CHAPTER 13.

DO INTERNATIONAL MIGRATION AND REMITTANCES REDUCE POVERTY IN DEVELOPING COUNTRIES?*

by

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Introduction

International migration is one of the most important factors affecting economic relations between developed and developing countries in the 21st century. At the start of the century, it was estimated that about 175 million people – roughly 3% of the world population – lived and worked outside the country of their birth (United Nations, 2002). The international remittances sent back home by these migrant workers have a profound impact on the developing countries of Asia, Africa, Latin America and the Middle East. According to *Global Development Finance* (World Bank, 2004), official international remittances sent home by migrant workers represent the second most important source of external funding in developing countries.[1] Official international remittances now total USD 93 billion per year (Ratha, 2004), and are about twice as large as the level of official aid-related inflows to developing countries.[2]

Despite the ever-increasing size of official international remittances, very little attention has been paid to analysing the poverty impact of these financial transfers on developing countries. While a small handful of studies have examined the impact of international remittances on poverty in specific village or country settings,[3] the authors are not aware of any studies which examine the impact of international remittances on poverty in a broad range of developing countries.

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1. Foreign direct investment (FDI) is the most important source of external funding for developing countries.

2. In addition to those international remittances which return through official banking channels, a large and unrecorded amount of remittance monies is transmitted through unofficial and informal channels. One recent International Monetary Fund study (El-Qorchi, Maimbo and Wilson, 2003) estimated that unofficial transfers of remittances to the developing world currently amount to USD 10 billion per year.

3. See, for example, Adams (1991; 1993), Taylor (1992), Gustafson and Makonnen (1993), Taylor, Zabin and Eckhoff (1999), and Stark (1991).

Two factors seem to be responsible. The first is a lack of poverty data; it is quite difficult to estimate accurate and meaningful poverty headcounts in a broad and diverse range of developing countries. The second factor relates to the nature of data on international migration and remittances. Not only do few developing countries publish records on migration flows, but many developed countries which do keep records on migration tend to undercount the large number of illegal migrants living within their borders. At the same time, the available data on international remittances do not include the large (and unknown) sum of remittance monies which are transmitted through informal, unofficial channels. As a result of these data problems, many key questions remain unanswered. Exactly what is the effect of international migration on poverty in the developing world? How do the official remittances sent home by international migrants affect the level, depth and severity of poverty in the developing world?

This chapter proposes to answer these and similar questions, using a new data set composed of 71 developing countries. This data set includes all those low and middle-income developing countries for which reasonable information on poverty, inequality, international migration and remittances could be assembled. It includes countries drawn from each major region of the developing world: Latin America and the Caribbean, Middle East and North Africa, Europe and Central Asia, East Asia, South Asia and Sub-Saharan Africa.

The chapter is organised as follows. The first section sets the stage by reviewing the findings of recent village or country-level studies on the relationship between international migration, remittances, inequality and poverty. The second section presents the new data set, and describes how these data are used to calculate the relevant migration, remittances and poverty variables. The third section uses the new data to econometrically estimate the impact of two variables – international migration and remittances – on poverty in the developing world. This part finds that both international migration and remittances reduce the level, depth and severity of poverty in the developing world. However, it is possible that these variables may be endogenous to poverty: that is, international migration and remittances may reduce poverty in the developing world, but poverty in the developing world may also affect the number of international migrants being produced and the level of remittances being received. For this reason, the fourth section employs an instrumental variables strategy to isolate the overall effect of these two variables on poverty. The main instruments employed in this section are distance between remittance-sending and receiving countries, level of education and government stability. Using these three variables as instruments, the chapter finds that instrumented international migration and remittances still reduce the level, depth and severity of poverty in developing countries. The final section summarises the findings and presents policy implications.

Recent studies on international migration, remittances and poverty

There is little agreement and scant information in the literature concerning the impact of international migration and remittances on poverty. Stahl (1982, p. 883), for example, writes that "migration, particularly international migration, can be an expensive venture. Clearly it is going to be the better-off households which will be more capable of (producing international migrants)". Similarly, Lipton (1980, p. 227), in a study of 40 villages in India that focuses more on internal than international migration, found that "migration increases intra-rural inequalities ... because better-off migrants are 'pulled'

towards fairly firm prospects of a job (in a city or abroad), whereas the poor are 'pushed' by rural poverty and labour-replacing methods".

Other analysts, however, suggest that the poor can and do benefit from international migration and remittances. For example, Stark and Taylor (1989, pp. 12-14) find that in rural Mexico "relatively deprived" households are more likely to engage in international migration than are "better off" households. In a similar vein, Adams (1991, pp. 73-74) finds that in rural Egypt, the number of poor households declines by 9.8% when household income includes international remittances, and that remittances account for 14.7% of total income of poor households.

While the findings of these past studies are instructive, their conclusions are of limited usefulness due to small sample size. For instance, the findings of Stark, Taylor and Yitzhaki are based on 61 households from two Mexican villages, while those of Adams are based on 1 000 households from three Egyptian villages. Clearly, there is a need to extend the scope of these studies to see if their findings hold for a larger and broader collection of developing countries.

New data on international migration, remittances, inequality and poverty

The evaluation of the impact of international migration and remittances on poverty in developing countries is based on a new data set that includes information on international migration, remittances, inequality and poverty for 71 "low-income and middle-income" developing countries.[4] These countries were selected because it was possible to find relevant migration, remittances, inequality and poverty data for all of them since the year 1980.[5] As it was not easy to assemble this data set, and data problems still plague this (and all other) studies on international migration and remittances, it is useful to spell out how this information was assembled.

In the case of migration, few, if any, of the major labour-exporting countries publish accurate records on the number of international migrants that they produce. It is therefore necessary to estimate migration stocks and flows by using data collected by the main labour-receiving countries. For the purposes of this chapter, the main labour-receiving countries (regions) include two: United States and the OECD (Europe), excluding North America and Asia.[6] Unfortunately, no data are available on the amount of migration to the third and fourth most important labour-receiving regions in the world, the Arab Gulf and South Africa.

Because of their importance to labour-exporting countries, remittance flows tend to be the best measured aspect of the migration experience. For instance, the International Monetary Fund (IMF) keeps annual records of the amount of worker remittances received

4. Low-income and middle-income countries are those which are classified as such by the World Bank (2000, pp. 334-335). Low-income includes countries with 1999 GNP per capita USD 756 or less; middle-income includes countries with 1999 GNP per capita of USD 756 to USD 9 265.

5. In line with other cross-national studies of poverty, 1980 was selected as a cutoff point because the poverty data prior to that year are far less comprehensive. See, for example, Ravallion and Chen (1997) and Adams (2004).

6. For the purposes of this study, OECD (Europe) includes 21 countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxemburg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland and United Kingdom.

by each labour-exporting country.[7] However, as noted above, the IMF only reports data on *official* worker remittance flows, that is, remittance monies which are transmitted through official banking channels. Since a large (and unknown) proportion of remittance monies is transmitted through private, unrecorded channels, the level recorded by the IMF underestimates the actual flow of remittance monies returning to labour-exporting countries.

Finally, with respect to poverty, many developing countries – especially the smaller population countries – have not conducted the type of nationally-representative household budget surveys that are needed to estimate poverty. For example, of the 157 developing countries classified as low or middle-income by the World Bank,[8] only 81 countries (52%) have published the results of any household budget survey. Of these countries, missing data on income inequality reduced the size of the data set used in this chapter to 71 countries.[9]

Annex Table A1 gives the countries, regions, poverty, inequality, migration and remittances indicators included in the new data set. The data set includes a total of 184 observations: an observation is any point in time for which data on income, poverty and inequality exist. The data set is notable in that it includes 36 observations (from 18 countries) in Sub-Saharan Africa, a region for which migration, remittances and poverty data are relatively rare. It also includes observations from countries in all other regions of the developing world.

Annex Table A1 reports three different poverty measures. The first, the headcount index, set at USD 1 per person per day, measures the percentage of the population living beneath that poverty line at the time of the survey.[10] However, the headcount index ignores the "depth of poverty", that is, the amount by which the average expenditures (income) of the poor fall short of the poverty line.[11] The poverty gap index, which measures in percentage terms how far the average expenditures (income) of the poor fall short of the poverty line, is also reported. For instance, a poverty gap of 10% means that the average poor person's expenditures (income) are 90% of the poverty line. The third poverty measure – the squared poverty gap index – indicates the severity of poverty. The squared poverty gap index possesses useful analytical properties, because it is sensitive to changes in distribution among the poor.[12]

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7. The International Monetary Fund (IMF) records annual flow in international remittances in its publication, *Balance of Payments Statistics Yearbook* (Washington, DC).

8. For a full list of these 157 developing countries, see World Bank (2000, pp. 334-335).

9. For example, China was eliminated from the data set because of missing income inequality data for the nation as a whole.

10. To ensure compatibility across countries, all of the poverty lines in Annex Table A1 are international poverty lines, set at estimates of USD 1.08 per person per day in 1993 purchasing power parity (PPP) exchange rates. The PPP exchange rates are used so that USD 1.08 is worth roughly the same in all countries. PPP values are calculated by pricing a representative bundle of goods in each country and comparing the local cost of that bundle with the US dollar cost of the same bundle. In calculating PPP values, the comparison of local costs with US costs is done using conversion estimates produced by the World Bank.

11. In this chapter, the terms "expenditure" and "income" are used interchangeably.

12. While a transfer of expenditures from a poor person to a poorer person will not change the headcount index or the poverty gap index, it will decrease the squared poverty gap index.

To measure inequality, Annex Table A1 uses the Gini coefficient. In the table, this measure is normalised by household size, and the distributions are weighted by household size so that a given quintile (such as the lowest quintile) has the same share of population as other quintiles across the sample.

The remaining variables in Annex Table A1 – international migration as share of country population and per capita official international remittances – are of key importance to this study. Since these two variables must be estimated using some rather heroic assumptions, it is crucial to discuss each variable in turn.

In the absence of detailed records on international migration in the labour-exporting countries, the migration variable in this study is estimated by combining data from the two main labour-receiving regions of the world: the United States and OECD (Europe). Specifically, the migration variable is constructed using three steps. The first step uses data from the 1990 and 2000 US Population Censuses on the "place of birth for the foreign-born population". While these data are disaggregated by country of birth for about 50 different labour-exporting countries, it is not at all clear whether all of these "foreign-born" people are in fact international migrants. For example, a person born in Mexico and brought to the United States as an infant would probably not consider himself as a migrant. Moreover, it is also not clear how many of those who enter the United States illegally are in fact included in the "foreign-born" population figures. As some observers have suggested, the US Census data may be grossly undercounting the actual migrant population that is living – legally or illegally – in the United States.[13]

The second step in calculating the migration variable is to estimate the number of "foreign born" living in the OECD (Europe), excluding North America and Asia.[14] Unfortunately, the OECD (Europe) data are not as detailed as the US Census data, and differ from the United States data in several key ways. Most basically, the OECD (Europe) data use a different way of classifying immigrants. Since US-born children of immigrants have US citizenship, the United States defines an immigrant as a person who was born abroad to non-US citizens. Most OECD (Europe) countries, however, follow an ethnicity-based definition of immigration status. This method classifies a person on the basis of the ethnicity of the parent, rather than on place of birth. Thus, a child of Turkish parents born in Germany is typically classified as an immigrant. This different way of classifying immigrants has the net effect of increasing the stock of immigrants in any particular OECD (Europe) country, and perhaps biasing our estimates by including a number of "migrants" who were actually born, raised and educated in that OECD (Europe) country. Another key difference between the OECD (Europe) data and the United States data has to do with the number of labour-exporting countries recorded. While the US Census data can be used to count the number of "foreign-born" (or migrants) from about 50 different countries, the OECD (Europe) data only record the number of "foreign-born" (or migrants) in each European country coming from ten or fifteen countries. While this is not a significant problem for large-labour exporting countries (like Turkey), which send many migrants to Europe, it is a problem for smaller labour-exporting countries, like Brazil or Sri Lanka, where the actual number of migrants to any particular European country might not be recorded at all.

13. In 2002 the stock of illegal immigrants in the United States was estimated at 9.3 million, or about 26% of the total stock of the "foreign-born" population. See Passel, Capps and Fix (2004).

14. All of the data on the "foreign-born" population living in the OECD (Europe) comes from *Trends in International Migration,* OECD, Paris, various years.

The final step in calculating the migration variable is to take the sum of the "foreign born" from each labour-exporting country that are living in either the United States or the OECD (Europe) and divide this sum by the population of each developing country. These "migration as share of country population" figures are the ones which appear in Annex Table A1. In all likelihood, these figures seriously under-estimate the actual number of international migrants produced by any given labour-exporting country, because they do not include the large number of illegal migrants working in the United States and OECD (Europe). These figures also do not count the unknown number of international migrants working in other labour-receiving regions (like the Arab Gulf).

The process of defining the remittances variable in Annex Table A1 is more straightforward, but it also involves one heroic assumption. All remittance data comes from the International Monetary Fund (IMF) *Balance of Payments Statistics Yearbook*. As noted above, the main problem with these data is that they count only remittance monies which enter through official banking channels; they do not include the large (and unknown) amount of remittance monies which are sent home through private, unofficial channels. For example, in one major labour-exporting country – Egypt – it has been estimated that unofficial remittances amount to between one-third and one-half of total remittances.[15] For this reason, it is likely that the "official remittance" figures reported in Annex Table A1 are gross under-estimates of the actual level of total remittances (official and unofficial) entering each labour-exporting county.

International migration, remittances and poverty: OLS results

In this section, the cross-country data is used to analyse how international migration and remittances affect poverty in the developing world. Using the basic growth-poverty model suggested by Ravallion (1997) and Ravallion and Chen (1997), the relationship to be estimated can be written as:

$$\text{Log } P_{it} = \alpha_i + \beta_1 \log \mu_{it} + \beta_2 \log (g_{it}) + \beta_3 \log (x_{it}) + \varepsilon_{it} \qquad (1)$$

$$(i = 1, \ldots, N; t = 1, \ldots, T_i)$$

Where P is the measure of poverty in country i at time t, α_i is a fixed effect reflecting time-differences between countries, β_1 is the "growth elasticity of poverty" with respect to mean per capita income given by μ, β_2 is the elasticity of poverty with respect to income inequality given by the Gini coefficient, g, β_3 is the elasticity of poverty with respect to variable x (such as international migration or remittances) and ε is an error term that includes errors in the poverty measure.

Equation (1) represents the basic model of poverty determination used by a host of researchers.[16] The model assumes that economic growth – as measured by increases in mean per capita income – will reduce poverty. The relationship between poverty and the income variable is therefore expected to be negative and significant. The model also assumes that the level of income inequality affects poverty reduction. Since past work has shown that a given rate of economic growth reduces poverty more in low-inequality countries, as opposed to high-inequality countries,[17] the income inequality variable is

15. Adams (1991, p. 13).

16. In addition to Ravallion (1997) and Ravallion and Chen (1997), see Squire (1993), Collier and Dollar (2001) and Bhalla (2002).

17. On this point, see Birdsall and Londono (1997) and Ravallion (1997).

expected to be positive and significant. The innovation in this study is to introduce into equation (1) a variable measuring the level of international migration or remittances. Controlling for income and its distribution, the hypothesis tested that countries producing more international migrants or receiving more international remittances will have less poverty.

The income variable in equation (1) can be measured in two different ways: 1) per capita GDP, in purchasing power parity (PPP) units, as measured from national accounts data; and 2) per capita survey mean income (expenditure), as calculated from household budget surveys done in the various developing countries. As Deaton (2001) and others have shown,[18] these two measures of income typically do not agree. Income (expenditure) as measured by household surveys is calculated from the responses of individual households. However, income as measured by GDP data comes from the national accounts, which measure household income as a residual item, so that errors and omission elsewhere in the accounts automatically affect the calculation of household income (expenditure). Since the national accounts data also include many items (such as the expenditures of nonprofit organisations and the imputed rent of owner-occupied dwellings) which are not included in the household surveys, it is little wonder that the two measures of income do not correspond.

For the purposes of this study, equation (1) will b e estimated using both measures of income. It should be noted that neither measure of income includes international remittance income. The GDP data from national accounts should not include remittance income from abroad, and experience with household budget surveys suggests that most of these surveys do not adequately capture international remittance income because they do not include questions on remittances.[19]

Other researchers have often estimated equation (1) in first differences, in order to deal with possible correlation problems between the variables, since the dependent and independent variables are drawn from the same single source of data (household budget surveys).[20] In this study, however, equation (1) will be estimated as a level equation since the dependent and independent variables come from different sources of data: the dependent variable being drawn from household budget surveys and the independent variables (for GDP, international migration and international remittances) from various other sources.[21]

Equation (1) will also be estimated using the two measures of international migration and remittances developed in the last section: international migration as a share of country population and per capita official international remittances received by a developing country. Given all of the problems involved in constructing these two variables, as well as the fact that a number of the countries still have missing/incomplete migration or remittance data, it is not surprising that these two measures are not highly correlated in the data set (simple correlation of 0.579). Moreover, it is likely that a sizeable share of international migrants may migrate, but not remit. For all of these

18. See Deaton (2001, pp. 125-147) and Adams (2004).

19. However, in those household surveys where survey mean income is proxied by survey mean expenditure, the income variable may, to some extent, capture the impact of remittances income on household expenditure.

20. See, for example, Ravallion and Chen (1997).

21. When equation (1) is estimated using survey mean income, the dependent and independent variables in the equation are both based on data from household budget surveys.

reasons, it seems useful to use each of these measures to test the robustness of the findings regarding the impact of international migration and remittances on poverty in the developing world.

Using the international migration data, the OLS estimates of equation (1) are presented in Table 13.1 (using per capita GDP) and Table 13.2 (using survey mean income). To control for fixed effects by geographic region of the world, five regional dummy variables are added to the model.[22] In each table, results are shown first without, and then with, regional dummies. Since all of the variables are estimated in log terms, the results can be interpreted as elasticities of poverty with respect to the relevant variable.

In Tables 13.1 and 13.2, the coefficients for both of the income variables – per capita GDP and survey mean income – are of the expected (negative) sign and statistically significant in all cases. In both tables, the poverty elasticities with respect to income inequality (Gini coefficient) are also of the expected (positive) sign, and their magnitude is consistent with other recent analyses of poverty reduction (Adams, 2004; Ravallion, 1997). However, the results for the model as a whole are better and more precise in Table 13.2, using survey mean income: the R^2 measures increase from the 0.4-0.7 range to 0.6 to 0.8. For this reason, the focus will be on Table 13.2.

When the dependent variable in Table 13.2 is poverty headcount or poverty gap, the results for the international migration variable are negative and statistically significant. However, when the dependent variable is squared poverty gap, the international migration variable is not significant. For the poverty headcount measure, the estimates suggest that, on average, a 10% increase in the share of international migrants in a country's population will lead to a 1.4% decline in the share of people living on less than USD 1.00 per person per day.

Table 13.3 (using per capita GDP) and Table 13.4 (using survey mean income) show the results when equation (1) is estimated using international remittances data. Since the results for the model are better and more precise in Table 13.4 using survey mean income, we will focus on these results.

The remittances variable in Table 13.4 – per capita official international remittances – has a negative and statistically significant impact on each of the three poverty measures: headcount, poverty gap and squared poverty gap. Estimates for the poverty headcount measure suggest that, on average, a 10% increase in per capita official international remittances will lead to a 1.8% decline in the share of people living in poverty. Table 13.4 shows that remittances will have a slightly larger impact on poverty reduction when poverty is measured by the more sensitive poverty measures: poverty gap and squared poverty gap.

Official international remittances and poverty: IV results

As noted at the outset, one possible problem with equation (1) is that it assumes that all of the right hand side variables in the model – including international migration and remittances – are exogenous to poverty. However, it is possible that these two variables may be endogenous to poverty. Reverse causality may be taking place: international migration and remittances may be reducing poverty, but poverty may also be affecting the

22. The five regional dummy variables are those for East Asia, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, and South Asia. Sub-Saharan Africa is the omitted regional dummy.

share of migrants being produced and the level of international remittances being received. Without accounting for this reverse causality, all of the estimated coefficients in Tables 13.1 to 13.4 may be biased.

One way of accounting for possible endogenous regressors is to pursue an instrumental variables approach. This is the strategy adopted in this section. In the data set there are three possible instruments for the international migration and remittances variables. The first instrument is distance (miles) between the remittance-sending area [US, OECD (Europe) or the Persian Gulf] and the remittance-receiving country.[23] This variable seems like a good instrument because various studies of the determinants of international migration have found that distance between labour-receiving and exporting countries is usually negatively and significantly related to the level of international migration. For example, in a study of migration rates to the United States from 81 developing countries, Hatton and Williamson (2003, p. 11) find that distance from the United States is negatively and significantly related to the level of international migration from that country.[24] A second instrument for the international migration and remittances variables is education, specifically, the percentage of the population over age 25 that has completed secondary education in a developing country. This variable seems useful because human capital theory suggests that education is positively related with international migration (and presumably international remittances) because educated people typically enjoy greater employment and income-earning opportunities in labour-receiving countries.[25] The final instrument that can be used is government stability,[26] which is a measure of the level of political stability in each country. The expected outcome of this variable is not straightforward. Holding other factors constant, it would be expected that countries with more unstable governments would produce larger numbers of international migrants. However, whether or not these increased numbers of migrants will produce larger levels of remittances would depend on the extent to which political instability affects the incentives of migrants to remit. Since migrants remit for both altruistic and economic reasons, the net impact of political instability – probably positive for altruistic motives, as migrants seek to cushion their relatives from instability, and probably negative for economic motives to the extent that political instability undermines the investment climate – is ambiguous.

Tables 13.5 and 13.6 present the first-stage instrumental variables regression results when various combinations of these variables are used to instrument international migration and remittances, respectively. In each table, equations 1-4 present the results when the exogenous variables include per capita GDP, and equations 5-8 present the results when the exogenous variables include survey mean income. In both tables,

23. In this study, distance between remittance-sending region [United States, OECD (Europe) or Persian Gulf] and remittance-receiving country is measured for each individual developing country as the miles between the borders of that country and the main region from which it receives remittances. For example, for Latin American countries it is the distance to the United States, for North African countries it is the distance to OECD (Europe) and for South Asian countries it is the distance to the Persian Gulf.

24. For other empirical studies of the relationship between distance and international migration, see Karemera, Oguledo and Davis (2000), and Vogler and Rotte (2000).

25. See, for example, Harris and Todaro (1970).

26. Government stability is measured by ratings published on a monthly basis by the PRS Group in the *International Country Risk Guide*. These ratings for "government stability" have a scale of zero to 12, with zero representing countries with "very unstable government" to 11 representing those countries with "very stable government". For instance, in June 2002 the United States had a "government stability" rating of 11, while Poland had a rating of 6.

the IV equations containing only the distance variable are arguably the most exogenous and have the single highest predictive power (R^2 from 0.44 to 0.48). As expected, the distance variable is always negative and highly significant, suggesting that as the distance between remittance-sending and receiving countries increases, the level of international migration and remittances received falls. When instrumenting for international migration (Table 13.5), the education variable is positive and highly significant. As hypothesised, this implies that countries with a higher share of educated people also produce more international migrants. The other variable – government stability – is statistically insignificant in both tables, and therefore subject to weak instrument concerns. However, when all three variables are combined together – equations 4 and 8 in Tables 13.5 and 13.6 – the p-values for the F-statistic of the excluded instruments are all less than 0.01 for the prediction of international migration and remittances, while the F-statistics themselves are over 8. When using all three variables as instruments, international migration is predicted somewhat better than official international remittances, but the F-statistics still show instrument relevance.

Tables 13.7 to 13.10 present the second-stage IV results when the international migration and remittance variables are instrumented by all three variables: distance, education and government stability. Tables 13.7 and 13.8 present the IV results for international migration, using per capita GDP and survey mean income, respectively. Tables 13.9 and 13.10 present these IV results for official international remittances, using the same income measures.

Comparing the IV and OLS estimates for international migration (Tables 13.1-13.2 and 13.7-13.8), we find out that the coefficients for the instrumented international migration variable in Tables 13.7 and 13.8 are more negative, and of greater significance. This is true using either per capita GDP or survey mean income data. Comparing the IV and OLS estimates for official international remittances (Tables 13.3-13.4 and 13.9-13.10) yields similar results. For example, using survey mean income, while the IV estimates for the poverty headcount measure suggest that, on average, a 10% increase in per capita official remittances will lead to a 3.5% decline in the share of people living in poverty (Table 13.10), the OLS estimates suggest that a similar increase in official remittances will lead to only a 1.8% decline in the share of poor people (Table 13.4).

Considered as a whole, the IV results suggest that after instrumenting for the possible endogeneity of international migration and remittances, these two variables still have a negative and statistically significant impact upon poverty. When using IV estimates, this impact on poverty is strongest using survey mean income data. When using survey mean income, instrumented international migration has a negative and significant impact on two of the three poverty measures – poverty headcount and poverty gap (Table 13.8), while instrumented official international remittances has a negative and significant impact on all three of the poverty measures (Table 13.10).

In Table 13.10, the relative magnitudes of the elasticity estimates on survey mean income and instrumented official international remittances imply that an increase in international remittances has about twice the poverty-reducing impact as an increase in other sources of household income. Evaluated at the sample mean, an increase in USD 1.00 in instrumented per capita official international remittances (from USD 17.15 to USD 18.15) will lead to a 2.04% reduction in the poverty headcount. By comparison, at the sample mean, a USD 1.00 increase in per capita survey mean income (from

USD 1 628.60 to USD 1 629.60) will yield a 0.98% reduction in the poverty headcount.[27] In other words, dollar for dollar the income remitted by migrants from abroad reduces poverty much more than income generated by domestic economic activity.

Conclusions and policy implications

This chapter has used a new data set on international migration, remittances, inequality and poverty from 71 developing countries to examine the impact of international migration and remittances on poverty in the developing world. Three findings and two policy implications emerge. First, both international migration and remittances have a strong, statistically significant impact on reducing poverty in the developing world. After instrumenting for the possible endogeneity of international migration, and controlling for level of income, income inequality and geographic region, results for the poverty headcount measure suggest that, on average, a 10% increase in the share of international migrants in a country's population will lead to a 2.1% decline in the share of people living on less than USD 1.00 per person per day. After instrumenting for the possible endogeneity of international remittances, a similar 10% increase in per capita official international remittances will lead, on average, to a 3.5% decline in the share of people living in poverty. The fact that *both* international migration and international remittances reduce poverty in the developing world is important because data on each of these variables is incomplete and subject to under-reporting in many developing countries. By analysing samples which include information on each of these variables, it has been possible to test the migration-remittances-poverty relationship for the largest number of labour-exporting countries possible. The results provide strong, robust evidence of the poverty-reducing impact of both international migration and remittances in the developing world.

The second finding relates to endogeneity. Comparing the instrumented and non-instrumented (OLS) estimates for international migration and remittances in this chapter shows that the coefficients for the instrumented variables are larger and more precisely estimated than those for the non-instrumented variables. This suggests that international migration and remittances may be endogenous to poverty: that is, the hypothesis cannot be excluded that variations in poverty in developing countries cause changes in both the share of migrants going to work abroad and in the level of official international remittances sent home. However, results show that the extent of this endogeneity bias on poverty is not large in absolute terms: the instrumented results suggest that, on average, a 10% increase in per capita official remittances will lead to a 3.5% decline in the share of people living in poverty, while the non-instrumented (OLS) estimates suggest that a similar increase in official remittances will lead to a 1.8% decline in the share of poor people. More work needs to be done on this topic.

The third finding is more of a plea than a conclusion. From the standpoint of future work on this topic, more attention needs to be paid to collecting and publishing better data on international migration and remittances. With respect to international migration, it would be useful if developing countries would start publishing records on the number and destination of their international migrants. In many developing countries, these data are already being collected, but they are not being published. With respect to international remittances, the International Monetary Fund should make greater efforts to count the

27. The relevant calculations from Table 13.10 are as follows. For instrumented per capita international remittances, (18.15/17.15 – 1)*(-0.351) = (-2.046). For survey mean income, (1629.60/1628.60 1)*(-1.590) = (-0.976).

amount of remittance monies that are transmitted through informal, unofficial channels. It is possible that poor people, especially those from countries located near major labour-receiving regions, are more likely to remit through informal, unofficial channels. For this reason, a full and complete accounting of the impact of international remittances (official and unofficial) on poverty in the developing world needs more accurate data on the large level of unofficial remittances returning to developing countries.

The findings point to two policy recommendations. With respect to migration, the positive impact of international migration on poverty makes the policy question of "managing migration" assume greater importance in the international development community. While the international community has paid considerable attention in the past to international movements of goods, services and finance, much less attention has been paid to the international movements of people. The results of this chapter suggest that there would be substantial potential benefits to the world's poor if more international attention were focused on integrating "migration policy" within the larger global dialogue on economic development and poverty reduction. With respect to remittances, the international community needs to take efforts to reduce the current high transaction costs of remitting money to labour-exporting countries. At present, high transactions costs resulting from lack of competition, regulation and/or low levels of financial sector performance in labour-exporting countries act as a regressive tax on international migrants and their families. Lowering the transactions costs of remittances will increase the poverty-reducing impact of international remittances and will also encourage a larger share of remittances to flow through formal financial channels in developing countries.

REFERENCES

Adams, Jr., R. (1991) *The Effects of International Remittances on Poverty, Inequality and Development in Rural Egypt,* Research Report No. 86, International Food Policy Research Institute, Washington, DC.

Adams, Jr., R. (1993) "The Economic and Demographic Determinants of International Migration in Rural Egypt", *Journal of Development Studies,* No. 30, pp. 146-167.

Adams, Jr., R. (2004), "Economic Growth, Inequality and Poverty: estimating the growth elasticity of poverty", *World Development*, No. 32, pp. 1989-2014.

Bhalla, S. (2002), *Imagine There's No Country: Poverty, inequality and growth in the era of globalization,* Institute for International Economics, Washington, DC.

Birdsall, N. and J. Londono (1997), "Asset Inequality Matters: An assessment of the World Bank's approach to poverty reduction", *American Economic Review,* No. 87, pp. 32-37.

Collier, P. and D. Dollar (2001), "Can the World Cut Poverty in Half? How policy reform and effective aid can meet international development goals", *World Development*, No. 29, pp. 1787-1802.

Deaton, A. (2001), "Counting the World's Poor: Problems and possible solutions", *World Bank Research Observer*, No. 16, pp. 125-147.

El-Qorchi, M., S. Maimbo and J. Wilson (2003), "Informal Funds Transfer Systems: An analysis of the informal hawala system", IMF Occasional Paper No. 222, International Monetary Fund, Washington, DC.

Gustafson, B. and N. Makonnen (1993), "Poverty and Remittances in Lesotho", *Journal of African Economies*, No. 2, pp. 49-73.

Harris, J. and M. Todaro (1970), "Migration, Unemployment and Development: A two-sector analysis", *American Economic Review*, No. 60, pp. 126-142.

Hatton, T. and J. Williamson (2003), "What Fundamentals Drive World Migration?", Wider Discussion Paper No. 2003/23, Helsinki, Finland.

International Monetary Fund (various years), *Balance of Payments Statistics Yearbook,* International Monetary Fund, Washington, DC.

Karemera, D., V. Oguledo and B. Davis (2000), "A Gravity Model Analysis of International Migration to North America", *Applied Economics,* No. 32, pp. 1745-1755.

Lipton, M. (1980), "Migration from Rural Areas of Poor Countries: the impact on rural productivity and income distribution", *World Development,* No. 8, pp. 1-24.

OECD (various years), *Trends in International Migration,* Paris.

Passel, J., R. Capps and M Fix (2004), "Undocumented Immigrants: Facts and figures", Unpublished manuscript, Urban Institute, Washington, DC.

Ratha, D. (2004), "Enhancing the Developmental Effect of Workers' Remittances to Developing Countries", *Global Development Finance,* World Bank, Washington, DC, pp. 169-173.

Ravallion, M. (1997), "Can High-inequality Developing Countries Escape Absolute Poverty?", *Economics Letters,* No. 56, pp. 51-57.

Ravallion, M. and S. Chen (1997), "What Can New Survey Data Tell Us about Recent Changes in Distribution and Poverty?", *World Bank Economic Review,* No. 11, pp. 357-382.

Squire, L. (1993), "Fighting Poverty", *American Economic Review,* No. 83, pp. 377-382.

Stahl, C. (1982), "Labor Emigration and Economic Development", *International Migration Review*, No. 16, pp. 868-899.

Stark, O. (1991), *The Migration of Labor*, Harvard University Press, Cambridge, MA.

Stark, O. and J.E. Taylor (1989), "Relative Deprivation and International Migration", *Demography*, No. 26, pp. 1-14.

Taylor, J.E. (1992), "Remittances and Inequality Reconsidered: Direct, indirect and intertemporal effects", *Journal of Policy Modeling,* No. 14, pp. 187-208.

Taylor, J.E., C. Zabin and K. Eckhoff (1999), "Migration and Rural Development in El-Salvador: A micro-economywide perspective", *North American Journal of Economics and Finance,* No. 10, pp. 91-114.

US Census Bureau (1990 and 2000), *Population Census,* Washington, DC.

Vogler, M. and R. Rotte (2000), "The Effects of Development on Migration: Theoretical issues and new empirical evidence", *Journal of Population Economics,* No. 13, pp. 485-505.

World Bank (2000), *World Development Report, 2000/01,* World Bank, Washington, DC.

World Bank (2002), *Global Poverty Monitoring Database,* World Bank, Washington, DC.

World Bank (2004), *Global Development Finance,* World Bank, Washington, DC.

Table 13.1. OLS estimates of the effects of international migration on poverty, estimated using per capita GDP

VARIABLE	DEPENDENT VARIABLE = POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
PER CAPITA GDP (CONSTANT 1995 DOLLARS)	-1.177 (-8.84)**	-1.003 (-6.48)**	-1.343 (-8.82)**	-1.295 (-6.43)**	-1.417 (-7.51)**	-1.399 (-5.72)**
GINI COEFFICIENT	3.396 (6.88)**	2.502 (4.90)**	4.170 (7.39)**	3.195 (4.81)**	4.600 (6.93)**	2.926 (3.61)**
INTERNATIONAL MIGRATION (SHARE OF MIGRANTS IN COUNTRY POPULATION)	-0.155 (-2.49)*	-0.085 (-1.52)	-0.120 (-1.68)	-0.101 (-1.38)	-0.023 (-0.27)	-0.015 (-0.17)
EAST ASIA		0.402 (0.98)		0.109 (0.20)		-0.496 (-0.76)
EUROPE, CENTRAL ASIA		-0.959 (-1.87)		-0.459 (-0.69)		-0.356 (-0.44)
LATIN AMERICA		0.257 (0.59)		0.581 (1.02)		0.677 (0.97)
MIDDLE EAST, NORTH AFRICA		-1.691 (-3.65)**		-1.291 (-2.14)*		-1.638 (-2.18)*
SOUTH ASIA		0.468 (1.33)		0.347 (0.76)		-0.180 (-0.29)
CONSTANT	13.550 (10.94)**	11.556 (10.18)**	14.089 (9.96)**	12.733 (8.63)**	14.022 (8.03)**	12.416 (6.81)**
N	109	108	109	108	100	100
ADJ R^2	0.493	0.694	0.481	0.594	0.399	0.504
F-STATISTIC	36.11	31.39	34.41	20.59	22.91	13.59

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates.
* Significant at the 0.10 level.
** Significant at the 0.05 level.

Table 13.2. OLS estimates of the effect of international migration on poverty, estimated using survey mean income

VARIABLE	DEPENDENT VARIABLE = POVERTY HEADCOUNT (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
PER CAPITA SURVEY MEAN INCOME	-2.336 (-16.85)**	-1.942 (-12.00)**	-2.623 (-15.24)**	-2.437 (-11.89)**	-2.659 (-11.49)**	-2.699 (-10.19)**
GINI COEFFICIENT	4.025 (12.08)**	3.060 (7.68)**	4.798 (11.60)**	3.678 (7.30)**	5.002 (9.29)**	3.675 (5.64)**
INTERNATIONAL MIGRATION (SHARE OF MIGRANTS IN COUNTRY POPULATION)	-0.188 (-4.48)**	-0.136 (-3.12)**	-0.153 (-2.93)**	-0.143 (-2.59)*	-0.048 (-0.69)	-0.086 (-1.19)
EAST ASIA		-0.423 (-1.50)		-0.962 (-2.69)**		-1.609 (-3.53)**
EUROPE, CENTRAL ASIA		-1.046 (-2.98)		-0.674 (-1.52)		-0.445 (-0.78)
LATIN AMERICA		-0.147 (-0.50)		0.037 (0.10)		0.157 (0.33)
MIDDLE EAST, NORTH AFRICA		-1.322 (-3.77)**		-1.268 (-2.86)**		-1.191 (-2.08)*
SOUTH ASIA		-0.054 (-0.20)		-0.344 (0.99)		0.775 (-1.61)
CONSTANT	22.530 (19.09)**	19.214 (15.30)**	23.915 (16.32)**	21.943 (13.81)**	23.436 (11.98)**	22.960 (11.17)**
N	106	106	106	106	100	100
ADJ R^2	0.766	0.817	0.722	0.773	0.598	0.685
F-STATISTIC	116.09	59.71	92.00	45.89	50.11	27.93

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates.
* Significant at the 0.10 level.
** Significant at the 0.05 level.

Table 13.3. OLS estimates of the effects of official international remittances on poverty, estimated using per capita GDP

VARIABLE	DEPENDENT VARIABLE = POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (8)	(9)
PER CAPITA GDP (CONSTANT 1995 DOLLARS)	-1.129 (-7.78)**	-0.852 (-6.19)**	-1.273 (-7.80)**	-0.961 (-5.27)**	-1.228 (-6.43)**	-0.929 (-4.22)**
GINI COEFFICIENT	2.959 (5.48)**	1.882 (3.91)**	4.266 (7.02)**	3.184 (5.00)**	4.786 (7.33)**	3.271 (4.44)**
PER CAPITA OFFICIAL INTERNATIONAL REMITTANCES	-0.119 (-1.98)*	-0.077 (-1.70)*	-0. 208 (-3.09)**	-0.209 (-3.45)**	-0.215 (-2.82)**	-0.164 (-2.02)**
EAST ASIA		0.065 (0.19)		-0.306 (-0.68)		-0.991 (-1.95)*
EUROPE, CENTRAL ASIA		-1.928 (-5.29)**		-2.198 (-4.55)**		-1.826 (-3.30)**
LATIN AMERICA		-0.147 (-0.47)		-0.128 (-0.31)		-0.314 (-0.65)
MIDDLE EAST, NORTH AFRICA		-2.099 (-6.23)**		-1.748 (-3.92)**		-2.101 (-3.69)**
SOUTH ASIA		0.077 (0.26)		0.165 (0.42)		-0.384 (-0.78)
CONSTANT	13.059 (10.08)**	10.575 (10.55)**	14.095 (9.67)**	11.437 (8.61)**	13.365 (8.01)**	10.567 (6.51)**
N	100	99	100	99	89	89
ADJ R^2	0.427	0.744	0.480	0.679	0.484	0.606
F-STATISTIC	25.66	36.70	31.49	26.89	28.58	17.92

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates.
* Significant at the 0.10 level.
** Significant at the 0.05 level.

Table 13.4. OLS estimates of the effect of official international remittances on poverty, estimated using survey mean income

VARIABLE	DEPENDENT VARIABLE = POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
PER CAPITA SURVEY MEAN INCOME	-2.242 (-15.48)**	-1.605 (-10.47)**	-2.593 (-14.29)**	-2.005 (-9.16)**	-2.394 (-11.74)**	-2.059 (-8.44)**
GINI COEFFICIENT	3.646 (10.42)**	2.752 (7.34)**	5.029 (11.47)**	4.095 (7.66)**	5.361 (11.23)**	4.398 (7.29)**
PER CAPITA OFFICIAL INTERNATIONAL REMITTANCES	-0.163 (-3.88)**	-0.176 (-4.48)**	-0. 181 (-3.44)**	-0.208 (-3.70)**	-0.212 (-3.75)**	-0.214 (-3.40)**
EAST ASIA		-0.126 (-0.52)		-0.549 (-1.59)		-1.152 (-3.03)**
EUROPE, CENTRAL ASIA		-1.337 (-4.69)**		-1.365 (-3.36)**		-0.893 (-1.96)*
LATIN AMERICA		-0.044 (-0.20)		-0.052 (-0.16)		-0.094 (-0.26)
MIDDLE EAST, NORTH AFRICA		-1.180 (-3.83)**		-1.091 (-2.49)**		-1.102 (-2.25)*
SOUTH ASIA		0.348 (1.54)		0.269 (0.84)		-0.079 (-0.20)
CONSTANT	16.355 (19.05)**	12.863 (15.86)**	17.896 (16.64)**	14.672 (12.69)**	16.461 (13.77)**	14.446 (11.10)**
N	95	95	95	95	88	88
ADJ R^2	0.762	0.857	0.739	0.797	0.711	0.758
F-STATISTIC	101.25	71.64	89.69	47.25	72.24	35.07

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates.
* Significant at the 0.10 level.
** Significant at the 0.05 level.

Table 13.5. First-stage IV estimates for international migration

	INTERNATIONAL MIGRATION , ESTIMATED USING PER CAPITA GDP				INTERNATIONAL MIGRATION , ESTIMATED USING SURVEY MEAN INCOME			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INSTRUMENTS								
DISTANCE FROM REMITTANCE-SENDING AREA (US, OECD-EUROPE, PERSIAN GULF) TO REMITTANCE-RECEIVING COUNTRY	-1.162 (-6.21)**			-1.328 (-7.53)**	-1.157 (-6.05)**			-1.331 (-7.40)**
PERCENT OF POPULATION OVER 25 YEARS THAT HAS SECONDARY EDUCATION		0.631 (2.38)*		0.913 (4.22)**		0.789 (3.03)**		0.980 (4.59)**
GOVERNMENT STABILITY			0.270 (0.70)	0.137 (0.44)			0.178 (0.47)	0.001 (0.01)
INCLUDED EXOGENOUS VARIABLES	-0.237 (-1.09)	-0.428 (-1.66)	-0.329 (-1.27)	-0.499 (-2.33)*				
PER CAPITA GDP (CONSTANT 1995 DOLLARS)								
PER CAPITA SURVEY MEAN INCOME					-0.541 (-1.86)	-1.089 (-3.21)**	-0.745 (-2.21)*	-0.843 (-3.00)**
GINI COEFFICIENT	0.509 (0.72)	-0.300 (-0.37)	-0.545 (-0.68)	1.041 (1.56)	0.728 (1.06)	-0.109 (-0.15)	-0.331 (-0.42)	1.099 (1.69)
EAST ASIA	2.022 (3.29)**	0.753 (1.05)	1.081 (1.53)	1.436 (2.45)*	1.728 (3.13)**	0.325 (0.51)	0.780 (1.22)	0.983 (1.82)
EUROPE, CENTRAL ASIA	0.358 (0.46)	1.617 (1.90)	2.251 (2.72)**	-0.876 (-1.14)	0.357 (0.50)	1.744 (2.34)*	2.362 (3.19)**	-1.067 (-1.48)
LATIN AMERICA	1.906 (3.09)**	2.691 (3.84)**	2.951 (4.25)**	1.393 (2.35)*	1.720 (3.13)**	2.592 (4.44)**	2.797 (4.61)**	1.090 (2.09)*
MIDDLE EAST, NORTH AFRICA	0.375 (0.50)	2.410 (3.12)**	2.929 (4.05)**	-0.837 (-1.12)	0.315 (0.40)	2.656 (3.68)**	3.151 (4.36)**	-1.001 (-1.30)
SOUTH ASIA	0.232 (0.44)	0.152 (0.24)	0.590 (0.92)	-0.381 (-0.71)	-0.009 (-0.02)	-0.260 (-0.42)	0.309 (0.48)	-0.696 (-1.30)
CONSTANT	8.993 (4.03)**	-0.588 (-0.32)	-0.965 (-0.51)	11.118 (5.05)**	11.527 (4.40)**	4.212 (1.69)	2.551 (0.95)	14.072 (5.51)**
N	117	114	114	111	117	115	113	111
ADJ R^2	0.442	0.259	0.240	0.514	0.451	0.313	0.256	0.538
F-STATISTICS EXCLUDED INSTRUMENTS	42.65	8.46	4.15	12.65	42.65	8.46	4.15	12.65
P-VALUE	0.000	0.004	0.148	0.000	0.000	0.004	0.148	0.000

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates. * Significant at the 0.10 level. ** Significant at the 0.05 level.

Table 13.6. First-stage IV estimates for official international remittances

	PER CAPITA INTERNATIONAL REMITTANCES, ESTIMATED USING PER CAPITA GDP				PER CAPITA INTERNATIONAL REMITTANCES, ESTIMATED USING SURVEY MEAN INCOME			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INSTRUMENTS								
DISTANCE FROM REMITTANCE-SENDING AREA (US, OECD-EUROPE, PERSIAN GULF) TO REMITTANCE-RECEIVING COUNTRY	-1.565 (-6.24)**			-1.929 (-6.25)**	-1.191 (-4.71)**			-1.271 (-4.01)**
PERCENT OF POPULATION OVER 25 YEARS THAT HAS SECONDARY EDUCATION		-0.232 (-0.58)		-0.694 (-1.95)*		0.071 (0.20)		-0.276 (-0.76)
GOVERNMENT STABILITY			0.611 (1.12)	0.328 (0.69)			0.414 (0.87)	0.504 (1.10)
INCLUDED EXOGENOUS VARIABLES								
PER CAPITA GDP (CONSTANT 1995 DOLLARS)	0.505 (1.93)	0.773 (1.74)	0.141 (0.38)	1.358 (3.26)**				
PER CAPITA SURVEY MEAN INCOME					0.440 (1.19)	0.145 (0.31)	0.122 (0.28)	0.611 (1.33)
GINI COEFFICIENT	1.272 (1.34)	-0.593 (-0.46)	0.552 (0.43)	0.264 (0.23)	1.124 (1.22)	0.694 (0.61)	0.994 (0.88)	1.221 (1.13)
EAST ASIA	2.143 (2.97)**	0.660 (0.65)	0.587 (0.66)	3.084 (3.21)**	2.165 (3.29)**	0.763 (0.85)	0.930 (1.31)	2.789 (2.86)**
EUROPE, CENTRAL ASIA	-2.000 (-2.76)**	-0.392 (-0.33)	0.205 (0.17)	-3.164 (-2.61)*	-1.354 (-1.86)	0.210 (0.21)	0.631 (0.66)	-1.107 (-1.03)
LATIN AMERICA	0.084 (0.13)	1.528 (1.80)	1.687 (2.05)*	-0.303 (-0.36)	0.867 (1.54)	1.872 (2.70)	1.923 (3.03)**	1.053 (1.46)
MIDDLE EAST, NORTH AFRICA	-0.864 (-1.05)	2.504 (2.51)*	2.813 (3.35)**	-1.742 (-1.54)	0.651 (0.72)	3.745 (4.25)**	3.733 (4.64)**	0.873 (0.77)
SOUTH ASIA	1.378 (2.46)*	1.957 (2.30)*	1.852 (2.31)*	2.054 (2.60)*	1.566 (2.95)**	1.740 (2.35)*	2.150 (3.09)**	2.173 (2.79)**
CONSTANT	10.914 (3.91)**	-4.645 (-1.42)	-0.791 (-0.28)	7.598 (2.17)*	7.871 (2.37)*	0.040 (0.01)	-0.228 (-0.07)	6.713 (1.64)
N	101	91	91	84	97	90	87	83
ADJ R^2	0.463	0.193	0.177	0.436	0.478	0.305	0.303	0.397
F-STATISTICS EXCLUDED INSTRUMENTS	39.42	4.92	4.23	8.90	39.42	4.92	4.23	8.90
P-VALUE	0.000	0.069	0.047	0.000	0.000	0.069	0.047	0.000

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates. * Significant at the 0.10 level. ** Significant at the 0.05 level.

Table 13.7. IV estimates of the effects of international migration on poverty, estimated using per capita GDP

VARIABLE	DEPENDENT VARIABLE = POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
INSTRUMENTED ENDOGENOUS VARIABLE INTERNATIONAL MIGRATION (SHARE OF MIGRANTS IN COUNTRY POPULATION)	-0.526 (-4.36)**	-0.186 (-2.05)*	-0.424 (-3.31)**	-0.280 (-2.37)*	-0.230 (-1.68)	-0.136 (-1.02)
EXOGENOUS REGRESSORS PER CAPITA GDP (CONSTANT 1995 DOLLARS)	-1.031 (-6.20)**	-1.075 (-6.65)**	-1.219 (-6.90)**	-1.406 (-6.66)**	-1.378 (-6.90)**	-1.498 (-5.99)**
GINI COEFFICIENT	3.475 (6.12)**	2.444 (4.71)**	4.219 (7.00)**	3.050 (4.51)**	4.613 (6.85)**	2.840 (3.55)**
EAST ASIA		0.412 (0.96)		0.165 (0.30)		-0.524 (-0.80)
EUROPE, CENTRAL ASIA		-0.782 (-1.43)		-0.119 (-0.17)		-0.174 (-0.21)
LATIN AMERICA		0.485 (0.98)		1.030 (1.60)		0.943 (1.25)
MIDDLE EAST, NORTH AFRICA		-1.300 (-2.49)*		-0.638 (-0.94)		-1.249 (-1.52)
SOUTH ASIA		0.372 (0.98)		0.221 (0.44)		-0.288 (-0.46)
CONSTANT	12.531 (8.28)**	11.880 (10.00)**	13.228 (8.23)**	13.113 (8.46)**	13.783 (7.67)**	12.923 (7.05)**
N	103	102	103	102	96	96
ADJ R^2	0.307	0.671	0.385	0.559	0.380	0.503
F-STATISTIC	30.94	27.39	31.40	18.11	23.43	13.28

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates. * Significant at the 0.10 level. ** Significant at the 0.05 level.

Table 13.8. IV estimates of the effect of international migration on poverty, estimated using survey mean income

VARIABLE	DEPENDENT VARIABLE = POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
INSTRUMENTED ENDOGENOUS VARIABLE INTERNATIONAL MIGRATION (SHARE OF MIGRANTS IN COUNTRY POPULATION)	-0.337 (-4.78)**	-0.211 (-3.06)**	-0.230 (-2.78)**	-0.197 (-2.30)*	-0.059 (-0.56)	-0.136 (-1.27)
EXOGENOUS REGRESSORS PER CAPITA SURVEY MEAN INCOME	-2.193 (-14.56)**	-1.956 (-11.66)**	-2.498 (-14.07)**	-2.422 (-11.58)**	-2.575 (-10.93)**	-2.681 (-9.91)**
GINI COEFFICIENT	3.989 (11.30)**	3.001 (7.45)**	4.723 (11.36)**	3.595 (7.16)**	4.916 (9.09)**	3.583 (5.53)**
EAST ASIA		-0.402 (-1.36)		-1.008 (-2.73)**		-1.693 (-3.60)**
EUROPE, CENTRAL ASIA		-0.926 (-2.43)*		-0.668 (1.40)		-0.485 (-0.80)
LATIN AMERICA		0.012 (0.04)		0.097 (0.23)		0.180 (0.34)
MIDDLE EAST, NORTH AFRICA		-1.022 (-2.57)**		-1.115 (-2.24)*		-1.167 (-1.83)
SOUTH ASIA		-0.059 (-0.20)		-0.415 (-1.14)		-0.853 (-1.70)
CONSTANT	21.448 (16.91)**	19.142 (15.01)**	22.95 (15.36)**	21.739 (13.67)**	22.773 (11.51)**	22.788 (11.06)**
N	101	101	101	101	96	96
ADJ R^2	0.726	0.802	0.708	0.764	0.589	0.680
F-STATISTIC	96.33	52.33	83.12	41.53	46.38	23.33

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates. * Significant at the 0.10 level. ** Significant at the 0.05 level.

Table 13.9. IV estimates of the effects of official international remittances on poverty, estimated using per capita GDP

VARIABLE	DEPENDENT VARIABLE – POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
INSTRUMENTED ENDOGENOUS VARIABLE						
PER CAPITA OFFICIAL INTERNATIONAL REMITTANCES	-0.604 (-3.69)**	-0.128 (-1.63)	-0.579 (-3.70)**	-0.304 (-2.92)**	-0.387 (-2.88)**	-0.205 (-1.36)
EXOGENOUS REGRESSORS						
PER CAPITA GDP (CONSTANT 1995 DOLLARS)	-1.085 (-4.52)**	-0.901 (-6.19)**	-1.345 (-5.87)**	-1.121 (-4.59)**	-1.328 (-5.73)**	-1.165 (-4.38)**
GINI COEFFICIENT	3.172 (4.19)**	2.149 (3.95)**	4.662 (6.46)**	3.749 (5.21)**	4.983 (7.33)**	3.947 (4.87)**
EAST ASIA		0.047 (0.12)		-0.133 (-0.27)		-0.787 (-1.42)
EUROPE, CENTRAL ASIA		-1.780 (-3.36)**		-1.749 (-2.50)*		-0.805 (-0.98)
LATIN AMERICA		-0.140 (-0.37)		0.117 (0.23)		-0.089 (-0.15)
MIDDLE EAST, NORTH AFRICA		-1.904 (-4.25)**		-1.113 (-1.88)		-1.589 (-1.97)
SOUTH ASIA		0.148 (0.40)		0.437 (0.89)		-0.124 (-0.19)
CONSTANT	14.199 (6.85)**	11.255 (7.92)**	15.961 (8.07)**	13.037 (6.93)**	14.809 (7.52)**	12.691 (6.15)**
N	83	82	83	82	75	75
ADJ R^2	0.041	0.721	0.379	0.653	0.524	0.597
F-STATISTIC	18.53	27.30	27.17	19.94	27.98	14.10

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates. * Significant at the 0.10 level. ** Significant at the 0.05 level.

Table 13.10. IV estimates of the effects of official international remittances on poverty, estimated using survey mean income

VARIABLE	DEPENDENT VARIABLE – POVERTY HEADCOUNT (USD1.08/PERSON/DAY) (1)	(2)	DEPENDENT VARIABLE = POVERTY GAP (3)	(4)	DEPENDENT VARIABLE = SQUARED POVERTY GAP (5)	(6)
INSTRUMENTED						
ENDOGENOUS VARIABLE	-0.464	-0.351	-0.421	-0.396	-0.247	-0.283
PER CAPITA OFFICIAL INTERNATIONAL REMITTANCES	(-4.70)**	(-3.55)**	(-3.68)**	(-2.91)**	(-2.31)*	(-2.24)*
EXOGENOUS						
REGRESSORS						
PER CAPITA SURVEY MEAN INCOME	-2.00	-1.590	-2.415	-1.986	-2.322	-2.072
	(-9.87)**	(-9.12)**	(-10.31)**	(-8.26)**	(-9.42)**	(-8.32)
GINI COEFFICIENT	3.610	2.950	5.094	4.407	5.351	4.700
	(8.14)**	(6.60)**	(9.93)**	(7.15)**	(10.26)**	(7.25)**
EAST ASIA		-0.230		-0.688		-1.373
		(-0.76)		(-1.65)		(-3.25)**
EUROPE, CENTRAL ASIA		-1.608		-1.790		-0.929
		(-4.01)**		(-3.23)**		(-1.51)
LATIN AMERICA		-0.021		-0.038		-0.303
		(-0.07)		(-0.09)		(-0.68)
MIDDLE EAST, NORTH AFRICA		-0.614		-0.533		-1.026
		(-1.24)		(-0.78)		(-1.54)
SOUTH ASIA		0.443		0.363		-0.145
		(1.28)		(0.76)		(-0.28)
CONSTANT	20.965	17.271	23.770	20.214	22.041	20.264
	(12.79)**	(12.39)**	(12.53)	(10.51)**	(11.05)**	(10.07)**
N	81	81	81	81	75	75
ADJ R^2	0.642	0.811	0.674	0.756	0.688	0.744
F-STATISTIC	60.26	46.06	60.67	33.11	51.43	27.06

Notes: All variables expressed in logs. T-ratios shown in parenthesis. Number of observations reduced in table because of missing values. See Annex Table A1 for countries and survey dates. * Significant at the 0.10 level. ** Significant at the 0.05 level.

Annex Table A1. Summary of data set on poverty, inequality, international migration and remittances

Country	Survey Year	Region	Poverty Headcount (USD1/person/day)	Poverty Gap (%)	Squared Poverty Gap (%)	Gini Coefficient	Migration as Share of Country Population	Official Remittances (million dollars)	Per capita Official Remittances (constant 1995 dollars)
Algeria	1988	Middle East, North Africa	1.75	0.64	0.48	0.414	2.77	379	15.94
Algeria	1995	Middle East, North Africa	1.16	0.23	0.094	0.353	2.01	1101	39.22
Bangladesh	1984	South Asia	26.16	5.98	1.96	0.258	0.04	527	5.58
Bangladesh	1986	South Asia	21.96	3.92	1.07	0.269	0.04	497	4.98
Bangladesh	1989	South Asia	33.75	7.72	2.44	0.288	0.05	771	7.17
Bangladesh	1992	South Asia	35.86	8.77	2.98	0.282	0.06	848	7.43
Bangladesh	1996	South Asia	29.07	5.88	1.6	0.336	0.09	1217	10.78
Belarus	1988	Europe, Central Asia	0	0	0	0.227	0	0	0
Belarus	1993	Europe, Central Asia	1.06	0.13	0.03	0.216	0	0	0
Belarus	1995	Europe, Central Asia	2.27	0.71	0.46	0.287	0	29	2.84
Bolivia	1990	Latin America	11.28	2.22	0.6	0.42	0.47	2	0.30
Botswana	1985	Sub-Saharan Africa	33.3	12.53	6.09	0.542	0	0	0
Brazil	1985	Latin America	15.8	4.69	1.82	0.595	0.05	25	0.18
Brazil	1988	Latin America	18.62	6.78	3.22	0.624	0.05	19	0.13
Brazil	1993	Latin America	18.79	8.38	5.01	0.615	0.08	1123	7.24
Brazil	1995	Latin America	13.94	3.94	1.46	0.6	0.09	2891	18.12
Brazil	1997	Latin America	5.1	1.32	0.5	0.517	0.11	1324	8.08
Bulgaria	1989	Europe, Central Asia	0	0	0	0.233	0.2	0	0
Bulgaria	1992	Europe, Central Asia	0	0	0	0.308	0.2	0	0
Bulgaria	1995	Europe, Central Asia	0	0	0	0.285	0.2	0	0
Burkina Faso	1994	Sub-Saharan Africa	61.18	25.51	13.03	0.482	0	80	8.19
Central African Rep	1993	Sub-Saharan Africa	66.58	40.04	28.56	0.613	0	0	0
Chile	1987	Latin America	10.2	2.25	0.66	0.564	0.4	0	0
Chile	1990	Latin America	8.26	2.03	0.73	0.56	0.42	0	0
Chile	1992	Latin America	3.91	0.74	0.23	0.557	0.44	0	0
Chile	1994	Latin America	4.18	0.65	0.15	0.548	0.46	0	0
Colombia	1988	Latin America	4.47	1.31	0.57	0.531	0.8	448	13.32
Colombia	1991	Latin America	2.82	0.75	0.32	0.513	0.86	866	24.29
Colombia	1995	Latin America	8.87	2.05	0.63	0.574	1.02	739	19.16
Colombia	1996	Latin America	10.99	3.16	1.21	0.571	1.06	635	16.16
Costa Rica	1986	Latin America	12.52	5.44	3.27	0.344	1.43	0	0
Costa Rica	1990	Latin America	11.08	4.19	2.37	0.456	1.41	0	0
Costa Rica	1993	Latin America	10.3	3.53	1.79	0.462	1.58	0	0
Costa Rica	1996	Latin America	9.57	3.18	1.55	0.47	1.71	122	34.83
Côte d'Ivoire	1985	Sub-Saharan Africa	4.71	0.59	0.1	0.412	0	0	0
Côte d'Ivoire	1987	Sub-Saharan Africa	3.28	0.41	0.08	0.4	0	0	0
Côte d'Ivoire	1993	Sub-Saharan Africa	9.88	1.86	0.54	0.369	0	0	0
Côte d'Ivoire	1995	Sub-Saharan Africa	12.29	2.4	0.71	0.367	0	0	0

Country	Survey Year	Region	Poverty Headcount (USD1/person/day)	Poverty Gap (%)	Squared Poverty Gap (%)	Gini Coefficient	Migration as Share of Country Population	Official Remittances (million dollars)	Per capita Official Remittances (constant 1995 dollars)
Czech Republic	1988	Europe, Central Asia	0	0	0	0.194	1.73	0	0
Czech Republic	1993	Europe, Central Asia	0	0	0	0.266	1.53	0	0
Dominican Republic	1989	Latin America	7.73	1.51	0.42	0.504	4.89	301	43.33
Dominican Republic	1996	Latin America	3.19	0.71	0.26	0.487	7.08	914	116.70
Ecuador	1988	Latin America	24.85	10.21	5.82	0.439	1.38	0	0
Ecuador	1995	Latin America	20.21	5.77	2.27	0.437	1.92	382	33.32
Egypt	1991	Middle East, North Africa	3.97	0.53	0.13	0.35	0.15	2569	47.92
Egypt	1995	Middle East, North Africa	5.55	0.66	0.13	0.283	0.18	3279	56.35
El Salvador	1989	Latin America	25.49	13.72	10.06	0.489	9.06	228	45.38
El Salvador	1996	Latin America	25.26	10.35	5.79	0.522	11.67	1084	187.32
Estonia	1988	Europe, Central Asia	0	0	0	0.229	0	0	0
Estonia	1993	Europe, Central Asia	3.15	0.91	0.51	0.395	0	0	0
Estonia	1995	Europe, Central Asia	4.85	1.18	0.39	0.353	0	0	0
Ethiopia	1981	Sub-Saharan Africa	32.73	7.69	2.71	0.324	0.07	0	0
Ethiopia	1995	Sub-Saharan Africa	31.25	7.95	2.99	0.399	0.09	0	0
Gambia	1992	Sub-Saharan Africa	53.69	23.27	13.28	0.478	0	0	0
Ghana	1987	Sub-Saharan Africa	47.68	16.6	7.81	0.353	0.11	1	0.07
Ghana	1989	Sub-Saharan Africa	50.44	17.71	8.36	0.359	0.12	6	0.41
Ghana	1992	Sub-Saharan Africa	45.31	13.73	5.61	0.339	0.18	7	0.43
Ghana	1999	Sub-Saharan Africa	44.81	17.28	8.71	0.327	0.32	26	1.44
Guatemala	1987	Latin America	47.04	22.47	13.63	0.582	2.09	0	0
Guatemala	1989	Latin America	39.81	19.79	12.59	0.596	2.34	69	8.07
Honduras	1989	Latin America	44.67	20.65	12.08	0.595	2.11	35	7.40
Honduras	1992	Latin America	38.98	17.74	10.4	0.545	2.74	60	11.62
Honduras	1994	Latin America	37.93	16.6	9.38	0.552	3.23	85	15.54
Honduras	1996	Latin America	40.49	17.47	9.72	0.537	3.66	128	22.15
Hungary	1989	Europe, Central Asia	0	0	0	0.233	2.02	0	0
Hungary	1993	Europe, Central Asia	0	0	0	0.279	1.75	0	0
India	1983	South Asia	52.55	16.27	NA	0.32	0.04	2311	3.14
India	1986	South Asia	47.46	13.92	NA	0.337	0.06	2105	2.69
India	1988	South Asia	47.99	13.51	NA	0.329	0.07	2402	2.95
India	1990	South Asia	45.95	12.63	NA	0.312	0.09	1875	2.21
India	1995	South Asia	46.75	12.72	NA	0.363	0.11	7685	8.27
India	1997	South Asia	44.03	11.96	NA	0.378	0.12	10688	11.10
Indonesia	1987	East Asia	28.08	6.08	1.78	0.331	0.01	86	0.51
Indonesia	1993	East Asia	14.82	2.98	0.39	0.317	0.05	346	1.84
Indonesia	1996	East Asia	7.81	0.95	0.18	0.364	0.08	796	4.35
Indonesia	1998	East Asia	26.33	5.43	1.69	0.315	0.1	959	4.71
Iran	1990	Middle East, North Africa	0.9	0.8	NA	0.434	0.63	1	0.02
Jamaica	1988	Latin America	5.02	1.38	0.67	0.431	17.03	76	32.24

Country	Survey Year	Region	Poverty Headcount (USD1/person/day)	Poverty Gap (%)	Squared Poverty Gap (%)	Gini Coefficient	Migration as Share of Country Population	Official Remittances (million dollars)	Per capita Official Remittances (constant 1995 dollars)
Jamaica	1990	Latin America	0.62	0.03	0.01	0.418	19.07	136	56.57
Jamaica	1993	Latin America	4.52	0.86	0.29	0.379	21.8	187	75.65
Jamaica	1996	Latin America	3.15	0.73	0.32	0.364	24.4	636	250.52
Jordan	1987	Middle East, North Africa	0	0	0	0.36	0.87	939	329.99
Jordan	1992	Middle East, North Africa	0.55	0.12	0.05	0.433	0.93	843	225.89
Jordan	1997	Middle East, North Africa	0.36	0.1	0.06	0.364	0.94	1655	371.26
Kazakhstan	1988	Europe, Central Asia	0.05	0.02	0.01	0.257	0	0	0
Kazakhstan	1993	Europe, Central Asia	1.06	0.04	0.01	0.326	0	0	0
Kazakhstan	1996	Europe, Central Asia	1.49	0.27	0.1	0.354	0	10	0.64
Kenya	1992	Sub-Saharan Africa	33.54	12.82	6.62	0.574	0	0	0
Kenya	1994	Sub-Saharan Africa	26.54	9.03	4.5	0.445	0	0	0
Kyrgyz Republic	1988	Europe, Central Asia	0	0	0	0.26	0	0	0
Kyrgyz Republic	1993	Europe, Central Asia	22.99	10.87	6.82	0.537	0	2	0.44
Kyrgyz Republic	1997	Europe, Central Asia	1.57	0.28	0.1	0.405	0	3	0.64
Latvia	1988	Europe, Central Asia	0	0	0	0.225	0	0	0
Latvia	1993	Europe, Central Asia	0	0	0	0.269	0	0	0
Latvia	1995	Europe, Central Asia	0	0	0	0.284	0	0	0
Latvia	1998	Europe, Central Asia	0.19	0.01	0	0.323	0	3	1.22
Lesotho	1987	Sub-Saharan Africa	30.34	12.66	6.85	0.56	0	0	0
Lesotho	1993	Sub-Saharan Africa	43.14	20.26	11.84	0.579	0	0	0
Lithuania	1988	Europe, Central Asia	0	0	0	0.224	0	0	0
Lithuania	1993	Europe, Central Asia	16.47	3.37	0.95	0.336	0	0	0
Lithuania	1996	Europe, Central Asia	0	0	0	0.323	0	2	0.55
Madagascar	1980	Sub-Saharan Africa	49.18	19.74	10.21	0.468	0	0	0
Madagascar	1994	Sub-Saharan Africa	60.17	24.46	12.83	0.434	0	11	0.85
Mauritania	1988	Sub-Saharan Africa	40.64	19.07	12.75	0.425	0	9	4.74
Mauritania	1993	Sub-Saharan Africa	49.37	17.83	8.58	0.5	0	2	0.93
Mauritania	1995	Sub-Saharan Africa	30.98	9.99	4.59	0.389	0	5	2.16
Mexico	1984	Latin America	12.05	2.65	0.78	0.54	1.86	1127	15.24
Mexico	1989	Latin America	16.2	5.63	2.75	0.551	4.66	2213	27.09
Mexico	1992	Latin America	13.31	3.23	1.04	0.543	6.1	3070	35.54
Mexico	1995	Latin America	17.9	6.15	2.92	0.537	7.39	3673	40.30
Moldova	1988	Europe, Central Asia	0	0	0	0.241	0	0	0
Moldova	1992	Europe, Central Asia	7.31	1.32	0.32	0.344	0	0	0
Morocco	1985	Middle East, North Africa	2.04	0.7	0.5	0.392	4.38	967	44.67
Morocco	1990	Middle East, North Africa	0.14	0.02	0.01	0.392	4.02	1336	55.54
Mozambique	1996	Sub-Saharan Africa	37.85	12.02	5.42	0.396	0	0	0
Namibia	1993	Sub-Saharan Africa	34.93	13.97	6.93	0.743	0	8	5.26
Nepal	1985	South Asia	42.13	10.79	3.75	0.334	0	39	2.40

Country	Survey Year	Region	Poverty Headcount (USD1/person/day)	Poverty Gap (%)	Squared Poverty Gap (%)	Gini Coefficient	Migration as Share of Country Population	Official Remittances (million dollars)	Per capita Official Remittances (constant 1995 dollars)
Nepal	1995	South Asia	37.68	9.74	3.71	0.387	0	101	4.95
Nicaragua	1993	Latin America	47.94	20.4	11.19	0.503	4.38	25	5.98
Nigeria	1997	Sub-Saharan Africa	70.24	34.91	NA	0.505	0.09	1920	16.32
Pakistan	1988	South Asia	49.63	14.85	6.03	0.333	0.11	2013	19.63
Pakistan	1991	South Asia	47.76	14.57	6.04	0.332	0.16	1848	16.67
Pakistan	1993	South Asia	33.9	8.44	3.01	0.342	0.18	1562	13.41
Pakistan	1997	South Asia	30.96	6.16	1.86	0.312	0.22	1409	10.97
Panama	1989	Latin America	16.57	7.84	4.9	0.565	3.53	14	5.95
Panama	1991	Latin America	18.9	8.87	5.48	0.568	3.55	14	5.72
Panama	1995	Latin America	14.73	6.15	3.39	0.57	3.61	16	6.08
Panama	1997	Latin America	10.31	3.15	3.67	0.485	3.67	16	5.88
Paraguay	1990	Latin America	11.05	2.47	0.8	0.397	0	43	10.19
Paraguay	1995	Latin America	19.36	8.27	4.65	0.591	0	200	41.41
Peru	1985	Latin America	1.14	0.29	0.14	0.457	0.33	0	0
Peru	1994	Latin America	9.13	2.37	0.92	0.446	0.89	472	20.39
Peru	1997	Latin America	15.49	5.38	2.81	0.462	1.03	636	26.09
Philippines	1985	East Asia	22.78	5.32	1.66	0.41	1.26	111	2.04
Philippines	1988	East Asia	18.28	3.59	0.94	0.407	1.49	388	6.66
Philippines	1991	East Asia	15.7	2.79	0.66	0.438	1.69	329	5.27
Philippines	1994	East Asia	18.36	3.85	1.07	0.429	1.86	443	6.63
Philippines	1997	East Asia	14.4	2.85	0.75	0.461	2	1057	14.82
Poland	1987	Europe, Central Asia	0	0	0	0.255	1.89	0	0
Poland	1990	Europe, Central Asia	0.08	0.027	0.02	0.283	1.84	0	0
Poland	1992	Europe, Central Asia	0.08	0.031	0.02	0.271	1.81	0	0
Romania	1989	Europe, Central Asia	0	0	0	0.233	0.62	0	0
Romania	1992	Europe, Central Asia	0.8	0.34	0.31	0.254	0.77	0	0
Romania	1994	Europe, Central Asia	2.81	0.76	0.43	0.282	0.88	4	0.17
Russian Federation	1994	Europe, Central Asia	6.23	1.6	0.55	0.436	0.34	0	0
Russian Federation	1996	Europe, Central Asia	7.24	1.6	0.47	0.48	0.35	0	0
Russian Federation	1998	Europe, Central Asia	7.05	1.45	0.39	0.487	0.36	0	0
Senegal	1991	Sub-Saharan Africa	45.38	19.95	11.18	0.541	0	105	14.05
Senegal	1994	Sub-Saharan Africa	26.26	7.04	2.73	0.412	0	73	9.04
Sierra Leone	1989	Sub-Saharan Africa	56.81	40.45	33.8	0.628	0.18	0	0
South Africa	1993	Sub-Saharan Africa	11.47	1.83	0.38	0.593	0.14	0	0
Sri Lanka	1985	South Asia	9.39	1.69	0.5	0.324	0.06	292	18.43
Sri Lanka	1990	South Asia	3.82	0.67	0.23	0.301	0.12	401	23.57
Sri Lanka	1995	South Asia	6.56	1	0.26	0.343	0.3	790	43.53
Thailand	1988	East Asia	25.91	7.36	2.73	0.438	0.17	0	0
Thailand	1992	East Asia	6.02	0.48	0.05	0.462	0.21	0	0

Country	Survey Year	Region	Poverty Headcount (USD1/person/day)	Poverty Gap (%)	Squared Poverty Gap (%)	Gini Coefficient	Migration as Share of Country Population	Official Remittances (million dollars)	Per capita Official Remittances (constant 1995 dollars)
Thailand	1996	East Asia	2.2	0.14	0.01	0.434	0.24	0	0
Thailand	1998	East Asia	0	0	0	0.413	0.25	0	0
Trinidad, Tobago	1992	Latin America	12.36	3.48	NA	0.402	10.5	6	4.85
Tunisia	1985	Middle East, North Africa	1.67	0.34	0.13	0.434	3.12	271	37.33
Tunisia	1990	Middle East, North Africa	1.26	0.33	0.16	0.402	3.01	551	67.56
Turkey	1987	Europe, Central Asia	1.49	0.36	0.17	0.435	4.18	2021	38.45
Turkey	1994	Europe, Central Asia	2.35	0.55	0.24	0.415	4.13	2627	44.00
Turkmenistan	1988	Europe, Central Asia	0	0	0	0.264	0	0	0
Turkmenistan	1993	Europe, Central Asia	20.92	5.69	2.1	0.357	0	0	0
Uganda	1989	Sub-Saharan Africa	39.17	14.99	7.57	0.443	0	0	0
Uganda	1993	Sub-Saharan Africa	36.7	11.44	5	0.391	0	0	0
Ukraine	1989	Europe, Central Asia	0	0	0	0.233	0	0	0
Ukraine	1992	Europe, Central Asia	0.04	0.01	0.01	0.257	0	0	0
Ukraine	1996	Europe, Central Asia	0	0	0	0.325	0	0	0
Uruguay	1989	Latin America	1.1	0.47	0.4	0.423	0	0	0
Uzbekistan	1988	Europe, Central Asia	0	0	0	0.249	0	0	0
Uzbekistan	1993	Europe, Central Asia	3.29	0.46	0.11	0.332	0	0	0
Venezuela	1981	Latin America	6.3	1.08	0.25	0.556	0.08	0	0
Venezuela	1987	Latin America	6.6	1.04	0.22	0.534	0.14	0	0
Venezuela	1989	Latin America	8.49	1.77	0.49	0.557	0.19	0	0
Venezuela	1993	Latin America	2.66	0.57	0.22	0.416	0.29	0	0
Venezuela	1996	Latin America	14.69	5.62	3.17	0.487	0.36	0	0
Yemen	1992	Middle East, North Africa	5.07	0.93	NA	0.394	0	1018	73.51
Yemen	1998	Middle East, North Africa	10.7	2.42	0.85	0.344	0	1202	72.49
Zambia	1991	Sub-Saharan Africa	58.59	31.04	20.18	0.483	0	0	0
Zambia	1993	Sub-Saharan Africa	69.16	38.49	25.7	0.462	0	0	0
Zambia	1996	Sub-Saharan Africa	72.63	37.75	23.88	0.497	0	0	0
Zimbabwe	1991	Sub-Saharan Africa	35.95	11.39	4.56	0.568	0	0	0

Notes: All poverty and inequality data from World Bank, *Global Poverty Monitoring Database*. Migration data from U.S. Population Census and OECD, *Trends in International Migration*. Remittance data from IMF, *Balance of Payments Statistics Yearbook*.

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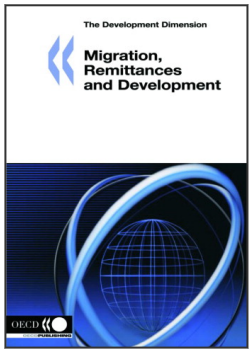

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