Remittances flow to India and its impact on growth over three decades since 1991

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Abstract

In many developing countries, remittance payments from migrant workers are observed as an *increasing magnitude and becoming a significant source of foreign reserve earnings. Remittances inflow is noted to be very useful in promoting household welfare, health, and education particularly in developing countries. Inflows of remittances to India have experienced a sharp rise in last three dictates. Remittances have also emerged as a more important and stable source of foreign exchange inflow compared to official development assistance, foreign direct investment or other types of capital flows in particular in developing countries.Among countries today, the top recipient countries are India with $79 billion, followed by China ($67 billion), Mexico ($36 billion), the Philippines ($34 billion), and Egypt ($29 billion) (World Bank 2019).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).In this study we have concentrated on the long-run relationship between remittances inflow and the economic growth of India considering annual data over the period 1975-2016,In this purpose we have used VAR (The vector auto regression) model for estimating the significance relationship and the direction of the relationship.*

Introduction

Before going into the discussion of remittances, we have to know about the interplay of migration in international context. There are two dominant patterns of migration during the long 19th century: first, from Europe to the Americas; and second, the movement of people within the periphery, particularly Indians and Chinese to South-East Asia, Africa, the Pacific and the Caribbean. There was some movement from the periphery to the Americas, such as Chinese settlements in the US,Hawaii, Canada, Peru and Cuba. Many of these movements were restricted through anti-immigration legislations. There was little migration from the periphery to Europe. The major reversal in mass migration, with periphery to core becoming its dominant direction, took place in the post-war period. In part, the reversal immigration flows arose because of the need for peripheral labour in core states.

International migration is motivated by differences that are likely to increase in the twenty-first century. Persisting demographic and economic inequalities between countries give people reasons to migrate, while revolutions in communications and transportation allow people in poorer countries to learn about opportunities in richer countries and move to take advantage of them (*Martin and Zuercher 2008*). There is also a more mechanical reason for more international migration— more borders to cross.

I.I Remittances: Are they Shortcut for Development?

Most migrants remit some of their foreign earnings to family and friends at home. During the 1990s, when remittances to developing countries doubled, sending-country governments and development institutions became aware of rising remittances, which often provided the foreign exchange essential to cover balance-of-payments deficits and sustain economic development policies (*Ratha 2003).* Leaders of major labour sending countries began to acknowledge the importance of remittances by symbolically welcoming home some returning migrants at Christmas each year, as in the Philippines, or calling migrants "foreign exchange heroes," as with former Mexican President Vicente Fox.

Remittances pose several migration and development challenges. Many national governments as well as international organizations such as the World Bank want to increase remittances, which can be accomplished by sending more workers over national borders and ensuring that they earn, save, and remit. Governments and international organizations want to reduce the costs of sending money via formal channels, which should reduce the use of informal channels for remittances and minimize the opportunity for terrorists to use such channels.

Most migrants are from developing countries, and 75 percent of global remittances went to developing countries— the $240 billion received by developing countries in 2007 was almost triple the $86 billion they received in 2000. Most reasons go in favour of rapidly rising remittances, including better, or more or less prudent reporting after the September 11, 2001, terrorist attacks; lower costs to remit via banks (which are more likely to report remittances); and dollar, which at best raises the dollar value of remittances transferred in other currencies . Another well-known factor increasing formal remittances is the expansion and spread of banks from migrant countries of origin to migrant destinations, where they offer services in the migrant's language, also as ancillary services to migrant relatives at home.

The major migration and development challenge tackled over the past decade has been to reduce the cost of sending small sums over borders via regulated financial institutions. There are altogether three steps that is associated and involved in a typical remittance transfer in the fact that the migrant pays the remittance to a money transfer firm such as Western Union in one country; the money transfer firm instructs its agent in another country to deliver the remittance, and last of all the agent pays the recipient.

However, in a more logical way, there are mainly three steps in remittances called first *mile,* the *intermediary stage,* and the *last mile,* and they involve three major costs. First is the fee paid by the sender, typically $10 to $30 to send the usual $200 remittances. Second is the exchange rate difference, as when dollars are converted to pesos at a rate less favourable than the interbank exchange rate. Third are fees that may be charged to recipients when they collect their funds (in many cases, remittance pick-up points are located in stores or other outlets that encourage recipients to spend some of the money received). There may also be an interest rate float if there is a time lag between paying and receiving remittances.

The second remittance-related migration and development challenge is to ensure that the spending of remittances accelerates development in migrant-sending areas. Most studies suggest that each $1 in remittances generates a $2 increase in economic activity, as the spending of remittances on housing, education, and health care creates jobs (*Taylor and Martin 2001*). Most remittances are spent on daily needs, as would be expected because foreign earnings replace money that would have been earned locally. However, remittances often exceed what would have been earned at home, and after basic consumption needs are satisfied, remaining remittances are often used to build or improve housing, educate and provide health care to children, and expand or launch new businesses or to venture forth in entrepreneurial activities.

Remittances can speed up development if macroeconomic fundamentals are correct. Sound economic policies give all residents, migrants and non-migrants, incentives to save and invest (*World Bank 2006*). One policy question usually crops up in this context whether governments should have special policies to encourage migrants to send remittances, such as matching remittances that are contributed to develop migrant areas of origin.

The best way so far for a migrant-sending country to maximize remittances and their impacts on development is to have the economic fundamentals correct, which actually means having an economy that is growing, an appropriate exchange rate, and a climate that fosters small investments. Migrants can sometimes have other impacts that speed development, as when they steer investments to their countries

of origin and persuade their (foreign) employers to buy products from their countries of origin. Migration increases travel and tourism between countries, as well as trade in ethnic foods and goods that migrants became familiar with while abroad.

In the migration and development equation returns can be best understood as third R, as the migrants who have been abroad can return with new energy, ideas, and entrepreneurial vigour that accelerate development in their countries of origin. Migrants are generally drawn from the ranks of the risk takers, and a combination of their remittance savings and skills acquired abroad can speed development, as in happened in case of southern Europe and Korea. On the other hand, if migrants somehow settle abroad and cut all their ties to their countries or origin, or if they return only to rest and retire, obviously there may be few development-accelerating impacts of migrant returns, as in many Pacific and Caribbean islands. . Also, the possibility of back-and-forth circulation cannot be ignored. This can under some conditions contribute to economic growth in both countries. Thus, the major migration and development channels are recruitment, remittances, and returns. Each of these three migration Rs sometimes operate in ways that speed up economic development. The 3 Rs can create virtuous circles that speed development, as with Indian IT.

A desirable outcome is migrant-led development, meaning that migrants accelerate development upon their return. Taiwan provides an example. Government policy encouraged out-migration during the 1960s and 1970s and return migration in the 1980s and 1990s. During the 1960s and 1970s, most government educational spending was for primary and secondary education, so Taiwanese often went abroad for university education, and over 90 percent of Taiwanese graduates remained overseas. When Taiwan's economy began to grow rapidly in the late 1970s, the government established the Hinschu Science-Based Industrial Park to encourage Taiwanese abroad to return by offering financial incentives and subsidized Western-style housing (Luo and Wang 2002). Hinschu, begun in 1980, became a major success by 2000, when over 100,000 workers were employed by 300 companies, half headed by returned migrants. Many local governments in China have followed a similar strategy of subsidizing the return of migrants to speed economic development. For example, Shanghai reportedly had 30,000 returned professionals in 2002, 90 percent of whom had MS or PhD degrees earned abroad (*Kaufman 2003*).

Rising interest in migration and development has prompted more governments to recognize that migrants abroad may be a key to development at home. Many migrant-sending governments have enacted legislation that permits or encourages dual nationality or dual citizenship in an effort to maintain links to citizens abroad. Some researchers believe that, in a globalizing world, dual nationality can be the keystone for "a Diaspora model [of development], which integrates past and present citizens into a web of rights and obligations in the extended community defined with the home country as the centre" (*Bhagwati 2003*).

Economic theory teaches us that inequalities between nation-states can be reduced as workers cross borders to fill jobs or as jobs move to workers via freer trade and investment. This means that migration and trade can be substitute policies to accelerate economic convergence.

So far so is the dynamics of migration and its relationship with the remittances. We may enter now with the details of remittances. Remittances are defined at best as the monies transmitted from one place to another. Although remittances can also be sent in-kind, the term "remittances" usually refers to cash transfers. Migrant workers' remittances are the part of total remittance flows that is transmitted by migrant workers, usually to their families or friends back home. The World Bank forcefully articulates that remittances play a vital role in the growth and development of the developing countries as they are an important and stable source of income for households. (*WorldBank 2006*). Analytical studies have already shown that the flow of remittances is the least influenced by economic downturn and remains a stable source of income.

II. Flow of Remittances to India

Inflows of remittances to India have experienced a sharp rise in recent years. Remittances have also emerged as a more important and stable source of foreign exchange inflow compared to official development assistance, foreign direct investment or other types of capital flows in particular in developing countries. Remittances have some comparative advantages as they do not create any future

repayment obligation and liabilities. Moreover, remittances come to the households as private aid to care about the wellbeing of the family back home of the migrants' members.

Among countries today, the top recipient countries are India with $79 billion, followed by China ($67 billion), Mexico ($36 billion), the Philippines ($34 billion), and Egypt ($29 billion) (*World Bank 2019*). 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 evidence indicates 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 inflow, 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 (Ratha 2009).

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 decades. The magnitude of the remittances can be judged by the fact that they sometimes exceed far over the foreign direct investment (Table 1).

Table 1: Remittances as a share of GDP

Years	Remittances Inflow (Rs Billion)	Remittances as a percentage of GDP	Net FDI Inflow as a percentage of GDP
1975-76	3.614494	0.416862998	-0.010628169
1976-77	5.7880931	0.619564246	-0.007604007
1977-78	8.1929375	0.77402856	-0.030083406
1978-79	9.5356413	0.831739278	0.01335363
1979-80	11.7393947	0.933706201	0.032176041
1980-81	21.75668	1.453915345	0.043059214
1981-82	20.0103652	1.138213657	0.048148456
1982-83	24.8890728	1.665691951	0.036397108
1983-84	26.9870898	1.178367477	0.002618983
1984-85	26.0675119	1.015837665	0.00919131
1985-86	30.563808	1.055657148	0.046244655
1986-87	28.2736879	0.872782071	0.047923052
1987-88	34.4996976	0.936954561	0.077119938
1988-89	32.2403599	0.73794636	0.031182439
1989-90	42.344118	0.843629325	0.086308037
1990-91	41.6830944	0.711058361	0.074736972
1991-92	74.737566	1.109071653	0.027593624
1992-93	75.0660576	0.969163284	0.097238944
1993-94	110.9093366	1.244277943	0.199720325
1994-95	183.695941	1.756863981	0.301406511

1995-96	201.8019968	1.645046745	0.603030361
1996-97	310.4678322	2.187506964	0.625827257
1997-98	375.3267464	2.38697646	0.871838424
1998-99	391.0939929	2.168674526	0.633739715
1999-00	478.785417	2.366557844	0.479034915
2000-01	577.2555845	2.651107459	0.77555818
2001-02	671.4053253	2.849955431	1.070660341
2002-03	763.3492051	3.009663995	1.025248066
2003-04	978.9186285	3.445073359	0.614080764
2004-05	849.8203245	2.621115186	0.775952192
2005-06	975.7125	2.641795336	0.898676912
2006-07	1283.728538	2.989095268	2.176329406
2007-08	1538.867125	3.08570153	2.100365807
2008-09	2174.244387	3.861847349	3.656950691
2009-10	2381.7147	3.676718597	2.687536065
2010-11	2445.437176	3.141573803	1.653785022
2011-12	2916.972078	3.237582777	2.002065552
2012-13	3677.62907	3.636435168	1.312934337
2013-14	4100.088066	3.610798509	1.516275965
2014-15	4295.805476	3.414846991	1.698769519
2015-16	4420.707429	3.196443895	2.105852937
2016-17	4218.117762	2.748317088	1.96389782

Source: World Bank Data 2017

India has received immigrant remittances in excess of 1% of its gross domestic product for many years. For example, as far back as 1982, remittances by Indians working overseas were estimated to be equal to 1.6% of Indian GDP. Total remittances by overseas Indians were reported to have reached $8 billion by2000, about 2% of Indian GDP. By 2006, they were double that amount (Table: 1.1).

II.I. Remittances Flow to India : A Historical Perspective

The trends in remittances during the 1970s and 1980s are outlined in Table 2, which confirm the sharp rise in remittances beginning in the mid-1970s. Data on remittances before 1970s are not available. Table 2 show the growing significance of remittances as a mean of financing the balance of payments (BoP) deficits in India.

Table: 2: Remittances Flow to India during 1970 to 1990

Years	Net private transfer Remittances (Rscrore)
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: Karmakar(2010)

That there are several macroeconomic factors underlying the increase in remittances flow might be attributed to the following factors:

(i)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 1980s. The economic boom in the Middle Eastern economies, particularly the Middle East, which followed the increase in 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 1980s 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 1989-198 (*Karmakar, 2010:164*).

(ii) Besides, 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.

(iii) 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. 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.All these factors if we take together have resulted in for the first time a net surplus in the current account of India's balance of payments. The net surplus was Rs. 1525.8 crore in 1976-77 and Rs. 1734.7 crore in 1977-79. That is the main reason for which the decade 1970s is hailed as the golden year in India's balance of payments.

Objective of the Study

India is the highest remittance receiving country in the world (World Bank 2019) with an increasing number of migrants living overseas. The inflow of remittances into the country has certainly grown dramatically in the past few years. Now it is an important matter to identify the significance of the economic impacts of remittances inflow on the Indian economy. Thus, the study focuses on the impacts of remittances on the potential macroeconomic variable like Growth of the Indian economy and it will assist the policymakers of India in the development of policies to have the maximum benefits of these inflows. So, our objective is to estimate the impact of international remittances inflows on economic growth in India.

Hypotheses:

H_o: There is no significant relationship between remittances inflows and economic growth in India.

H_1: There is significant relationship between remittances inflows and economic growth in India.

Theoretical Background on Remittances and Economic Growth

In the post-1945 period there have been three waves of interest in growth theory. The first wave focused on the neo- Keynesian work of Harrod (1939) and Domar (1946) emphasizing the role of savings in the growth of output in an economy. In the mid-1950s the development of the neoclassical growth model by Solow(1956) and Swan(1956) stimulated a second more lasting and substantial wave of interest, which after a period of relative neglect between 1970 and 1986, has been reignited. The third wave, initiated by the research of Paul Romer (1986),Robert Lucas (1988), Sergio Rebelo (1991) and Ortigueira and Santos (1997), led to the development of endogenous growth theory, which emerged in response to theoretical and empirical deficiencies in the neoclassical model.The Endogenous Growth Model considered mainly two factors: Human capital (increase in labour quantity and quality) and Physical capital in process of economic growth. The model assumes that human capital has no depreciation and it holds that investment in human capital, innovation, and knowledge are significant contributors to economic growth. The theory also focuses on positive externalities and spillover effects of a knowledge-based economy which will lead to economic growth and development. These works inspired the development of a 'new' breed of endogenous growth models and generated renewed interest in empirical and theoretical questions relating to long-run development.

In this above context of endogenous growth models, the inflow of remittances may lead to increase factor productivity by increasing human capital such as through improved health and access to education. According to Altruistic Theory it is believed that the migrant remit to his family as a result of his love and affection for his family members and hence to smooth the consumption of the family back home. So, this flow of money can be used by migrant household for education of the children and to have better medical facility.

Another theoretical transmission channel can be expected through the financial development of the domestic economy that would speed up remittances inflow to be translated into economic growth. The greater the width and depth of financial development, the more it creates positive externalities to the impact of remittances inflow on growth process. First, remittances inflow would be channelized towards productive investment, rather than conspicuous consumption, if the financial sector was ready to absorb the funds sent by migrant worker's home. Instead of 'wasting' the extra income received by recipients in developing countries, they would be incentivized by financial institutions offering higher returns. Second, recipients of foreign income would access financial institutions simply to collect their revenue streams but, in the process, they could demand other financial services as their knowledge and trust increase.

Third, banks will be able to resolve their asymmetric information problems (between customers and banks) by increasing the knowledge of new customers who have access to foreign incomes sent by relatives and friends working abroad. Fourth, banks will be able to increase their overall lending based on new deposits created via remittance and these financial multipliers will increase the supply of loanable funds to the rest of the economy. Fifth, remittances are often lumpy, and recipients might wish to utilize 'financial products that allow for the safe storage of these funds' (Aggarwal, Demirgüç-Kunt and Peria, 2006.); this allows for the growth of new and innovative financial products even when the original remittances were not received through normal commercial channels. Sixth, the risks associated with such transfers via the curb market (common to many poor developing countries and regions) is eliminated with higher quality of financial services accessible to senders and recipients alike. This could potentially increase the total supply of such transfers.

Although the above theoretical knowledge indulges the concept that remittance inflow has a positive impact on economic growth but some alternative view which postulate that remittances inflow may cause the economic growth negatively.

Supporting this above argument, it is argued that remittances inflows may also influence economic growth through their effects on the rate of growth of labour inputs (while holding the level of human capital fixed). One channel through which remittances could impact labour inputs is through labor force participation in the domestic economy. Remittances inflow would be expected to have a negative effect on labor force participation, for the following reasons. Firstly, the remittances inflows are simple income transfers from migrants to their households, recipient households may rationally substitute these unearned, nonobligatory (no liabilities for future repayment) remittance income for their labor income. In addition to that, regardless of their intended use, remittances inflow may raise the issue of moral hazard problems, this idea that was first introduced by Chami, Fullenkamp, and Jahjah (2005). Because this type of transfer occurs under asymmetric information and so it is difficult to monitor and enforce by the distance separating remitter and recipient, moral hazard problems may induce recipients to divert resources to the consumption of leisure, thereby reducing their labor market effort.

In another way it can be theoretically justified that remittances inflow for the purpose of investment can be procyclical, but it can fuel up the real effective exchange rate (REER) to appreciate further which in turn affects inversely the international competitiveness. As a result, it causes to contract the export sector of domestic country and indirect affects economic growth negatively.

IV.I. Empirical Literature on Remittances and Economic Growth

Remittance flow has grown faster over past three decades most of which has flowed to developing economics. Similarly, there are a growing number of theoretical and empirical studies which were endeavored to investigate whether remittances inflow positively affects economic growth process or not and the studies have also provided evidence of the possible transmission channels. Existing literatures provides mixed results. A group of studies suggest a positive effect of remittances inflow on economic growth through higher consumption, savings, and investment. For example, Aggarwal, Demirgüç-Kunt and Peria (2006), assuming the hypothesis that financial development; enhances economic growth and find that remittance inflow promotes financial sector development in developing countries. Similarly, Catrinescu, Leon-Ledesma, Piracha, and Quillin (2006) reject the existence of negative effect of remittance inflow on long-run economic growth. However, Rao and Hassan (2011) speak different with that remittance has no direct effect but small indirect effect on economic growth.

There are also groups identified as groups called: Second groups. They find a negative impact of workers' remittance on economic growth. These studies follow suit with the happening of Dutch Disease thus indicating that remittances inflow appreciates real exchange rate and reduces international competitiveness. It also reduces workers' participation in the labour market (Majumder & Karmakar, 2015). Lopez, Molina, and Bussolo (2007) and Chowdhury and Rabbi (2014), for instance, suggest that remittance inflow significantly appreciates real exchange rate of recipient country, which ultimately reduces international competitiveness in the export sector. Chami, Fullenkamp and Jahjah (2005) also in their model indicate that remittance is actually a non-profit driven compensatory private transfer and therefore has a negative correlation with economic growth. Barajas, Chami, Fullenkamp, Gapen, and Montiel (2009) suggest that even if remittance has an enormous effect on poverty eradication, at present

and the years to come combined with consumption smoothing positive effect, it does not significantly affect economic growth.

Third branch of literatures estimate the relationship between remittance inflow and financial development. Aggarwal, Demirgüç-Kunt and Pería (2006) find a positive association between remittance flow and financial development. Chowdhury, Mamta and Fazle (2014) suggest that there is a positive relationship between remittance inflow and financial development; however, the reverse causation is absent in Bangladesh data.

There is yet fourth group of research which examines the role of remittances inflow in investment, productivity, employment, and import. For instance, Lucas (2005) and Glytsos (2002) show that remittance inflow accelerates investment. Leon-Ledesma and Piracha (2004) show that remittances increase productivity and employment through investment. Roberts and Banaian (2004) shows that average propensity to save from remittance is 40 percent. Glytsos (2002) states that inflow of remittances acts as a source of financing for imports and decrease the balance of payments deficit in LDCs. On the contrary, Russell (1986) indicates that remittance increases imports and widen balance of payments deficit.

A further group of research estimates impact of workers' remittance on economic growth through institutional development. Catrinescu, Leon-Ledesma, Piracha, and Quillin (2006) suggest that a sound institutional environment enhance efficiency of investment leading to higher output. Using the data set used by Richard H Adams Jr and John Page (2005) on international migration, remittances etc., Paulo Giuliano and Marta Ruiz-Arranz (2009) determine the relationship between remittances and growth, given their importance in total international flows. Covering over 100 developing countries, they found that remittances augmented growth in countries with less developed financial systems and that remittances inflow positively affect economic growth, however. On the contrary, Ahamada and Coulibaly (2011) find that although the effect of financial development varies country to country, a high level of financial development helps remittances to have a high stabilizing effect on GDP growth. The IMF occasional paper, by Chami, Barajas et al. (2008) in a detailed study of countries that receive hefty amount remittances addresses two questions: how to manage their macroeconomic effects and how to harness their development potential. So, it is clear that there is the effect of remittances inflow on macroeconomic variables. Kireyev (2006) argues in this context that the impact of remittance depends on the structural characteristics such as consumption and investment patterns as well as the capacity to manage large financial inflows of the recipient country. DilipRatha and Sankar Mahapatra (2007) review the recent experiences of the developing countries in regard to the impact of remittances on poverty, growth, real wages, and external competitiveness. Their study handles the policy options available to the developing countries when remittances inflows are high and persistent. Along these lines, Singh, and Hari (2011) have gone through to show the impact of remittances on various macroeconomic and developmental aspects of the Indian economy they have examined data on remittances and some of the macroeconomic variables like the GDP, GDCF, savings, FDI, FII, export, import, and balance of trade deficit for the period between 1971 and 2008. Our study gives a hint to that, expanding the period from1975to 2016 to have a better mirror.

Variables, Data and Methodology

As per the objective the empirical analysis of our study employs annual dataset covering the period 1975 to 2016. The time series data on Remittances Inflow are taken from World Development Indicators of World Bank (2016). On the other hand, time series data on Output, Inflation are collected from Handbook of Statistics on the Indian Economy published by RBI (2016).

Apart from the Remittances inflow a set of Control Variables are used in our empirical analysis. Especially in the identification of the impact of Remittances Inflow on the Economic Growth or Output we have used M_3 money supply as share of GDP as a proxy of financial development, Total Government Expenditure as share of GDP, Gross Fixed Capital Formation as a share of GDP, Net FDI as a share of GDP and Real Export. The data on Net FDI inflow are collected from World Development Indicators of World Bank and for the other variables viz. M_3 money supply, Total Government Expenditure, Gross Fixed Capital Formation, and Export are collected from the RBI's Handbook of Statistics on the Indian Economy.

Table 3: Representation of Variables

Variables	Specification	Representation
Remittances inflow	Real remittances inflow = Remittances inflow Rs billion/ CPI_2010	R_REM
Output	Real GDP = GDP at current market price Rs billion/ CPI_2010	R_GDP
M_3 as a share of GDP	M_3Rs billion/ GDP at current market price Rs billion	M_3_GDP
Total Govt. Expenditure as a share of GDP	Total Govt. Expenditure Rs billion/ GDP at current market price Rs billion	TEXP_GDP
Gross Fixed Capital Formation as a share of GDP	Gross Fixed Capital Formation Rs billion/ GDP at current market price Rs billion	GFCF_GDP
Net FDI as a share of GDP	Net FDI inflow Rs billion/ GDP at current market price Rs billion	FDI_GDP
Real Export	Total export Rs billion/ CPI_2010	R_X

Source: *Authors' own representation*

The study uses a battery of time series econometric techniques as methodology. At first the Descriptive Statistics are being analysed. All of the statistics are calculated using the observations in the current sample.

After the Descriptive Statistics it is an important issue to check whether a series is stationary or not before using it in a regression,

In the event of same order of integration (I(1)) among the variables the long run relationship of GDP with the selected determinants have enquired by Johansen (1988, 1995) co-integration technique. Presence of co-integration implies that we run the error correction model (ECM) to correct for the short-term disequilibrium as the variables move towards long run equilibrium, and the short run dynamics of the co-integrating relationship is assessed by Vector Error Correction model (VECM). The VEC has co-integration relations built into the specification so that it restricts the long run behaviour of the endogenous variables to converge to their co-integrating relationships while allowing for short-run adjustment dynamics. The co-integration term is known as the Error Correction Term (ECT) since the deviation from long-run equilibrium is corrected gradually through a series of partial short-run adjustments. VECM has a scope to study the nature and direction of the causal impact of the selected determinants including Remittances inflow (REM) on Output (GDP).

If the estimated dynamics is maintained at the near future, then how the GDP profile get constituted through these endogenous random innovations of control variables are ascertained through a variance decomposition analysis. This analysis has a scope for identifying the relative strengths of innovations affecting GDP profile in the out of-sample forecast horizon.

Empirical Results of Remittances and Economic Growth

According to our objective, to assess the possibility of the long run relationship among the selected macroeconomic variables Output (LR_GDP), Total Govt. Expenditure as a share of GDP (TEXP_GDP), Gross Fixed Capital formation as a share of GDP (GFCF_GDP), Money Supply as a share of GDP (M_3_GDP), Real Export (LR_X), Net FDI as a share of GDP (FDI_GDP), Remittances inflow (LR_REM) time series data from the period 1975 to 2016 of those variables are being used as discussed previously.

Table 4 shows us the descriptive statistic summary of the selected variables. The Table 4 highlights that the average i.e. Mean of the Output (LR_GDP) is highest, 10.411 followed by Real Export (LR_X) reported as 7.862, Remittances inflow (LR_REM) as 6.335, Net FDI as a share of GDP (FDI_GDP) as 0.77, Money Supply as a share of GDP (M_3_GDP) as 0.527, Gross Fixed Capital formation as a share of GDP

(GFCF_GDP) as 0.258 and the average of Total Govt. Expenditure as a share of GDP (TEXP_GDP) is lowest, 0.154 among the variables. The table also reveals that the highest Median value among the variable is Output (LR_GDP) with a Median value 10.422 and the lowest Median value variable is Total Govt. Expenditure as a share of GDP (TEXP_GDP) with a value of 0.153.

Table also declares the Coefficient of Variations (C.V.) of the variables, among the variables Net FDI as a share of GDP (FDI_GDP) has the highest C.V. (117.532%) followed by Money Supply as a share of GDP (M_3_GDP) (33.776%), Gross Fixed Capital formation as a share of GDP (GFCF_GDP) (20.155%), Remittances inflow (LR_REM) (19.842%), Real Export (LR_X) (14.334%),Total Govt. Expenditure as a share of GDP (TEXP_GDP) (9.740%) and the lowest has acquired by the Output (LR_GDP) (6.416%).

According to Table 4 all the variables are positively skewed except Remittances inflow (LR_REM), which is negatively skewed. Furthermore, information we can gather from the table 4 that all the variables are platykurtic i.e., the value coefficient is less than 3 on the other hand only one variable, Net FDI as a share of GDP (FDI_GDP) is leptokurtic whose value of coefficient is more than 3.

The graphical representation of the time series data of the variables is presented in Figure 1. As can be seen from Figure 1, there is a trend in each of the series of the selected variables and therefore, the means and variances of the time series data of the variables are changing over time, so the series in their original form may not be stationary.

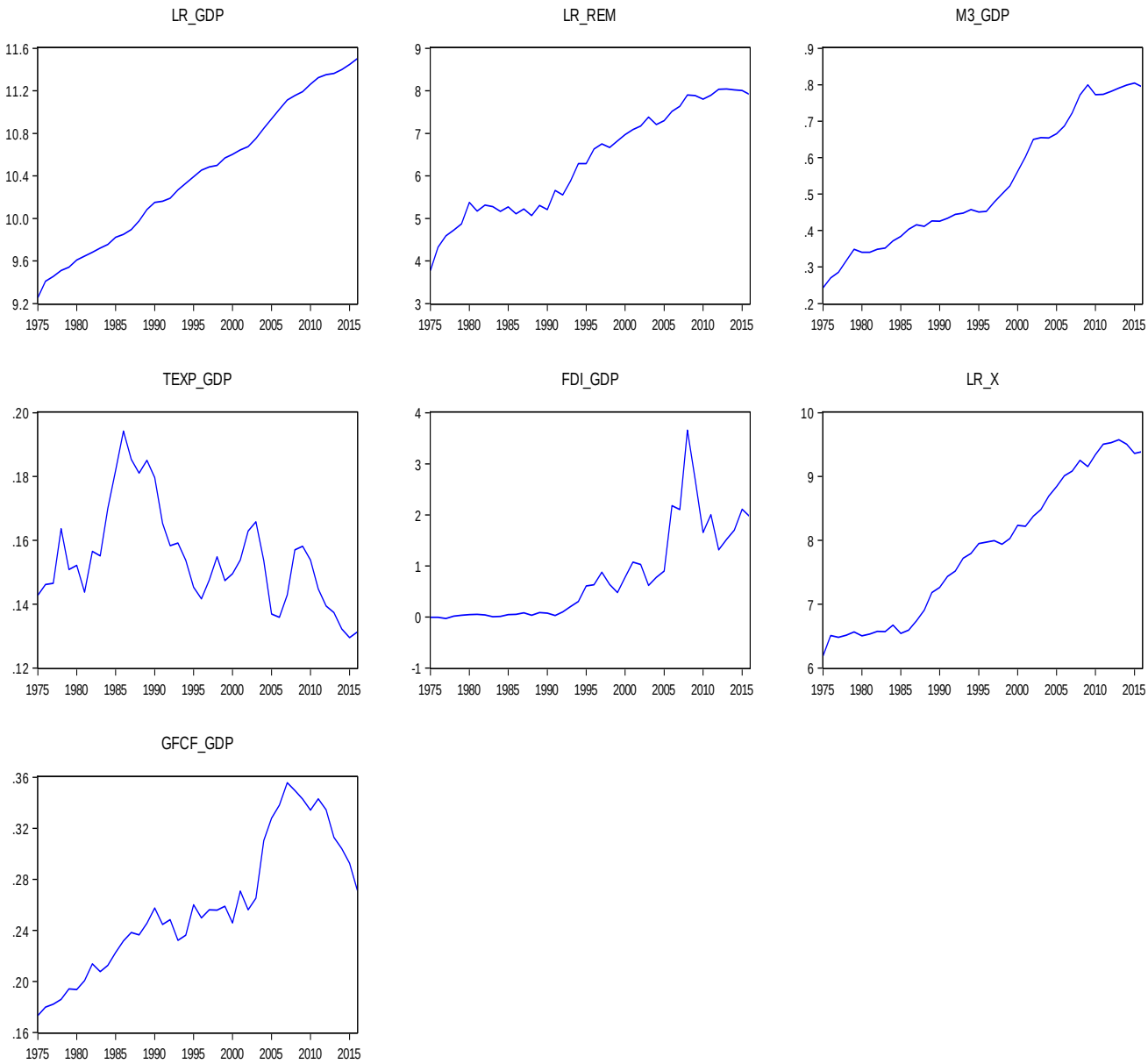
The first step in this regard is to check whether the concerned variables are stationary or not or in other words the order of integration. The results of the Augmented Dickey Fuller (1981) tests considering at first the assumption of only intercept and further considering the assumption of both intercept and trend are reported in the Table 5, 6 and the results of PP Peron (1988) test considering at first the assumption of only intercept and further considering the assumption of both intercept and trend are revealed in Table 7, 8.

Table 4Descriptive Statistics of the Selected Variables

	LR_GDP	LR_REM	TEXP_GDP	GFCF_GDP	FDI_GDP	M3_GDP	LR_X
Mean	10.41157	6.335013	0.154598	0.258824	0.770822	0.527555	7.862650
Median	10.42219	6.458956	0.153704	0.252825	0.541033	0.455067	7.943780
Maximum	11.50337	8.041323	0.194216	0.355703	3.656951	0.804794	9.577388
Minimum	9.255034	3.774866	0.129485	0.173162	-0.030083	0.242795	6.187828
Std. Dev.	0.668834	1.257323	0.015703	0.052201	0.905782	0.178749	1.127076
C.V.	6.416	19.842	9.740	20.155	117.532	33.776	14.334
Skewness	0.059923	-0.097916	0.709110	0.312417	1.219341	0.298579	0.107864
Kurtosis	1.776553	1.676295	2.952824	2.108213	3.885650	1.682159	1.581349

Source: *Computed by the researcher*

Figure: 1Graphical representation of time series data of the variables



Source: *Computed by the researcher*

Table 5: Augmented Dickey Fuller (ADF) Unit Root Tests (Intercept)

Variables and Specifications	Level		First Difference		Order of Integration
	Statistic	Prob.	Statistic	Prob.	
Output (LR_GDP)	-0.085	0.94	-4.244	0.00*	I (1)
Total Govt. Expenditure as a share of GDP (TEXP_GDP)	-2.024	0.27	-3.931	0.00*	I (1)
Gross Fixed Capital formation as a share of GDP (GFCF_GDP)	-1.659	0.44	-5.262	0.00*	I (1)
Money Supply as a share of GDP (M_3_GDP)	-0.580	0.86	-3.776	0.00*	I (1)
Real Export (LR_X)	-0.619	0.85	-5.985	0.00*	I (1)
Net FDI as a share of GDP (FDI_GDP)	-1.370	0.58	-7.358	0.00*	I (1)
Remittances inflow (LR_REM)	-1.940	0.31	-7.896	0.00*	I (1)

Source: *Computed by the researcher*

(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

Table 6: Augmented Dickey Fuller (ADF) Unit Root Tests (Intercept & Trend)

Variables and Specifications	Level		First Difference		Order of Integration
	Statistic	Prob.	Statistic	Prob.	
Output (LR_GDP)	-2.996	0.14	-4.184	0.01*	I (1)
Total Govt. Expenditure as a share of GDP (TEXP_GDP)	-2.689	0.24	-4.023	0.01*	I (1)
Gross Fixed Capital formation as a share of GDP (GFCF_GDP)	-0.568	0.97	-5.486	0.00*	I (1)
Money Supply as a share of GDP (M_3_GDP)	-2.171	0.49	-3.725	0.03**	I (1)
Real Export (LR_X)	-2.797	0.20	-5.895	0.00*	I (1)
Net FDI as a share of GDP (FDI_GDP)	-3.017	0.14	-7.172	0.00*	I (1)
Remittances inflow (LR_REM)	-2.401	0.37	-8.003	0.00*	I (1)

Source: *Computed by the researcher*
(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

Table 7: PP Unit Root Tests (Intercept)

Variables and Specifications	Level		First Difference		Order of Integration
	Statistic	Prob.	Statistic	Prob.	
Output (LR_GDP)	-0.720	0.83	-5.979	0.00*	I (1)
Total Govt. Expenditure as a share of GDP (TEXP_GDP)	-1.739	0.40	-5.238	0.00*	I (1)
Gross Fixed Capital formation as a share of GDP (GFCF_GDP)	-1.674	0.43	-5.455	0.00*	I (1)
Money Supply as a share of GDP (M_3_GDP)	-0.588	0.86	-3.577	0.01**	I (1)
Real Export (LR_X)	-0.627	0.85	-6.040	0.00*	I (1)
Net FDI as a share of GDP (FDI_GDP)	-1.276	0.63	-7.544	0.00*	I (1)
Remittances inflow (LR_REM)	-1.886	0.33	-7.705	0.00*	I (1)

Source: *Computed by the researcher*
(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

Table 8: PP Unit Root Tests (Intercept & Trend)

Variables and Specifications	Level		First Difference		Order of Integration
	Statistic	Prob.	Statistic	Prob.	
Output (LR_GDP)	-2.547	0.30	-5.849	0.00*	I (1)
Total Govt. Expenditure as a share of GDP (TEXP_GDP)	-2.280	0.43	-5.892	0.00*	I (0)
Gross Fixed Capital formation as a share of GDP (GFCF_GDP)	-1.290	0.87	-5.636	0.00*	I (1)
Money Supply as a share of GDP (M_3_GDP)	-1.568	0.78	-3.527	0.04**	I (0)
Real Export (LR_X)	-1.865	0.65	-5.960	0.00*	I (1)
Net FDI as a share of GDP (FDI_GDP)	-3.017	0.14	-7.454	0.00*	I (1)
Remittances inflow (LR_REM)	-2.797	0.20	-7.773	0.00*	I (1)

Source: *Computed by the researcher*
(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

As we have found all the variables are stationary at 1st difference now as mentioned earlier the long run relationship of Output (LR_GDP), Remittances inflow (LR_REM) and other control variables have enquired by Johansen (1988, 1995) cointegration technique. To determine the existence and the number of cointegrating vectors, Johansen cointegration technique is used. There are two hypothesis tests used for cointegration testing, called the Trace (λ trace) test and Maximum Eigen value (λ max) test. The cointegration test results at 5% level of significance are presented in Table 9 and 10.

Table 9: Johansen Cointegration Test Results
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob
None*	0.7961	172.9550	150.5585	0.00*
At most 1	0.5995	107.7595	117.7082	0.17
At most 2	0.4972	70.2383	88.8038	0.49
At most 3	0.3111	42.0425	63.8761	0.77
At most 4	0.2695	26.7597	42.9152	0.69
At most 5	0.1651	13.8812	25.8721	0.66
At most 6	0.1462	6.4822	12.5179	0.40

Source: *Computed by the researcher*
(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

Table 10: Johansen Cointegration Test Results
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob
None*	0.7961	65.1955	50.5998	0.00*
At most 1	0.5995	37.5211	44.4972	0.23
At most 2	0.4972	28.1957	38.3310	0.44
At most 3	0.3111	15.2828	32.1183	0.93
At most 4	0.2695	12.8785	25.8232	0.81
At most 5	0.1651	7.3989	19.3870	0.87
At most 6	0.1462	6.4822	12.5179	0.40

Source: *Computed by the researcher*
(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

From the results above so far, we found that the variables are stationary at 1st difference i.e. I (1) and are cointegrated. Therefore, they have a long-term relationship. So, their short-run fluctuation can be described by their first differences, which are stationary. The interactions in the short-run fluctuations may therefore be described by a VAR system in first differences. We determine the optimal lag length for the VAR system by using the Schwarz (1978) Criterion (SC) and the Akaike (1974) Information Criterion (AIC). We used a VAR system of "i" lags and estimate it for various lag lengths and found that the optimal lag lengths for Output (LR_GDP) and Remittances Inflow (LR_REM) and other control variables, to be 2. So, from the foregoing discussion and the review of the literature, the effect of Remittances inflow (LR_REM) on the Output (LR_GDP) can be represented as follows: -

$$\Delta LR\_GDP_t = \alpha + \Sigma^n_{i=0}\ \beta_{1i}\Delta LR\_GDP_{t-i} + \Sigma^n_{i=0}\ \beta_{2i}\ \Delta LR\_REM_{t-i} + \Sigma^n_{i=0}\ \beta_{3i}\ \Delta TEXP\_GDP_{t-i} + \Sigma^n_{i=0}\ \beta_{4i}\ \Delta M_3\_GDP_{t-i} + \Sigma^n_{i=0}\ \beta_{5i}\ \Delta GFCF\_GDP_{t-i} + \Sigma^n_{i=0}\ \beta_{6i}\ \Delta FDI\_GDP_{t-i} + \Sigma^n_{i=0}\ \beta_{7i}\ \Delta LR\_X_{t-i} + \lambda\ ecm_{t-1} + \varepsilon_t$$

According to the test it reveals that the variables have a long run relationship at 1% level of significance. The results of cointegration test are interpreted through Vector Error Correction Model (VECM) which is a restricted version of VAR model designed for non-stationary time series. VECM captures the linear relationship among multiple time series by adding error correction features. The error correction term (ECT) tells how much the error is being corrected or adjusted from short run disequilibrium to long run equilibrium. The result of VECM is stated in Table 11.

Table 11:Vector Error Correction Estimates
Dependent Variable D(LR_GDP)

Regressors	Coefficient	t-Statistic	Regressors	Coefficient	t-Statistic
CoinEq1	-0.2952	-2.0636**	D (M_3_GDP (-1))	-0.3632	-0.9009
D (LR_GDP (-1))	0.3672	1.5002	D (M_3_GDP (-2))	0.7697	2.3862**
D (LR_GDP (-2))	0.1763	0.7135	D (FDI_GDP (-1))	0.0274	1.9304**

D (LR_REM (-1))	-0.1270	-2.6808*	D (FDI_GDP (-2))	0.0302	2.0755*
D (LR_REM (-2))	-0.0815	-1.9156**	Constant	0.0433	3.0774*
D (TEXP_GDP (-1))	-1.6130	-2.1337**	R squared	0.5412	
D (TEXP_GDP (-2))	-0.9306	-1.4673	Adj. R squared	0.2419	
D (GFCF_GDP (-1))	-0.5452	-1.2112	D-W Stat	2.0144	
D (GFCF_GDP (-2))	-0.5676	-1.2294	Akaike (AC)	-4.5663	
D (LR_X (-1))	-0.0309	-0.3920	Schwarz (SC)	-3.8838	
D (LR_X (-2))	-0.0327	-0.6104			

Source: *Computed by the researcher*

(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

In the above study VECM was used to examine short runs dynamics and correct for short run disequilibrium among the variables LR_GDP, LR_REM, TEXP_GDP, GFCF_GDP, LR_X, M_3_GDP, and FDI_GDP. The co-efficient of error correction term (ECT) is equal to -0.2952 and is statistically significant at 5%. The sign of (ECT) conforms to the restriction of negativity and less than one (Gujarati, 2009). It also implies that the rate at which short runs disequilibrium is being corrected to arrive to the long run equilibrium at a rate of 29.52% per annum.From the above results we can conclude that the Output (LR_GDP)is determined by lag values of Remittances inflows (LR_REM), Total Govt. Expenditure (TEXP_GDP), FDI (FDI_GDP) and Money supply (M_3_GDP).We have provided empirical evidence showing that remittances inflow has a negative impact in both the 1st lag (-0.1270 at 1% level of significance) and 2nd lag (-0.0815 at 5% level of significance) on the Output of India.

On the other hand, empirically, it is observed that Total Govt. Expenditure (TEXP_GDP) has negative impact at 5% level of significance which can be justified that initially Govt. Expenditure may have a negative impact or no impact as a Govt. Expenditure requires sum lag period to give a positive thrust to the economy. However, the positive impact of FDI (FDI_GDP) in the 1st lag and in the 2nd lag at 5% and 1% level of significance respectively, FDI through its spillover effect have direct positive economic growth of the host countries, which support the view of positive correlation among foreign capital inflow and economic growth.

Whereas it is empirically also evident the theoretical opinion that the increase in money supply can spur the economic growth through demand side. According to standard macroeconomic theory, an increase in the supply of money should lower the interest rates in the economy, leading to more consumption and lending/borrowing. In the short run, this should increase the Output (GDP) of the economy. Here Money supply positively influences Output in the 2nd lag at 5% level of significance.

The empirical result VECM also reveals that there is no autocorrelation detected in the sample with D-W value of 2.01. The Durbin Watson (DW) statistic is a test for autocorrelation in the residuals from a statistical regression analysis. The Durbin-Watson statistic will always have a value between 0 and 4. If the value comes out to be 2.0 means that there is no autocorrelation detected in the samples. Values from 0 to less than 2 indicate positive autocorrelation and values from 2 to 4 indicate negative autocorrelation.

Now if the estimated dynamics is maintained at the near future, then how the Output (LR_GDP) profile get constituted through these endogenous random innovations of control variables are ascertained through a variance decomposition analysis. This analysis has a scope for identifying the relative strengths of innovations affecting the Output (LR_GDP) profile in the out of-sample forecast horizon. The result of Variance Decomposition is shown in Table 12.

Table 12: Variance Decomposition of LR_GDP

Variance Period	LR_GDP	GFCF_GDP	FDI_GDP	LR_X	M_3_GDP	LR_REM	TEXP_GDP
1	92.2077	0.0000	0.0000	0.0000	0.0000	7.7922	0.0000
2	72.8644	0.0354	0.9260	1.8015	0.5860	20.9859	2.8005
3	67.1729	1.0829	0.5220	3.5860	0.6578	20.3433	6.6347
4	61.9717	3.2629	1.3732	5.2455	3.0723	17.8636	7.2105
5	57.4728	4.3048	2.7324	5.8566	6.6303	16.0716	6.9312
6	54.4104	5.2279	3.9475	6.2006	9.6010	14.5656	6.0466
7	51.5644	5.6415	5.1190	6.6079	11.8824	13.6952	5.4893
8	49.0730	6.1908	6.4273	7.0036	13.9510	12.4915	4.8624
9	46.4556	6.6729	7.8978	7.4252	15.8758	11.3516	4.3208
10	44.2192	7.1061	9.2761	7.7268	17.6388	10.2389	3.7939

Source: *Computed by the researcher*

(Significant at 1%, ** Significant at 5%, *** Significant at 10%)*

According to Table 12 it is found that the Remittances inflow innovation would account 20.98% variance of Output at the 2-forecast period horizon that is the highest innovation among 10 forecast horizon and 10.23% of such variance at the 10-forecast period horizon. The variance decomposition analysis, therefore, confirms that in the near future the Remittances inflow may be an important cause for negative Output growth in India.

Conclusions

In what follows from our dissertation is the fact that Indian emigration has been taking place since centuries and therefore they are not fortuitous, it is systematic. History is the evidence to the fact that India witnessed massive movements of people from the country to other parts of the world. This happened during the 19th, 20th and 21st centuries. It goes back several centuries the intimate contact with the Persian Gulf region and south-east Asia, both in terms of trade in goods and movement of people. According to the Ministry Overseas Indian Affairs, India is the second largest diaspora in the world and the highest recipient of remittances. The money that migrants send home is very important not only to their families but also to their country's balance of payments. At the macro level, remittances inflow is an important source of external financing for developing countries, often providing a steady source of capital in excess of funds generated through FDI and portfolio flows. Importantly, remittances flow also serves to stabilize recipient economies at times of economic downturn brought on by such phenomena as a natural disaster, financial crisis, political conflict etc. In essence, inflows can be counter-cyclical to smooth macroeconomic shocks in the migrants' home countries. It is true that remittances have proved to be an important and stable source of external finance to cushion the impact of a weak merchandise trade account in India. In Sri Lanka also, as its economy was subject to the external supply-side shock of a rapid rise in international oil prices during 2004-2008, a sharp deterioration in the current account of BoP was offset by higher inflows of remittances. For India, inward remittances flows have been pivotal in financing the trade deficit (43 per cent in 2017-18). Thus, the overall developmental impact of remittances is quite significant.

Emigrants send home money by way of periodic remittances. One of the inevitable consequences is the increase in disposable income at the household level thus providing financial resources for household. The sudden increase in household income has had a considerable impact on household consumption patterns (food; clothing, electric appliances such as rice cooker, water boiler, mobile phones; payment of electricity and telephone bills; etc.). Inflows of remittances from the people working abroad have had a significant effect on poverty eradication with the result that the overall percentage of people in the country in question decreases. Econometric evidence also confirms positive impact of remittances on

poverty. Anecdotal evidence suggests that remittances have helped alleviating poverty for many of the households, both in the rural and the urban areas. The World Bank (2006) finds that remittances can reduce poverty, improve households' ability to withstand adverse shocks (for example, households receive higher levels of remittances during adverse health outcomes, crop failures.), provide credit for household enterprises, and improve household investments on education and health. (*World Bank, 2006*: 117-127). Inflows of remittances from the migrants abroad reduces the unemployment rate of the country. Thus, remittances have a poverty reducing and welfare enhancing impact, in particular for individuals' welfare improving. They are desirable despite its negative effects such that it can generate "Dutch Disease" effects, making capital less costly relative to labour and reduce country's competitiveness of the export sector following a sizeable surge in inflows leading to a real exchange rate appreciation and reduce export-oriented sectors. However, some policies can be prudently used to counter the negative impact of remittances inflows. A number of programmes and schemes that covers issue of governance in the process of labour migration and the protection and welfare of migrant workers and their families may be instituted by the Indian government.

In addition, remittances are an important source of national savings that can lift the investment rate of a country. The savings take the form of direct investment, cash, or deposits into the financial system. A low volume of domestic savings is always a hindrance for a country to lift up its investment rate. India has managed to maintain a much higher level of national savings, and thus, a higher level of total investment in the economy. While such inflows that increase investments are likely to have a positive effect on economic growth, a good investment climate— including the presence of a well-developed financial system— will partly determine the extent to which remittances are invested in physical and human capital.

The existing literature articulating on remittance impacts is divided between those analysts who suggest that remittances have no developmental impact but only creates over consumption, dependency and disincentive to work and those who argue that remittances may lead to economic development and poverty alleviation in the developing countries. The big question in this debate is the way the term development has been conceptualized differently by researchers who have been analyzing the impacts of remittances on receiving families and communities. The questions remain: what is real development? What makes development to happen? It is also argued that in most cases remittances are not invested in productive areas and the largest part is consumed. This is true; however, it should also be recognized that remittance transfers are of different types with a variety uses and potentials for development, and therefore disaggregated data showing different types of remittances on how they are used and why is needed to be able to come up with reliable conclusions that are necessary for policy intervention.

There are various factors that are listed as reasons for impact of remittances to development. It is claimed that a substantial part of remittance flows is underreported in most developing countries and also a significant amount of about 35 to 75 percent of formal remittances is transferred through informal channels and in that way reducing their impact on development (Freund and Spatafora 2005). Factors that are being blamed for higher informal remittance flows in developing countries include weak financial systems, larger exchange rate spread and higher transaction costs of sending remittance through formal/official/registered channels.

Our study, however, examines the long run and short run relationship among Remittances Inflow, Output, and other selected control variables. The empirical findings from the error-correction model show that the Output adjust to its equilibrium rapidly in short run. From the above results we can conclude that the GDP is determined by lag values of remittances inflows, total govt. expenditure, gross fixed capital formation, FDI and money supply. We have provided empirical evidence showing that remittances inflow has a negative impact on the GDP of India. The co-efficient of error correction term (ECT) is equal to -0.2952 and is statistically significant at 5%. The sign of (ECT) conforms to the restriction of negativity and less than one (Gujarati, 2009). It also implies that the rate at which short runs disequilibrium is being corrected to arrive to the long run equilibrium at a rate of 29.52% per annum.From the above results we can conclude that the Output (LR_GDP) is determined by lag values of Remittances inflows (LR_REM), Total Govt. Expenditure (TEXP_GDP), FDI (FDI_GDP) and Money supply (M_3_GDP). We have provided

empirical evidence showing that remittances inflow has a negative impact in both the 1st lag (-0.1270 at 1% level of significance) and 2nd lag (-0.0815 at 5% level of significance) on the Output of India.

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