PART TWO

Remittance Inflows, Growth, and Poverty

REMITTANCES INFLOWS, GROWTH AND POVERTY: THE CASE OF PAKISTAN

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I. INTRODUCTION

It is now well documented that migrants' remittances represent a significant part of international capital flows from labor-scare, richer economies to labor-exporting, less developed countries. However, there remains an inadequate understanding as to how the often voluminous migrant remittances are used and to what extent they contribute to the development of the migrant's country of origin.

Most researchers believe that the bulk of remittances is spent on personal consumption and thus, there is no or insignificant economic impact of international remittances. Lipton (1980), for instance, maintains that "everyday [consumption] needs often absorb 90 percent more of a village's remittances" and that "investment is only the fourth [and last] priority for remittances". Similarly, Gilani et al (1981) in his analysis of remittances in Pakistan found that most of the remittances are spent on consumption. Overall, it was found that 62 percent of remittance expenditure went into current consumption, 22 percent into real estate, 13 percent into direct investment, and 3 percent into financial investment.

The above view is, to some extent, contradicted with the help of macroeconomic-based multiplier theory. Researchers have pointed out that even if remittances are totally spent on consumption, there will still be a benefit to the receiving economy, to the extent that at least some of the funds are spent on domestically provided and produced goods and services. For instance, Amjad (1986) inferred that remittances have financed significant portions of the increases in the aggregate macro variables (consumption, residential construction and investment) of Pakistan's economy. Stahl and Habib (1989) used input-output tables for Bangladesh to construct a simple remittance multiplier. The average value for this multiplier was about 1.24 and this was basically a consumption effect. Nishat and Bilgrami (1991) used a simple Keynesian structural model to estimate the remittance multiplier for Pakistan. They found a multiplier of 2.43, which operates primarily through the consumption effect. Adelman and Taylor (1990) constructed a social accounting matrix for Mexico and found an output multiplier of 3.2 for remittances. Nonetheless, the multiplier stories capture at least the short-run impact of remittances on the receiving economy and virtually there is no literature to demonstrate the long-term relationship between international remittances and economic development.

Some observers view remittances as a source of foreign exchange for many developing countries where its limited availability acts as a major constraint on economic development and social safety-net programs and stabilization policy. For example in Pakistan, remittances have been recognized as a significant factor in the reduction of external debt, a doubling of foreign reserves and even the posting of account surplus in 2002. The excessive flows have resulted in more fiscal space for development and pro-poor expenditure and helped in stabilizing macroeconomic

indicators. However, some have argued that international migration results in an increase in the dependency of the country of origin on remittances and the excessive reliance on remittance flows can have negative consequences on national economies.

There is also a breed of economists and policy makers who argue that remittance flows prevent poor recipient households from falling into the poverty trap. They establish an inverse relationship between remittance flows and poverty incidence in less developed labor-exporting countries. Stark (1991) found that in rural Mexico relatively deprived households are more likely to engage in international migration than are better off households. In a similar vein Adams (1991) found that in rural Egypt the number of poor households declines by 9.8 percent when household income includes international remittances, and that remittances account for 14.7 percent of total income of poor households. However, the negative view holds that the poorest seldom have the means to migrate and thus international migration creates income and wealth disparities. Taylor (1992) concluded that data from Mexico supports the hypothesis that migrant remittances have indirect short-term and long-term asset accumulation effects on the level and distribution of household farm income.

This study supplements the above debate on the complex relationship among international remittances, growth and poverty by providing empirical evidences from Pakistan. Both household level and macro level data are used to analyze and to observe the behavioral relationship. The following section of the paper furnishes a brief review of the three most recent papers on international migration and remittances. Some stylized facts of remittances and overseas migration from Pakistan are tabulated and narrated in Section III. The remittances-growth nexus in the context of Pakistan is scrutinized in Section IV. Impacts of remittances on household welfare are described in Section V, while the last section is reserved for a few concluding remarks.

II. RECENT RESEARCH ON INTERNATIONAL MIGRATION AND DEVELOPMENT

This section provides a detail review of the three most recent research studies on the impact of international migration and remittances conducted by international agencies. World Bank Policy Research Working Paper number 3179 (Adams and Page, 2003) presents a quantitative analysis of remittance and poverty in a cross-section of developing countries. An Asian perspective of migration and development is scrutinized by International Organization for Migration (Hugo, 2003), while IMF working paper number 189 (Chami et. al, 2003) explores the effectiveness of remittances inflows as a major source of capital for development. Following are the major findings, recommendations and conclusions of these studies.

The research conducted by Adams and Page (2003) explored the impact of international migration and remittances on poverty in a broad cross-section of developing countries. The authors concluded that while international migration does not come from the ranks of the poor, the income that migrants remit to their countries of origin appears to both increase average income and to reduce the incidence and severity of poverty. Their results are based on new data sets from World Bank that includes information on international migration, remittance, income inequality and poverty for low-income and middle-income developing countries. The basic growth-poverty model suggested by Ravallion and Chen (1997) is used to determine the elasticity of poverty

with respect to per capita income, income distribution and remittances[1] (or migration[2]). They found that the remittance variable – remittances as a share of country GDP – has a negative and statistically significant impact on three measures of poverty; headcount, poverty gap and squared poverty gap. However, the size of the elasticity of poverty with respect to remittances was small. On the average, the point estimates for the poverty headcount measure suggested that a 10 percent increase in the share of remittances in country GDP will lead to a 1.6 percent decline in the share of people living on less than $ 1 per person per day. The authors speculated on the reasons why international migration and remittances have such a small – albeit statistically significant – impact on poverty reduction. They argued that the variable "remittances as a share of country GDP" does not include the large (and unknown) amount of money that is remitted through private, unofficial channels. Since workers who migrate illegally are more likely to be poor and to remit through unofficial channels, it is likely that the variables used in this study underestimate the true impact of international migration and remittance on poverty. It is likely that international migration and remittances would have a larger and stronger statistical impact on poverty reduction in the developing world, if it would be possible to get more accurate estimates of official and unofficial remittances.

Data problems notwithstanding, the results of the study provide an intriguing puzzle and point to an important area for future work. Remittance flows can be treated analytically in the same way as any other increase in national income. Their poverty reducing impact derives from two sources: first, from an increase in per capita GDP; and second, from any contemporaneous change in the distribution of income that occurs as a result of the receipt of remittances by different income groups. If the distributional bias of remittance income to households is progressive, the poverty reducing impact of the increase in income will be greater than if the distribution had remained unchanged. A regressive bias will result in the opposite outcome. In the econometric specifications the level of per capita income and income distribution are controlled for. Yet the authors still found a significant, independent poverty reducing impact of both migration and (more convincingly) remittances on the poverty headcount as well as measures of depth and severity. Put another way, perhaps rather than express surprise at the small magnitudes of the elasticity of poverty reduction with respect to the migration and remittance variables, one should be surprised that they are significant at all. Is there a "third channel" by which incomes remitted affect the level and severity of poverty in developing countries? Although available data do not permit an answer to this question, one possible explanation is that the remittance variable may be picking up the effect of a progressive bias in the distribution of remittance income among households.

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[1] The study uses remittance data from IMF annual records. However, the IMF only reports data on official worker remittance flows, that is, remittance monies which are transmitted through official banking channels. Since a large (and unknown) proportion of remittance monies is transmitted through private, unofficial channels, the level of remittances recorded by the IMF underestimates the actual flow of remittance monies returning to labor-exporting countries. The remittance figures used in this paper, therefore underestimate the actual level of international remittances – official and unofficial –received by individual countries.

[2] The authors used two specifications using remittances and international migration separately with other variables. Migrants measured as number of immigrants from country recorded as living in the United States or the Europe. Due to data limitation, the study did not include the immigrants living in Middle East and other African countries. Therefore, the following discussion is limited to the impact of remittances on poverty.

Adams and Page (2003) also explored the determinants of international migration using a gravity model. Migration flow was regressed on the cost of migration (distance between labor-exporting and labor-receiving countries), economic variables (income, income distribution, poverty, inflation and unemployment), demographic variables (population density, educated population) and political variables (government stability and country credit rating). Two important findings emerged from this exercise. The first, and most important result concerns the distance variable. The coefficient for distance was negatively and significantly related to migration. The study estimated that on average, a 10 percent increase in distance to a labor-receiving region would reduce the share of international migration from a country by approximately 10 percent. Second, the statistically significant coefficients for per capita GDP and its square are instructive and suggest that an inverted U-shaped curve exists between the level of country income (level of development) and international migration. Accordingly, the study concluded that developing countries with low or high per capita GDP produce smaller shares of international migration than do middle-income countries.

A descriptive review article is prepared by Hugo (2003) for International Organization for Migration (IOM). The study focusing on Asia scrutinized three issues; the first part discusses the financial flows associated with international migration and its impacts, the second part highlights the issues related with mobilizing the diasporas and brain drain, and the final part draws a number of recommendations for further research. Major upshots of the review are reproduced below.

Policy concerns with remittances in the labor sending countries of Asia have generally been of two types; to maximize the inflow of remittances from overseas workers and other citizens or former citizens overseas and to mobilize those remittances so that they are directed into the formal banking sector and recipient households use them in ways which enhance national development priorities.

The study indicated that in terms of increasing the inflow of remittances, one important policy aim must be to reduce the transaction costs both in the migration process itself and in the sending of remittances. In several countries excessive rent is taken by a range of intermediaries involved in the recruitment, preparation, sending and employment of overseas workers. This substantially reduces the amount of money migrants are able to remit. In addition, it is clear that several of the mechanisms for remitting money from the countries of employment to the home countries take an unfair percentage in commissions. Therefore, there is an urgent need for the development of efficient, cheap and reliable remittance systems.

Regarding the use of remittances, the study argued that Governments in Asia have made only very limited attempts to channel remittances into productive investment. It has indicated that such policy initiatives have taken two forms – business counselling and training, on the one hand, and training cum action programs to turn return migrants into entrepreneurs, on the other. The study observed that the efforts in these areas remain very limited.

The paper quoted various studies at the level of individual nations to observe the macroeconomic impact of remittances inflows on Asian economies. The author concluded that, "in nations experiencing substantial inflows of remittances the macroeconomic impacts have been considerable. Between 1990 and 1999 remittances contributed an average 20.3 percent of a nation's export earnings and 5.2 percent of GNP".

However, the excessive reliance on remittances is indicated as a negative impact on the labor sending economies. There is considerable concern in Asia that labor migration, in conjunction with remittances, can lead to the so-called "Dutch disease", i.e. the appreciation of the real exchange rate. The Dutch disease creates a condition of greater vulnerability to external shocks by stimulating imports and reducing the incentives to develop exports. The Dutch disease also leads to an over-emphasis on capital-intensive methods of production. To avert the deleterious consequences of the Dutch disease, a number of policies can be adopted, including the depreciation of the currency, and structural reforms in the production sector to achieve greater economic efficiency.

While discussing the impact of remittances on families or households, the study observed that in the literature on remittances it has been argued that the developmental impacts have been limited because the bulk is expended on consumer items. The study contradicted the argument by quoting other research which has suggested that the positive developmental impacts have been underestimated for the following reasons.

- Eki (2002) found considerable development-related expenditure on remittances in his intense study of a village in East Flores, Indonesia, suggesting that survey type research may miss much of the developmental activity associated with remittances.
- Most studies find that a high proportion of remittances is spent on upgrading housing, which is dismissed as consumption. However, detailed research in Mexico has shown that the second and third round effects of expenditure of remittances on housing are considerable where they employ local people and use local materials. Careful analysis by Adelman and Taylor (1990) found that for every dollar remitted from abroad, total GNP increased by between US$ 2.69 and US$ 3.17, and that the largest income multipliers were in rural communities where expenditure patterns favored the purchase of locally produced goods and services and labor-intensive production technologies. Similar findings from Bangladesh (Stahl and Habib, 1991) indicate that each migrant worker overseas creates three jobs at home through remittances. Of course, to the extent that housing materials, household goods and day-to-day items purchased from remittances are brought in from elsewhere, it means that the benefits on development will also be felt elsewhere rather than in the emigration area.
- Another common finding in remittance studies is that a substantial amount is spent on the education of siblings, children and other family members. This clearly represents a significant contribution to development, although obtaining an education may be associated with out-migration from the emigration community to places offering more educational and occupational opportunities.
- There is evidence that the emigration of workers eases local un-and-underemployment and the pressure on agricultural opportunities.
- While there are undoubtedly substantial social costs associated with much labor emigration, especially associated with the splitting up of families, there have also been positive impacts in terms of improving the role and status of women in sending areas.

The second part of the study deals with the issues of mobilizing the diaspora and policies encouraging return migration. Remittances and Foreign Direct Investment (FDI) are two cannels which may be effectively used in enhancing domestic investment and growth. Several countries are looking at ways to capture more foreign exchange from their diaspora by offering preferential banking treatment, high interest rates, etc. The diaspora can be both a direct source of FDI and effective "middlemen" to channel FDI towards the home country. Biers and Dhume (2000) report that "several overseas Indians who had reached upper management positions in Western Multinationals helped to convince their companies to set up operations in India. Hewlett Packard, being a prime example". However, cases *par excellence* here are the Chinese mainland and Taiwan where the spectacular economic growth of recent years has been heavily influenced by investment from a diaspora of perhaps 30 million overseas Chinese (Lucas, 2003). There has been considerable discussion of how Chinese businesses and social networks have overcome barriers to international trade. Rauch and Trindade (2002) found that ethnic Chinese nationals have a quantitatively important impact on bilateral trade. Rubin (1996) has shown how Chinese entrepreneurs in the United States are taking their businesses into China. The Indian diaspora, second in size only to that of China, is of around 20 million people with an income of US\$ 160 billion – more than a third of India's GDP (Sharma, 2003). However, it has not been mobilized as effectively as the Chinese diaspora, contributing only 9.15 per cent of US\$ 4 billion FDI compared with half of China's US\$ 48 million. The Indian government, according to Sharma (2003) is now developing a program to:

- Attract back expatriates;
- Heighten their cultural attachment through events;
- Attract their investment and remittances;
- Develop new markets for Indian goods;
- Equip Indian companies with management expertise.

The study argues that there are a number of ways in which the diaspora can have an impact on economic development in Asian countries. The important issue is the extent to which government policy can assist in encouraging such developments. There are specific policies and programs that can be utilized to encourage the diaspora to link with development related activities in their home nations. However, part of a diaspora policy has to involve some means to maintain the identity of the diaspora with the home community. This is not a trivial issue. In some cases there may be a certain degree of resentment among the diaspora who may have the feeling of being a forgotten or overlooked part of the nation. One way of maintaining identity is through the growth of a myriad of expatriate organizations and associations. Several countries have policies and programs that assist these developments, and they can play an important role in the operationalization of the types of programs mentioned above. The fact that most expatriates are online means that modern forms of communication can be used to strengthen such organizations. Modern communication and information technology greatly facilitates networking. Therefore, the possibility of developing registers of expatriates is a real and economic proposition. The privacy factor is very important and registration should be voluntary. There can be deep suspicion about such registers, especially where one of the motivations to emigrate was to flee the influence of totalitarian governments, and if it is felt that governments are simply seeking to tax their

diaspora. Thus, there is also a need for government involvement to emphasize opportunities for the diaspora and not to focus on, or be associated with, compliance, taxation and exploitation. The government's role should rather be one of facilitating and enhancing the networks that have already developed.

While policies and programs to stem the brain drain do have an important role to play in less developed countries, it is at least equally important to recognize that some outflow of young skilled people is inevitable, but that there are also ways in which this outflow can be harnessed to the benefit of economic and social development in the home country. To achieve this objective, the author recommends the followings:

- Enhance the flow of remittances from expatriates and internal labor migrants;
- Facilitate the return of expatriates to bring back their enhanced skills and experience;
- Develop innovative approaches to better incorporate the diaspora into the mainstream of national life, as well as to develop their potential economic, social, political and cultural contribution to their home country.

The study concludes by arguing "It is important to stress, however, that our understanding of the linkages between migration and development remains very partial. We need a much more sophisticated knowledge of emigration and its impacts and how this is mediated by a range of contextual, cultural, individual and migration-related elements. Only then can policy makers be provided with the knowledge to develop strategies to maximize the beneficial dimensions of south-north migration and to minimize its harmful effects."

Chami et al. (2003) developed a framework that links the motivation for remittances with their effect on economic activity. They argued that despite the large interest in immigrant remittances, their role in development and economic growth is not well understood. This is partly because the literature on the causes and effects of remittances remain separate. Therefore, they constructed a unified framework that can analyze both the causes and effect of remittances.

Using a panel of aggregate data on remittances from the World Bank's World Development Indicator Database, they employed two-stage panel estimation method with instrumental variable. At the first stage, they regressed changes in remittances on its various determinants. The predicted value of changes is then incorporated in the second stage with other variables of economic growth and development. The entire dataset includes 113 countries for which worker remittances are reported over the 1970-1998 period. Major findings of the study include:

- The statistical results indicate that a primary function of remittances is to compensate their recipients for bad economic outcomes, such as low output in their home country. Therefore, the nature of remittances is mainly altruism or compensatory transfers.
- The negative and significant relationship between the growth of worker remittances and the growth rate of GDP is robust to the many different specifications and panel methods employed. These results support the idea that remittances have a negative impact on GDP growth. The authors called this phenomenon a 'moral hazard' problem and argued that it can be manifested in many ways. Recipients can decrease their labor force participation, limit their

job searches, reduce labor effort, or invest in riskier projects, among other actions. The effect is to induce the recipients to act in ways that tend to decrease expected output.

- The study also demonstrated that remittances differ greatly from private capital flows in terms of their motivation and their effects. Remittances, at least currently, do not appear to be a significant source of capital for economic development.

The authors found evidences in a large panel of countries that remittances move countercyclically, and that remittances do have a negative impact on output growth. But they suggested more investigation into remittances in the context of their integrated framework, in order to make finer distinctions between shot-run effects of remittances, and to test different motivations for remitting against one another. They also recommended that there is also much work to be done on designing policies to help countries realize the potential benefits of remittances, especially since their work has revealed another significant obstacle in the way of policy makers.

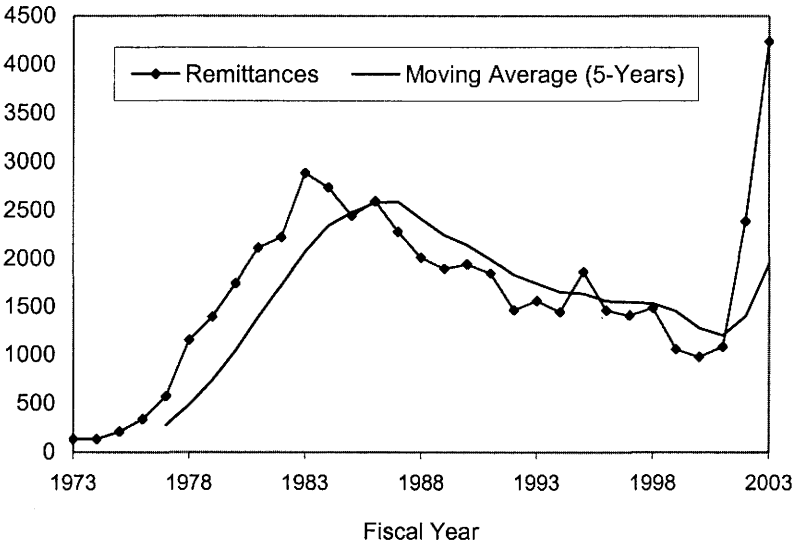## III. STYLIZED FACTS OF REMITTANCES AND OVERSEAS MIGRATION

International remittances represent a sizable component of Pakistan's current account inflows, and historically a large proportion of the trade and service account deficit was covered by these inflows. The trends in official remittances and its relationship with macroeconomic variables are assembled in Table 1, while Graph 1 and Graph 2 portray a schematic view of the trend in remittances inflows. At its peak in 1982-83, official flow of remittances was equivalent to 70 percent of the country's total export of goods and services. However, the remittances registered a sharp decline after the first half of 80s. The slowing down in economic activity in major labor-receiving countries and more importantly with increased competition from other labor-exporting countries has led to not only a decline in the outflow of migrant workers but also resulted in the quickening pace of return migrants. Another reason for a declining trend in workers' remittances is the popularity of *Hundi* or the informal banking channel. Subsequent measures after the nuclear test like the implementation of a two-tire exchange rate, the suspension of Foreign Currency Accounts, coupled with the heightened uncertainty led to a sharp widening of the gap between the official and the free market rates of Pak rupee. Consequently, the formal inflow of remittances declined to US$ 1 billion during fiscal year 1999-2000.

A recent surge in workers' remittances was observed after the event of September 11. The tight global monitoring of financial transfers forced many expatriate Pakistanis to revert back to the formal banking channel. Consequently, remittances through formal channels have recently shown a tremendous increase, resulting in a collapse of the kerb premium in Pakistan.

Regarding the sustainability of inflows in the coming future, there are two views. Policy-makers in Government circles argue that if the efforts to arrest money laundering and global monitoring continue, especially by USA and its allies, then we could expect still more inflows in the future. Further, they indicate that an increase in remittances from UAE is largely due to the enhanced monitoring of the *Hundi* network by the UAE Central Bank. Therefore, it is expected that with the continued efforts to clamp down the

Hundi network, the official inflows from UAE would persist in the coming future as well. Many independent observers, however, hold that while there is a considerable uncertainty as to what the future trend may be, the phenomenon of a recent surge in official inflows is temporary and probably will not persist in the future.

GRAPH 1
Workers' Remittances [Million US$]

Fiscal Year

GRAPH 2
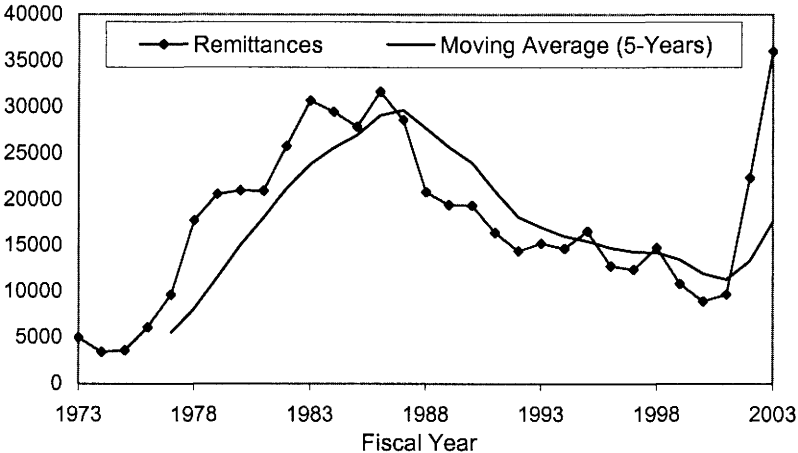Workers' Remittances
[Million Rupees - 1980-81 Prices]

Fiscal Year

TABLE 1. Overseas Workers' Remittances

	Remittances [Million US$]	Remittances as a percent of				
		GDP	Export	Import	Investment	Consumption
Averages						
FY 73-80	712	4.47	42.67	21.38	23.29	5.29
FY 81-85	2,482	7.83	70.31	38.97	42.84	9.49
FY 86-90	2,145	5.43	40.61	30.12	29.68	6.70
FY 91-95	1,638	2.80	15.71	16.16	15.29	3.47
FY 1997	1,410	1.98	12.86	10.90	11.25	2.31
FY 1998	1,490	2.30	16.20	13.71	12.97	2.68
FY 1999	1,060	1.63	12.24	10.64	10.47	1.87
FY 2000	983	1.30	8.73	9.00	8.25	1.52
FY 2001	1,087	1.37	8.45	9.61	9.64	1.64
FY 2002	2,389	3.02	17.70	21.23	23.07	3.68
FY 2003	4,236	4.47	21.47	30.05	33.79	5.94

Source: Pakistan Economic Survey, Various issues.
        State Bank of Pakistan, Annual Report, Various Issues.

TABLE 2. Workers Provided Employment Abroad Through
Bureau of Emigration and Overseas Employment
[Distribution of Categories]

	Total Workers	Broad Categories of Workers (%)			
		Highly Qualified	Highly Skilled	Skilled	Un-Skilled
1994	91,700	1	6	52	40
1995	99,927	1	7	52	40
1996	104,510	1	8	50	40
1997	127,841	1	6	51	41
1998	87,643	2	8	50	40
1999	68,969	3	18	41	38
2000	96,488	3	10	50	37
2001	115,126	2	8	50	39
2002	131,887	2	10	51	37
2003	175,009[a]	1	10	49	40

[a] Upto November 2003.
Source: Bureau of Emigration and Overseas Employment.

The yearly available data on the flow of out-migration through Bureau of Emigration and Overseas Employment are arranged in Table 2. On the average about 100,000 workers annually are proceeding abroad as emigrants, which is roughly 0.25 percent of total labor force of the country[3].

An increase in the migration trend after the year 2000 is also evident from the table. This is partly due to the lifting of the ban on Pakistani workers by Libya. Table 2 also depicts the level of skill of migrant workers. No major diversification is observed during the 1990's. The proportion of skilled and unskilled workers is roughly 60 and 40 respectively. The percentage of the category 'High Qualified' workers is about 2 and includes engineers, doctors, teachers, accountants and business managers. About 10 percent 'Highly Skilled' workers (nurses, secretaries, mechanics, IT workers, draftsmen, photographers and artists) proceed abroad. The category of 'skilled workers' possesses an approximate share of 50 percent and includes welders, foremen, masons, carpenters, electrician, plumbers, painter, drivers, tailors, goldsmiths and salesmen. The remaining 39 percent are unskilled laborers.

The percentage distribution of Pakistani workers' destination is displayed in Table 3. As is evident from the table, the majority goes to Saudi Arabia, followed by UAE. During the last 10 years about 98 percent of the expatriates proceeded to countries of the Middle East region. The annual country-wise export of manpower indicates an increasing trend in the Middle East share. This is despite the fact that these countries are pursuing the policy of nativization, imposition of visas and other charges and the banning of as much as 32 categories of import of manpower.

TABLE 3. Destination of Workers Abroad During Last 10 Years
[Percentage Distribution]

Saudi Arabia	61.8
UAE	27.7
Kuwait	3.4
Oman	2.9
Qatar	1.1
Bahrain	1.0
Libya	0.4
Korea	0.4
Spain	0.2
USA	0.2
Malaysia	0.1
UK	0.1
Other	0.7

Source: Bureau of Emigration and Overseas Employment.

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[3] According to the records of Bureau of Emigrant, about 3.27 million Pakistanis have proceeded abroad for employment through licensed overseas employment promoters (almost 1000 in number) and duly registered with the offices of Protector of Emigrant during the period 1971 to 2003. However, no data on return Pakistanis are available and it is difficult to estimate the stock of Pakistani workers abroad.

TABLE 4. Workers Provided Employment Abroad Through
Bureau of Emigration and Overseas Employment
[Province of Origin]

	Total Migrated	Provincial population Shares (%)			
		57	24	14	5
		Punjab	Sindh	NWFP	Balochistan
		Share of Population Migrated (%)			
1994	91,700	58	8	33	1
1995	99,927	61	11	27	1
1996	104,510	62	10	26	1
1997	127,841	59	8	31	1
1998	87,643	61	7	30	2
1999	68,969	52	9	36	3
2000	96,488	52	9	37	3
2001	115,126	53	8	37	2
2002	131,887	55	8	35	1
2003	175,009[a]	54	8	37	1

[a] Upto November 2003.
Source: Bureau of Emigration and Overseas Employment.

Information regarding the provincial[4] share in manpower export is displayed in Table 4. It is evident from the table that the share of NWFP in overseas migration is high relative to its population size, while the share of Balochistan and Sindh provinces with respect to population is low. On the average, provincial shares in manpower export are 53, 37, 8 and 2 for Punjab, NWFP, Sindh and Balochistan respectively.

In general, NWFP is known for exporting unskilled laborers, especially in the construction sector. Agricultural laborers mainly go from rural Punjab. Urban Punjab and Karachi export skilled and highly qualified workers, while the rest of Sindh (excluding Karachi) virtually has no share in overseas migration.

IV. IMPACT OF REMITTANCE ON AGGREGATE MACRO VARIABLES

This section heavily benefits from the work of Nishat and Bilgrami (1991). They estimated standard Keynesian macroeconomic model for Pakistan's economy for the period of 1959-60 to 1987-88. Their work is replicated here and the model is re-estimated using the data from 1972-73[5] to 2002-2003. The detailed methodology, specification and regression results are provided in Appendix – A.

Table 5 provides estimates for various multipliers using the relevant estimated coefficients and derivation formulae given in the Appendix (Equation 7 through to

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[4] According to the level of economic development, Punjab province ranks high, while the province of Balochistan possesses the lowest rank. The province of Sindh is the second highest. However Karachi, the provincial capital of Sindh, is the largest city of Pakistan as well as the hub of industrial and financial activities. The rest of Sindh is extremely backward.

[5] During 60's the remittances of Pakistan emigrants were small (less than one percent of the national economy) and they were not recorded separately in the balance of payment of Pakistan.

Equation 10). For national income, the remittance multiplier is estimated as 3.07[6], which indicates that an increase of one million rupees in overseas remittances would result in a three-fold increase in national income or GNP. However, when this multiplier is disaggregated into various components, it appears that the change is mainly operated through the consumption. The estimated remittance multiplier of 2.05 for private consumption suggests that approximately 70 percent change in national income is due to an increase in private consumption. Further, the analysis also shows the lowest multiplier (0.28) for aggregate investment.

TABLE 5. Remittance Multipliers for Macro Aggregates

Macro Aggregate Variables	Multipliers
National Income (GNP)	3.07
Private Consumption	2.05
Aggregate Investment	0.28
Imports	0.37

Source: Author's estimates.

The multiplier story, as pointed by Chami et al. (2003) only captures the short-run impact of remittances on the receiving economy. Further, the estimated model is extremely simple[7] and perhaps does not truly reflect the structural behavior of the economy. Therefore, the multiplier estimates are indicative and should be used cautiously.

As discussed in the review section, Chami et al. (2003) scrutinized the relationship between output growth and remittances using a unified framework and concluded that remittances have a negative impact on GDP growth[8]. Based on their work and to get a rough idea about the relationship between growth in remittances and growth in national output in the context of Pakistan, a simple OLS equation is estimated for the period of 1972-73 to 2002-2003. The specification is close to equation (6) of Chami et al (2003, page 18). The estimation results are provided in the following Table.

The negative sign of [Δ LOG (Remittance/GDP)] is consistent with the result of Chami et al. (2003). However, in the context of Pakistan it does not appear as statistically significant. This probably is due to the endogeneity problem and results may be improved using instrumental variable two-stage least square method. Nonetheless, the negative sign of the remittance variable indicates the importance of further investigation of the relationship between remittance and national income.

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[6] Nishat and Bilgrami (1991) estimated remittance multiplier for national income or GNP as 2.43 for the years from 1959-60 to 1987-88.

[7] Private consumption, investment, import demand and taxes are each treated as a function of a single variable (GNP).

[8] They used cross-section panel of about 113 counties and employed panel estimation methods with instrumental variables.

TABLE 6. Regression Result: GDP and Remittance Growth
[Dependent Variable – GDP Growth]

Independent Variables	Coefficient	t-Statistic
Constant	0.177	2.83
LOG (Investment/GDP)	0.072	2.07
Δ LOG (Remittance/GDP)*	-0.018	-1.35

Adjusted R-squared	0.13	F-statistic	3.12
Durbin-Watson stat	1.75	Prob(F-statistic)	0.06

Note: * reflects difference in remittance-GDP logarithmic ratios.
Source: Author's estimates.

V. MICRO PERSPECTIVE OF REMITTANCES

The welfare aspects of households, receiving international remittances, are scrutinized with the help of latest available[9] household data for the period of 1998-99[10]. Besides analyzing the sensitivity of consumption poverty and income inequality with and without remittances, other indicators of welfare, such as education and housing are also used. For comparison with control group (households not receiving remittances), all households are first ranked into quintile groups on the basis of per capita expenditure and then these groups (with and without) are evaluated for the lowest two quintiles[11].

Table 7 reports the estimated number of households which are acknowledging the receipt of international money from members abroad. It is estimated that about 4 percent households are receiving remittances and as expected (see Table 4), the majority of household belongs to Punjab province followed by NWFP. The data (not reported in the table) also reveals that on the average, rural households are about 57 percent. During 1997-98, the remittances of about 45 billion Pakistani rupees (US$ 1.18 billion) are estimated from the survey. It is worth noting here that apparently there is substantial underreporting[12] in the survey, perhaps due to the fear of taxation and exploitation. The official figure (which excludes *Hundi* or non-banking channel) is about 1.41 billion for the same year.

A major consideration that affects the magnitude of international migration is the costs to migrate. The costs of processing of documentation, financing for early years of migration and international traveling are inversely related with the level of international migration. Therefore, it is hypothesized that the probability of migration is low in highly economically deprived areas. Table 8 is developed to test this hypothesis. Districts of

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[9] Although the latest conducted household survey is for the period 2000-2001, the government of Pakistan didn't yet make it available for the analysis by independent institutions.

[10] The data was collected during 1998-99 by Federal Bureau of Statistics, Government of Pakistan. The universe consists of all urban and rural areas of the four provinces of Pakistan, defined as such by Population Census 1981. The survey excludes some area due to administrative difficulties. The excluded areas constitute about 4% or total population. Individual and household level information are collected on a large sample of 14679 households.

[11] The reason for choosing the lowest two quintiles is the fact that the poverty incidence n Pakistan is around 32-33 percent.

[12] It is likely that the underreporting would be largely from the middle and top levels of income distribution. Therefore, it will perhaps not affect the sensitivity analysis of poverty incidence.

migration origin are classified into three categories according to the level of their deprivation[13]. The rate of migration is computed by dividing the accumulated migrated population for the last 10 years[14] with the district population. In general, the hypothesis may not be rejected[15], as the migration rate (with some caveat) is relatively high in the category of 'low deprivation' level. However, there is a contradiction in the case of the rate of migration from NWFP province. The highest migration rate is reported from the high-deprived areas of the province[16].

TABLE 7. Households Receiving Overseas Remittances

Provinces	Number of Households Reported	%	Remittances Received [1997- 98 Million Rs.]	%
Punjab	392,894	61	26,097	58
Sindh	42,931	7	3,502	8
NWFP	195,495	30	14,209	32
Balochistan	15,796	2	1,095	2
Pakistan	647,116	100	44,903	100

Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

TABLE 8. Migration Origin and Level of Deprivation
[Migration Per 1000 Population]

Deprivation Level	Total	Provinces			
		Punjab	Sindh	NWFP	Balochistan
Low	9.78	11.32	4.65	14.63	5.26
Medium	6.87	3.55	1.28	21.23	1.94
High	8.15	6.41	0.67	39.46	3.00

Source: Author's estimates based on data obtained from Bureau of Emigration and Overseas Employment.

Therefore, it is considered important to test the hypothesis at the level of household and not at the level of the district. Because there is a possibility that even from high-deprived areas, the poor have less opportunities to migrate. Table 9 clearly endorses this phenomenon. Only 8 percent of remittance-receiving (having migrated members) households are in the lowest expenditure (or income) quintile as against 41 percent in the highest quintile. In the case of NWFP province, although the difference between lowest and highest quintile is not so sharp, about 16 percent of remittance-receiving households belong to the lowest quintile as against 24 percent to the highest.

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[13] For deprivation variables and methodology see, SPDC Research Report No. 52, "Mapping the Spatial Deprivation of Pakistan", www.spdc-pak.com.

[14] Simply to avoid yearly fluctuation in the level of migration.

[15] The correlation coefficient between rate of migration and the level of deprivation is negative but statistically insignificant

[16] Although it is not confirmed, but there is a possibility that provincial or federal government is providing some financial or institutional support for the export of unskilled manpower from the province to fulfill the high demand for these labor, especially in construction sector.

TABLE 9. Distribution of Households Receiving Remittances

Per Capita Expenditure Quintiles	Household Reported Receipt of Remittances [%]	Percentage of Total
Quintile 1 – Lowest	0.3	7.7
Quintile 2	0.5	12.8
Quintile 3	0.6	15.4
Quintile 4	0.9	23.1
Quintile 5 – Highest	1.6	41.0
Total	3.9	100.0

Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

While it has been established that the costs of international migration do matter and the poor have relatively fewer opportunities to migrate, it is then worth exploring the impact of remittances on poverty incidence and income inequality. This exercise is reported in Tables 10 and 11 below.

About 33 percent of the population is estimated as poor or below the poverty line[17] during the period of 1998-99. The proportion declined by over 2 percentage points[18] as a result of remittances received by emigrant households. On the average, a 5 percent increase in poverty incidence, in the absence of international remittances, is evident form Table 10. The phenomenon is more or less similar in both urban and rural areas. A minor impact on poverty incidence is due to the fact that most of the international remittances go to non-poor households. The data reveals that about 89 percent remittance-receiving households are non-poor (per capita expenditures are above Pakistan's official poverty line).

Similarly, the Gini (inequality coefficient) is almost insensitive and is not responding to the inflow of international remittances (Table 11). In rural areas however, a relatively higher change is observed as compared with urban areas.

TABLE 10. Impact of Overseas Remittances On Poverty Incidence

	Percentage of Population Below the Poverty Line		Increase [%]
	Base Scenario	Without Remittances	
Urban	21.63	23.32	7.81
Rural	38.13	40.16	5.32
National	33.41	35.12	5.12

Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

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[17] Pakistan's official poverty line of Rs. 673.54 per capita per month at the prices of 1998-99 is used (Pakistan Economic Survey, 2002-03, pp 49). The poverty line is based on calorific approach adjusted with other basic needs.

[18] The decline in poverty is relatively larger (5 percentage point) in case of NWFP province. This is due to the fact that about 16 percent emigrants from NWFP province belong to the lowest income quintile, while this percentage is 8 at the national level.

TABLE 11. Impact of Overseas Remittances On Income Inequality

	Gini Coefficient		Increase [%]
	Base Scenario	Without Remittances	
Urban	42.45	42.66	0.49
Rural	36.53	37.17	1.75
National	40.30	40.67	1.0

Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

Having noted that remittances have no drastic impact on overall poverty incidence and income inequality due to less participation of the poor in the migration venture, the other long-term aspects of welfare (child education, asset accumulation etc.) are scrutinized between emigrant (receiving remittances) and non-emigrant (not receiving remittances) households.

The following tables (Table 12 through Table 16) are developed to observe the differences between these two groups. However, the results are tentative as the average value that is associated with each group in the lowest two quintiles is used for interpretation and explanation of the differences. There are a number of other factors (besides remittances) that may affect the behaviors of these groups that are not controlled for. Further, it is not certain that improvement in various indicators is financed from the remittances. Hence, the causality between remittances and these welfare indicators is not clear and the following summary information should be taken cautiously.

In the remittance literature, various micro-level studies indicate that the education of children is at the top in the priority list of the emigrant family. Table 12 asserts this proposition. A significant[19] difference is observed in overall primary education. The difference is sharper in the lowest quintile (23 points in the lowest vs 14 points in the second lowest quintile). Similarly, the significant difference in female primary enrollment in the lowest quintile is evident. This is probably due to the lower base in the lowest quintile. Or alternatively, one may assume that income is a major constraint in the lowest quintile. Surprisingly, there is insignificant or almost negligible difference between recipient and non-recipient households as observed in female primary enrollment (58.78 vs 59.79). This phenomenon may be partly explained by the fact that there are non-income or non-monetary factors that affect female education (especially in NWFP province). Therefore, it is argued that in the second quintile the demand for education is relatively less associated with the increase in household income. Similar trends are observed in the combined enrollment (5-24 years age group) rate. This information is displayed in Table 13.

Another much discussed issue in the remittance literature is that households use a significant part of the remittances on durable and conspicuous consumption. Although this phenomenon is supposed to be more pronounced in the middle or upper income group, table 14 furnishes this information for the two lower quintiles. Statistically significant differences, according to t-values, are evident between these two groups.

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[19] The enrollment rates in these tables are computed at the level of group and not at the level of household. Therefore, statistical significance (such as through t-test) is not possible to compute.

About 37 and 11 percent differences in the average per capita expenditure on durables are observed in the lowest and the second lowest quintiles respectively.

TABLE 12. Impact of Overseas Remittances On Primary Enrollment

Per Capita Expenditure Quintiles	Overall [5-10 years Age Group]		Female [5-10 years Age Group]	
	Households Without Remittances	Households With Remittances	Households Without Remittances	Households With Remittances
Lowest Quintile [Lowest 20%]	50.90	74.11	41.29	61.09
Second Lowest [Lowest 30-40%]	68.74	83.26	58.78	59.79

Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

TABLE 13. Impact of Overseas Remittances On Combined Enrollment

Per Capita Expenditure Quintiles	Overall [5-24 years Age Group]		Female [5-24 years Age Group]	
	Households Without Remittances	Households With Remittances	Households Without Remittances	Households With Remittances
Lowest Quintile [Lowest 20%]	28.05	39.38	21.30	25.85
Second Lowest [Lowest 30-40%]	36.87	41.75	29.16	29.99

Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

TABLE 14. Impact of Overseas Remittances On Household Durable Expenditure

	Per Capita Expenditure Quintiles			
	Lowest Quintile [Lowest 20%]		Second Lowest [Lowest 30-40%]	
	Households Without Remittances	Households With Remittances	Households Without Remittances	Households With Remittances
Average Yearly Per capita Expenditure On Durables [1997-98 Rupees]	183	250 (46.54)[***]	291	322 (24.38)[***]

Notes: Value of t-statistics is given in parenthesis.
[***] indicates that the mean difference is significant at 1 percent level (two tailed).
Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

Improvement in the quality of housing is another important part of the disposition of an emigrant's saving. Unfortunately, the household data do not provide necessary information to verify the hypothesis in the context of Pakistan. Available data on housing only provides the level of services utilized by households. Table 15 is constructed to show the differences in the utilization of various services for urban areas only. It is assumed that supply constraints are less trivial in urban areas and the

differences between groups (recipient v/s non-recipients) are mainly driven from the demand (income) factors. To represent the rural part, the differences in the ownership of agriculture land are scrutinized to indicate the welfare impact of remittances. Table 16 displays this information.

TABLE 15. Impact of Overseas Remittances On Urban Housing Conditions

| | Per Capita Expenditure Quintiles | | | |
| Percentage of Urban Household Reported: | Lowest Quintile [Lowest 20%] | | Second Lowest [Lowest 30-40%] | |
	Households Without Remittances	Households With Remittances	Households Without Remittances	Households With Remittances
Residential property	77.5	78.2 (1.6)	78.5	88.7 (52.1)***
Electricity	75.4	100.0 (56.4)***	85.1	86.7 (6.8)***
Telephone Connection	6.9	29.4 (46.9)***	13.6	27.8 (55.9)***

Notes: Value of t-statistics is given in parenthesis.
*** indicates that the mean difference is significant at 1 percent level (two tailed).
Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

TABLE 16. Impact of Overseas Remittances On Agriculture Land Ownership

| | Per Capita Expenditure Quintiles | | | |
| | Lowest Quintile [Lowest 20%] | | Second Lowest [Lowest 30-40%] | |
	Households Without Remittances	Households With Remittances	Households Without Remittances	Households With Remittances
Rural Households Reported Agriculture Land Ownership	23.7	47.6 (89.5)***	27.6	33.0 (26.4)***

Notes: Value of t-statistics is given in parenthesis.
*** indicates that the mean difference is significant at 1 percent level (two tailed).
Source: Author's estimates based on Pakistan Integrated Household Survey, 1998-99.

It is observed in the case of education and durable expenditure that generally the magnitude of difference between groups is larger in the lowest quintile than the second lowest. Similar trends are evident in the case of urban electricity connections and access to telephone facilities. The results seem plausible. There is a relatively larger room for improving the basic needs and amenities in the lowest quintile as against the second lowest. The money received from remittances provides the opportunity to avail these standards.

No statistically significant difference is observed in the ownership of urban residential property in the lowest quintile. However, the second lowest quintile indicates a substantial difference. The phenomenon is reversed in the case of agriculture land ownership where the difference is larger in the first quintile.

Despite some caveats in the analysis using simple 'with and without' approach, the results generally are encouraging, especially in the case of child education. Nonetheless, concrete results may best be obtained using information on how households spend remittance money on various indictors of welfare.

VI. CONCLUSION

At its peak in 1982-83, the official flow of remittances was equivalent to 70 percent of the country's total export. However, the remittances registered a decline after the first half of the 1980's and these remained less than 15 percent of total export during the 1990's. A recent surge in remittance was observed after the event of September 11 and consequently, remittances through formal channels have recently shown a tremendous boost, resulting in an increase in foreign exchange reserves, stabilizing the current account and exchange rate and a collapse of the kerb premium in Pakistan. Although the sustainability of this rise is uncertain, the phenomenon raised expectation of policy makers for economic stabilization, poverty alleviation and social development.

The purpose of this paper is to shed some light on the complex relationship among remittances, poverty, inequality and growth in the context of Pakistan. The phenomenon is scrutinized both at the macro as well as micro (household) level.

A standard Keynesians macro model is estimated for Pakistan's economy for the period of 1973 to 2003. Although the results indicate a large remittance multiplier of 3.07 for the national output, it however, channels through consumption. The remittance multiplier for investment is negligible. The results therefore, support the stand taken by various researchers and observers that the role of remittances in channelizing productive investment and growth is negligible. It is also argued that the multiplier story only captures the short-run impact of remittances on the receiving economy and attempts should be made to capture long-term aspects such as human capital development and labor force participation.

In general, the study found a negative relationship between deprivation of origin and migration. Migration rates are higher, with the exception of one province, for low deprived areas. The result, therefore, suggests that the costs of migration are an important indicator and government should provide financial or institutional support.

The impact of remittances on national poverty incidence is also analyzed using the latest available household data. The estimates show that, on the average, a 2-percentage points decrease in poverty incidence is due to remittances. Further, the Gini (inequality coefficient) is insensitive and did not respond to the inflow of remittances. The fact that the poor have less participation makes these results plausible.

Other aspects of household welfare are also scrutinized using a simple 'with and without' approach. Significant differences are observed with respect to child education, consumption on durables and housing services between remittance recipient and non-recipient households, especially in the lowest income quintile. However, these results should be taken cautiously as the causal link between remittances and these welfare indicators is not clear and other factors that may affect these welfare indicators are not taken care of.

Finally, it should be admitted that our understanding of the linkages between migration and development remains very partial. There is a need for more detailed empirical studies. At the household level, both representative and detailed qualitative

case studies are required to evaluate the welfare implication of remittances. At the macro front, there is a need to tackle the methodologies for assessing impact of remittances on national output.

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Appendix – A

Impact of Remittance on Macro Aggregate Variables
[Methodology and Regression Results]

The economy is approximated using the following standard Keynesian macro model:

(1) $CON_t = c(1) + C(2) * YD_t + e_{t1}$

(2) $INV_t = c(3) + C(4) * GNP_t + e_{t2}$

(3) $IMP_t = c(5) + C(6) * GNP_t + e_{t3}$

(4) $TAX_t = c(7) + C(8) * GNP_t + e_{t4}$

(5) $YD_t = GNP_t - TAX_t$

(6) $GNP_t = CON_t + GEX_t + INV_t + EXP_t + REM_t - IMP_t$

The above macro model consists of four equations and two identities. It gives six endogenous variables: private consumption (*CON*), investment (*INV*), imports (*IMP*), tax revenue (*TAX*), disposable income (*YD*) and national income (*GNP*). In addition, the model gives three exogenous variables, viz., government expenditure (*GEX*), remittances (*REM*) and export (*IMP*). In the model, C(2) represents marginal propensity to consume out of disposable income, C(6) reflects marginal propensity to import, C(8) is a tax rate and C(4) quantifies the relationship between national income and investment. The autonomous components of private consumption, investment, imports and taxes are represented by c(1), c(3), c(5) and c(7) respectively, while *e* denotes the random disturbance and unexplained part of the dependent variables. Equation (5) and (6) are identities in the model and define disposable and total national income respectively.

The reduced form equations for dependent variables may be easily obtained by solving the model in terms of exogenous variables. Accordingly, the coefficient associated with the remittance variable in the national income reduced form equation gives an idea about the impact of rupee change in remittances on national income[20]. Theoretically, the remittance multiplier takes the following form:

(7) $\dfrac{dGNP}{dREM} = \dfrac{1}{[1 - C(2)][1 - C(8)] - C(4) + C(6)}$

This indicates that the multiplier is determined by the magnitudes of marginal propensities to spend, invest and import as well as the tax rate. An Increase in either the marginal propensity to consume or invest increases the multiplier and an increase in the marginal propensity to import decreases it.

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[20] See Nishat and Bilgrami (1991) for detailed derivation.

The above remittance multiplier may be decomposed into various components using the relevant estimated coefficients. The multiplier effects of a rupee increase in remittances on private consumption, investment and import is computed using following derivations, equation (8) through equation (10), respectively.

$$(8) \qquad \frac{dCON}{dREM} = \frac{dCON}{dGNP} * \frac{dGNP}{dREM}$$

$$(9) \qquad \frac{dINV}{dREM} = \frac{dINV}{dGNP} * \frac{dGNP}{dREM}$$

$$(10) \qquad \frac{dIMP}{dREM} = \frac{dIMP}{dGNP} * \frac{dGNP}{dREM}$$

Table A1 provides estimates of structural coefficients of the model (equation 1 through equation 6), while the exact specification of equations and summary statistics are given in Table A2.

TABLE A1. Magnitude of Estimated Coefficients

	Coefficient	t-Statistic	Prob.
C(1)	12665.64	1.02	0.32
C(2)	0.69	27.98	0.00
C(3)	35957.67	1.92	0.06
C(4)	0.09	3.52	0.00
C(5)	21990.63	3.48	0.00
C(6)	0.12	10.46	0.00
C(7)	17576.88	1.35	0.18
C(8)	0.05	2.53	0.01

Source: Author's estimates.

TABLE A2. Actual Specification and Summary Statistics

Equation (1) : CON = c(1) + c(2)*YD+[AR(1)=c(11)]			
Adjusted R-squared	0.99	Durbin-Watson statistics	1.37
Equation (2) : INV = C(3) + C(4)*GNP+C(22)*D1+[AR(1)=C(21)]			
Adjusted R-squared	0.97	Durbin-Watson statistics	1.67
Equation (3) : IMP = C(5) + C(6)*GNP+ [AR(1)=C(31), AR(2)=C(32)]			
Adjusted R-squared	0.93	Durbin-Watson statistics	1.82
Equation (4): TAX = C(7) + C(8)*GNP+ [AR(1)=C(41), AR(2)=C(42)]			
Adjusted R-squared	0.94	Durbin-Watson statistics	1.94

Note: AR denotes autoregressive of order 1 or 2. These are incorporated to control for autocorrelation. Further, a dummy variable (D1) is introduced in Equation (2) to control for outlier in the investment equation.

Source: Author's estimates.