

# Increasing the Macroeconomic Impact of Remittances on Development<sup>1</sup>

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## **1. Introduction**

International migration can generate substantial welfare gains for migrants, as well as countries of origin and destination, and reduce poverty. The benefits to origin countries are realized mostly through remittances. Remittances are an important source of external finance for developing countries, with remittances larger than official development assistance, foreign direct investment, and portfolio flows in many countries.

Remittances are person-to-person flows, well targeted to the needs of the recipients, who are often poor, and do not typically suffer from the governance problems that may be associated with official aid flows. Fundamentally, remittances are personal flows from migrants to their friends and families. They should not be taxed or directed to specific development uses. Instead, the development community should make remittance services cheaper and more convenient, and support the development of instruments for these remittances to be leveraged for improving financial access of migrants, their beneficiaries, and the financial intermediaries in the origin countries. The benefits of remittances for development are, however, conditional upon the broader economic and political context.

This background paper reviews the recent country experiences on the impact of remittances on poverty, growth, real wages and external competitiveness, and provides available policy options for developing countries to deal with the consequences of large and persistent remittance inflows. It also discusses how developing countries can leverage remittances for improving their access to international capital markets.

### ***1.1. Remittances are an important source of external finance for developing countries***

Recorded remittances sent home by migrants from developing countries reached \$240 billion in 2007, up from \$221 billion in 2006 and more than double the level in 2002. The true size of remittances, including unrecorded flows through formal and informal channels, is believed to be even larger. Remittances were more than twice the level of official development assistance (ODA) flows to developing countries in 2007. In many poor countries, they are the largest source of external financing.

The doubling of recorded remittances over the last five years is a result of better measurement of flows, increased scrutiny since the terrorist attacks of September 2001, reduction in remittance costs and

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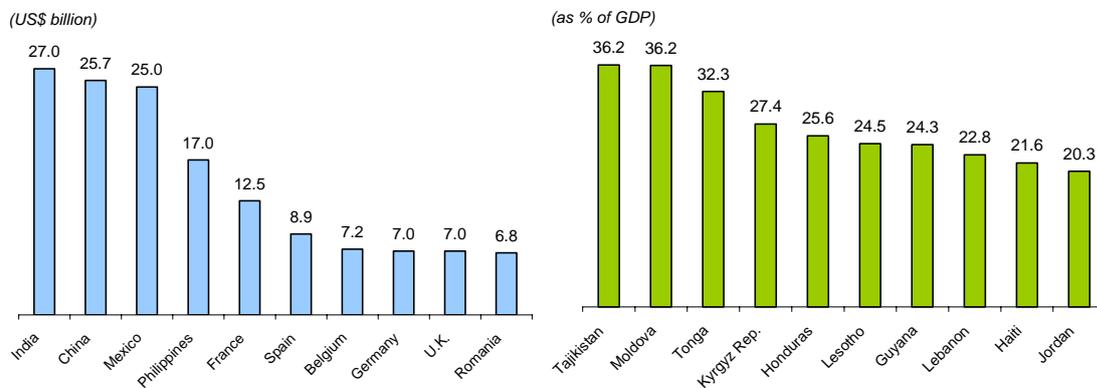
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expanding networks in the industry, depreciation of the dollar, and growth in the global migrant stock and incomes.

### 1.2. Poor countries receive relatively larger remittances

Remittances are more evenly distributed across developing countries than private capital flows. In 2007, the top three recipients of remittances—India, China, and Mexico—each received over \$25 billion. But smaller and poorer countries tend to receive relatively larger remittances when the size of the economy is taken into account (figure 2). Expressing (recorded) remittances as a share of GDP, the top recipients were Tajikistan (36 percent), Moldova (36 percent), Tonga (32 percent) and Kyrgyz Republic (27 percent). Remittances as a share of GDP amounted to 3.6 percent of GDP in low-income countries in 2006 compared to 1.7 percent in middle-income countries (see figure 1).

**Figure 1: Top recipients of remittances, 2007**



Source: World Bank staff calculations. Remittances as a percent of GDP are for 2006.

## 2. Recent trends on the macro-impact of remittances for development

### 2.1 Remittances are stable or even countercyclical

Unlike private capital flows, remittances tend to rise when the recipient economy suffers an economic downturn following a financial crisis, natural disaster, or political conflict.<sup>2</sup> Migrants send more funds during hard times to help their families and friends. Remittances thus smooth consumption and contribute to the stability of recipient economies by compensating for foreign exchange losses due to macroeconomic shocks. For example, remittances as a share of personal consumption expenditure rose in Indonesia, Mexico and the Philippines following financial crisis and in Central America following natural disasters (see figure 2).<sup>3</sup> In many conflict countries such as Haiti and Somalia, remittances provide a lifeline to the poor. In Latin America, which has long been dependent on foreign financing and the vagaries of commodity prices, remittances work effectively as an informal “stabilization fund”.<sup>4</sup>

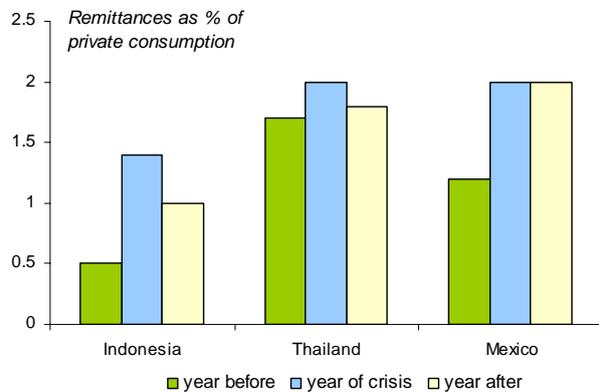
<sup>2</sup> Ratha (2007), World Bank (2005)

<sup>3</sup> Yang (2006)

<sup>4</sup> Loser and others (2006)

In the Caribbean, a 1 percent decrease in real GDP is associated with a 3 percent increase in remittances after a two-year lag.<sup>5</sup>

**Figure 2: Remittances rise during crisis, natural disaster, or conflict**



Source: Global Economic Prospects 2006

To the extent that remittances are used for investment purposes, they may behave procyclically just as other investment flows do. Remittances are more likely to be countercyclical in poor countries. Remittances tend to be strongly countercyclical in India and Bangladesh, and procyclical in Jordan and Morocco.<sup>6</sup> In Turkey and the Philippines, remittances were more volatile and procyclical in the 1990s than in the 1980s. In general, the volatility of remittances is lower than that of private capital inflows and official flows.<sup>7</sup> In Sub-Saharan Africa, where official aid flows have fluctuated considerably from year to year, remittances have been more stable than both FDI and official aid.<sup>8</sup>

## 2.2. Remittances reduce poverty in the recipient economy

Remittances directly augment the income of the recipient households. In addition to providing financial resources for poor households, they affect poverty and welfare through indirect multiplier effects and also macroeconomic effects. Also these flows typically do not suffer from the governance problems that may be associated with official aid flows.

Analysis of household survey data show that remittances have reduced poverty and resulted in better development outcomes in many low-income countries. Remittances may have reduced the share of poor people in the population by 11 percentage points in Uganda, 6 percentage points in Bangladesh and 5 percentage points in Ghana. Studies in El Salvador and Sri Lanka find that the children of remittance recipient households have a lower school drop-out rate. In Mexico, Guatemala, Nicaragua and Sri Lanka children in remittance recipient households have higher birth weights and better health indicators than other households. Remittances are also often used for small business investments, especially in countries with a good investment climate.

<sup>5</sup> Mishra (2005)

<sup>6</sup> Sayan (2006)

<sup>7</sup> IMF (2005a)

<sup>8</sup> Gupta, Pattillo and Wagh (2007)

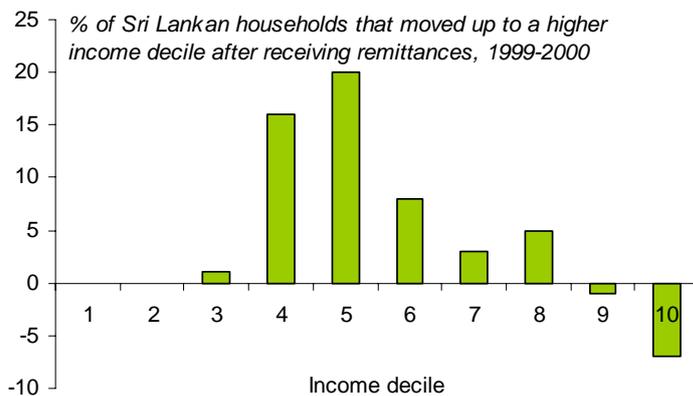
Cross-country analysis also show significant poverty reduction effects of remittances: a 10 percent increase in per capita official remittances may lead to a 3.5 percent decline in the share of poor people.<sup>9</sup> Remittances have reduced poverty in Sub-Saharan Africa and Latin America, although with heterogeneous effects across countries.<sup>10</sup>

The analysis of poverty impact of remittances must account for counter-factual loss of income that the migrant may experience due to migration (for example, if the migrant has to give up his or her job). Such losses are likely to be small for the poor and unemployed, but large for the middle- and the upper-income classes.

Very poor migrants may not be able to send remittances in the initial years after migration. Also the remittances of the very rich migrants may be smaller than the loss of income due to migration. But for the middle-income groups, they enable recipients to move up to a higher income group. In Sri Lanka, for example, households from the third through the eighth income deciles moved up the income ladder thanks to remittances (see figure 3).

Remittances are also associated with increased household investments in education, entrepreneurship, and health—all of which have a high social return in most circumstances. Studies based on household surveys in El Salvador and Sri Lanka find that children of remittance recipient households have a lower school drop-out ratio and that these households spend more on private tuition for their children. In Sri Lanka, the children in remittance receiving households have higher birth weight, reflecting that remittances enable households to afford better health care. Several studies also show that remittances provide capital to small entrepreneurs, reduce credit constraints and increase entrepreneurship. Remittances from the United States accounted for about one fifth of the capital invested in micro-enterprises in urban Mexico.<sup>11</sup>

**Figure 3: Remittances help reduce poverty**



Source: Global Economic Prospects 2006

<sup>9</sup> Adams and Page (2006)

<sup>10</sup> Fajnzylber and Lopez (2006) and Gupta, Pattillo and Wagh (2007)

<sup>11</sup> Woodruff and Zenteno (2001)

### ***2.3 The evidence on the effect of remittances on long-term growth is inconclusive***

To the extent that they finance education and health and increase investment, remittances could have a positive effect on economic growth. In the economies where the financial system is underdeveloped, remittances may alleviate credit constraints and act as a substitute for financial development.<sup>12</sup> Even when they increase consumption, remittances may increase per capita income levels and reduce poverty and inequality, even if they do not directly impact growth. On the other hand, large outflow of workers (especially skilled workers) can reduce growth in countries of origin.

Remittances may be more effective in a good policy environment. For instance, a good investment climate with well-developed financial systems and sound institutions is likely to imply that a higher share of remittances is invested in physical and human capital.<sup>13</sup> Indeed, recent research shows that remittances may promote financial development, which in turn can enhance growth.<sup>14</sup>

Empirical evidence on the growth effects of remittances, however, remains mixed. In part, this is due to the fact that the effects of remittances on human and physical capital are realized over a very long time period. In part, this is also due to the difficulty associated with disentangling their counter-cyclical response to growth which implies that the causality runs from growth to remittances, but the correlation between the two variables is negative. It has not been easy to find appropriate instruments for controlling such reverse causality. It would be easy to conclude that remittances have a negative effect on growth, but that would be erroneous. Also, to the extent that they increase consumption, remittances may increase individual income *levels* and reduce poverty, even if they do not directly impact growth.

### ***2.4 Large remittance inflows can lead to exchange rate appreciation and lower export competitiveness***

Large and sustained remittance inflows can cause an appreciation of the real exchange rate and therefore a loss in relative export competitiveness, by making the production of cost-sensitive tradables, including cash-crops and manufacturing less profitable. Although empirical evidence on the adverse effect of large inflows of foreign exchange on terms of trade and growth is limited, it is plausible that this effect exists and is significant for some small economies where remittances are very high.<sup>15</sup> Several countries such as El Salvador, Kenya and Moldova are concerned about the effect of large remittance inflows on currency appreciation.

A doubling of worker's remittances may have resulted in real exchange rate appreciation of more than 20 percent in countries in the Latin America and Caribbean region.<sup>16</sup> The real exchange rate appreciated in parallel with an increase in remittances during 1993-2005 in 7 out of 8 countries with the highest

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<sup>12</sup> Giuliano and Ruiz-Arranz (2005)

<sup>13</sup> IMF (2005a)

<sup>14</sup> Aggarwal and others (2005) and Beck and others (2004)

<sup>15</sup> Gupta, Pattillo and Wagh (2007) suggest that policymakers should be especially to Dutch disease in countries where remittances inflows are large compared to the size of the economy, where supply constraints are a significant hindrance to the expansion of the non-tradables sector, and where a significant portion of remittances are spent on domestic goods, especially on non-tradables.

<sup>16</sup> Amuedo-Dorantes and Pozo (2004). See also Winters and Martins (2004).

remittances to GDP ratio in Latin America, except for Nicaragua. This may have affected export competitiveness in these countries.<sup>17</sup>

Large remittance inflows in Moldova seem to have created a substantial appreciation pressure on the exchange rate in recent years. According to the IMF, workers' remittances are the only large foreign exchange net-inflows that can explain this strong appreciation pressure since the second quarter of 2003.<sup>18</sup> In contrast, in Tajikistan remittances may have helped counteract the depreciation pressure from a growing trade deficit. Further, low labor and other costs in Tajikistan compared to its trading partners may have substantially reduced the adverse effect of these inflows on competitiveness.<sup>19</sup>

Some other studies found that remittances have no effects on external competitiveness, contending that remittances may be directed to a large extent towards unskilled-labor intensive activities with limited effect on real wages.<sup>20</sup>

### **3. Proposals for future actions to be discussed during the roundtable discussion**

#### ***3.1 Develop appropriate macroeconomic policies to respond to large remittances inflows***

Countries receiving large remittances inflows may need to devise appropriate policies to deal with possible negative consequences. Policy responses can include fiscal measures, sterilization of remittance inflows as a short-term response, and longer-term structural reforms to improve labor productivity and competitiveness of the economy.

A reduction in *government expenditure* can prevent an overheating of the economy in the context of a surge in international workers' remittances. However, the necessary decrease in government consumption would have to be quite large to stabilize the exchange rate effect of remittance inflows.<sup>21</sup> The use of this instrument may therefore be constrained by political economy, equity and other considerations<sup>22</sup> in particular those related to social and economic development.

Countries can attempt to reduce the adverse effect of remittances inflows on external competitiveness through interventions in the *foreign exchange market*.<sup>23</sup> However, the quasi-fiscal cost of sterilizing these foreign exchange interventions may prove infeasible in the medium-run.

As remittances tend to be relatively stable and persistent over long periods, the "Dutch disease" effects of remittances are less of a concern than similar effects of natural resource windfalls,<sup>24</sup> and the real exchange rate level achieved through sensible policies may be sustainable.<sup>25</sup>

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<sup>17</sup> Fajnzylber and Lopez (2006), World Bank (2006)

<sup>18</sup> IMF (2005b)

<sup>19</sup> Kiriyevev (2006)

<sup>20</sup> Rajan and Subramanian (2005)

<sup>21</sup> Fajnzylber and Lopez (2006)

<sup>22</sup> Chami and others (2006)

<sup>23</sup> The Moldova Central Bank has been actively intervening in the foreign exchange market to dampen the appreciation pressure on the leu (Kiriyevev 2006).

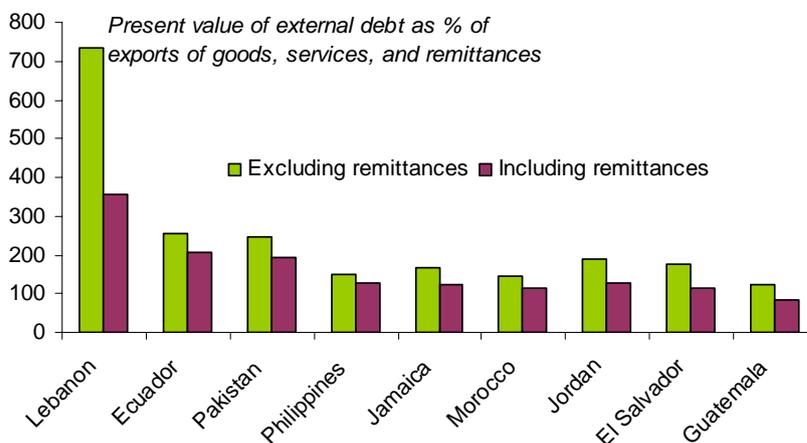
<sup>24</sup> Remittances are widely dispersed, the great bulk is allocated in small amounts, and for the most part they avoid the government 'middleman'. Hence, the expectation is that they would avoid the negative effects of natural resource windfalls on poverty, growth, and institutional capacity. This is similar to argument by Birdsall and

The appropriate policy response, therefore, is not to sterilize these flows, but to learn to live with them. Governments in countries receiving large remittances can mitigate the effects of real exchange rate appreciation by allocating a larger portion of government expenditures on infrastructure, making their labor markets more flexible, and practicing more liberal trade policies to improve labor productivity and external competitiveness. These measures should take into account national development priorities and stage of development.

### 3.2 Leveraging remittances for improving country creditworthiness

Remittances can improve a country's creditworthiness and thereby enhance its access to international capital markets for financing infrastructure and other development projects.<sup>26</sup> The ratio of debt to exports of goods and services, a key indebtedness indicator, would increase significantly if remittances were excluded from the denominator (see figure 4).

**Figure 4: Remittances improve country creditworthiness**



Source: Global Economic Prospects 2006

Country credit ratings by major international rating agencies often fail to account for remittances. Model-based calculations using debt to export ratios that include remittances in the denominator indicate that including remittances in creditworthiness assessments would improve credit ratings for Lebanon and Haiti; and result in implied sovereign spread reductions ranging from 130 to 334 basis points. Any improvement in sovereign rating is likely to translate into an improvement in the rating of sub-sovereign borrowers.

- Countries receiving large remittance inflows can take measures to ensure that these inflows are reflected in the sovereign rating.

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Subramanian (2004) that countries would be better off if they distributed the bulk of the returns from resource flows to the general population who would use the funds more effectively than a highly centralized government, and also greatly reduce the incentives for corruption.

<sup>25</sup> IMF (2005a)

<sup>26</sup> Ratha (2007)

- Countries should make an effort to improve the data on remittances and make them available to rating agencies and international investors.
- Encouraging the flow of remittances through formal channels will also improve the recording of remittances.

### ***3.3 Leveraging remittances for improving the access of private sector banks to international capital markets***

Commercial banks in developing countries can leverage their access to remittances to raise capital from international bond markets for financing infrastructure and other development projects.<sup>27</sup>

Some of these projects could focus on meeting migrants needs (such as building housing for returning migrants for instance), this could in turn create an incentive for the formalization of transfers. Several banks in Brazil, Egypt, El Salvador, Guatemala, Kazakhstan, Mexico, and Turkey have been able to raise more than \$15 billion (since 2000) from international capital markets via securitization of future remittance flows.

Although remittances do not belong to the bank, they provide access to foreign currency. It is therefore important to note that a securitization structure does not affect the flow of remittances to the ultimate beneficiaries. A remittance transaction provides the bank with a foreign currency asset while creating an immediate local currency liability. The securitization structure does not absolve the bank of its local currency liabilities to the remittance beneficiaries. Also the amount of bond financing can only be a small fraction of the remittances flowing through the bank. At times of currency crisis, such access can greatly mitigate the currency convertibility risk, a key component of the sovereign risk. Also securitization structures set up in an international financial center with a sound legal environment can mitigate the risk of sovereign expropriation.

A future flow securitization structure allows securities to be rated better than the sovereign credit rating. Such securities are typically rated investment-grade, which makes them attractive to a wider range of investors, and thereby lowers the interest cost and lengthens the maturity. This in turn may allow a bank to undertake projects that may have low economic returns but high social impact. Moreover, by establishing a credit history for the borrower, these deals enhance the ability and reduce the costs of accessing capital markets in the future.

- Poor countries that receive large remittances should try to obtain a sovereign rating from the rating agencies for enabling banks and private entities to raise capital from international markets.<sup>28</sup> The sovereign rating acts as a ceiling for the rating of banks.
- Migrant-receiving countries should educate migrants about available options for sending remittances and improve the access to banking for migrants, thereby helping to bring remittances into formal channels. A larger share of remittances flowing through banks will enable migrant-sending countries

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<sup>27</sup> Ketkar and Ratha (2005).

<sup>28</sup> New research suggests that many of the nearly 70 developing countries that are not rated by Fitch, Moody's and Standard and Poor's have a "shadow sovereign rating" of B or higher, in a similar range as the major emerging market countries. (Ratha, De and Mohapatra 2007).

to leverage their remittance inflows for raising additional finance at lower cost from international capital markets.

- Donor countries and the international development community can provide technical assistance to developing countries to help set up the remittance securitization structures and to obtain credit ratings. The European Investment Bank is providing assistance to Lebanon in securitizing future remittance flows, including purchasing a part of the bond issue. The UNDP has helped several African countries obtain sovereign ratings in partnership with Standard and Poor's (following a similar initiative by the U.S State Department) to help catalyze private sector financing.
- Governments and private financial and non-financial institutions in migrant-sending countries can potentially raise financing from the diaspora through the issuance of diaspora bonds<sup>29</sup> which can be raised at lower borrowing costs, often in crisis times. The diaspora may be willing to provide a "discount" on these bonds for patriotic reasons. They are also more familiar with and willing to invest in their home country. Such funds raised from the diaspora migrants abroad can finance investment in infrastructure and other long-term projects with high social value.

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<sup>29</sup> Ketkar and Ratha (2007).

## References

- Adams, Richard and John Page. 2005. "Do International Migration and Remittances Reduce Poverty in Developing Countries?" *World Development* 33: 1645-1669. October.
- Aggarwal, Reena, Asli Demirguc-Kunt, and Maria Soledad Martinez Peria. 2005. "Do Remittances Promote Financial Development? Evidence from a Panel of Developing Countries." Policy Research Working Paper 3957. World Bank, Washington, DC.
- Amuedo-Dorantes, Catalina, and Susan Pozo. 2004. "Workers' Remittances and the Real Exchange Rate: A Paradox of Gifts." *World Development* 32(8): 1407-1417.
- Beck, Thorsten, Asli Demirguc-Kunt, and Ross Levine. 2004. "Finance, Inequality and Poverty: Cross-Country Evidence." Working Paper 10979. National Bureau of Economic Research, Cambridge, MA.
- Birdsall, Nancy, and Arvind Subramanian. 2004. "Saving Iraq from Its Oil." *Foreign Affairs*: 77-89. July/August.
- Chami, Ralph, Thomas F. Cosimano and Michael T. Gapen. 2006. "Beware of Emigrants Bearing Gifts: Optimal Fiscal and Monetary Policy in the Presence of Remittances." Working Paper 06/61. International Monetary Fund, Washington, DC.
- Fajnzylber, Pablo and J. Humberto López. 2007. *Close to Home: The Development Impact of Remittances in Latin America*. World Bank, Washington, DC.
- Giuliano, P., and M. Ruiz-Arranz. 2005. "Remittances, Financial Development, and Growth." Working Paper 05/234. International Monetary Fund, Washington, DC.
- Gupta, Sanjeev, Catherine Pattillo, and Smita Wagh. 2007. "Impact of Remittances on Poverty and Financial Development in Sub-Saharan Africa." Working Paper 07/38. International Monetary Fund, Washington, DC.
- IMF. 2005a. *World Economic Outlook*. International Monetary Fund, Washington, DC.
- \_\_\_\_\_. 2005b. "Republic of Moldova: Selected Issues." International Monetary Fund, Washington, DC.
- Ketkar, Suhas L. and Dilip Ratha. 2005. "Recent Advances in Future-Flow Securitization." *The Financier*. December.
- Ketkar, Suhas L. and Dilip Ratha. 2007. "Diaspora Bonds: Track Record and Potential." Policy Research Working Paper 4311, World Bank, Washington, DC.
- Kireyev, Alexei. 2006. "The Macroeconomics of Remittances: The Case of Tajikistan". Working Paper 06/02. International Monetary Fund, Washington, DC.
- Loser, Claudio, Caitlin Lockwood, Adam Minson, and Lucia Balcazar. 2006. "The Macro-Economic Impact of Remittances in Latin America - Dutch Disease or Latin Cure?" Presented at the G-24 Technical Group meeting in Singapore on September 13-14.
- Mishra, Prachi. 2005. "Macroeconomic Impact of Remittances in the Caribbean." Unpublished paper. International Monetary Fund, Washington, DC.
- Rajan, Raghuram and Arvind Subramanian. 2005. "What Undermines Aid's Impact on Growth." Working Paper 05/126. International Monetary Fund, Washington, DC.
- Ratha, Dilip. 2007. "Leveraging Remittances for Development." *Policy Brief*, Migration Policy Institute, Washington DC. (Paper presented at the Leading Group on Solidarity Levies Conference on Innovative Finance, Oslo, February 6-7, 2007).  
[www.worldbank.org/prospects/migrationandremittances](http://www.worldbank.org/prospects/migrationandremittances).

- Ratha, Dilip, Prabal De and Sanket Mohapatra. 2007. "Shadow Sovereign Ratings for Unrated Developing Countries." Policy Research Working Paper 4269. World Bank, Washington, DC.
- Sayan, Serdar, 2006. "Business Cycles and Workers' Remittances: How Do Migrant Workers Respond to Cyclical Movements of GDP at Home?" Working Paper 06/52. International Monetary Fund, Washington, DC.
- Winters, L.A., and Pedro M.G. Martins. 2004. "When Comparative Advantage Is Not Enough: Business Costs in Small Remote Economies." *World Trade Review* 3(3): 1-37.
- Woodruff, Christopher M. and Zenteno, Rene. 2001. "Remittances and Microenterprises in Mexico." UCSD, Graduate School of International Relations and Pacific Studies Working Paper.
- World Bank. 2005. *Global Economic Prospects 2006: Economic Implications of Remittances and Migration*. Washington, DC. [www.worldbank.org/prospects/migrationandremittances](http://www.worldbank.org/prospects/migrationandremittances).
- \_\_\_\_\_. 2006. "The Development Impact of Workers' Remittances in Latin America." Report No. 37026, Washington, DC.
- Yang, Dean. 2006. "International Migration, Remittances, and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks." Working Paper W12325. National Bureau of Economic Research. June.