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Diaspora, remittances, and poverty RP's regions

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Diaspora, Remittances, and Poverty RP's Regions

By

Ernesto M. Pernia*

1. Introduction

Remittances are one of the many dimensions of international migration that of late has attracted a great deal of attention from academics, public officials, and the media. For one thing, the magnitudes have increased sharply, at rates even faster than the departure of migrant workers. For another, for many developing countries, remittances have begun to significantly exceed foreign direct investment (FDI), capital market flows, or official development assistance (ODA). Moreover, remittances are providing timely support to otherwise shaky balance of payments and fiscal positions. Further, remittances appear to contribute importantly to lifting households out of poverty, as well as benefit the wider community through the multiplier effects of increased spending.

The Philippines is reputed to be the world's third highest net remittance recipient country (relative to net migration) after India and Mexico. In 2005, remittances were officially recorded at $11.7 billion[1] representing about 10% of GDP. Clearly, remittances resulting from the Filipino *diaspora* have become a major factor in the economic and social life of the country. This paper focuses on the home-country consequences of remittances, addressing the question whether and to what extent remittances contribute to poverty reduction and regional development in the Philippines.

The next two sections revisit the causes and consequences of international migration, drawing on the more recent literature. The fourth section focuses on remittances in terms of what motivate them and what impact they may have in the labor-sending countries. The paper then describes the pattern of labor migration and remittances by region in the Philippines. The sixth section carries out an econometric analysis of the data to see if remittances do matter to poverty alleviation and regional development. The paper concludes with the main points and some implications for policy.

2. Causes of International Migration

Given the pronounced economic and social inequalities across the various countries of the world, one would expect floods of migrants from the worse-off to the better-off places. However, actual migration flows are limited by various territorial controls in the

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[1] Total remittances are often estimated to be much more if those sent through non-bank and other informal channels – also known as "unbanked" remittances – are included..

destination countries. Still, even these controls have limitations that effectively allow clandestine and irregular migrants which in some countries are estimated to be as much as half to equal the actual numbers.

The socioeconomic status of developing countries is typically a critical determinant of the magnitudes and characteristics of international emigration. Economic development, if characterized by tight labor markets, serves to attenuate pressures especially on skilled workers and professionals to migrate. Examples are Malaysia and Thailand – countries with strong economic growth and limited skilled/professional emigration, and India and the Philippines with weak economic growth (especially prior to the 1990s in the case of India) and large educated migrant outflows. In the case of the Philippines, continuing rapid population growth has been a contributory factor as well. South Korea exemplifies a country with a dynamic economy experiencing emigration (mainly to the U.S.), while Indonesia has shown limited skilled/professional emigration regardless of its economic performance.

It appears that cultural factors (cultural attachment) play a significant role in the cases of Malaysia, Thailand and Indonesia, while India, the Philippines and South Korea illustrate the importance of migrant stocks (family networks and social capital) at destination, resulting in inertial migration (or migration momentum). This migrant stock effect applies as well to Vietnam, following substantial refugee-type migration primarily to the U.S. after the Vietnam war.

Employing cross-country regressions, Adams and Page (2003) report an inverted U-shaped curve between level of country per capita income and international migration, meaning that migration propensity tends to be weak for low- and high-income countries but peaks among middle-income countries. They also find no statistical relationship between poverty incidence (headcount ratio) and international migration, implying the considerable costs involved in migration. Other migration determinants found to be significant are distance, income inequality, population density, education, and macroeconomic stability (proxied by credit rating). A variable that the authors did not account for but is likely to have a strong explanatory power is migrant stock. Migrant stock, which represents kinship network and social capital, as mentioned above, appreciably lowers the costs of migration, including distance, and eases the migrant's adjustment pains and woes at destination.

Another factor that is likely to have a significant, if indirect, effect on international migration is greater trade openness in the developed countries. Studies of trade and growth show that economic openness in developing countries contribute to faster economic growth (e.g., Krueger and Berg 2002), in turn affecting international migration. Further, one could argue that greater trade openness in the developed countries themselves (e.g., the lifting of agricultural subsidies) would contribute to even faster growth in developing countries and, in turn, dampen the propensity to migrate. Rough estimates of the effects of such greater openness suggest huge global economic gains. However, this issue has hardly been considered in international migration studies.

3. Consequences of International Migration

By and large, international migrants tend to be among the better educated and experienced workers in the community at origin. Most of them would have been previously employed prior to quitting voluntarily or otherwise. This implies that the departure of migrants could result in some disruption of economic activity before the vacancies are filled. And even when these are filled, the situation may not be the same as before.

Lucas (2004) explains how labor market responses would depend on the composition of emigration and the nature of labor markets (flexibility, segmentation, rates of un- and underemployment) as influenced by policy. He further discusses wage effects, cross-market effects, and technology (capital intensity) and output responses. However, he admits that "the responses across the many differentiated domestic labor markets impacted by substantial emigration are almost impossible to characterize *a priori*". Indeed, the empirical evidence available from country case studies, such as Pakistan, Sri Lanka, the Philippines, and Albania bear out the difficulty of plausible generalization. In any case, Lucas arrives at two categories of cases: (i) where emigrant workers are easily replaced with no discernible loss in output or rise in wages (India, Indonesia, and Sri Lanka); and (ii) where significant upward pressure on wages is palpable (Pakistan, Philippines, Mexico, Malawi, and Mozambique). The outcome in both cases appears to be a happy one, namely, labor market gains for those left behind.

A variation to the foregoing analysis would be to look at two time periods: pre- and post-1985 – the year of the Plaza Accord (resulting in the Japanese yen's dramatic appreciation) – a watershed particularly for Asian developing countries (ADCs). This marked the sharp acceleration of growth in ADCs fueled by exports to and FDIs from Japan. Thus, while prior to the mid-1980s rates of un- and under-employment were high, labor markets actually tightened thereafter. Indeed, some of the higher-income ADCs have become hosts to labor migrants from the lower-income countries.

Another important effect of departing workers is on the quality of goods and services, reflecting the quality of replacement workers. A deterioration in quality would not be unexpected. For example, such deterioration is apparent in the quality of education and health services in the Philippines as a consequence of the departure of skilled or professional workers (teachers and health workers). Of course, one would also have to figure out to what extent the deterioration in service quality is due to diminished real budgets for public services as a result of the country's lackluster economic growth.

A number of econometric studies, employing cross-country regressions, on the consequences of international migration have also been carried out. Concerning the issue of the brain drain, Adams (2003) finds that international legal migration is largely the movement of educated persons, with the large majority of those moving to the United States and other OECD countries having secondary schooling or higher. However, he claims that although migrants are well educated, international migration does not take

away a very large share of a country's best educated (in general, less than 10% of the college-educated or higher). Nonetheless, he admits that for a few labor-sending countries, international migration does result in brain drain.

Indeed, other authors argue that international migration leads to a significant loss of highly educated persons for a wide range of countries (Lucas 2004; Lowell 2003). However, the empirical evidence on the magnitudes and types of costs to labor-exporting developing countries remains scant. An aspect of these costs is the loss of public funds invested in the education of the labor migrants – reinforcing the need to reform the financing of tertiary education. Nevertheless, the brain drain is probably not an unmitigated bane as there are compensating benefits, such as remittances, other beneficial links that the emigrants develop and maintain with the home country, and return migration.[2]

Regarding international migration and poverty in developing countries, Adams and Page (2003) show that international migration (defined as the share of a country's population living abroad) exerts a strong negative effect on poverty. Overall, a 10% rise in the share of international migrants in a country's population is associated with a 1.9% decline in the proportion of the population living below a US dollar-a-day poverty line. They also find that the level of international remittances (defined as the share of remittances in a country's GDP) is significantly associated with poverty reduction. On average, a 10% increase in the share of remittances in a country's GDP is associated with a 1.6% drop in poverty incidence.

Studies of international migration based on regressions of cross-country averages, however, tend to be hobbled by the well-known pitfalls (e.g., considerable inter-country differences in concepts, definitions and measurements of the variables used) and, hence, can offer only broad indications. These need to be complemented or validated by country-specific studies using sub-national (regional, provincial, or district) data.[3]

4. Remittances

If the data on the number and types of international migrants are imperfect, the data on remittances leave even more to be desired. Obviously, it is easier to hide or store cold cash than warm bodies! It is reported that formal remittance flows to developing countries in 2002 reached an estimated US$88 billion and informal flows are typically estimated to be hugely larger (Ratha 2003). It is plausible to assume that the extent of informal flows varies directly with the proximity of the host country to the home country and/or with the frequency of return home visits by either the remitting migrants

[2] Good examples are the Chinese and Indian *diasporas* that are playing an important role in the continuing rise of FDIs into China and India. Likewise, both countries are experiencing return migration, either permanent or circular.

[3] For instance, while Dollar and Kraay (2001) find, based on cross-country averages, a one-to-one correspondence between economic growth and increase in incomes of the poor, sub-national regressions reveal much smaller elasticities between growth and welfare of the poor, ranging from 0.55 for the Philippines to 0.7 for Indonesia and close to 1.0 for Vietnam (Balisacan and Pernia 2003; Balisacan, Pernia, and Asra 2003; Balisacan, Pernia, and Estrada 2003).

themselves or their kin and friends who can serve as trusted couriers. The practice of informal remittance is likely to persist with regulatory systems in both host and home countries that make formal remittance highly cumbersome and costly. Admittedly, some notable progress has been made by governments and international agencies in helping overcome the hurdles of remitting.[4] But, undoubtedly, a lot more needs to be done.

A notable feature of remittances has been its steady growth over the past several years, compared with FDI whose growth has been erratic and on the downtrend more recently, and ODA which has been declining. These trends provide strong motivation for improving the remittance system in terms of both making the flows more efficient and broadening and deepening their impact on economic growth and poverty reduction in the sending countries. Indeed, some observers now refer to remittances as the new development finance (Wimaladharma, Pearce, and Stanton 2004).

Determinants

Lucas (2004) addresses the question "why do migrants remit at all and what determines how much they send" in terms of altruism, pure self-interest (target saving), or mutual insurance. This view appears somewhat simplistic and, in any case, probably not easily empirically testable. It seems more likely that the motivation to remit is a combination of these and other reasons (such as parental or elder-sibling obligation) that can change over time.[5] It makes more sense to regard remittances as the returns to migration, an investment in human capital of the migrant and his/her family, often to provide a better present and a brighter future for the children or younger siblings. Thus, we often hear the remark: "I'm doing this not so much for myself but for my children and their future."

In terms of macro determinants, apart from the economic conditions in the host country that influence the job opportunities and earnings for the migrants, macroeconomic stability (realistic exchange rate, stable prices and interest rates) in addition to social and political stability in the home country would probably favor the rise of formal remittances and the corresponding fall of informal remittances. While beneficial to the economy's long-term growth, the decline of informal remittances could hurt individual families in the short run (e.g., owing to delays, transaction costs). However, in the longer run, as the impact of remittances, working through multiplier effects, deepens and widens throughout the economy, it can contribute to sustained growth and welfare improvement of lower income households.[6]

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[4] This is probably a significant factor in the marked rise in recorded remittance flows into home countries.

[5] In the Asian context, and probably also in other developing counties with strong familial ties, caring and giving (including remittance) among family members are typically not considered "altruism" but a natural gesture of concern. "Altruism" is essentially an individualistic concept that probably applies more to Western societies.

[6] However, Burgess and Haksar (2005) argue that the longer term economic effects of remittances are ambiguous.

Consequences

Since labor migrants tend to come from the not-so-poor households (typically, those above the poverty threshold), it is the lower-middle to middle-income families who directly gain from remittances. The poor and certainly the poorest-of-the-poor could benefit from remittances mainly in subsequent rounds via multiplier effects from increased consumption and investment spending. The size of the multiplier effect may hinge on whether remittances are received by rural or urban households, with the former typically consuming more local products, thereby creating a larger multiplier effect (Adelman and Taylor 1990). How much of the remittances will be spent for consumption and how much for investment by the recipient families themselves, or investment by others from the saved remittances, will depend on the investment climate in the locality (Pernia and Salas 2005). The role of policy is to improve such investment environment (macro fundamentals, governance and institutions, and infrastructure). Combined with social and political stability, such an environment could also encourage migrants to remit through formal channels, as pointed out above.

Like the other aspects of international migration, it is precarious to generalize regarding the consequences of remittances, as Lucas (2004) points out, stressing the need for empirical evidence. Worthwhile evidence can come from country-specific studies. For instance, a trade, growth and poverty study using sub-national data on Philippine regions indicates a significant relationship between regional trade openness (exports-GRDP ratio) and regional development [increase in gross regional domestic product (GRDP) per capita]; further, the regional growth elasticity of poverty is estimated to be 0.2, implying that a 10% rise in regional incomes per capita raises the incomes of the poorest (bottom quintile) by 2% (Pernia and Quising 2003). In other words, as suggested by cross-country studies, economic openness at the sub-national level also influences positively the welfare of the poor through economic growth. With data on international migrant remittances by regions/provinces, one could incorporate remittances in the equation to gauge their relative impact on regional development and well-being of the poor. This exercise will be carried out in this paper.

The economic consequences of remittances can be considered at different levels. At the household level, a substantial portion of migrant workers' earnings are typically remitted to family members in their home communities. Remittances serve to enhance family incomes, although whether they represent a net increase is debatable, given the possibility that family members may reduce their work effort – a moral hazard effect on labor supply. Nonetheless, overall, it seems clear that recipient families are better-off with rather than without the remittances.[7]

The extent to which remittances is spent on consumption or investment has been a greatly debated issue, but the discussion seems misdirected. It should be noted that remittances are a fungible resource to the household (Lucas 2004). So, the issue is not

[7] Burgess and Haksar (2005), however, find no clear empirical support for the purported short-term stabilizing effect of remittances on consumption.

really whether the money received is actually invested but whether households whose incomes are increased by remittances save more and such savings become available for investment in the local or macro economy. Moreover, expenditures on education, housing and land are important forms of investment.[8] Further, spending by one household may or may not be an investment for the larger economy depending on how the recipient of these payments spends the income.

At the community level, the distribution of incomes across households would be affected by money flows depending on where the remittance recipients are in the income distribution scale. Income inequality and poverty would improve to the extent that the poorer households receive the bulk of these income transfers, or the inequality would worsen if the richer families are the main recipients.[9] Nonetheless, creation of jobs and trading opportunities often results from the expanded demand for goods and services, with the beneficiaries in turn spending and generating further spending. These multiplier effects could be concentrated in particular local economies or spread more widely depending on how localized are the migrant networks.

At the macroeconomic level, remittances have become a major source of foreign exchange, especially for developing countries plagued by fiscal deficits, external debts, persistent trade imbalances, and scant foreign direct investment. Foreign exchange inflows, however, tend to put upward pressure on prices, requiring skillful monetary management that often includes sterilization. Moreover, these foreign money inflows may spur a real appreciation of the exchange rate, thereby constraining the development of export-oriented and import-competing industries. This has been likened to the Dutch disease problem of Indonesia brought about by the foreign exchange income from oil exports (Quibria 1986). Further, the remittance windfall may have a moral hazard effect as the urgency for the government to pursue policy reforms or improve governance dissipates while people are lulled into complacency, as appears to be the case in the Philippines.

Table 1 shows that while the Philippines' average annual reported remittance inflow during 1995-2001 was only next in absolute size to India's, it was the highest relative to population and GDP among Asia's main labor-exporting countries, and third highest relative to exports after Bangladesh and India. In recent years, exports from Bangladesh and India have been booming, so it is possible the Philippines' remittances-to-exports ratio would have overtaken or closed in on those of both countries. In any case, these data indicate how much of a factor remittances have played in the country's macro-economy.

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[8] These investments reflect a rational behavior on the part of the family particularly when the investment climate is unfavorable. Yang (2004) examines the exchange rate shocks due to the 1997-98 Asian financial crisis and finds that households whose overseas workers experienced favorable shocks were able to reduce child labor, increase educational spending, improve child schooling, and afford higher ownership of durable goods.

[9] However, as noted earlier, even families that receive no remittances at all could benefit indirectly from the remittance flows through the multiplier effects of increased spending in the community.

Table 1. Average Annual Reported Remittance Inflows into Asia's Main Labor Exporting Countries, 1995-2001

Country	US dollars (millions)	$ per capita	Remittance/GDP (%)	Remittance/exports (%)
Bangladesh	1,651	13	3.86	32.42
India	9,181	8	2.19	25.68
Indonesia	925	5	0.62	1.71
Pakistan	1,344	10	2.48	16.86
Philippines	**5,942**	**80**	**7.92**	**22.27**
Sri Lanka	993	53	6.57	21.56
Thailand	1,570	26	1.15	2.72

Source: Lucas (2004) based on IMF Balance of Payments Statistics and International Financial Statistics.

5. Regional Patterns of Labor Migration

The Data

The data on labor migration and remittances by region are from the annual Survey of Overseas Filipinos (SOF) carried out, beginning in the early 1990s, as a rider to the Labor Force Survey (LFS), by the National Statistics Office (NSO). The SOF gathers estimates of the number of overseas Filipino workers (OFWs), their socioeconomic characteristics, the amount of remittances in cash and in kind, and the manner of remitting to their families in the Philippines.

OFWs include overseas contract workers (OCWs) who are currently and temporarily out of the country during the reference period (April 1 to September 30 of each year) to fulfill a work contract, or who are currently in the country on vacation but still have an existing contract, as well as other Filipino workers abroad with valid work permits. Filipinos currently staying and working full time in other countries even without working visas (tourist, visitor, student, medical, and other types of non-immigrant visas) are also included.[10] OFWs who left for abroad earlier than April 1 of the reference year are also included provided they were working during the reference period.

[10] Filipinos in other countries with immigrant visas are not included in the SOF's definition of OFWs. Hence, their remittances are not included in the SOF remittance data.

Overview

In 2004, OCWs accounted for 93% of all OFWs. OFWs were roughly equally divided between females and males, with the former mostly in the 25-29 age group and the latter 45 years or older. Over three-fourths of OFWs were working in Asia in 2004, about 10% in Europe, 8% in North and South America, and the balance in Australia, Africa, and other countries. Of those in Asia the bulk was in Saudi Arabia, followed by Hong Kong, Japan, and Taiwan. OFWs in Saudi Arabia were mostly males while those in Hong Kong were mostly females. The majority of male OFWs were production and related workers, transport and equipment operators and laborers, while female OFWs were mostly sales and service workers. Only a small minority of OFWs were professional, technical and related workers.

Since the SOF covers remittances only during the reference period (April 1-September 30), the reported amounts would have to be doubled to arrive at yearly estimates. These estimates may miss the additional amounts customarily sent for the Christmas holidays; however, extra amounts are also typically remitted in connection with the opening of the school-year in June.

In 2004, total remittances consisted of cash sent (77%), cash hand-carried home (17%), and remittances in kind (4%). The bulk of cash remittances was sent through banks, and the balance was sent through door-to-door delivery, through friends and co-workers or other means (now known as "unbanked" remittances).

Regional distribution of OFWs and remittances

The number of OFWs estimated by the SOF was 795 thousand in 1995, increasing to 978 thousand in 2000, and further to about 1.1 million in 2004, representing and average annual growth rate of 3.7%. The largest share (about one-fifth) has consistently come from Southern Tagalog (Calabarzon+Mimaropa), followed by the National Capital Region (Metro Manila) at 16-18%, then Central Luzon with 13-14% (Table 2). Hence, Metro Manila[11] and the adjacent regions of Southern Tagalog and Central Luzon together account for at least half of OFWs. Other significant senders of OFWs are Ilocos, Western Visayas, and Cagayan Valley accounting for close to a quarter of the total. By contrast, the poorer regions of Mindanao, Eastern Visayas, and Bicol are responsible for relatively smaller fractions of the total, thus lending support to the hypothesis that the poor are less able to migrate.

[11] It is possible that although some OFWs may originate in the other regions, Metro Manila is given as the residential address (of relatives) while prospective OFWs are still processing their departure papers and making other preparations to leave.

Table 2. Number of overseas workers (April to September), in thousand persons and percent shares by region

		1995	%	2000	%	2004	%
1	Ilocos Region	105	13.2	99	10.1	86	8.1
2	Cagayan Valley	48	6.0	54	5.5	57	5.4
3	Central Luzon	104	13.1	126	12.9	149	14.0
4	Southern Tagalog (CALABARZON + MIMAROPA)	157	19.7	198	20.2	202	19.0
5	Bicol Region	35	4.4	28	2.9	32	3.0
6	Western Visayas	62	7.8	90	9.2	92	8.7
7	Central Visayas	26	3.3	52	5.3	49	4.6
8	Eastern Visayas	15	1.9	19	1.9	24	2.3
9	Western Mindanao/Zamboanga Peninsula	23	2.9	30	3.1	22	2.1
10	Northern Mindanao	19	2.4	15	1.5	28	2.6
11	Southern Mindanao/Davao	26	3.3	31	3.2	34	3.2
12	Central Mindanao/Soccsksargen	16	2.0	21	2.1	30	2.8
13	National Capital Region	118	14.8	172	17.6	194	18.3
14	Cordillera Administrative Region	25	3.1	25	2.6	24	2.3
15	Autonomous Region in Muslim Mindanao	12	1.5	10	1.0	31	2.9
16	Caraga			8	0.8	10	0.9
	Philippines	795	100	978	100	1,063	100

Note: Estimates include overseas Filipinos whose departure occurred during the last five years and who are working or had worked abroad during the past six months (April to September) of the survey period
Source: National Statistics Office, Survey of Overseas Filipinos, various years.

Total remittances from OFWs were estimated at P23.2 billion for six months in 1995, thus an annual figure of roughly P46.4 billion. Similarly, total annual remittances can be estimated at P110.2 billion in 2000 and P129.4 billion in 2004. Thus, from 1995 to 2004, remittances were growing on average at 12.1% annually in nominal terms, i.e., more than thrice faster than the increase in the number of OFWs.

Metro Manila obtained from 18% to 27% of total remittances between 1995 and 2004, Southern Tagalog 18-22%, and Central Luzon 12-15% (Table 3). Thus, over 50% of the remittances went to the country's three most developed regions. Another fifth to a quarter of the total was remitted to Western Visayas, Ilocos, and Central Visayas. Predictably, the poorer regions were recipients of much smaller shares.

Table 3. Total remittances (April to September), in thousand pesos and percent shares by region

	1995		2000		2004	
	Pesos	%	Pesos	%	Pesos	%
1 Ilocos Region	2,156,642	9.3	5,077,353	9.2	3,623,940	5.6
2 Cagayan Valley	1,072,820	4.6	2,114,517	3.8	2,394,389	3.7
3 Central Luzon	3,479,927	15.0	6,753,929	12.3	8,412,717	13.0
4 Southern Tagalog (CALABARZON + MIMAROPA)	4,229,651	18.3	11,449,648	20.8	14,107,479	21.8
5 Bicol Region	1,101,146	4.8	1,523,818	2.8	1,747,257	2.7
6 Western Visayas	2,246,060	9.7	4,964,318	9.0	5,694,762	8.8
7 Central Visayas	1,186,437	5.1	3,358,505	6.1	2,717,955	4.2
8 Eastern Visayas	366,111	1.6	1,415,036	2.6	1,423,691	2.2
9 Western Mindanao/Zamboanga Peninsula	334,488	1.4	1,245,433	2.3	776,558	1.2
10 Northern Mindanao	590,837	2.6	694,088	1.3	1,488,404	2.3
11 Southern Mindanao/Davao	949,289	4.1	1,880,135	3.4	1,811,970	2.8
12 Central Mindanao/Soccsksargen	241,376	1.0	810,279	1.5	905,985	1.4
13 National Capital Region	4,225,293	18.2	12,108,006	22.0	17,149,000	26.5
14 Cordillera Administrative Region	758,097	3.3	1,236,616	2.2	841,272	1.3
15 Autonomous Region in Muslim Mindanao	223,880	1.0	160,154	0.3	905,985	1.4
16 Caraga		0.0	341,571	0.6	647,132	1.0
Philippines	23,161,874	100.0	55,133,406	100.0	64,713,207	100

Note: Estimates cover overseas Filipino whose departure occurred within the last five years and who are working or had worked abroad during the past six months (April to September) of the survey period. For 2004, only total remittances data are available, so the regional shares are computed based on the regional shares for 2002.
Source: National Statistics Office, Survey of Overseas Filipinos, various years.

Average six-month remittance per OFW was P34,207 in 1995, rising to P66,146 in 2000 and further to P72,795 in 2004 for an average yearly increase rate of 8.8**%.** The data on average remittances by region show a noteworthy pattern (Table 4). In 1995, Central Visayas got the highest average remittance per OFW (1.6 times the national average), followed by Metro Manila (1.3 times), then followed closely by Western Visayas (1.2 times), Northern Mindanao, Southern Mindanao, and the Cordillera Autonomous region, in that order. Southern Tagalog and Central Luzon were only ninth and seventh in the ranking, while Bicol was eighth. In 2000, Eastern Visayas – one of the poorest regions – got the highest average remittance (1.3 times the national average),

Table 4. Average remittance per OFW (April to September), in pesos and ratio to national average by region

	1995		2000		2004	
1 Ilocos Region	22,572	0.7	57,703	0.9	47,431	0.7
2 Cagayan Valley	24,803	0.7	44,897	0.7	46,958	0.6
3 Central Luzon	38,074	1.1	60,378	0.9	69,850	1.0
4 Southern Tagalog (CALABARZON + MIMAROPA)	31,313	0.9	67,012	1.0	78,306	1.1
5 Bicol Region	37,804	1.1	78,678	1.2	61,798	0.8
6 Western Visayas	41,868	1.2	62,671	0.9	67,066	0.9
7 Central Visayas	54,345	1.6	75,881	1.1	84,115	1.2
8 Eastern Visayas	27,220	0.8	83,946	1.3	71,603	1.0
9 Western Mindanao/Zamboanga Peninsula	17,121	0.5	56,270	0.9	39,712	0.5
10 Northern Mindanao	41,006	1.2	58,232	0.9	70,364	1.0
11 Southern Mindanao/Davao	40,329	1.2	67,127	1.0	75,809	1.0
12 Central Mindanao/Soccsksargen	21,216	0.6	55,587	0.8	43,848	0.6
13 National Capital Region	43,753	1.3	83,574	1.3	97,009	1.3
14 Cordillera Administrative Region	39,080	1.1	55,385	0.8	58,333	0.8
15 Autonomous Region in Muslim Mindanao	24,982	0.7	30,696	0.5	100,243	1.4
16 Caraga		0.0	49,214	0.7	70,590	1.0
Philippines	34,207	1.0	66,146	1.0	72,795	1.0

Note: Estimates cover overseas Filipino whose departure occurred within the last five years and who are working or had worked abroad during the past six months (April to September) of the survey period. For 2004, only the national average remittance per OFW is available, so the regional averages are computed based on the regional ratios to the national average for 2002.
Source: National Statistics Office, Survey of Overseas Filipinos, various years.

followed by Metro Manila, then Bicol (also among the poorest regions), Central Visayas, and Southern Mindanao. Southern Tagalog and Central Luzon ranked only sixth and seventh, followed by Northern Mindanao and Ilocos. By 2004, the Autonomous Region of Muslim Mindanao ranked first in average remittance (1.4 times the national average), with Metro Manila second again, followed by Central Visayas, Southern Tagalog, Southern Mindanao, Eastern Visayas, Caraga, Northern Mindanao, Central Luzon, and Bicol, in that order.

The pattern of average remittance per OFW by region is intriguing because it departs from the regional distribution of OFWs and total remittances. Two possible

explanations may be advanced here. One is greater altruism on the part of OFWs from the poorer regions, implying the need to send more money to assist their more deprived families. A second is higher positive selectivity of migrant workers from the less developed regions, meaning that OFWs from those regions, though fewer in number, may be more highly skilled and hence earn higher average incomes. These two hypotheses seem plausible are not necessarily mutually exclusive.

What do the data tell us thus far? The more developed regions send more OFWs than the less developed ones, resulting in appreciably greater shares of the total remittances going to the former. However, OFWs from the poorer regions tend to send home significantly higher average remittances than the richer regions. This implies that while remittances overall may contribute to a widening of the economic disparities among the regions, these money flows do lift the well-being of poor households even in the backward regions.

6. Remittances, Poverty Alleviation, and Regional Development

The question whether remittances contribute to poverty alleviation and regional development can be probed further through econometric analysis of the available data. This analysis enables us to better appreciate the effect of remittances in the context of several other factors that matter to regional development and improvement in the well-being of the poor.

Based on our survey of the literature, we hypothesize that remittances benefit recipient households directly and influence the local economy via increased household spending. Thus, not only the recipient families but also the non-recipient ones are affected indirectly from the initial impact of remittances on the local economy and subsequent multiplier effects.

Regression equations

We have three main variables – welfare of the poor (or poverty incidence), remittances, and gross regional domestic product (GRDP). We assume these three variables to be endogenous, hence, requiring three equations:

$$EXPOOR_{rt} = EXPOOR_{rt}\,(REMIT_{rt}, GRDP_{rt}, LOCAL_{rt}) \quad (1)$$

$$REMIT_{rt} = REMIT_{rt}\,(GRDP_{rt}, LOCAL_{rt}) \quad (2)$$

$$GRDP_{rt} = GRDP_{rt}\,(REMIT_{rt}, LOCAL_{rt}) \quad (3)$$

where

$EXPOOR_{rt}$	=	per capita expenditure of the poor in region *r* at time *t*
$REMIT_{rt}$	=	per capita remittance in region *r* at time *t*
$GRDP_{rt}$	=	per capita income of region *r* at time *t*
$LOCAL_{rt}$	=	local factors/initial conditions in region *r* at time *t*

Equation 1 shows how the welfare of the poor (proxied by their mean per capita expenditure) is influenced by the region's per capita GRDP, per capita remittance, and local factors or attributes. Equations 2 and 3 take into account the endogeneity of GRDP and remittances as both are affected by each other and by local factors.

Equations 1-3 are estimated using the three-stage least squares (3SLS) method. The 3SLS estimation procedure takes into account not only the endogeneity of the three variables (expenditure of the poor, remittances, and regional income) but also the interaction between equations through the covariance matrix of the equations' disturbances.

For the estimation, we use panel data on 15 regions for the years 1994, 1997, 2000, and 2003.[12] The data on remittances are from the SOF (as described above), gross regional domestic product (GRDP) from the national income accounts, various socioeconomic data from records of relevant government agencies, and household expenditure data from the Family Income and Expenditure Survey (FIES) conducted by the NSO every three years. We have two indicators for poverty from the FIES: poverty incidence (headcount ratio) – the proportion of population below the poverty line, and mean consumption expenditure of the poorest 40% (quintiles 1 and 2). For theoretical and practical reasons, mean consumption expenditure is deemed superior to mean income as a measure of welfare (Deaton 1997). The theoretical basis is the permanent income hypothesis; at the same time, in practice, current income is more difficult and costly to measure in developing countries where the majority of the poor are self-employed and engaged in agricultural activities with fluctuating incomes.

To test for dynamic effects, we experiment with current as well as lagged values. Appendix Tables 1 and 2 present the definition of the variables and their descriptive statistics, respectively.

$LOCAL_{rt}$ is a vector of exogenous local factors or initial conditions that serve as control variables. These include human and physical infrastructures, such as average schooling years of household heads (HHeduc), employment ratio (Employr), dependency ratio (Dep-ratio), initial primary and secondary school participation rates (Elempr0 and Hspr0), initial infant mortality rate (Infmort0), initial road density (roads-to-area ratio, Road0), initial electricity and water supply coverage (Elect0 and Water0).

[12] The regions are as classified in 2004 and this regional classification is used consistently throughout the period.

Empirical results

The regression results are mostly in accord with expectations. Table 5 shows that remittances have a positive and significant effect on the well-being of poor households, as reflected in higher family spending per capita of the bottom quintile (q1), after controlling for the effects of other variables. To illustrate, an increase of P1,000 in remittance per capita results in P2,543 additional annual family spending per person among the poorest quintile. Roads, education (HHeduc), and health (Infmort0) also appear to be particularly important factors that improve the poor's welfare; by contrast, overall increases in regional incomes (GRDP) do not seem to matter as much. As the third panel of Table 5 shows, remittances contribute significantly to regional development through increased spending for consumption, human capital and housing investments, and consequent multiplier effects (Yang 2004; Rago 2005). However, because the more advanced regions tend to get bigger shares of the total, remittances may contribute to regional divergence rather than convergence. As expected, roads, water, education and health infrastructures are critical to regional development.

Table 5. Three-stage least squares regression (Quintile 1)

Variable	Coefficient	t-value	P>|t|	[95% Conf.	Interval]
Expoor-q1					
GRDP	-28.00497	-0.88	0.381	-90.99594	34.986
Remit	2543.478	1.92*	0.056	-66.32355	5153.28
Road0	870.0016	5.91*	0.000	579.4172	1160.586
Infmort0	-45.75125	-2.63*	0.009	-80.08043	-11.42206
HHeduc	228.6774	2.65*	0.009	58.50531	398.8495
Employr	-1845.798	-1.09	0.278	-5194.477	1502.88
Elempr0	22.40434	1.13	0.260	-16.7174	61.52607
Hspr0	1.468993	0.15	0.881	-17.94374	20.88173
Cons	511.1144	0.26	0.797	-3411.456	4433.685
Remit					
GRDP	-.0142709	-1.48	0.140	-.0332914	.0047496
Road0	.0715443	1.82*	0.071	-.0061983	.1492869
Infmort0	.0070729	1.49	0.138	-.0023041	.01645
HHeduc	.0090999	0.45	0.655	-.0310341	.049234
Employr	-.8707271	-1.66*	0.098	-1.905436	.1639821
Dep-ratio0	-.0163008	-5.91*	0.000	-.0217518	-.0108499
Cons	1.946634	4.93	0.000	1.165932	2.727335
GRDP					
Remit	12.64628	6.33*	0.000	8.702492	16.59008
Road0	1.68372	3.84*	0.000	.8185789	2.54886
Infmort0	-.3382358	-5.07*	0.000	-.4699202	-.2065515
HHheduc	.5637276	2.02*	0.045	.0115358	1.115919
Employr	5.859465	0.76	0.450	-9.413868	21.1328
Water0	14.9125	7.59*	0.000	11.03354	18.79145
Cons	.0101259	0.00	0.998	-6.865536	6.885788

Equation	Obs	Parms	RMSE	"R-sq"	F-Stat	p
Expoor-q1	60	8	430.999	0.9115	65.27	0.0000
Remit	60	6	.1322012	0.6233	16.64	0.0000
GRDP	60	6	2.033332	0.8772	62.45	0.0000

Note: Asterisked t-values denote significance at 10% level or better.

Table 6 shows that the regression results for the next poorest 20% of households (quintile 2) closely resemble those for the poorest quintile. There is a noteworthy difference, however. Not only is the impact of remittances on household welfare more significant, it also larger (by 30%), as household expenditure per capita rises to P3,317 for every P1,000 incremental per capita remittance. The magnitude of this positive effect on household well-being continues to rise for quintiles 3 and 4, but becomes negative though insignificant for quintile 5.[13] This is not surprising as the richest 20% of families are much less likely to have OFWs or to rely on remittances. It appears, therefore, that remittances are important to at least 80% of households.

Table 6. Three-stage least squares regression (Quintile 2)

Variable	Coefficient	t-value	P>|t|	[95% Conf.	Interval]
Expoor-q2					
GRDP	32.77885	0.90	0.369	-39.01094	104.5686
Remit	3317.016	2.20*	0.029	338.739	6295.293
Road0	782.077	4.66*	0.000	450.7938	1113.36
Infmort0	-48.7413	-2.46*	0.015	-87.82006	-9.662534
HHeduc	352.6881	3.59*	0.000	158.7236	546.6525
Employr	-4606.589	-2.39*	0.018	-8418.941	-794.2378
Elempr0	39.42144	1.75*	0.083	-5.188607	84.03149
Hspr0	-9.943257	-0.89	0.377	-32.08834	12.20182
Cons	-130.0807	-0.06	0.954	-4601.875	4341.714
Remit					
GRDP	-.0142709	-1.48	0.140	-.0332914	.0047496
Road0	.0715443	1.82*	0.071	-.0061983	.1492869
Infmort0	.0070729	1.49	0.138	-.0023041	.01645
HHeduc	.0090999	0.45	0.655	-.0310341	.049234
Employr	-.8707271	-1.66*	0.098	-1.905436	.1639821
Dep-ratio0	-.0163008	-5.91*	0.000	-.0217518	-.0108499
Cons	1.946634	4.93	0.000	1.165932	2.727335
GRDP					
Remit	12.64628	6.33*	0.000	8.702492	16.59008
Road0	1.68372	3.84*	0.000	.8185789	2.54886
Infmort0	-.3382358	-5.07*	0.000	-.4699202	-.2065515
HHeduc	.5637276	2.02*	0.045	.0115358	1.115919
Employr	5.859465	0.76	0.450	-9.413868	21.1328
Water0	14.9125	7.59*	0.000	11.03354	18.79145
Cons	.0101259	0.00	0.998	-6.865536	6.885788

Equation	Obs	Parms	RMSE	"R-sq"	F-Stat	P
Expoor-q2	60	8	487.3238	0.9331	86.29	0.0000
Remit	60	6	.1322012	0.6233	16.64	0.0000
GRDP	60	6	2.033332	0.8772	62.45	0.0000

Note: Asterisked t-values denote significance at 10% level or better.

[13] The regression results for quintiles 3-5 are not presented here. To test for robustness of the remittance effect on the poor's welfare, we also carried out 3SLS regressions substituting poverty incidence for household expenditure per capita as the dependent variable and the results are consistent, i.e., negative and significant effect of remittances on poverty incidence. Likewise, ordinary least squares (OLS) regressions (random-effects GLS) for both measures of poverty indicate a strong effect of remittances. These results are not shown here but are available with the author.

Another result worth noting is that while the impact of an increase in regional income (GRDP per capita) on household welfare is negative (though insignificant) for quintile 1, it is positive for quintile 2 and the size of this positive effect increases monotonically through to quintile 5. This suggests that regional development does not benefit low-income households as much as the higher income families, which is consistent with earlier findings based on provincial data (Balisacan and Pernia 2003).

7. Conclusion and Policy Implications

The findings lend support to the conclusions of other studies that remittances help lift households out of poverty. The more developed regions send more OFWs than the less developed ones, resulting in appreciably greater shares of total remittances going to the former. However, OFWs from the poorer regions send home significantly higher average remittance than the richer regions. One explanation is greater concern ("altruism") on the part of migrant workers from poorer regions to send more money to assist their more deprived families. Another reason – not necessarily at variance with the first -- is higher positive selectivity of OFWs from the less developed regions, i.e., though fewer in number, they may be more highly skilled and, hence, earn higher average incomes. An implication is that while remittances overall may contribute to a widening of the economic disparities across regions, these money flows do improve the well-being of poor households even in the lagging regions.

Econometric analysis provides deeper insights. Remittances contribute significantly to poverty alleviation, as reflected in higher family expenditure per capita of the bottom 40% of households, while controlling for the effects of other variables including physical infrastructure and human capital in the regions. This beneficial effect rises monotonically up to quintile 4, then peters out for quintile 5, which is not surprising given that the richest 20% of families are unlikely to have OFWs or to need remittances.

Remittances also matter importantly to regional development through increased spending for consumption as well as investments in human capital and housing, and consequent multiplier effects. However, overall regional development does not seem to benefit low income households as much as the upper income families.

The government seems right in calling OFWs the country's "modern-day heroes". However, instead of lip service *ad nauseam*, the government should provide genuine service to OFWs, and there are a number of ways this could be done. For example, the government could do a much better job in shielding OFWs from unscrupulous recruiters and agents and assisting them forge fair contracts with their overseas employers. The accounts one often gathers either directly from or about OFWs on how they have been shortchanged and maltreated are heart-rending.

Channeling remittance flows also requires more improvement, such as minimizing the inconvenience and financial costs of remitting. The fact that a large share of total remittances continues to be sent informally (or "unbanked") suggests the extent of the transaction costs OFWs have to bear in accessing the more formal channels.

Further, the government should improve the climate for investing remittances in the regions.

In fine, while the country has certainly benefited from the *diaspora*, the remittance bonanza has not been totally an unmixed blessing, not only for the households but also the macro-economy. It has conveniently kept the government from pursuing real policy reforms (including no population policy) that would have improved the performance of the domestic economy and reduced the need for overseas employment. The government would probably be well advised to rethink its policy on labor export – a phenomenon subject to all kinds of vicissitudes, regard it as transitory, and just buckle down to doing its long overdue home work.

References

Adams, Richard H. 2003. "International Migration, Remittances and the Brain Drain: A Study of 24 Labor-Exporting Countries." World Bank Policy Research Working Paper 3069, Washington, D.C.

Adams, Richard H., and John Page. 2003. "International Migration, Remittances and Poverty in Developing Countries." World Bank Policy Research Working Paper 3179, Washington, D.C.

Balisacan, Arsenio M., and Ernesto M. Pernia. 2003. "Poverty, Inequality, and Growth in the Philippines," in E. M. Pernia and A. B. Deolalikar (eds), *Poverty, Growth, and Institutions in Developing Asia* (London: Palgrave Macmillan), pp. 219-246.

Balisacan, Arsenio M., Ernesto M. Pernia, and Abuzar Asra. 2003. "Revisiting Growth and Poverty Reduction in Indonesia," in E. M. Pernia and A. B. Deolalikar (eds.), *Poverty, Growth, and Institutions in Developing Asia* (London: Palgrave Macmillan), pp. 191-218.

Balisacan, Arsenio M., Ernesto M. Pernia, and Gemma Estrada. 2003. "Economic Growth and Poverty Reduction in Viet Nam," in E. M. Pernia and A. B. Deolalikar (eds.), *Poverty, Growth, and Institutions in Developing Asia* (London: Palgrave Macmillan), pp. 273-291.

Burgess, Robert, and Vikram Haksar. 2005. "Migration and Foreign Remittances in the Philippines." IMF Working Paper 05/111, Washington, D. C.

Deaton, Angus. 1997. The Analysis of Household Surveys: A Microeconomic Approach to Development Policy (Baltimore: Johns Hopkins University Press).

Dollar, D., Kraay, A., 2001. Growth Is Good for the Poor. World Bank Policy Research Paper No.2587, The World Bank, Washington, D.C.

Krueger, Anne, and A. Berg. 2002. "Trade, Growth, and Poverty: A Selective Survey." Paper presented at the World Bank's Annual Bank Conference on Development Economics, Washington, D.C. 29-30 April.

Lowell, B. Lindsay. 2002. "Skilled Labour Migration from Developing Countries: Annotated Bibliography." International Migration Papers, International Labour Office, Geneva.

Lucas, Robert E. B. 2004. "International Migration Regimes and Economic Development." Paper prepared for the Expert Group Meeting on Development Issues, Stockholm, 13 May 2004.

Pernia, Ernesto M., and Pilipinas F. Quising. 2003. "Trade Openness and Regional Development in a Developing Country." *Annals of Regional Science* 37: 391-406.

Pernia, Ernesto M., and J. M. Ian S. Salas. 2005. "Investment Climate, Productivity, and Regional Development in RP." Discussion Paper No. 0501. U.P. School of Economics, Diliman, Quezon City.

Quibria, M. G. 1986. "Migrant Workers and Remittances: Issues for Asian Developing Countries." *Asian Development Review* 4 (1): 78-99.

Rago, Raquel D. 2005. "The Effect of Remittances on Household Welfare and Expenditure Pattern." Paper submitted to the U.P. School of Economics in partial fulfillment of the requirements for the Master's in Development Economics.

Ratha, D. 2003. "Workers' Remittances: An Important and Stable Source of International Development Finance." *Global Development Finance 2003*. World Bank, Washington, D.C.

Wimaladharma, Jan, Douglas Pearce and David Stanton. 2004. Remittances: the New Development Finance?" *Small Enterprise Development* 15: 12-19.

Yang, Dean. 2004. "International Migration, Human Capital, and Entrepreneurship: Evidence from Philippine Migrants' Exchange Rate Shocks." Gerald R. Ford School of Public Policy and Department of Economics, University of Michigan, Ann Arbor.

Appendix
Table 1. Definitions of the Variables

Variable	Definition	Source
Expoor-q*i*	real expenditure per capita, quintile *i* = 1 (poorest) … 5 (richest)	FIES
Povinc	proportion of families with per capita income below poverty line	FIES
Remit	real remittances per capita (remittances/regional HH pop)	SOF;FIES
GRDP	gross regional domestic product per capita (1985 prices)	NIA;FIES
Road0	lagged road density (concrete or asphalt roads/land area)	DPWH
Elect0	lagged proportion of households with electricity	FIES
Water0	lagged proportion households with potable water from faucets	FIES
HHeduc	average number of years of education of household heads	FIES
Hspr0	lagged high school participation rate of pop 13-16 yrs old	DECS
Elempr0	lagged elementary school participation rate of pop 7-12 yrs old	DECS
Infmort0	lagged infant mortality rate	NSO
Dep-ratio0	lagged dependency ratio (pop 0-15/pop 15+)	FIES
Employr	ratio of employed persons (old def.) to total HH population	LFS/FIES

Note: Expoor-q*i*, Remit, and GRDP are in constant (1985) prices.

Appendix

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std Dev	Minimum	Maximum
povinc	60	0.3666	0.1373	0.0509	0.6599
Expoor-q1	60	3405.9990	1347.3150	1862.6660	8366.5780
Expoor-q2	60	4125.3440	1752.1010	2488.0450	10325.9800
Expoor-q3	60	5121.2380	2182.8530	3038.7010	12453.6900
Expoor-q4	60	6957.6430	2843.7310	3389.0330	16105.2700
Expoor-q5	60	13960.6000	6352.2200	5578.5810	41787.0900
GRDP_pc	60	10.7057	5.4989	3.9900	30.2580
Remit_pc	60	0.3323	0.2042	0.0422	0.8864
HHeduc	60	6.0952	1.2803	3.6200	9.8300
Elect0	60	0.6197	0.1806	0.2143	0.9957
Water0	60	0.3813	0.1805	0.0858	0.8209
Roadd0	60	0.3671	1.0079	0.0256	4.1863
Infmort0	60	16.3002	5.1471	4.6700	25.2900
Elempr0	60	89.6250	7.8542	71.5000	99.9800
Hspr0	60	59.5830	14.8476	18.0200	92.5700
Dep-ratio0	60	81.0957	10.0407	60.7100	103.7400
Employr	60	0.3866	0.0367	0.3216	0.4902