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Remittances, Savings, and Development in Migrant-Sending Areas

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Migrant remittances and savings represent the most direct and measurable benefits of international migration in migrant-sending areas. Evidence indicates that they contribute both directly and indirectly to income in remittance-receiving households and that this income contribution may be substantial. Economic linkages transmit the effects of remittances and savings to other households in migrant-sending areas, including those that may not participate directly in international migration. These direct and indirect income effects of remittances have potentially profound influences on production, income inequality, and poverty.

The vast majority of research on migrant remittances and savings ignores their indirect effects on migrant-sending economies. As a result, many studies paint a negative picture of the implications of remittances and savings for development. For example, Reichert (1981) calls Mexico–U.S. migration—the world's largest international migration flow—an "illness" or "syndrome" that undermines local development; Wiest (1979) calls it an "addiction"; and Stuart and Kearney (1981) characterize it as a "dangerous dependence." Studies in other parts of the world echo these findings (e.g. see Swanson 1979; Bohning 1981; Rubenstein 1983; Kearney 1986; Diaz-Briquets 1991; for critical reviews see Papademetriou and Martin 1991; Durand and Massey 1992; and Taylor et al. 1996*a*,*b*).

These studies are unduly pessimistic for three reasons. First, the sheer magnitude of migrant remittances is large and often underestimated. Second, in the few studies that have attempted to measure the effects of international remittances on non-remittance income in migrant-sending households, the effect has been found to be positive, indicating that remittances stimulate local production. Third, the few studies that have attempted to measure income linkages among migrant and non-migrant households find that migrant remittances and savings create local income multipliers that are often quite large. Finally, it appears that international migrant remittances in many cases have an equalizing effect on income distributions in migrant-sending areas, particularly at late stages of the development process, providing an avenue for economic mobility for households located at the bottom-to-middle of the income ladder, especially in poor rural areas (Stark, Taylor, and Yitzhaki 1986, 1988).

This chapter examines each of these three sets of potential influences of international migrant remittances and savings on economic growth and development. It then presents a case study to illustrate the diverse array of influences that remittances and savings may have within a major migrant-sending region, in this case the Mexican state of Michoacan.

QUANTIFYING MIGRANT REMITTANCES AND SAVINGS

Estimation of the size of international migrant remittances is complicated by the fact that an unknown but probably large share of the flows are not channeled through formal banking systems. Microlevel field studies indicate that clandestine or in-kind transfers are substantial (see Lozano Ascencio 1993; Massey and Parrado 1994). In addition, remittances are often in kind, and remittance studies generally do not attempt to put a value on in-kind remittances (or even know how to treat them analytically).

Less-developed country (LDC) governments frequently conceive of emigration as a potential source of savings and foreign exchange. Official estimates from the International Monetary Fund placed total annual remittances from foreign workers at around US$75 billion in 1989. This figure is 50 per cent higher than the total of official development assistance (Russell and Teitelbaum 1992).

In addition to understating the true magnitude of all migrant remittances and savings, this figure masks the importance of remittances to some countries and to specific migrant-sending areas within them. The world distribution of remittances is unequal. Among the world's 21 major recipients of worker remittances, the absolute value of remittances ranged from US$207 million in El Salvador to US$6.2 billion in the former Yugoslavia (see Table 9.1). The ten largest recipients of remittances received 86 per cent of all remittances flowing to these countries. In per capita terms the disparity is even greater. For example, India, far and away the most populous country in Table 9.1, is not among the top ten remittance recipients. In eleven of the countries in the table (Egypt, El Salvador, Bangladesh, Pakistan, Portugal, Turkey, Yugoslavia, Jordan, Yemen, Morocco, and Sudan) remittances constitute more than one quarter of total export revenues (see Taylor et al. 1996). These numbers indicate that migrant remittances constitute a large and important source of capital for many developing countries, contributing to domestic savings, easing foreign exchange constraints, and offering a means to finance trade deficits.

Most micro-level studies that gather data on international migrant remittances do not provide information on total incomes within surveyed households, making it impossible to ascertain the share that remittances comprise of total income within migrant-sending communities. Nevertheless, available evidence suggests that migrant remittances and savings represent an important fraction of total income in many households and regions. For example, income remitted by migrants from rural Mexico accounted for 33–40 per cent of total household income reported on a 1983 survey (Stark, Taylor, and Yitzhaki 1986), based on a survey of two Michoacan villages in 1983. A follow-up survey in 1989 revealed a sharp drop in remittances from

Table 9.1. *IMF estimates of total international migrant remittances in 1989 (millions of 1989 U.S. dollars)*

Country	Total remittances	Per cent of world total
El Salvador	207	0.63
Jamaica	214	0.65
Sudan	297	0.90
Algeria	306	0.93
Syria	355	1.08
Yemen	410	1.24
Colombia	467	1.42
Tunisia	488	1.48
Jordan	623	1.89
South Korea	624	1.89
Bangladesh	771	2.34
Greece	1,387	4.21
Morocco	1,454	4.41
Spain	1,861	5.65
Pakistan	1,897	5.76
Mexico	2,277	6.91
India	2,750	8.34
Turkey	3,040	9.22
Egypt	3,532	10.72
Portugal	3,706	11.24
Yugoslavia	6,290	19.09
Total	32,956	100.00

Source: Russell and Teitelbaum (1992).

internal migrants during the economic crisis years of the 1980s, but international remittances continued to account for a persistently large share household income, on the order of 20 per cent. Studies of villages in other regions of Mexico suggest that typical international remittance shares are on the order of 15–25 per cent (see Taylor, Yunez, and Dyer-Leal 1999).

Comparable figures have been obtained elsewhere: 11 per cent of rural household income in a Kenya study by Lewis and Thorbecke (1992), 12 per cent in a Java study (Ralston 1995), 26 per cent in a West India study (Subramanian 1995), 10 per cent in the Sahelian zone of Burkina Faso (Reardon et al. 1992), and 12.5 per cent in a study of rural Egyptian households by Adams (1989). Remittances from migrants in the United States constituted 36 per cent of total income in migrant households in a study of rural households in El Salvador (Taylor and Zabin 1996).

Mexican Migration Project data on 22 migrant-sending communities show that, in the 12 months prior to the survey, household heads who were migrants remitted an average of US$2,383, and other household remitted an average of $2,100.

Returning migrants who were household heads brought back an average of $1,392 in savings; nonheads brought back an average of $858 (Massey and Parrado 1994). Mean family remittances by migrants legalized under provisions of the 1986 U.S. Immigration Reform and Control Act (IRCA) were US$1,1997, or about 7 per cent of total family income, in 1987. They were highest to Mexico ($1,304) and Central America ($1,144) and lower to other Western Hemisphere countries ($930) and countries in the Eastern Hemisphere ($874; U.S. Department of Justice 1992).

INDIRECT EFFECTS OF HOUSEHOLDS WITH MIGRANTS

The effect of *migrant remittances* on household incomes may not be accurately reflected in the remittances themselves. Migration and remittances may influence the quantity of household income from other sources, as posited by the new economics of labor migration (hereafter NELM), pioneered by Stark (1982) and documented by the few microeconometric studies that have attempted to test it (Lucas 1985; Taylor 1992; Taylor and Wyatt 1996).

In the NELM, migration is hypothesized to be partly an effort by households to overcome market failures that constrain local production. Market failures include missing or imperfect credit and insurance markets, which force household farms to self-finance their production and to self-insure against income risk. Migrants provide their households with liquidity, in the form of remittances, which may be used to finance new production technologies, inputs, and activities. They also offer income insurance, by providing households with access to an income source (migrant remittances) that is uncorrelated—or perhaps negatively correlated—with farm income. If credit and risk constraints are binding and migration enables families with migrants to overcome them, migration should have a positive effect on local production.

The NELM offers a fundamental change in the way that the connection between migration and development is conceptualized and modeled, compared with neoclassical economics and dependency theory. Previous research decoupled the determinants of migration from the effects of migration on sending areas. In NELM, the origins of migration (a household's desire to overcome market failures) imply specific outcomes for development (a positive effect on local production, as remittances and implicit risk contracts with family migrants enable households to overcome market failures).

This view leads to hypotheses about migration and development that are beyond the purview of traditional models, and has provided the inspiration for new surveys to collect data better able to test these hypotheses. NELM-inspired surveys gather data on all aspects of household-farm production and income, not just remittances, because potential correlations between migration and other income sources make it impossible to model migration and other aspects of household-farm economies separately. In other words, they are whole household-farm surveys (Taylor 1992; Adelman and Taylor 1990).

Stark and Katz (1986) formalize the argument that rural-to-urban migration, a labor-market phenomenon, is caused by imperfections in capital markets. Stark and Lucas (1988) and Lucas and Stark (1985) offer theoretical and empirical evidence (from Botswana) that remittances are part of a self-enforcing contractual arrangement between family and migrant, shifting the focus of migration theory away from individual independence (as in the Todaro model) to mutual interdependence.

Stark and Levhari (1982) use a graphical presentation to argue that migration is a means to spread risk, rather than being a manifestation of risk-taking behavior on the part of migrants. Stark's research with Stark and Rosenzweig (1989) and with Lucas (1985) provide some econometric evidence, using household-farm data from India and Botswana, that families insure themselves against risk by placing members in labor markets outside the village, where their incomes are not likely to be positively correlated with local farm incomes.

The importance of the indirect effects of migration on household-farm income turns on the extent to which financial and risk constraints on local production are binding to begin with. If families do not face such constraints, then the indirect income effects of migration in a Stark-type model are minimal, and the family will have little incentive to engage in migration. If credit and risk constraints are binding, then families have a larger incentive to sponsor migrants in an effort to overcome these constraints, and the subsequent indirect effects of migration on family incomes will be large. The net direct plus indirect effects of migration on migrant-household incomes, therefore, are theoretically ambiguous.

Lucas (1985) uses aggregate time-series data on migration from five southern African countries to South African mines to test the Stark hypothesis. His econometric analysis finds that lost-labor effects of emigration are negative and large initially, as production in migrant-sending households falls because less labor is available. In the long run, however, agricultural productivity increases. The productivity increase may be due to the investment of migrant remittances in production activities at home—that is, a loosening of financial constraints on investments that enhance productivity. Alternatively, it may be due to risk spreading, made possible by the diversification of income through migration, which encourages risk-averse households to undertake new agricultural investments. Or it may be some combination of the two.

Adams (1991) finds that households of rural Egyptian migrants have higher marginal propensities to invest than do their non-migrant counterparts. That is, migration has a positive effect on investment that is independent of its contribution to total household income. However, policy biases against agriculture, in the form of depressed prices for farm output, discourage agricultural investments.

Taylor (1992) estimates the marginal effects of migrant remittances on farm incomes and on asset accumulation over time, using matched longitudinal, micro data from farm households in rural Mexico. The initial marginal effect of remittances on household-farm incomes (measured in 1982) is less than unitary; that is, a $1 change in remittances produces a less-than-$1 change in total incomes of remittance-receiving households. This finding implies a negative effect of migrant remittances on

non-remittance income. It is consistent with the hypothesis that the marginal product of migrant labor is positive prior to migration. Measured 6 years later, however, the marginal impact of remittances on total income is significantly greater than unitary. That is, over the long run remittances had a *positive* effect on non-remittance income.

These studies, while offering micro, econometric evidence in support of the migration-and-development hypothesis, also suggest that this relationship is not invariant over time or across settings. There appears to be a pattern of first negative and then positive effects of migration on non-remittance income in migrant-sending households. The positive effects clearly depend on the magnitude of migrant remittances and the profitability of investing in new production activities or techniques.

In the Mexican case, poor crop potential on marginal lands often limits families' incentives to invest their remittances in crop production. However, where livestock production is viable, grazing land is available, and transportation and marketing infrastructures are somewhat developed, the development potential of migration may be large. In other settings, profitable investment opportunities may be limited by environmental or market constraints, or else by government policies that turn the terms of trade against agriculture.

A finding that migration negatively affects non-remittance incomes, therefore, could reflect the stage of the migration process at which the study is conducted, or it could be evidence against the migration-and-development hypothesis. In the latter case, policy biases against agriculture may break the migration-and-development link. For example, poor infrastructure or price, credit, and technology policies that discriminate against small farmers may discourage migrant households from investing in new technologies or income activities.

LOCAL ECONOMY-WIDE EFFECTS OF REMITTANCES AND SAVINGS

A micro household (or household-farm) approach ignores interactions among households. Because of this, even an analysis that treats individual households as whole economies is partial. If economic linkages among households are important, micro household (or household-farm) models may produce misleading findings about the impacts of migration on migrant-sending economies. At the very least, they will tend to underestimate these impacts.

A simple example illustrates the shortcomings of a micro household-farm approach to modeling migration-development interactions. Suppose that a village household (Household A) with a total income of 100 units increases its income to 150 by sending a family member abroad. That is, (a) the remittances the migrant sends home, net of (b) migration costs, minus (c) the income the migrant would have contributed to the household by staying home, plus (d) the migrant's consumption cost at home, equals 50 income units. An econometric estimate of the effect of this income increase on household expenditures finds that all of the 50-unit income increase is allocated to consumption. None is allocated to what most researchers would consider to be productive investment. Such a finding would appear to support the pessimistic view that income from migration is squandered on consumption.

Suppose, however, that the consumption goods whose demand increases are produced by another household within the village (Household B), using 40 units of family labor and 10 units of intermediate inputs "imported" from outside the village. Furthermore, suppose that the investment propensity of Household B is large, say, on the order of 0.20. The second-round effect of the 50-unit increase in Household A's income from migration will be a 50-unit increase in production, a 40-unit increase in Household B's income and an 8-unit (0.20 times 40) increase in village investment. At the end of the second round of the village "remittance multiplier," the total increase in village income will be 90, of which only 50 units are in the migrant household. Estimating the total impact of Household A's gains from migration on income and investment in the village requires carrying this calculation to its limit (this example—and SAM multipliers generally—assume a Keynesian world of underemployed resources).

Remittances and household expenditures

Household expenditures are critical in determining the impact of migration on migrant-sending economies, because they are the means by which income gains in migrant households are transmitted to others in the economy. Understanding the marginal (direct and indirect) effects of migration and remittances on migrant household incomes is a critical first step in estimating the effect of migration on household-farm expenditures. Under NELM, the marginal effect of migration on income also *implies* an influence of migration on household-farm expenditures; that is, on investment in local production activities.

Remittance use surveys focus on expenditures (rather than the marginal income effects of migration) to assess the effect of migration on economic development in sending areas. (For critiques of remittance use surveys see Taylor 1995 and Taylor et al. 1996*b*.) Migration is assumed to have a positive effect on economic development if respondents report spending a large share of their remittance income on "productive investments."

Remittance use studies, however, rest on three shaky assumptions: (1) that observed remittances (net of migration costs) represent the true marginal contribution of migration to household-farm income; (2) that the use of remittances, themselves, accurately reflects the marginal effect of remittances on household-farm expenditure patterns; and (3) that the same families and, in some cases, the same individuals, must be both the source of migration and the agents for transforming migrant earnings into local income growth.

Evidence on non-unitary marginal effects of remittances on incomes in migrant-sending households casts doubt on the first assumption. The second assumption is not reasonable unless remittance checks are earmarked for specific uses and can be treated as separate from other family income sources—that is, unless

income is not fungible. If households' marginal propensity to save is positive, income increases from migration should stimulate household-farm savings. In the absence of regional credit markets that tap household-farm savings and channel them outside the village, changes in village savings by definition must equal changes in village investments. This is an accounting identity. Often, the challenge in economic fieldwork is to uncover the specific forms that village investments assume.

If capital markets are missing within the local economy, each household-farm will be bound by a savings-investment constraint. In this case, a positive impact of migration on savings necessarily results in increased investment *by the migrant's household.* Only in this case is the same household necessarily the agent in both migration and investment (assumption 3). If local capital markets exist, migrant households may function as creditors for other villagers who are primarily responsible for carrying out local investments. That is, migrants and investors in local production activities are not necessarily the same. Even if local credit markets are missing or marginal savings rates in migrant households are zero, there are other important channels through which income generated by migration may find its way into local investments. The most important of these channels, paradoxically, is migrant households' use of their income gains for consumption.

The conclusion of many remittance-use studies that remittances are consumed instead of invested often rests on arbitrary definitions of "productive investments." For example, schooling, despite its demonstrated positive effect on household incomes (e.g. Taylor 1986) is often absent from the list of productive investments. This probably is because expenditures on educating family members usually do not create direct, immediate employment and income linkages within migrant-sending economies. Housing expenditures also are off the list of productive investments in many studies, despite their direct stimulus to village construction activities. By contrast, expenditures on farm machinery generally are regarded as productive investments, in spite of the fact that machinery is not produced within the village economy and may even displace labor in village production and produce negative income linkages.

Remittance multipliers

Village remittance multipliers estimated using Social Accounting Matrices (SAM) suggest that economic linkages among households are important in shaping migration's effect on migrant-sending areas. For example, in 1982, remittance multipliers on village income were on the order of 1.87 in a Mexican village studied by Adelman, Taylor and Vogel (1988). Subsequent SAM studies of multiplier effects confirm the importance of inter-household linkages in villages in India (Subramanian and Sadoulet 1990), Java (Ralston 1995), Senegal (Golan 1995) and a Kenyan village-town economy (Lewis and Thorbecke 1992).

SAM multiplier models have been an important advance in village and regional modeling because they highlight the economic linkages among households that transmit exogenous changes in policies or markets through the local economy. SAM remittance multipliers reveal an important finding: *Many of the benefits of remittances accrue to households other than the ones that receive remittances.* Income linkages between migrant and non-migrant households transfer the benefits of migration beyond the remittance-receiving household. They may also be manifested largely outside the traditional farm sectors, as a result of strong linkages between the farm and nonfarm economies (e.g. see Adelman *et al.* 1988; Ravallion and Chandhuri 1994).

The sheer magnitude of remittances and their effect on household incomes and expenditures make it likely that international migration is a major stimulus to LDC economies. Indeed, studies using a new generation of micro economy-wide models (Taylor 1995; Taylor and Adelman 1996) reveal relatively large effects of remittances on local economies, despite the fact that distributional effects of remittances are sensitive to model choice.

DIRECT AND INDIRECT EFFECTS OF REMITTANCES: A CASE STUDY

A series of studies using data from the author's Michoacan Project offer an in-depth view of the effects of migrant remittances and savings on incomes in a Mexican migrant-sending economy. Taken together, these studies indicate that, far from creating a "dangerous dependence" or a "syndrome," international migration enabled rural households to prosper during a decade of economic malaise in Mexico. It did this by (1) generating large amounts of remittance income; (2) stimulating production in migrant-sending households; and (3) creating expenditure linkages that contributed to income growth in other households within migrant-sending areas.

Remittances during the crisis years

If one looks only at migration and remittance data, it would appear that households' reliance on migration increased during Mexico's economic crisis years. The share of households in the Michoacan sample receiving remittances from migrants in the United States rose from 47 per cent in 1982 to 52 per cent in 1988, and total remittances in the sample jumped by 58 per cent (see Table 9.2—all figures are in 1982 US dollars).

Table 9.2. *Changes in international migrant remittances and incomes in Michoacan Project households, 1982–8*

	Total income	Remittance income	Non-remittance income
% Change 1982–8	83.0	57.9	89.9
share of total income			
1982	1.00	0.22	0.78
1988	1.00	0.19	0.81

Source: Tabulations from Michoacan Project data from 1983 and 1989 surveys.

However, increases in non-remittance income exceeded this increase in remittance income; non-remittance income rose by 90 per cent between 1982 and 1988. As a result, total income increased more rapidly than remittance income during the crisis, and the share of remittances in total income declined, from 22 to 19 per cent. These increases in total income are striking in light of the adverse impacts of the crisis in urban areas. For example, real wages in urban Mexico fell by an estimated 32 per cent between 1982 and 1984 (Lustig and Ross 1987).

What explains the combination of rising remittances and a falling share of remittances in total income? Remittances from migrants stimulated non-remittance income in the Michoacan-survey households in three ways. First, they enabled migrant households to purchase inputs (e.g., fertilizer) that increased income in the short run. Second, they provided migrant-sending households with funds to invest in income-producing assets—particularly livestock—which created new sources of local income in the long run. Third, they created expenditure linkages in the local economy that transmitted the positive effects of remittances to other households—including those that did not have migrants in the United States.

Short- and long-run remittance effects on migrant-sending households

Traditionally, microeconomic researchers have treated migrant remittances as simple transfers affecting consumption but not production in migrant-sending households. That is, $1 in remittances translates into $1 of total income. However, the 1989 Michoacan survey data reveal that the marginal impact of remittances on total income was significantly greater than unity: a $1 increase in remittances brought about a $1.85 increase in total household income.

This finding is consistent with the view that remittances loosen constraints on local production, once migrants become established abroad. It contradicts the neoclassical household-farm model (e.g. Singh, Squire, and Strauss 1986), which implies that production is independent of migration and remittances. In the Mexican case, remittances also promoted the accumulation of livestock over time and increased the rate of return to livestock assets (through complimentary investments; see Taylor 1992). The livestock sector's contribution to total income rose from 23 per cent in 1982 to 42 per cent in 1988. When remittances were interacted with household holdings of liquid and illiquid asset, the interaction terms were significant and the direct effect of remittances became insignificant. Just as the new economics of migration theory would predict, the marginal income effect of remittances was greatest in the most liquidity-constrained households (Taylor and Wyatt 1996).

Local economy-wide effects

Village SAM techniques were used to explore the role of income and expenditure linkages in transmitting the impacts of remittances from migrant households to others within migrant-sending economies. Table 9.3 summarizes findings for the

Table 9.3. *Estimated village remittance multipliers, 1988*

Sector	International migration remittance multiplier	Internal migration remittance multiplier
Production		
Basic grains	0.15	0.20
Livestock	0.35	0.51
Resource extraction	0.07	0.09
Nonagricultural	0.05	0.99
Retail	1.02	0.99
Value Added		
Family labor	0.16	0.20
Hired labor	0.02	0.03
Capital	0.19	0.24
Land	0.22	0.31
Gross Village Product	0.60	0.78
Household Incomes		
Landless	0.07 (0.04)	0.17 (0.13)
Small landholder	0.84 (0.56)	0.36 (0.00)
Large landholder	0.67 (0.39)	1.22 (0.87)
Investment		
Physical capital	0.17	0.31
Human capital	0.03	0.05

Note: Numbers in the table represent the absolute effects of a $1 increase in migrant remittances on the corresponding account total. Numbers in parentheses are shares of the remittance change accruing to each household group.

Source: Taylor (1995).

Michoacan survey area. The 1988 remittance multipliers reveal that village income linkages from remittances potentially are large. A US $1 increase in international migrant remittances or savings brought back to the village by migrants results in a $1.60 increase in total village income. That is, it contributes the $1 of remittances and stimulates a $.60 increase in value-added from local production. This "remittance multiplier" does not include the indirect, NELM effects of remittances on migrant households, discussed above.

In the Michoacan case, the direct and indirect benefits of migration are unequally distributed across household groups. On the production side, the largest remittance multipliers are in basic grains, livestock, and especially the retail sectors. A $1 increase in U.S. remittances in 1988 stimulates a $.15 increase in basic grain production, a $.35 increase in livestock output, and a $1.02 increase in the demand for manufactured goods (retail). These numbers illustrate the importance of remittances in generating household demand for village goods. Because the retail sector is essentially a village import sector, the high retail multiplier indicates that remittances also create a significant rural-demand stimulus for industrial production.

Increased production generates value-added within the village that is relatively evenly distributed among family labor, physical capital, and land. Hired labor value-add changes little ($.02). These findings illustrate the family-input intensity of production in this village and a minimal use of hired labor as a substitute for family labor. That is, there is only slight evidence of a functioning local labor market.

Table 9.3 reports total multiplier effects of a $1 increase in U.S. remittances on the income of each household group. These household-income multipliers include the remittances themselves plus the second-round effects of remittances to all household groups on income from village production. The increases in remittances to each household group are presented in parentheses. The differences between the two numbers represent the second-round multiplier effects of the $1 of remittances on household incomes. Even if a household group does not receive remittances, it nevertheless may benefit from second-round effects if remittances stimulate village production activities in which households within the group are engaged.

Remittances from U.S. migrants unquestionably favor small-holder households. These households receive, on average, $.56 per dollar of U.S. remittances, and they benefit handsomely from second-round effects. Their total income increases by 84 cents. In other words, while receiving 56 per cent of U.S. remittances, small-holder households also capture 47 per cent ($.28) of the remittance multiplier on village value-added. Similarly, large-holder households receive $.39 of the average U.S. remittance dollar, and the multiplier effect of one dollar of remittances on their total income is $.67.

In contrast, landless households receive, on average, only 4 cents per dollar of U.S. remittances. They benefit only slightly from second-round multiplier effects of remittances on village production (3 cents, for a total increase of 7 cents in the table). In sum, the first and second-round effects of U.S. remittances favor small-holder households and, to a lesser extent, large-holder households. Landless households do not lose from U.S. migration, but they do not gain much, either.

This finding reflects obstacles to relatively expensive and risky international migration for landless households. International migration risks include those of apprehension during or after illegal border crossings as well as employment risks in migrant labor markets. Family contacts in the United States can substantially reduce migration risks by not only providing job information and placement but also by matching new migrants up with trusted coyotes, or labor smugglers; financing the border crossing; and paying smugglers only after the new migrant is safely in the United States, thus shifting the financial risks of the border crossing from migrant to smuggler.

The finding also reveals weak income linkages to spread the benefits of U.S. migration to the village landless. The multiplier effects of international migrant remittances are different from those of internal migrant remittances. While small-holder households specialize in international migration, internal migrant remittances favor landless (13 per cent) and especially large-holder (87 per cent) households (Column B). As in the case of international migrant remittances, however, the second-round effects do not benefit the landless; only 3 cents of the $.78 multiplier of internal migrant remittances on village value added accrue to this group. By contrast, small-holder households, who do not receive remittances from internal migrants, benefit indirectly by capturing $.36 (46 per cent) of the increased village value-added. The total multiplier effect of internal remittances on large-holder incomes is $1.22, including a direct effect of $.87 and an indirect multiplier effect of $.35.

Production multipliers from internal remittances reflect the relatively favorable impacts of landless households' expenditure patterns and of their investment demand on village production. Basic grains account for a large marginal share of landless-household budgets but not the budgets of the other two household groups. By favoring the landless, internal remittances create a larger stimulus to basic grain production than international remittances. (The internal-remittance multiplier on basic grains production is $.20.) Large-holder households, for which the income multiplier of internal remittances is largest, have by far the highest savings rates of all household groups. In the absence of a well-functioning credit market, these savings are channeled primarily into livestock demand. The livestock-production multiplier is nearly 50 per cent higher from internal remittances ($.51) than from Mexico-to-U.S. migrant remittances ($.35).

Computable General Equilibrium village models (Taylor 1995; Taylor and Adelman 1996) yield similar findings with regard to the total income effects, but not the distributional effects, of international migrant remittances. In these models (and most likely in the real world), migration complements some local production activities but competes with others. The distributional effects of remittances depend critically on the extent to which various household groups are involved in local production activities that are stimulated by the injection of migrant remittances into the local economy. This creates a patchwork of local winners and losers from (some) households' participation in international migration (Taylor 1995).

REMITTANCES, SAVINGS, AND DEVELOPMENT RECONSIDERED

Migration influences local economies in ways that are usually overlooked by migration research. Direct contributions of migrant remittances and savings to incomes in migrant-sending households typically are large. The new economics of migration posits, and empirical studies document, positive indirect effects of remittances on migrant-household incomes. As a result of these indirect effects, $1 of migrant remittances and savings may contribute more than $1 to total income in migrant-sending households. Expenditure linkages, in turn, transmit the impacts of migration from migrant to non-migrant households. Because of the importance of income linkages in migrant-sending economies, remittance-use surveys of migrant households are likely to offer a limited and distorted picture of the impacts of remittances. Migration and remittances unleash an array of income and price effects which tend to transform village production and influence incomes even in households that do not contain migrants. Many of migration's impacts on local economies are not to be found within the migrant households themselves.

In the short run, the loss of labor to migration and a higher opportunity cost of family time may create trade-offs between migration and local production. However, in the long run, migrant-sending economies benefit from the increased savings made possible by migration. The findings from the Mexico case study presented above support the new economics of labor migration hypothesis that migrants act as financial intermediaries, loosening credit constraints on investment in local production (Stark 1982). They do this by providing their households of origin with access to liquidity, in the form of migrant remittances. They also may promote investments by offering income insurance, promising to assist households in times of economic distress or in the event that new investments fail to produce.

Despite the relatively optimistic picture of migrant remittances, savings, and incomes in migrant-sending areas presented in this chapter, one cannot overemphasize that migration is not a substitute for sound macroeconomic policies and well-designed development strategies in migrant-sending economies. Misguided economic policies both stimulate migration and may seriously limit productive investment opportunities for the savings created by migrants. The migration-and-development literature includes a proliferation of pessimistic case studies in which international migration allegedly did not promote development in migrant-sending areas.

However, none of these pessimistic case studies refer to countries that are models of sound macroeconomic management or growth-oriented development policy. In the Mexican case, in spite of what obviously was a less than ideal policy and economic environment, abundant land for grazing, a new market-oriented development strategy on the part of the Mexican government, and the construction of a new road connecting villages to outside markets probably were critical factors promoting local income growth from remittances.

Where natural resource constraints are more binding, infrastructure is poor, and government policies are not conducive to promoting income growth, the effects of remittances on local incomes obviously will be different: migration may displace local production activities, leading to a "Dutch disease" scenario in which economies specialize in the export of migrants rather than in the production of other "tradables." In economies specializing in "migrant-exports," the possibilities for promoting productive growth linkages from migration are relatively limited.

The policy lesson that stands out from this research is that creating a fertile ground for migration and remittances to contribute to broad-based income growth in migrant-sending areas is the key to promoting migration–development interactions. In most cases, what is needed are not special programs to harness remittances and savings from migrants abroad, but rather sound macroeconomic policies that encourage the productive use of migrant remittances and savings at home.

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