both economic and migration statistics apply the one year rule. A worker who is employed abroad for less than a year (for example a border worker, a seasonal worker or a short term employee) is classified as a nonresident of the host country in economic statistics.

Under the altruistic view, the migrant sends remittances home because he cares about the well being of his / her family in the home country, and the remittance satisfies the immigrants concern for the welfare of his family. The main prediction of the altruistic motive is that remittance tends to decrease overtime, as the attachment to family gradually weakens overtime when members are in different countries bringing his family to his adopted country. This, of course, reduces remittances.

Opposite to the altruistic motive is the immigrant who sends remittances to the home country mainly for economic reasons and financial self-interest. In this scenario the successful immigrant saves money in a foreign country, creating the dilemma as to how to accumulate wealth (in which asset) and where (in which country).And obvious place to invest at least part of the assets in the home country buying property, land, financial assets, where these assets earn higher rate of interests than in the host country.

The Implicit Family Contract theory assumes that a family develops an implicit contract with the individual who chooses to live abroad and those who stays at home. In the loan repayment theory the family invests education of the migrant and usually finances migration cost subsistence in the host country. This is loan (investment) element of the theory. The repayment part comes after the migrant settles abroad, his income profile starts to rise over time and he starts repaying the loan (principal interest) back to the family in the form of remittance.

Another variant of the theory of remittance is an implicit family contract between the migrants and those at home is based on the nation of risk diversification. The idea is simple insurance and capital markets in the real world are incomplete, and risks cannot be diversified because of the absence of financial assets that edge risk. In addition, constraints to borrowing, a particularly serious problem for the poor migrants, limit the ability to smooth consumption and finance investment. Assuming that economic risks between the sending and foreign country are not positively co-related, then it becomes a convenient strategy for the family as a whole to send abroad of its member. The migrant, then can support their family.

Remittances can be sent between or within countries. The remittances which are sent by the migrants who left their home country bare called *International remittances*, whereas the remittances sent by the persons who migrated within their country of origin are called *Intra-National remittances*. But *intra-national* remittances are not reflected in the IMF Balance of Payments, it is difficult to measure their size. In some countries it is estimated that the i*ntra-national* remittances is also huge. In China, for example, there are an estimated 50 to 60 million internal migrants who take up employment in the coastal areas and remit a large part of their earnings to their families back home.

Almost all remittances are sent by individual migrants, is known as *individual remittances*, but a fraction is sent by groups of migrant workers through their associations (*collective remittances*). Migrants from developing countries can often earn more by migrating abroad, and thus the amount remitted per person is likely to be higher. Yet even within countries, wage differences between rural and urban areas within a country can be huge, and a large number of small amounts also add up to considerable remittance flows. Besides, problems and costs involved in intra-national remittance transfers are generally lower due to the absence of foreign exchange issues and related financial regulations.

The bulk of remittances are *individual remittances,* sent by individual migrants; a smaller fraction is sent in the form of *collective remittances* or donations by groups of migrants through community or church associations. The latter form is often organized through hometown associations (HTAs) consisting of migrants from the same town or parish in the home country, but also other more or less organized groups, such as refugee groups, ethnic professional groups or even virtual refugee organizations using the internet participate in collective donations.

Recent debates within the development community has been divided into two camps: one emphasizing transfer costs reduction and incentives for productive investments as a way to enhance the developmental impact of remittances; another emphasizing the need to acknowledge the private and family nature of the bulk of international remittances (hands off).

Instead of disagreeing on the nature, impact, and possibility of political leveraging of remittances, recent theoretical debates point to the importance of disaggregating remittances into different forms of transfers and a concomitant need to recognize the specificity of remittance types in policy and programme interventions. Assuming a broad definition of development, including economic, social, community and political development, a first premise for mobilizing remittances for predevelopment efforts is to understand that different types of remittances contribute to different aspects of development. Concrete policy proposals must therefore distinguish clearly between family remittances, collective remittances, and entrepreneurial remittances and their gendered specificities.

Family remittances build on intimate social ties, are *private transfers*, and tend to be used on recurrent livelihood costs and to substitute for/improve access to public services such as health, education and social security. Collective remittances are generally donations for community projects associated with diaspora organizations or HTAs. Entrepreneurial remittances have the clearest productive investment potential but do not have organizations behind them.

Formal remittances are sent through banks, post offices, exchange houses and transfer companies. Common facilities for such transfers include demand drafts, traveler's cheques, telegraphic transfers, postal orders, account transfers, ATM facilities or electronic transfers. Formal, international remittances can be measured through the IMF Balance of Payments Statistics Yearbook. Yet this type of remittances only reflects a top of the iceberg. Research on remittance flows to Pakistan, the Philippines, Sudan and Egypt, for example, shows that informal remittances are estimated to be at least double or triple the recorded figures. Informal transfers generally take place through hand-carriage, family, friends, or money couriers.

Besides, some countries have extensive and efficient systems to facilitate such informal transfers. The hundi system being the main informal channel of sending remittances in Bangladesh may be the most renowned transfer system. Hundi agents are foreign exchange dealers, who charge 1 to 2 percent more than the official exchange rate, yet who do not charge any commission. Apart from offering quick and convenient transfer services, some hundi agents also provide other assistance and services of a personal nature, and they cover geographical areas where formal banking facilities are absent. The hundi system has ranked high in terms of costs and time required to undertake the transaction. Some times when remittances are sent through the informal system, there is also the danger that payments are deliberately delayed, to make profits or to temporarily use the funds for personal purposes. Yet the informal system can count on continued popularity, since many migrants want to avoid paper work at the sending and receiving end. Besides, some migrants stay illegally abroad, or have a temporary working permit and do not have access to a bank account.

The choice between formal and informal channels depends on a variety of factors, including the efficiency, the level of charges and exchange rates, the availability of facilities for transferring funds, the prevalence of political risks and the degree of flexibility in foreign exchange rules. In Brazil and Colombia, for example, international money transfers are controlled through government regulations. In Brazil, international transfers must go through Banco de Brazil, resulting in a time consuming and expensive process. In Colombia, residents are charged a 3 percent tax on the money received.

The size and frequency of total remittance flows is determined by several factors, such as: the number of migrant workers, wage rates, economic activity in the host country/region and in the sending country/region, exchange rates, political risk, facilities for transferring funds, marital status, level of education of the migrant, whether or not accompanied by dependents, years since out migration, household income level, relative interest rate between labour-sending and –receiving. This all factors influence the flow of remittances sent by the migrants to his or her home country.

2. Remittances and Economic Development

On the basis of available evidence, various recent reports estimate that remittances amount to roughly one and a half times official development assistance, more than capital market flows and more than half of foreign direct investment flows to developing countries. Lower middle-income countries apparently receive the largest amounts, but remittances may constitute a much higher share of the total international capital flow to low-income countries. To further underline the development dimension of migrant transfers, remittances are said to have the potential of being more stable than private capital flows and to be less volatile to changing economic cycles.

Remittances play an important role in the accounts of many developing countries and are crucial to the survival of poor individuals, families and communities around the world and hence it is recognized by the increasing bilateral and multilateral development agencies. At the same time an increasing number of source country governments are beginning to view migrants and their economic transfers as strategic resources to be 'captured' and incorporated in national development processes.

The emphasis of development policy is now firmly on poverty alleviation and the achievement of the Millennium Development Goals, which in addition to the eradication of extreme poverty and hunger, the improvement of health and education, the reduction of infant and child mortality, universal access to safe drinking water, adequate sanitation, and the improvement of the lives of poor rural and urban slum dwellers, also headline objectives such as gender equality and the empowerment of women. Because much remittance research stems from an economic development concern it has centered on determining the volume and the assessment of the contribution to local development through investments in productive activities, the identification of transfer channels, the costs involved, and the determinants driving remittances. A

human development approach nevertheless suggests that apart from remittances' potential to augment incomes and lift recipients out of poverty, migrant transfers also have a social dimension. Such important differences notwithstanding, both economic and human development approaches generally take off from the idea that migration can – and should – contribute to development.

The remittance flows of global migrants have been characterized by a long term upward trajectory almost as significant as that of FDI, and the rate of increase in remittances shifted upward as FDI fell in recent years. Remittance flows to less developed country's' now exceed US$ 160 billion and more important than aid and portfolio investment to the alleviation of poverty. They are the financial manifestation of the international movement of persons. Their increase reflects the fact that world's foreign-born population has more than doubled since 1965 and currently stands at well over 175 million persons. Increased remittance flows have also responded to declines in money transfer costs that accompany globalization. The rapid increase in record remittances since 2001 may also be due to increased scrutiny and recording of these flows and the inclusion of previously on recorded flows in the official data.

2.1. Effect of remittances on Poverty, Income distribution and Growth

Unlike public development cooperation and foreign direct investment, remittances have grown steadily in recent decades and today serve as an important source of revenue in countless households throughout the developing world.

Opinions vary greatly as to how remittances affect the fight against poverty, income distribution, spending habits, education, health, investment and growth as well as the balance of payments in developing countries. This is due, in part, to the lack of accurate data and the variety of research methods used to analyse it.

2.1.1. Combating poverty:

The influence of remittances on individual recipient household incomes can be seen as a positive one, at least in the short term. The principle advantage of remittances is that they are paid directly to individuals and families. Unlike state-controlled development assistance and direct investments from foreign countries, the money does not flow into companies and other organisations. Rather, it raises available household income, which in turn enables families to meet their own specific needs. It must be emphasised, however, that it is difficult to draw a direct comparison between remittances and the above-mentioned sources of development-related financing: Remittances represent a source of private capital, and it is therefore solely at the discretion of the migrants and their families to decide on the money's use.

Mexico's National Population Council (CONAPO) estimates that 1.4 million Mexican households benefited from remittances in 2004. For beneficiaries, this financial influx represents, on average, 47% of the family income. Similarly, the Philippines has come to the consensus that households receiving remittances are financially better off, because they average a monthly income that is 45% above the national minimum wage. In addition to increased income, remittances also offer beneficiaries a certain amount of security. While foreign direct investments have been especially subject to fluctuation, remittances have served as a stable, steadily increasing financial inflow to developing countries since 1990. Due to their consistency even during economic troughs, remittance payments offer recipients an extremely reliable source of income. Anti-cyclical increases are common, i.e. migrants abroad increase the scope of their family support during times of economic crisis. Such behaviour helped buoy the Philippine economy during the Asian financial crisis. It was possible to avoid a recession solely through a surge in remittances, which sustained domestic consumption and helped the country overcome a slump in exports. The immediate increase of available family incomes is a vital means of support, especially for middle- to low-income households. This added income not only increases recipients' living standards, it also minimises vulnerability during times of crisis or natural disasters.

2.1.2. Income distribution

A comparison of data from different case studies does not reveal a consistent pattern concerning the effects of remittances on income distribution; in some cases, it even reveals conflicting results. These variations can be attributed, in part, to traditional patterns of migration. As a rule, individuals from the middle class tend to migrate first, as only they can afford the high costs involved. As soon as migration networks are established, the cost of migrating decreases significantly, making it possible for poorer groups of people to emigrate. It is assumed that remittances reflect this migration trend and, therefore, temporarily increase income disparities in the sending countries. At first, remittances from middle-class migrants increase the level of income in middle-class households, widening the income gap, before poorer households are able to improve their income by sending a family member abroad.

2.1.3. Spending habits

The improved income situation enjoyed by recipients of remittances also brings with it changes in spending habits. Additional financial resources are used primarily for daily expenditures, home construction, land purchase, medical care and education. A smaller fraction of the money is saved and possibly invested. The majority of funds, however, are used to cover ongoing living expenses. For a long time it was believed that spending on consumption did not generate lasting economic development. Current economic studies now tend to deviate from this line. The increase in household spending is now said to stimulate ongoing demand for consumer goods and services, which, in turn, triggers production and results in the creation of new jobs.

The second largest expenditure target is home and land ownership. Although this tends to have a positive effect on the construction sector, it may have some negative consequences. In Egypt, for example, the price of land for agricultural purposes increased 600% between 1980 and 1986. This increase in demand was due, in part, to remittances. Such

growth in demand for non-tradable goods like property and real estate can lead to a rise in inflation. Similarly, negative effects can occur if domestic production cannot keep up with the increased demand. This can result in an increase in imports and/or an appreciation of the exchange rate, impairing domestic production as exports become more expensive on the international market and, as a result, less competitive.

2.1.4. Education and health

A considerable portion of remittance spending goes to educating young relatives back home. A number of studies have already shown significant improvements in the educational level of younger generations. For example, the increased cash flow to the Philippines during the financial crisis in Asia led to a significant increase in school enrolment, a decline in child labour as well as a general increase in spending on education.

It is difficult to measure the real effect of increased health-related spending. For example, it remains to be seen whether Mexico's migration trends alone are responsible for decreases in child mortality and increased birth weights, or whether this is also due, in part, to other factors. The most important migration-related benefits in the fields of health and education are – in addition to increased financial support – the heightened awareness and knowledge of these issues that migrants gain by living abroad.

2.1.5. Investment

Another crucial component of sustainable development is the accumulation of real capital, which requires new investments. In this context, remittances could produce the greatest impulse for the creation of capital and labour market expansion in developing countries if they were used to finance entrepreneurial activities. However, this type of spending tends to occur least often. Studies show that in Mexico, for example, 95% of monetary remittances are spent on consumption and a mere 5 to 8% saved for future investments. Despite this low level of savings, remittances do seem to have a positive effect on the creation of new businesses in Mexico. A study conducted on small businesses in urban areas of Mexico revealed that remittances account for nearly 20% of total capital stocks.

However, the relatively widespread criticism that remittances contribute very little to sustaining structural improvements and generating development remains valid. Finding ways to increase the proportion of investment spending is certainly a challenge for the future. At the same time, few migrants seem able to make the career move from worker to entrepreneur. It is up to national governments to create a healthy financial sector and an investment-friendly climate so as to increase personal savings (including from remittances) and investments.

2.1.6. Growth

Economic theory considers economic growth, i.e. increase in GDP, a basic prerequisite for escaping the poverty trap. To achieve growth, it is not the size of remittance payments that is important but rather – as argued above – the way in which the additional revenue is put to use. As previously discussed, the effects of savings and investment are greater than that of consumer spending. Nevertheless, consumer spending can also have positive multiplier effects for the economy as a whole. In the case of Mexico, it has been proven that for every dollar entering the country through remittances, the GDP increases by US$2.69 in urban areas and by US$3.17 in rural areas.

On the other hand, at the household level, isolated observations reveal that remittances may have a negative effect on growth. For example, Kenyan farmers with additional income from remittances have lower crop yields than those without financial support from abroad. The paradoxical phenomenon can be traced back to a change in incentives. The so-called moral hazard theory supports the notion that families in this situation no longer have an incentive to remain productive themselves, preferring to direct their energies into attracting support from relatives living abroad. Under these conditions, remittances could lead to a decline in economic growth. However, it is doubtful that such behaviour can be attributed to all individuals.

2.1.7. Balance of Payments

Finally, extreme increases in remittance values have a direct effect on a country's balance of payments. Monetary inflows not only fill the coffers of private households but also lead to an increase in the recipient side of the balance of payments. The entry of foreign currency into the country helps both to reduce foreign exchange shortages and to consolidate the balance of payments. Remittances, in contrast to other incoming payments from abroad, are advantageous, because they neither carry interest nor have to be repaid.

From the above analysis what we can infer is that manpower export can bring forth a country's hefty foreign exchange earnings. Remittances have been providing investment funds for housing and construction, agriculture, small-scale manufacturing and transport as well as for the economic and social infrastructure. Manpower export provides some relief from acute unemployment, both rural and urban. It encourages the development of vocational and technical skills among both returned and intending migrants: it has also led to the rapid development of travel agencies, hotels, catering, transport and communication services, improved education facilities in the rural areas, jewellery shops, modern shopping centres and departmental stores.

Though it is popularly believed that overseas migration is a major blessing for densely populated poor countries like Bangladesh because of the ever-increasing flow of remittances it brings, some of the outcomes may not augur well for the country in the long run. As regards negative impacts at the macro level, one can mention the inflation generated by money pouring in. A significant proportion of the funds are spent on purchasing land, jewellery, consumer durables and food, and on social and religious ceremonies. These consumption-oriented uses of the remittance money do not add significantly to

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the productive capacity of the economy. Another negative impact is related to the economic and social rehabilitation of returned migrants within the context of increasing unemployment in the country and their changed expectations and attitudes about what constitutes a suitable job and an appropriate wage or income. Further, the inflow of remittances has generated a localized hyper-inflation of prices and wages in the sending communities. The inflow of remittances has diversified the demand and supply pattern of goods and services to reflect the changed lifestyles of migrant-households. A section of the migrants also resort to conspicuous consumption of luxury goods and imported gadgets. Remittances may create a 'culture of dependence' on the income from remittances. This, in turn, can impair efforts to escape poverty through education and work. The distributive effect of remittances is another dimension of the development effects of remittances. In the BoP context, one negative effect of (substantial) remittances is the possibility that they produce the so-called 'Dutch disease' effect. In countries receiving substantial amounts in remittances, there is a tendency for the real exchange rate to appreciate which then penalizes non-traditional exports and hampers the development of the tradable goods sector.

2.2. Global and Regional Trends in Remittance Flows

Remittances to the developing world have increased steadily from around US $ 15 billions in 1980 to near about 80 billions in 2002. This represents an annual rate of increase of 7.7%. The highest rate of growth is seen in Latin America 12.4% per annum. And the lowest is seen in Africa 5.2%. The growth rate in East Asia and Pacific is 11%. In 2002 Latin America and the Caribbean have the highest level of remittances, totaling US $ 25 billions, followed by South Asia with 16 billions, the Middle East and North Africa with 14 billions, and East Asia and the Pacific with 11 billions. Sub- Saharan Africa has the lowest level of remittances, 4 billions.

In terms of the distribution of remittances by levels of per capita income, the developing country group received 65% of world remittances. In turn, the lower middle income and low income groups received a higher proportion than the upper middle income countries.

In 2002 for the developing country group, worker remittances represented on average 1.3% of GDP, 55.9% of FDI flows, and nearly 140% of the Aid flows. This varies from region to region. The proportion of the worker remittances in GDP is the highest in the MENA region (3% 2002) and the lowest in the East Asia and Pacific region (0.7% in 2002). Remittances as the proportion of FDI are the highest in the MENA region (466.7% in 2002) and lowest in East Asia and Pacific (19.3%).

In terms of total resource flows, remittances are the second largest component of external resource flows to developing countries after FDI. Remittances have been larger than Aid flows as a source of external development finance since 1997. In 2001 foreign Aid represented 18% of total external finance flows while remittances were 25%.

At the individual country level, remittances are relatively concentrated in the group of 20 developing countries that capture around 80% of total remittances to the developing world. In turn, the GDP of these 20 countries represents approximately 60% of GDP of the developing world (2003 World Bank). In 2001 the main recipient of worker remittances was India, receiving an annual flow of US $ 10 billions.

2.3. Stability of Remittances in the Economic Cycle

As mentioned in the previous section, worker remittances are more stable than portfolio investments and bank credit. Remittances can even be counter-cyclical. The different motives to remit reviewed above can shed some light in explaining this behavior. In the model of remittances based on altruism, the migrant can increase his remittances when there is an economic downturn in the home country (as income of the migrant's family declines). In this case, a remittance would be the equivalent of a private 'welfare payment' sent from abroad to help smooth the consumption of the recipient at home. However, business cycles may be internationally synchronized. The growing economic interdependencies of globalization make this a more plausible case. In this situation, a recession in the receiving country may be positively correlated with a recession in the source country, so that the ability of the immigrant worker to send remittances may be hampered by economic conditions in the host country. This is a real possibility, although the sender may also draw on existing savings to maintain a steady flow of remittances.

If remittances were driven by the portfolio decisions of the migrant (remittances driven by investment), again the relevant issue would be correlation between the rate of return of the assets in the host country and the rate of return on the assets at home. Here international correlation of the business cycle matters, as does the degree of financial integration between the source and the receiving country. In the model of remittances as mechanism of co-insurance, risk diversification may call for a steady flow of remittances if business cycles are not fully positively correlated between the source and the receiving country.

3. Remittances flow to India

India, with a vast reservoir of both highly skilled and semi skilled and unskilled labour force, is a major contributor to the contemporary global labour flows. Available evidences indicate that migrant labour flows from India since 1990s have not only registered impressive growth in respect of the traditional destinations like United States of America (USA), United Kingdom (UK), Canada and the Gulf countries but also have diversified and expanded to newly emerging migrant destinations in continental Europe (Germany, France, Belgium), Australasia (Australia, New Zealand), East Asia (Japan) and South-East Asia (Singapore, Malaysia). Consequently the proportion of Indian migrants in total immigration inflows in the major receiving countries has registered considerable increase in recent years. The most beneficial impact of the increasing number of migrants from India is the growing magnitude of remittances, which is now far in excess of the external sector aid and foreign investment flows and a major factor accounting for the improvements in India's balance of

payments. The inflows come from an Indian Diaspora estimated at around 25 million spread across nearly 130 countries and are both quite stable and rapidly growing with the flows all set to diversify further in the years to come.

India is the highest remittance receiving country in the world. With an increasing number of Non Resident Indians (NRIs) living overseas, either for work or having settled there, flows into the country have certainly grown dramatically in the past few years. The magnitude of the remittances can be judged by the fact that they exceed over three times the foreign direct investment in the country in 2006-07 **(Table 4.4** and **Figure 4.3)**.

Even India's total income tax and wealth tax collections together are less than the remittances received. However, while the remittances make up only about 5.5% of India's GDP, in other countries, remittances form a bigger share of the national economy. All tough the ratio of Remittances to GDP in India since 1991 has increased significantly. **Table 4.1** shows the remittances as the percent of GDP. In the year 2008-09 remittance was 5.5% of GDP compare to the 0.78% in the year 1990-91.

Table 4.1

Year	Remittances (US$ million)	Percent of GDP
1990-91	2069	0.780003
1991-92	3783	1.411162
1992-93	3852	1.362246
1993-94	5264	1.77688
1994-95	8093	2.56138
1995-96	8507	2.502954
1996-97	12367	3.382994
1997-98	11830	3.110002
1998-99	10280	2.544902
1999-2000	12256	2.825359
2000-01	12854	2.848411
2001-02	15398	3.242972
2002-03	16387	3.325985
2003-04	21608	4.046902
2004-05	20525	3.549585
2005-06	24493	3.874191
2006-07	29825	4.30164
2007-08	41705	5.515374
2008-09	44047	5.491498

Source: *Hand Book of Statistics on the Indian Economy 2008-09. Note: projected GDP value was used in calculation. For the purpose of conversion it has been assumed that US$1=45 Indian rupees (base period 1999)*

Among the Indian states, Kerala and Tamil Nadu are the biggest contributors, providing almost half of the total immigrants remitting money to India, followed by Karnataka, Gujarat, Andhra Pradesh, Maharashtra, and Punjab. It is statistically confirmed that over 25% of households in Kerala have at least one person working abroad.

Also, toppling a pre-conceived notion is the fact that the bulk of remittances come from workers in routine jobs, wage employees and service providers, and not by highly skilled professionals like doctors or software engineers.

The growing number and relatively higher skill levels appear to be driving the growth in Indian remittances. Better means of transferring funds, like electronic transfers are aiding the rapidly increasing remittances. Supporting the fact is the upbeat business of wire transfer companies with estimated revenues of $15 billion in 2006, and up to 30% profit margins.

The RBI has reported that Indian migrants transferred US$ 24.5 billion approx in the year 2005-06. India thus continues to retain its position as the leading recipient of remittances in the world. The figures have gone up touching US$ 44 billion in 2008, up from US$2 billion a year in the late 1980's. Interestingly, a large bulk of this money is flowing into the India's

promising property market. The figure US$ 12.3 billion in the year 1996-97 from US$ 2.1 billion in the year 1990-91, and jumped to almost US$ 22 billion in the year 2003-04 and dramatically increased to US$ 44 billion in the year 2008-09 **(Table 4.2)**. **Table 4.3** and **Figure 4.2** shows the growth rate of remittances flow to India. There were fluctuations in the growth rates, but the rise in the remittances flows are the most significant point to be observed **(Figure 4.1)**. After liberalization it has been seen that the data increased dramatically due to the reforms in the in the exchange rate policies

Figure 4.1

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2007-08	41705
2008-09	44047

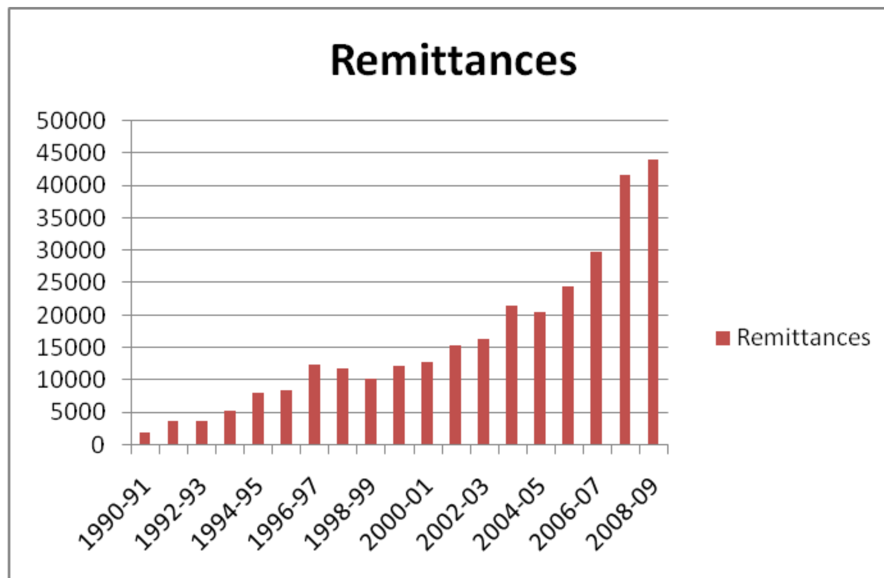

Figure 4.2

Source: *Hand Book of Statistics on the Indian Economy 2008-09*

Table 4.3

Year	Remittances (US$ million)	Growth rate
1990-91	2069	
1991-92	3783	82.84195
1992-93	3852	1.823949
1993-94	5264	36.65628
1994-95	8093	53.7424
1995-96	8507	5.115532
1996-97	12367	45.3744
1997-98	11830	-4.3422
1998-99	10280	-13.1023
1999-00	12256	19.22179
2000-01	12854	4.879243
2001-02	15398	19.7915
2002-03	16387	6.422912
2003-04	21608	31.86062
2004-05	20525	-5.01203
2005-06	24493	19.33252
2006-07	29825	21.76949
2007-08	41705	39.83236
2008-09	44047	5.615634

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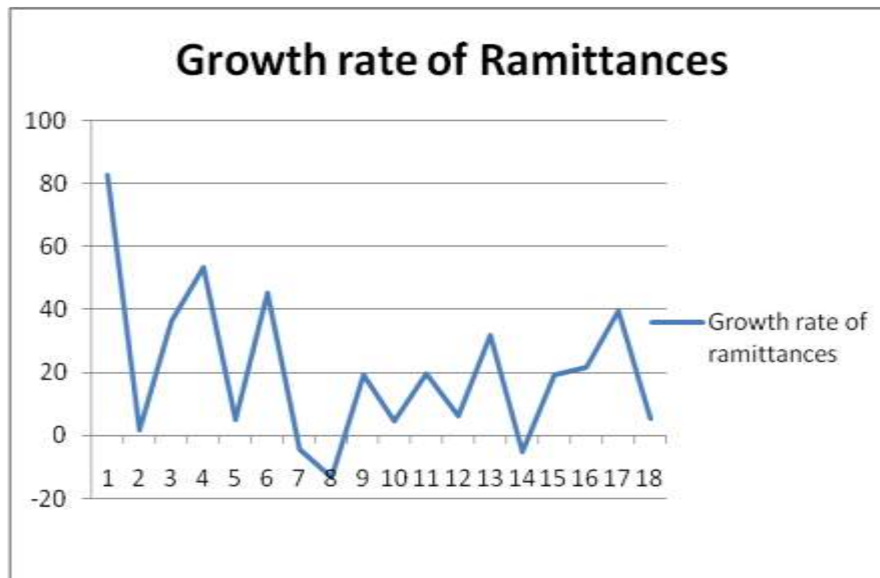


Source: *Hand Book of Statistics on the Indian Economy 2008-09*

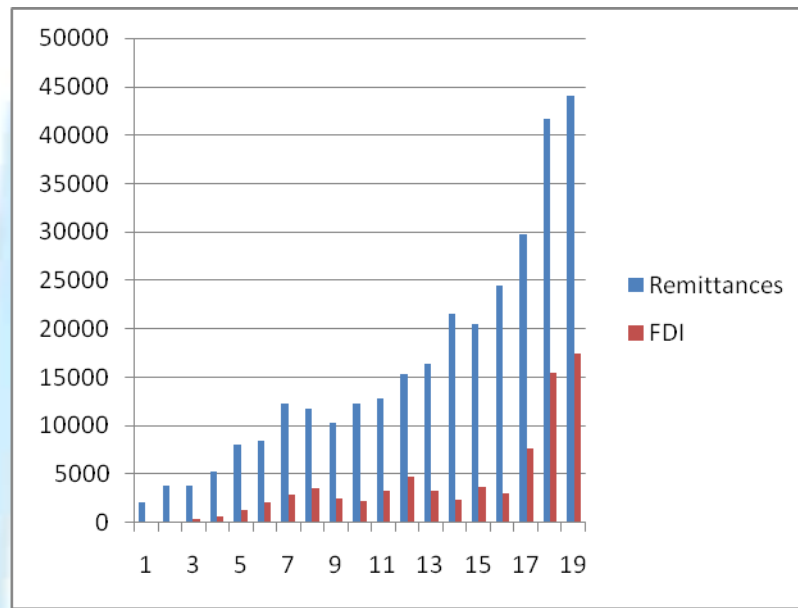
There are several factors which are responsible for this the continued tax exemption on interest income has worked as an incentive. In the early 1990s, when the country was suffering from a balance of payment crisis, NRI deposits were given tax benefits for attracting foreign exchange. An upsurge in NRI deposits can be attributed to incessant tax exemption, attractive interest rates and better facilities provided by banks and finance institutions in India. This has led to a large inflow. Many NRIs also found it attractive to invest in India considering the higher rates of interest as compared to other countries.

Soon after independence India embarked on a strategy of import substitution in the frame work of development planning with a focus on encouraging and improving the local capability in heavy industries including the machinery-manufacturing sector. As the domestic base of created assets, technology, skills, entrepreneurship, etc was quite limited, the attitude towards FDI was increasingly receptive. FDI was destined to be used to bring about the skills and technological advancement along with increase in capital base of the country. From the 1991 onwards FDI was liberalized through the Industrial Policy of 1991. After Foreign Direct Investments (FDI), remittances have emerged as the largest external capital source for developing nations like India. Amount of NRI remittances have been exceeding FDI inflows in India for the last few years. The **Table 4.4** and **Figure 4.3** below shows the NRI remittances started rolling over against the FDI in India. The remittances were near about 3.9 times of FDI in the year 2000-01 and it was about 9 times of FDI in the year 2003-04. FDI has gradually increased in recent years though still it is lesser than the remittances near about 2.5 times of the remittances.

Table 4.4

Years	Remittances (US$ million)	FDI (US$ million)	Percent of FDI
1990-91	2069	97	2132.99
1991-92	3783	129	2932.558
1992-93	3852	315	1222.857
1993-94	5264	586	898.2935
1994-95	8093	1343	602.6061
1995-96	8507	2143	396.9669
1996-97	12367	2842	435.1513
1997-98	11830	3562	332.1168
1998-99	10280	2480	414.5161
1999-00	12256	2167	565.5745
2000-01	12854	3272	392.8484

2001-02	15398	4734	325.264
2002-03	16387	3217	509.3876
2003-04	21608	2388	904.8576
2004-05	20525	3713	552.7875
2005-06	24493	3034	807.2841
2006-07	29825	7693	387.6901
2007-08	41705	15401	270.7941
2008-09	44047	17496	251.7547



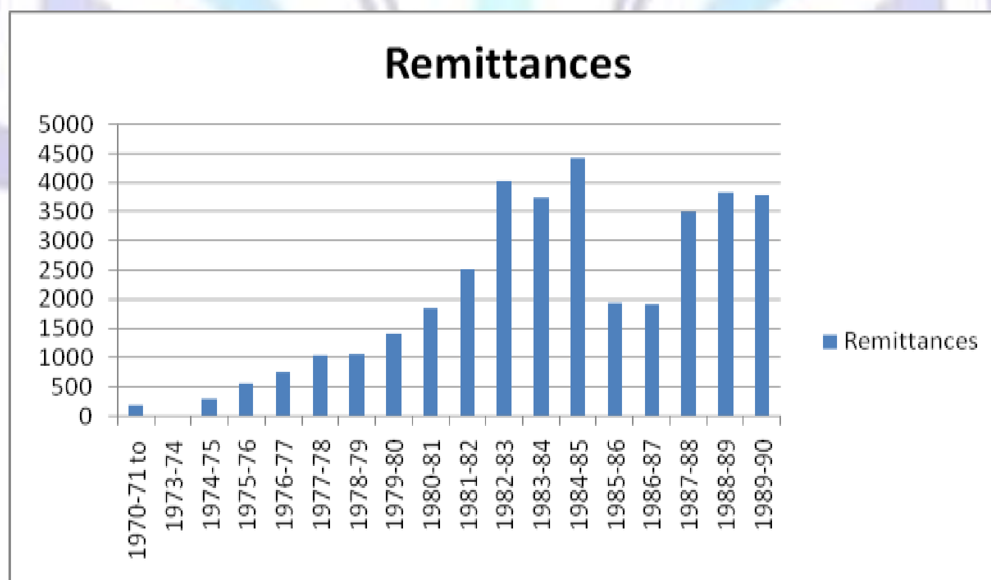
Source: *Hand Book of Statistics on the Indian Economy 2008-09*

3.1. History of Remittances Flow to India

The trends in remittances during the 1970s and 80s are outlined in Table 2.1 which confirms the sharp rise in remittances beginning in the mid 1970s. Data of remittances before 1970s are not available. The **Table 4.5** and **Figure 4.4** show the growing significance of remittances as a mean of financing the payments deficit in India.

Table 4.5

Years	Net private transfer Remittances(Rs crore)
1970-71 to 1973-74	169.9
1974-75	279.9
1975-76	541.2
1976-77	745.6
1977-78	1029.3
1978-79	1059.3
1979-80	1412.7
1980-81	1840.8
1981-82	2507.7
1982-83	4037
1983-84	3733.9
1984-85	4429.6
1985-86	1935.9
1986-87	1918.3
1987-88	3498.4
1988-89	3841.6
1989-90	3797.7



Source: *RBI data on Balance of Payments*

The macro economic factors underlying the increase in remittances flow might be attributed to the following factors:

The real gains to India on a large scale from OPEC countries came through the direct export of labour which increase at a phenomenal pace throughout the late 1970s, and reached their peak level in the early 1980s and it continued in the late 80s. The economic boom in the Middle Eastern economies, particularly the Middle East, which was flowed the increase in the oil prices, led to a massive temporary emigration of large number of Indian workers-both skilled and unskilled as simply labourers, skilled technicians, nurses, office assistance, etc. to the Gulf Countries. This export of labour was a principal source of foreign exchange earnings for India from oil rich Gulf Countries. These workers kept sending their net earnings back home. Consequently, transfer payments to India on private account moved up from on an average annual flow of Rs. 49.9 crore during the Third Plan period to Rs. 917.3 crore in 1977-78 and Rs. 4037 crore in 1982-83. This phenomenal rise is essentially due to the remittances from the migrant workers in the Middle East. But in late 80s the data are quite fluctuating. There was a sharp decline in remittances flow to India in the year 1985-86 to the year 1986-87. It became Rs. 1918.3 crore in the year 1986-87. After that there was a sharp rise from the year 1987-88 till the year 1989-1980.

In 23 June, 1972 the United Kingdom allowed the pound to float. Its external value promptly began to fall in the foreign exchange market. Since the rupee continued to be linked to the pound, its external value also fell alongside that of the pound. There was a steady effective value of the rupee vis-à-vis the SDR basket of currencies, until 1975 and the US Dollars, until 1976. This depreciation of the rupee, in conjunction with the exchange control regime, seemed to have directed a very large proportion of inflows of remittances through official channels.

In addition to the earnings from the direct export of labour and to that of earnings of reserves from the fall in the external value of the rupee, there was another reason behind the improvements in the balance of payments position in the 1970s, although it is difficult to make precise estimates regarding the contributions made by this factor. Following the crisis in the international monetary system during the early 1970s ,the international market price of gold shot up dramatically in the mid-1970s.There was even periods when the domestic price of gold(at the official exchange rate) was lower than the international price. As is well known, the enormous financial attraction of moving gold illegally into India has been an important basis for the substantial smuggling activities across the Indian borders. Hence after a long time, elimination of the large price-gap between the international price of gold and the domestic price of gold in India, led to a significant dampening influence on the smugglers' trade and their demand for foreign exchange, resulting in a better showing in the receipts and payments statistics of the Reserve Bank of India. At the same time, there emerged the disparity in price between the price of silver in India and the world price of silver. Latten on elimination of the large price-gap between the international price of silver and the domestic price of silver in India, also led once again in the fall of smugglers' demand for foreign exchange.

The policy that made simplification of banking procedures for remittances, an extension of banking services overseas and most importantly, liberalization of foreign exchange regulations for NRIs on the one hand, and government's extensive use of Conservation of Foreign Exchange and Prevention of Smuggling Act(COFEPOSA) and Maintenance of Internal Security Act(MISA) against smugglers during the period of Internal Emergency between 1975 and 1976, enhanced the inflow of remittances through official channels.

3.2. The Concept of Remittances according to RBI

Two types of financial flows are associated with the concept of remittance in India. First, there are inflows of funds that represent unrequited transfers from migrants to support their families, whether for consumption or for investment purpose. Second, there are inflows of funds as capital in form of Non resident deposit accounts.

To take remittance first: workers' remittances to India are recorded under the current transfers in the balance of payment accounts. It includes all unilateral remittances by Non-resident Indians (NRI) and foreign nationals of Indian origin for the purpose of family maintenance, transfer of savings, gold and silver brought by non resident and gifts. There is no quid pro quo for those transactions. The private transfers do not include credits to various non resident deposit accounts. Only local withdrawals from such accounts (in rupee denomination only) are included in the private transfers.

According to RBI, Remittances through formal channels include two flows: inward remittances and local withdrawal from Non-Resident Indian (NRI) deposit accounts. The term NRI popularly refers to members of the Indian Diaspora, including Indian citizens living abroad and people of Indian origin.

Inward remittances are direct transfers of funds from one person abroad to another in India, typically through a bank or wire transfer agency. Such transfers are generally sent to provide family support i.e. to increase the standard of living of the family.

Indian banks have established NRI deposit accounts especially for NRI's. The deposit schemes, which the government of India authorized in the year 1970, have been used to attract foreign capital when the Indian government felt the need to rise up its foreign exchange reserve. To make deposit accounts attractive, NRI depositors are given the choice of holding deposits in foreign currency denominations or in Indian rupees. Depositors in foreign denomination can repatriate their principle and interest in foreign currency when they choose. Thus the repatriable deposits are treated like debt. On the other hands, RBI treats funds that NRIs locally withdraw as rupee-denominated deposits as remittances to RBI, these transactions cease to be a liability and assume the form of "Unrequited Transfer".

The relationship between the two components of the remittance flow is important for understanding the remittance phenomenon in India. For the last few years, local withdrawal from NRI deposit accounts has exceeded the amount of

inward remittances; the differences were US$ 2.3 billion in 2005-06. Local withdrawal exceeded inward remittances in 2003-04 by the ratio of 1.2:1, in 2004-05 by the ratio of 1.11:1, and in 2005-06 by the ratio of 1.23:1. **Table 4.5** and **Figure 4.4** indicates the increase in remittances subject to the net inflow of NRIs bank deposits.

Table 4.5

Year	Remittances (US $ million	Net inflow of NRIs bank deposits (US $ million)
1990-91	2069	1537
1991-92	3783	290
1992-93	3852	2001
1993-94	5264	1207
1994-95	8093	172
1995-96	8507	1104
1996-97	12367	3350
1997-98	11830	1125
1998-99	10280	961
1999-2000	12256	1540
2000-01	12854	2316
2001-02	15398	2754
2002-03	16387	2978
2003-04	21608	3642
2004-05	20525	-964
2005-06	24493	2789
2006-07	29825	4321
2007-08	41705	179
2008-09	44047	4290

Source: *Hand Book of Statistic on the Indian Economy 2008-09*

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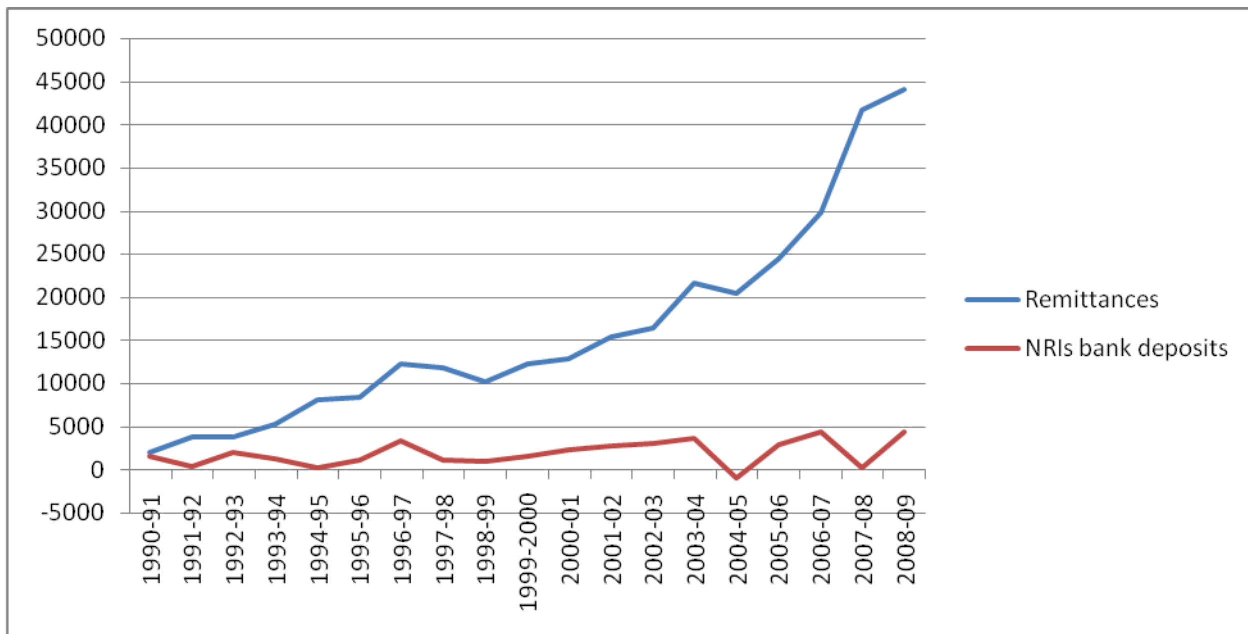
Figure 4.4



So we have observed that the NRI deposit accounts mainly the part of local withdrawal have a great impact in the increase in remittances flow to India. But from data by RBI it is observed that in the year 2004-05 there was a drastic decline in the Net inflow of NRIs bank deposits; it became US$ -0.964 billion which was previously US$ 3.6 billion in the year 2003-04. This drastic fall in NRIs bank deposits also reflected in total remittances account, it was US$ 20.5 billion in the year 2004-05.

Evidence here suggests that the importance of redeemed bonds should not be over looked. For example the popular Resurgent India Bonds, launched in 1998, matured in 2003. A sizable portion of the redeemed values of the bonds was retained in India, instead of being repatriated abroad in foreign currency. That retained amount was thus recognized as remittances resulting in the bulge in 2003-04 US$ 21.6 billion and the net NRI deposits accounts were US$ 3.6 billion. Similarly, the Millennium India Bonds, issued in 2000, matured at the end of 2005. It is likely that the redemption of those bonds contributed to remittance surge in 2005-06 to the tune of US$ 24.4 billion. The cause of decline in remittance flow in 2004-05, was that the overall amount of private transfers somewhat decreased in 2004-05, a year in which no such NRI bonds matured, so it may be the cause that in that year there was a massive decrease in net NRIs bank deposits. But the local withdrawal exceeded the inward remittances by US$ 0.943 billion.

3.3. Factors Responsible for Remittances Growth in India

India's extensive economic reform of the early 1990s consisting of structural adjustment and stabilization policies provides an important context. In 1990, India faced a severe BoP crisis. The Gulf crisis of 1990 led to an unprecedented crisis in balance of payments. The immediate impact was the rise in the oil import bills. It also resulted in a decline in workers' remittances, as well as additional burden of the repatriation and rehabilitation of NRIs from the affected zones of West Asia. As a consequence of the increase in the price of oil as well as certain other oil related imports, the trade deficit for the year 1990-91 deteriorated by amount US$ 2 billion. The deterioration in the trade account as well as invisibles led to a current account deficit in 1990-91 of US$9.7 billion, which was 3.1% of GDP. India's foreign currency assets were depleted to the point near default, and the international confidence in India's economy had eroded.

In response, the government of India instituted a set of structural reforms. The result was "Economic Liberalization", which began in 1991. It has been indicated as "India's second independence".

It gradually ended the state monopoly on a range of industries, allowed foreign capital in most sectors of the economy, lowered taxes and tariffs and rolled back currency controls. These reforms accelerated India's integration into the world economy and represent a larger change in the Indian mindset. There is a notable increase in the remittances flow to India after liberalization (**Table 4.1**). There are some factors which are responsible for this,

3.3.1. The Increasing Role of Official Channels:

A significant factor contributing to the reported remittance surge is simply the increased use of official channels for remitting money to India. Before 1993, the government of India strictly regulated the exchange rate of the Indian rupee, creating huge incentives to transfer money through informal, unregulated Hawala networks.

Hawala networks in India were used because of the advantageous exchange rate as well as to circumvent tight control on the transfer and possession of gold, a commodity highly valued in India. With the Liberalization of gold imports, beginning in 1992, the incentive to transfer through Hawal networks diminishes. In 1993 the Indian government established a market based exchange rate and it further diminishes the role of Hawala networks.

After the September 11 attacks in 2001, there has been heightened interest in tracking and regulating Hawala type networks, reflecting international concern about the financing terrorist activities. In the United States these networks came under the money transfer regulation at the end of 2001, and the government froze the assets of at least one “Hawala conglomerate”.

Before 1991, rigid regulation on the conversion of rupees to foreign currency meant that most NRIs chose to keep their money in repatriable foreign currency. Liberalization of the exchange regime started in 1992, and the highly criticized Foreign Exchange Control Act (FERA) was replaced in 2000. FERA imposed a strict control system on all transactions in foreign exchange, permitting only a limited number of transactions per year, and fixed the rupee exchange rate. FERA was replaced by Foreign Exchange Management Act (FEMA) in 2000, which relaxed controls on foreign exchange transactions. The data from RBI is quite striking. In March 1991, foreign currency denomination deposits formed 72 percent of total NRIs deposits; it diminished to only 34.7 percent of total NRI deposits by March 2005. In addition, NRIs are also withdrawing more money for use or consumption in India. This indicates the recent increase in the local withdrawal component of remittance figure.

3.3.2. The Shift in Emigration Pattern:

If the migration of Indian workers to the Gulf States was the dominant story of the 1970s and the 1980s, the migration of information technology (IT) workers, principally to the United States, has been the trend since the mid-1990s. Even in the Gulf countries, the number of Indian professional and managerial workers is increasing. Thus, the relative number of Indian professional workers going abroad has been growing.

This new high-skilled Indian workers has greater purchasing power as well as more savings potential than lower skilled workers. Plus, the growth of India’s homegrown IT services industry has helped foster strong business connections between India and Indian IT professional abroad.

The change in patterns of emigration has led to a significant shift in the source regions of remittances to India. According to RBI, North America has replaced the Gulf States as the most important source of remittances. RBI estimates that 44 percent of remittances originate in North America, 24 percent in the Gulf region, and 13 percent in Europe. In contrast, studies show that in 1990 – 1991, 40 percent of the remittances came from Gulf countries and 24 percent from North America. Indian banking officials believe the shift began in the late 1990s, with North America solidifying its dominance in 2002 – 2003.

3.3.3. More Facilities for Money Transfer:

The rise in remittances, in some measure, reflects the increasing number of formal channels for transmitting money to India. Options for transmitting money to India have also become much more competitive; the field is no longer strictly dominated by traditional transfer agents like Western Union. A survey of commercial banks conducted by RBI in 2006 indicates that 53 percent of remittances were transmitted by electronic wire/SWIFT, making it a dominant choice of overseas Indians.

Although electronic wires are the fastest means of remitting, they can be expensive: There is a 2.5 to 8 percent fee for amounts less than US$ 500 (US$ 6 to US$ 20 to remit US$ 250); the cost drops to 0.7 to 2 percent for transfers between US$ 500 and US$ 1000 (US$ 5 to US$ 15 to remit US$ 750).

Yet the RBI study indicates that the average size of remittance transfer to India is relatively high. Remittances of $ 1,100 and above accounted for 52 percent of the total remittance inflow to India. And within that high remittance category, 63 percent of remittances exceeded $ 2,200. Only 30 percent of remittances were for amounts less than $500. But the system certainly favors the richer end of the remitting spectrum.

3.3.4. Increase in the Prospect of Investment in India:

The most significant factor in the surge in remittances, ultimately, may be the way NRIs perceive the Indian economy. If the liberalization of the Indian economy in 1991 was a clear benchmark, its real significance has taken time to crystallize.

Until as recently regular remittances dominated the flow from NRIs. With the Indian economy growing at an average rate of 8 percent per year in the last few years, NRIs now see India as an “investment destination.” Real estate and equity markets are the principal areas of their interest. These sectors, restricted to NRIs in the past, are experiencing a boom. In 2005, for example, real estate experts believe that in Delhi, 20 percent of all properties worth over one crore (10 million rupees or about US $250,000) were bought or funded by NRIs. Even second-generation Indians are buying property in India. The new-found interest in the real estate and equity markets is another explanation for the increase in local withdrawals in RBI’s remittance figures. NRIs may have finally become “investors” rather than “savers”.

3.4. Impact of Global Slowdown on Indian Remittances

The trade impacts of Global slowdown had split over into invisibles trade, under which there are items like private transfers and remittances from NRIs (which are shown on the current account rather than capital account of the BOP). Remittances have helped so far in offsetting India’s merchandise trade deficit to a large extent. It is feared that recession induced rising job losses in the US and Europe could impact migrant workers more severely. Fears have also been expressed about reverse migration of Indian labourers working in Gulf countries, which could result in a decline in inflows of remittances and NRI deposits to India. Actually the construction industry in the Gulf region, especially in the UAE, has faced a difficult time due to global meltdown and has left millions of construction workers with uncertain future. The relative stability in

such transfers, compared to other capital account items, such as NRI deposits, foreign direct investment and portfolio investment, has also enabled the containment of the current account deficits at modest levels in the fact of pressures on other accounts. It was expected that inward remittances of India would no way be impacted significantly by the global economic crisis. According to the World Bank estimates, India received significantly higher remittances to the tune of US$52 billion in 2008 as compared with US$38.7 billion in 2007. This could be attributed to a number of actors, such as depreciation of the rupee, hike in interest rate ceilings on NRI deposits since September 2008 and uncertainties in oil-prices, which might have induced the workers to remit their money to India as a hedging mechanism due to its relatively better growth prospects. According to an earlier study by the Reserve bank of India, region-wise, North America accounts for nearly 44 per cent of the total remittances to India, followed by the Middle East (24 percent) and Europe (13 percent). In vies of the recessionary conditions in the advanced economics and sharp moderation in growth in the Middle East, some slowdown in remittances could be experienced in the near term. In fact, Global crisis had spillover effects on India's invisibles trades through lower remittances from non-residents workers due to jobs shrinkage and finalization of income contract in the US and EU and other countries and lower earnings from tourism. Thus the fallout of the crisis has permeated onto the country's services sector. According to the world Bank study, remittances which have so far been a major source of BOP support in many emerging economies and were of the order of US$305 billion in 2008 to developing countries far exceeding the flow of official assistance, are likely to fall by 5-8 percent in 2009, which may cause hardship to many poor countries. It is of no wonder that India, being so far the top recipient of such type of private transfer among developing countries currently standing at US$ 44.2 billion for the year 2008-09 could escape the global financial crisis in this respect.

4. Do Effective Exchange Rates Influence Remittances Flow to India?

In order to access the importance between Real Effective Exchange Rate (REER) and Remittances in the Indian context since the Liberalization period 1990-91 to 2008-09, we have attempted Granger's causality test between these two variables.

The logic for taking REER that it is the most important macro economic variable that influences international competitiveness in the present post — WTO era of increasing globalization. We have taken quarterly data of REER (E_t) and Remittances (R_t) from Apr-June92 to Janu-March09. A four period lag structure is assumed for two variables, viz, the REER (E_t) and Remittances (R_t). We postulate the following relations:

Model 1:

A. $E_t = f (E_{t-I} , R_{t-I})$ Unrestricted Form

B. $E_t = f (E_{t-I})$ Restricted Form

Model 2:

A. $R_t = g (R_{t-I} , E_{t-I})$ Unrestricted Form

B. $R_t = g (R_{t-I})$ Restricted Form

It is clear that part B of the Models 1 and 2 can be obtained by dropping the second variable from the estimable forms of part A of these models.

Here i= 1, 2, 3, 4 stands for four period lag.

The estimable equations of Model 1 and 2 are as follows:

Model 1:

A. Unrestricted Form with four period lag

$$E_t = \mu_0 + \mu_1 E_{t-1} + \mu_2 E_{t-2} + \mu_3 E_{t-3} + \mu_4 E_{t-4} + \pi_1 R_{t-1} + \pi_2 R_{t-2} + \pi_3 R_{t-3} + \pi_4 R_{t-4} + U_t$$

B. Restricted Form with four period lag

$$E_t = \mu_0 + \mu_1 E_{t-1} + \mu_2 E_{t-2} + \mu_3 E_{t-3} + \mu_4 E_{t-4} + V_t$$

Model 2:

A. Unrestricted Form with four period lag

$$R_t = \alpha_0 + \alpha_1 R_{t-1} + \alpha_2 R_{t-2} + \alpha_3 R_{t-3} + \alpha_4 R_{t-4} + \beta_1 E_{t-1} + \beta_2 E_{t-2} + \beta_3 E_{t-3} + \beta_4 E_{t-4} + U_t$$

B. Restricted Form with four period lag

$$R_t = \alpha_0 + \alpha_1 R_{t-1} + \alpha_2 R_{t-2} + \alpha_3 R_{t-3} + \alpha_4 R_{t-4} + V_t$$

When we put π_t=0 v i=1,2,3,4 in Model 1 A we get Model 1 B. And again when we put β_t=0 v i=1,2,3,4 in Model 2 A we get Model 2 B. The Null Hypothesis is that R_t does not Granger cause E_t and that in Model 2 is that E_t does not Granger cause R_t. Granger causality obtains when Null Hypothesis is rejected i.e. the calculated F-statistic exceeds the tabulated value.

4.1. ANOVA Tables for Model 1 and 2

Model 1 A

Residual sum of squares (RSS)	D.F.	F	Adjusted R^2	D.W.
56419427	55	58.875	0.880	1.971

Model 1 B

Residual sum of squares (RSS)	D.F.	F	Adjusted R^2	D.W
58351974	59	121.643	0.885	1.950

Model 2 A

Residual sum of squares (RSS)	D.F.	F	Adjusted R^2	D.W.
524.234	55	3.401	0.434	0.944

Model 2 B

Residual sum of squares (RSS)	D.F.	F	Adjusted R^2	D.W.
653.854	59	4.969	0.601	0.865

Adjusted R^2 is the modified measure of goodness of fit. It is possible for adjusted R^2 to decline if an additional variable produces too small a reduction in $(1-R^2)$ to compensate for the increase in (n-1) / (n-k)

Model 1(A and B) showing 88% goodness of where as Model 2 A showing 40% and 2 B showing 60% goodness of fit.

Durbin Watson (D.W.) test is used to check whether the model is suffering from auto correlation or not. $d=2(1-\rho)$. If ρ= -1then d=4, ρ=0 then d=2, ρ=1 then d=0. If the value of d is close to 4 then the model is taken as negatively auto correlated, if the value of d is close to 2 then model is non auto correlated and when the value is close to 0 then the model is positively auto correlated. For some given values of 'n' and the explanatory variable 'k', we get the d_L and d_U values from the d-Table. Using these values, we derive the whole range of 'd' into five sub ranges.

If $0<d<d_L$ we fail to reject H_0: ρ=1, there exists a positive auto correlation

If $4-d_L<d<4$ we fail to reject H_0: ρ= -1, there exists a negative auto correlation

If $d_U<d<4-d_U$ we fail to reject H_0: ρ=0, there exists no auto correlation

If $d_L<d<d_U$ and $4-d_U<d<4-d_L$ we can not conclude about the presence of auto correlation.

From the above ANOVA table we find in both the cases of Model 1 (A and B) the value of D.W. is very close to 2 i.e. in Model 1A D.W. = 1.971 and in Model 1B D.W.= 1.950. So we can conclude that the Model 1 is not suffering from auto correlation.

And for the Model 2 (A and B) the values of D.W. are 0.944 in A and 0.865 in B

From the ANOVA Table we find in Model 1 the estimated

$F (4,55) = \{(RSS_B – RSS_A) / (59-55)\} / (RSS_A / 55)$

$= \{(58351974 - 56419427) / 4\} / (56419427 / 55)$

=0.47098

This falls short to the tabulated value at 5% level of significance i.e. F (4, 55)=2.53

Here the Null Hypothesis H_0: R_t does not Granger cause E_t is not rejected due to the tabulated value. So R_t does not Granger cause E_t.

On the other hand, from the ANOVA Table we find in Model 2 the estimated

$F(4,55) = \{(RSS_B - RSS_A) / (59\text{-}55)\} / (RSS_A / 55)$

$= \{(653.854 - 524.234) / 4\} / (524.234 / 55)$

$=3.34$

Here the estimated F(4,55)=3.34 > tabulated F(4,55)=2.53 at 5% level of significance. Therefore the Null Hypothesis H_0: E_t does not Granger cause R_t , is rejected and Trade weighted real effective exchange rate (REER) does Granger cause Remittances. Thus we find in Indian case, the direction of causality runs from REER to Remittances, and not the other way round.

5. Conclusion

In what follows from our previous discussion is the fact that

CA=(X-M) + NFIA+NFT

where CA= Current account surplus, X and M are exports of goods and services and imports of goods and services respectively, NFIA is net factor income earned abroad and NFT is net transfers receipt from abroad in the Indian BoP .The entry NFIA includes only the receipts on Indian investments abroad and payments in foreign investments in India. The NFT includes unilateral transfers such as foreign aid and remittances. That the latter makes a major contribution to the current account in India is evidence from our dissertation showing there by that transfer consisting mainly of remittances, declined as a proportion the GDP throughout the 1980s but showed a steady expansion after the 1990-91 crisis. From just 0.8% of the GDP in 1990-91, they expanded to more than 5.5% in 2007-08. Thereafter they declined due to the impact of global meltdown on India's BoP transmuting the above meltdown mainly through the trade channel.

However since the crisis, the RBI has managed the current account, to the point that for each of the three years during 2001-04, India experienced a current account surplus. A key factor that has aided the RBI in this task is the expansion of remittances. The expansion of remittances is so vast that India becomes the highest recipient of remittances among the developing countries. With an increasing number of NRIs living overseas, either for work or having settled there, flows into the country have certainly grown dramatically in the post liberalization period. The magnitude of remittances can be judged by the fact that they exceed over three times the foreign direct investment in the country.

Following the onset of the 1991 reforms, both remittances and NRI deposits grow rapidly in the 90s and beyond. The spurt has in part been due to the rapid growth in the stock of Indian citizen residing abroad (especially North America) and the degree to which their earning power has increased. Policy changes including the large devaluation of the rupee and liberalization of gold imports have also made a difference, especially in bring remittances from the Middle East through the official channels rather than underground (Hawala market).

We all know that the size and frequency of total remittance flows is determined by several factors, such as: the number of migrant workers, wage rates, economic activity in the host country/region and in the sending country/region, exchange rates, political risk, facilities for transferring funds, marital status, level of education of the migrant, whether or not accompanied by dependents, years since out migration, household income level, relative interest rate between labour-sending and –receiving. This all factors influence the flow of remittances sent by the migrants to his or her home country. Among the factors we have taken exchange rates- particularly the real effective exchange rate (REER), to show that REER is a crucial variable which influences the size of the total remittances flow to India. For this in order to access the importance between Real Effective Exchange Rate (REER) and Remittances in the Indian context since the Liberalization period 1990-91 to 2008-09, we have attempted Granger's causality test between these two variables and find that the direction of causality was from REER to Remittances and not the other way round. Thus the significance of remittances was far greater in the external sector. In absolute terms, in 203-04, for example remittances were US$ 22 billion approx, as compared to exports at US$ 64.7 billion, imports at US$ 80.2 billion, direct foreign investment inflows at US$ 4.7 billion, and portfolio investment flows at US$ 11.4 billion.

There can be no doubt that remittances are a real blessing, not only for the migrants' families at a micro level but also for the economy at a macro level. Available evidence suggests that remittances, in the aggregate as also per capita, from un-skilled and semi-skilled migrants are significantly higher than remittances from others.

These remittances also provide resources for investment in the rural sector, particularly agriculture, or help to acquire assets for self employment in the urban sector. In sum such remittances create consumption possibilities and income opportunities for the poor or for the less well endowed. In contrast, remittances from educated and professional migrants, drawn from upper end of the spectrum of incomes before departure, in the aggregate as also per capita, are much lower.

In the context of the balance of payments, at a macro level the story is simple. The remittances inflow financed are large proportion of the balance of great deficit and thus reduce the current account deficit to manageable proportion. Indeed, at this juncture, remittances are far and away the most important source of external finance for India. The repatriable deposits provided external resources to finance the current account deficit, for a while in much the same way as away other form of borrowing abroad may have done. These may have eased BoP difficulties.

References

1. Aiyer, Swaminathan S. Anklesaria(2005) 'An Unexpected Bonanza from the NRIs' *The Economic Times,* May 25.
2. Alfieri, Alessandra et al (2005) 'Definition of Remittances and Relevant BPM5 Flows' *www.google.co.in.*
3. Ali, Sadaat (2005) 'Foreign Remittances Drop 10% to $ 21 b in 2004-05' *The Economic Times,* August 15.
4. Awasthi, Raja (2005) 'NRIs Move into the Heart of Capital', *The Economic Times*, November 6.
5. Bhattyacharya, B.B. and Sabyasachi Kar (2007*) Macroeconomic Reforms, growth and Stability*, Oxford UniversityPress.
6. Bhusan, Kul (2008) 'NRIs Send Money to India - Remittances are Top Priority' *www.Parinda.com*.
7. Chishti, A.Muzaffar (2007) 'The Rise in Remittances to India: A Closer Look' *www.MigrantPolicy.com*.
8. Cohen, Robin (ed.) (1995) *'The Cambridge Survey of World Migration'*, The Cambridge University Press.
9. Das, Gurucharan (2006) 'The India Model', *Foreign Affairs*, July/August.
10. Desai, Mihir A., Desai Kapur and John McHale (2001) 'The Fiscal Impact of the Brain Drain: Indian Emigration to the U.S.', *Weekly Political Economy Discussion Paper.* Harvard University, Massachusetts.
11. Doorn, Judith van (2002) 'Migration, Remittances and Small Enterprise Development' www.MigrantPolicy.com.
12. Giuliano,P etal (2006) 'Remittances Financial Development and Growth', *www.MigrantPolicy.com*.
13. Gordon, James and Poonam Gupta (2004) 'Non-Resident Deposits in India: In Search of Return?' *IMF Working Paper.*
14. Gupta, Poonam (2009). 'Macroeconomic Determinants of Remittances: Evidence from India' *International Monetary Fund.*
15. Kannan, K. P. (2005) 'Kerala's Turnaround in Growth Role of Social Development, Remittance and Reform', *Economic and Political Weekly*, February 5.
16. Karmakar, Asim K. (2010) *Balance of Payments Theory and Policy : The Indian Experience*, Deep and Deep Publications, New Delhi.
17. Nayyar, Deepak (1994) *Migration, Remittances and Capital Flows: The Indian Experience* (Delhi: Oxford University Press).
18. Mahmood, R.A (1991) 'Employment of Bangladeshis Abroad & Use of their Remittances,' *Dhaka Planning Commission,* Government of Bangladesh.
19. Maimbo, Samuel Munzele and Dilip Ratha (eds.), (2005**)** *Remittances:Development Impact and Future Prospect.* World Bank.
20. Panagariya, Arvind (2008) *India: the Emerging Giant*, Oxford University press.
21. Punnathara, C.J (2007) 'Foreign Remittances — Growing with the Flow', *Business Daily* from THE HINDU group of publications.
22. Ratha, Dilip (2007) 'Leveraging Remittances for Development', Development Prospects Group, *The World Bank*. Washington, DC.
23. Ratha, Dilip (2003) 'Workers Remittance: An Important and Stable Source of External Development Finance', *Global Development Finance*, The World Bank. Washington, DC.
24. Reinke, Jens (2007) 'Remittances in the Balance of Payments Framework: Current Problems and Forthcoming Improvements' *Statistics Department of International Monetary Fund.*
25. Solimano, Andres (2005) '*Remittances by Emigrants: Issues and Evidences'* in A.B. Atkinson (ed.), *New Sources of Development Finance,* Oxford University Press.
26. Sørensen, Ninna Nyberg (July 2005) 'Migrant Remittances, Development and Gender' www.diis.dk.