

The Trade, Migration, and Development Nexus

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The world is divided into about 200 nation states. Their per capita incomes ranged in 2004 from less than \$250 per year to more than \$50,000 (World Bank 2006), providing significant incentive to migrate from one country to another for higher wages. The thirty high-income countries had 1 billion residents in 2004, a sixth of the world's population, and their gross national income was \$32 trillion, 80 percent of the global \$40 trillion.¹ The resulting average per capita income of \$32,000 was twenty-one times the average \$1,500 for the five-sixths of the world's people in low- and middle-income countries.

About 3 percent of the world's 6.4 billion people were international migrants in 2005. These 191 million migrants included 62 million who moved from south to north (from a developing to a developed country), 61 million who moved from south to south, 53 million who moved from north to north, and 14 million who moved from north to south. In each of these flows, about half of the migrants were in the labor force of the destination area (International Labor Office 2004), prompting the question: What role can migrant workers who move from a developing to a high-income country play in fostering trade and accelerating development in their countries of origin? For most of human history, the assumption was that migrants contributed primarily to their new homes, not to their countries of origin. Historians debate the emigration mistakes of governments, as when the French expelled the Huguenots in the sixteenth century, helping to spark the Industrial Revolution in Britain.

Until recently, there were relatively few stories of migrants abroad transforming the country they left behind. One exception is Taiwan, which invested so little in higher education in the 1970s that many of those who wanted graduate degrees went abroad. Many graduates stayed abroad despite rapid economic growth in

Taiwan, but during the 1980s (even before the end of martial law), some began to return.² To encourage returns, the government established the Hsinchu Science Industrial Park in 1980 as a rival to Silicon Valley in California. Financial incentives such as subsidized Western-style housing were provided to encourage high-tech businesses to locate in Hsinchu (Luo and Wang 2002). By 2000, Hsinchu was a major success, employing over 100,000 workers in 300 companies with total sales of \$28 billion. Over 40 percent of Hsinchu-based firms were headed by returned overseas migrants, and 10 percent of the 4,100 returned migrants employed in the park had Ph.D. degrees.

Is Taiwan's Hsinchu experience with diaspora-stimulated development the exception or the rule? Can migrants abroad foster the trade and investment links associated with faster economic growth in poorer countries, even if their countries are not undergoing rapid economic growth, as in Taiwan? Are migrants, as United Nations Secretary General Kofi Annan asserted, "the motors of human progress" for both sending as well as receiving countries?³

This paper deals with migrants' role in stimulating development in their countries of origin, outlining the three major channels through which migration can affect development: recruitment, remittances, and returns. It next turns to the North American Free Trade Agreement (NAFTA), assessing the relevance of the Mexico–United States migration hump for migration, trade, and development elsewhere. The paper concludes that migrants can accelerate development in their countries of origin but finds nothing mechanical or automatic about the migration and development linkage. Countries growing and ready to grow can benefit from migration's three R's: recruitment, remittances, and returns. But in other cases, migration's three R's can prevent an economic takeoff. Thus, the answer to the question of whether migration accelerates development is simple: It depends.

Migration's Three R's

Migration that moves workers from lower- to higher-wage countries can be a win-win-win situation, with migrants benefiting from higher wages, receiving countries benefiting from more employment and larger gross national product, and sending countries benefiting from jobs, remittances, and returns. The first two wins are well established. Migrants demonstrate their strong desire to go abroad by taking enormous risks to move to higher-wage countries, and most studies conclude that migrants in industrial countries slightly expand economic output by slightly depressing wages.

The third win—the effect of emigration on migrant countries of origin—has been in the spotlight recently, largely because migrant numbers and remittances

have been rising and some sending-country governments have demanded compensation for their loss of human capital. Two extreme scenarios have emerged involving highly skilled migrants and their countries of origin: Indian information technology emigration and African health care migration. The virtuous circle that began with the emigration of Indian information technology specialists resulted in the development of a new software and outsourcing industry in India, while the vicious circle that began with the exodus of African health care professionals has been associated with deteriorating health care systems, lower worker productivity, and slower socioeconomic development.⁴

The Indian IT success story began in the mid-1980s, when some of the 7,000 Indian IT specialists were sent by multinationals to their subsidiaries outside India, where they performed well. The late-1990s IT boom and Y2K issue encouraged industrial countries to open doors to IT professionals from India and elsewhere. Independent brokers soon emerged to recruit and deploy Indians to firms that did not have operations in India. Two decades later, India has annual revenues of over US\$10 billion from exports of computer-related services.

By contrast, the recruitment of African doctors and nurses by hospitals in ex-colonial masters such as the U.K. may have set in motion vicious circles that retarded economic development. African doctors and nurses are often trained to colonial-power standards, expediting the recognition of their licenses abroad. Many government-funded health care systems in Africa find it hard to lure doctors and nurses to poorer rural areas, so they often assign graduates to rural areas and enforce these assignments by withholding licenses until the term of duty is completed. The result is often emigration fever, so that 40 percent of the 1,300 doctors and 2,500 nurses who graduate each year in South Africa emigrate as soon as they can (Organization for Economic Cooperation and Development, or OECD, 2004). The resulting loss of human capital can be significant. The South African government estimated it spent \$1 billion educating health workers who emigrated during the 1990s, equivalent to a third of the development aid received from the end of apartheid in 1994 to 2000.

There are obvious differences between IT and health care, including government's role in shaping labor supply and demand. IT is largely a private-sector industry in which much training occurs on the job and many standards are set privately. By contrast, the supply of health care services is heavily influenced by governments that support doctor and nurse training and control licensure, and the demand is influenced by the ease of access to and charges for services. Migration's effects on countries of origin usually lie between these virtuous and vicious extremes, justifying a closer look at the three R's that shape emigration's effects on development.

Recruitment

Migration is not random. Young people are most likely to move over borders because they have the least invested in jobs and careers at home and the most time to recoup their “investment in migration” abroad. Who migrates depends significantly on an individual’s human capital and network connections, but demand conditions in receiving areas are the dominant factor shaping labor flows. For example, if employers in destination countries want IT professionals and nurses, networks and recruiters will evolve to help them move abroad; if the demand is for maids and farmworkers, networks and agents will evolve to move them over borders.

Migrants moving from developing to developed countries are different from the workers they left behind as well as the workers in the countries to which they move. About 40 percent of the world’s workers are employed in agriculture, 20 percent in industry and construction, and 40 percent in services; the world’s developing country migrants are drawn from societies that have this 40–20–40 distribution (World Bank 2006). The industrial countries to which migrants move have about 3 percent of their workers employed in agriculture, 25 percent in industry, and 72 percent in services.

However, the 31 million migrant workers from developing countries who were in industrial countries in 2005 had a labor force distribution unlike that in sending or receiving countries. About 10 percent were employed in agriculture, 40 percent in industry and construction, and 50 percent in services. This distribution of developing-country migrants reflects a tendency of three types of industrial-country employers to request migrants: those in sunset industries such as agriculture and some manufacturing (sewing); those in industries that are difficult to trade, such as construction; and those in many growing service-sector industries, from janitorial to health care.

Developing-country migrants in industrial countries also have personal characteristics that set them apart from other adults in receiving countries. Migrants differ in the best single determinant of individual earnings in industrial countries: years of education.

In most developing countries, the distribution of adults by years of education has a pyramid shape reflecting a few well-educated persons on top and a mass of workers with less than a secondary-school certificate or high school diploma at the bottom.

Native-born adults in high-income countries, by contrast, have a diamond shape when arrayed by years of education. About 25 percent have a college degree, 60 percent a secondary-school certificate, and 15 percent less than a secondary-school certificate or high school diploma.

Developing-country migrants in industrial countries have more of an hour-glass or barbell shape. About 40 percent have a college degree, 25 percent a sec-

ondary-school certificate, and 35 percent less than a secondary-school certificate or high school diploma. International migration from developing to industrial countries takes people from the top and bottom of a pyramid distribution and adds them to the top and bottom of a diamond-shaped distribution.

Professionals and Students. The migrants drawn from the top of the education pyramid of developing countries are often professionals, students, or legal residents of industrial countries. Foreigners arrive in industrial countries via front, side, and back doors. The front door represents presumed settler immigration; the side door allows the entry of tourists, guest workers, and students for a specific time and purpose; and the back door represents illegal entries as well as legally arrived foreigners who violate the terms of their entry, such as tourists who go to work or overstay.

Over the past two decades, almost all industrial countries have made it easier for foreign professionals to enter as settlers or guest workers. There are two broad approaches to selecting immigrants who are professionals: so-called supply and demand systems. The supply-oriented systems of Australia, Canada, and the U.K. give points to applicants for immigrant visas based on their language ability, years of education, age, and other factors presumed to affect earnings and grant immigrant visas to those with sufficient points. The demand-oriented system of the U.S., by contrast, makes the major criterion having a job offer from a U.S. employer. There has been some convergence between supply- and demand-oriented selection systems. In particular, Canada has raised the number of points awarded for having a local job offer to avoid brain waste—the presumed lack of earnings due to immigrants' employment in jobs that do not require their credentials, such as when a doctor drives a taxi. Meanwhile, the U.S. makes it easiest for employers to obtain immigrant visas for degreed foreigners who fill a U.S. job that requires at least a college degree.

Side-door “nonimmigrant” professionals and students often wind up obtaining immigrant visas. Nonimmigrants are admitted for a specific time and purpose, but most industrial countries have probationary immigrant guest worker programs similar to the U.S. H-1B program, which makes entry and settlement relatively easy (Martin 2006). U.S. employers open the border gate to degreed foreigners by attesting that these workers are needed to fill U.S. jobs that usually require a college degree. During the six years that an H-1B visa is normally valid, foreigners may become immigrants by finding a U.S. employer to sponsor them under a different certification process that involves proving that qualified U.S. workers are not available. With the foreign worker usually employed in the job while the employer engages in the required recruitment of U.S. workers, it is no surprise that U.S. workers are rarely hired in these situations (U.S. Department of Labor 1996).

Professionals complete their education before they cross borders and are probationary until they find an employer to sponsor them for visas (U.S.) or satisfy

requirements (Europe) that provide permanent residence status. Foreign-student programs are another type of probationary immigrant system. Most graduates of host-country institutions learn the host-country language and become familiar with host-country ways of study and work before graduation. If they find employers to hire them, most countries permit foreign student graduates to remain at least several years or settle.

In 2000, two million foreign students were in OECD countries—half from outside the OECD, including 34 percent in the U.S., 16 percent in the U.K., 13 percent in Germany, 11 percent in France, and 8 percent in Australia (OECD 2002). Foreign students usually study subjects that impart skills transferable internationally, such as science and engineering rather than law. Some institutions of higher education have become dependent on the revenues from foreign students, and some graduate programs appreciate the willingness of foreign students to be relatively low-wage research assistants and postdoctoral researchers.

The rising number of foreign students, especially in science and engineering graduate programs, raises the question of whether they are needed. Teitelbaum (2003) argues that the high percentage of foreign students in U.S. science and engineering doctoral programs reflects labor market deficiencies and student desires for immigrant visas, not a “national need” for more Ph.D.s in science and engineering. He points out that in many basic sciences, six or more years of graduate study is followed by five to ten years of low-paid postdoctoral research, so that graduates do not get “real jobs” until age 35 or 40.⁵

Unskilled Migrants. Most of the world’s workers and most of the world’s migrant workers are unskilled. Many need help to cross national borders, and there has been rapid growth in the number of for-profit recruiters that move the workers (Kuptsch 2006). The wage gap between countries motivates migration, and the recruiter’s share of this wage gap depends on a number of factors, including the difficulty of migrating illegally (or migrating without the help of recruiters) and prospects for settlement and upward mobility abroad. In most labor flows, recruiting fees are highest at the beginning of a flow. But after workers are established abroad, more potential migrants have access to information via social networks and may find alternative routes to employment that include traveling as tourists to visit relatives and staying to work.

In countries such as the Philippines, where most migrants leave legally, recruiters match half or more with jobs. The government tries to limit recruiting fees to the equivalent of one month’s wages for the typical two-year contract, about 4.2 percent, but Abella (2004) concludes that limits on fees that recruiters can charge workers have been “widely disregarded” because there is an excess supply of migrants. A migrant may leave the country with a contract stipulating that the recruitment fee is a month’s wage but, upon arrival, is asked to sign another contract that raises the fee to four to six months’ wages. Migrants can refuse to

sign the second contract but may be forced to return without the means to repay recruitment debts.

A December 1995 survey of male migrants in Kuwait found that 75 percent of Sri Lankan migrants used private recruiters to get their jobs, paying an average \$800, or four months' wages, for the typical \$200-a-month worker (some of these recruitment fees wind up in the hands of the foreign sponsor-employers). Fewer Indian and Pakistani men used recruiters because they had more access to social networks; the Indians and Pakistanis who used recruiters paid two to three months' wages in fees (Shah 1996). Half of the Bangladeshis used recruiters, and they paid the highest fees despite having the lowest monthly earnings: an average \$1,800 for jobs paying \$150 a month. The recruitment fees paid by Bangladeshis rose in the 1980s,⁶ perhaps because the shift from construction to services jobs allowed migrants to remain abroad longer (Azad 1989).

It is important to emphasize that conditions in receiving-country labor markets, such as employer perceptions of the relative virtues of migrants and local workers, affect what type of worker is preferred and how migrants find jobs. Most economists believe that employers prefer workers with the most human capital, but sociologists Roger Waldinger and Michael Lichter (2003) find that many Los Angeles-area employers preferred newly arrived migrant workers because they had the "right" attitude toward the often low-wage and difficult jobs offered.⁷ Migrants lacking English, schooling, and familiarity with American culture may be preferred by some employers because of their "personal qualifications—friendliness, enthusiasm, smiling, subservience."

Waldinger and Lichter look at the requirements of jobs held by migrants and find that in manufacturing, workers needed to be able to engage in the physical exertion associated with the job, but their next-most-important trait was an ability to get along with coworkers. In most workplaces, current employees were expected to teach new workers the tricks of particular tasks and machines. Migrant networks are ideal for such on-the-job training because current workers often recruit friends and relatives. Networks save employers recruitment and training costs and enable workers from particular foreign places to "capture" particular workplaces, so that unemployed local workers with more human capital but no "social capital" may not even learn about the vacant jobs.⁸

Most migrants move over national borders under the terms of unilateral guest worker programs, meaning that employers who satisfy national government criteria for employing foreign workers can recruit them where and how they wish. Most countries do not sign bilateral agreements or memorandums of understanding (MOUs) with migrant countries of origin to regulate recruitment, even though the International Labor Organization (ILO) favors recruitment under bilateral agreements and included a model agreement in Recommendation 86 (1949).⁹

More MOUs regulate migration today than in the past, but they often deal

with the return of apprehended migrants, not the recruitment and protection of migrant workers. Thailand has MOUs with the three neighbors that send migrant workers—Burma, Cambodia, and Laos—and they call for migrant workers in Thailand to receive equal wages and benefits. However, the emphasis on return is reflected in the 15 percent of wages earned in Thailand that are withheld to encourage returns and provide funds for development in migrant areas of origin.

In exchange for opening legal channels for migrants, Burma, Cambodia, and Laos are to issue identification documents to their nationals at home and abroad and accept the return of apprehended unauthorized foreigners. In December 2005, the Thai cabinet approved the admission of 200,000 migrants under these MOUs while there were 300,000 nationals of these countries in detention for irregular status.¹⁰ Since these apprehended foreigners had to be dealt with before new legal guest workers were admitted, the net effect of the announcement may have been to promote illegal migration. Some migrants expecting to go legally may have been encouraged to go illegally rather than wait.

Remittances

Remittances are international financial transfers from individuals to individuals. Most are derived from the earnings of citizens of one country who are employed in another, meaning that remittances replace what would have been earned at home if the individual had not migrated.

Three steps are involved in a typical remittance transfer: The migrant pays the remittance to a money transfer firm such as Western Union in one country, the money transfer firm instructs its agent in another country to deliver the remittance, and the agent pays the recipient. Agents in the two countries periodically settle their credit and debit accounts, often via a commercial bank. Under the *bundi*, *hawala*, *padala*, *fei-chien*, and other informal remittance systems, no money need cross national borders immediately to have remittances paid to beneficiaries.

Volume and Formalization. Remittances are the sum of workers' remittances and "compensation of employees" payments recorded in balance of payments data. Workers' remittances are monies received from nationals or residents of countries abroad more than twelve months (regardless of their legal status), while compensation of employees payments are funds from those abroad less than twelve months, including border commuters and seasonal workers.¹¹ Not all countries report remittance data. Forty-five report both workers' remittances and compensation of employees data, fourteen only workers' remittances, and nineteen only compensation of employees data (World Bank 2005).¹²

The International Monetary Fund (IMF) compiles reports of remittances from national central banks in its *Balance of Payments Statistics Yearbook*. Conceptually, workers' remittances are a transfer without a quid pro quo, while compensation

of employees is labor income, but “it may be difficult to separately identify the two items” (United Nations Technical Subgroup on Movement of Natural Persons 2005). Some countries, such as Indonesia, report personal transfers from abroad as workers’ remittances; others, such as Thailand, report them as compensation of employees; and some, including the Philippines, report under both categories. Most analyses sum workers’ remittances and compensation of employees to obtain a measure of formal transfers, and this sum is generally called remittances.¹³

Major payers of remittances include the U.S. (\$39 billion in 2004), Saudi Arabia, and Germany. Flows of money out of countries in which migrants work should match inflows of funds to migrant countries of origin (unless migrants send remittances to third countries). This does not necessarily occur, in part because some countries do not (fully) report remittances, and some remittances are transferred via informal channels, such as when migrants return with cash, send cash with friends or via couriers or informal systems, or return with goods.

The *Global Economic Prospects 2006* report (World Bank 2005) estimates total remittances of \$232 billion in 2005, including \$167 billion received by developing countries. There are several reasons for rapidly rising remittances, including the increased scrutiny of remittance flows after the September 11, 2001, terrorist attacks;¹⁴ lower costs and expanding networks to move small sums over borders via regulated financial institutions; better recording of fund transfers; more migrants; and the depreciation of the dollar, which raises the dollar value of remittances transferred in other currencies.¹⁵ Unrecorded remittance flows via informal channels “may conservatively add 50 percent (or more) of recorded flows” (World Bank 2005), or \$84 billion to developing countries in 2005, bringing the total to at least \$251 billion.

In 2004, 34 developing countries each received over \$1 billion in remittances. India received the most, \$21.7 billion, followed by China, \$21.3 billion; Mexico, \$18.1 billion; and the Philippines, \$11.6 billion.¹⁶ About two-thirds of remittances to developing countries came from migrants in developed countries and a third from developing-country migrants in other developing countries (for example, when Indonesians in Malaysia send remittances to Indonesia). Remittances to developing countries doubled between 2000 and 2004, with half the increase accounted for by China, India, and Mexico. Countries in which remittances are the highest share of gross domestic product include islands such as Tonga, 31 percent; countries making transitions from communism, including Moldova, 27 percent; and traditional labor exporters such as Lesotho, 26 percent.

The major determinants of remittance volume include the number of migrants, their income abroad, and their propensity to remit to their countries of origin. International organizations such as the World Bank and IMF aim to increase and formalize remittances to accelerate poverty reduction and improve the access of poor people in developing countries to financial services. Formal transfers

may have favorable macroeconomic effects on recipient countries, such as when banks lend against remittance deposits or sell bonds based on anticipated remittances, increasing their multiplier effect. Formal remittances may also deepen recipient-country financial systems and strengthen country credit ratings. In many cases, if recipients pick up remittances at banks, they open accounts, which can have favorable impacts on bank profits as well as development.

Formalizing remittance flows can be encouraged by reducing the cost of formal transfers, increasing migrant access to banks and other formal transfer mechanisms, and providing migrants with the IDs needed to deal with regulated financial institutions. The World Bank 2005 report concludes that it is generally easier to formalize remittance flows by reducing costs and improving migrant access to regulated financial institutions than by trying to impose regulation on informal transfer mechanisms.

Reducing formal remittance costs and easing access can be accomplished with regulatory changes such as:

- Allowing and encouraging domestic banks to operate in countries where migrants are employed to overcome migrant distrust of unfamiliar banks¹⁷ and to ensure that banking services are provided in the migrants' language (in some cases, capital requirements may need to be reduced to allow more foreign banks to operate in countries hosting migrants).
- Discouraging or banning exclusive arrangements between transfer agents, such as Western Union or MoneyGram, and entities with dispersed facilities in migrant areas of origin, such as postal agencies, thereby promoting competition in the so-called last mile of a remittance corridor linking two countries.
- Encouraging the spread of cellular telephone-based remittance systems, which promise the lowest-cost means of sending remittances while improving communications in migrant-sending areas.

All research agrees that the best way to increase and formalize remittances is to ensure that migrant-sending countries have sound economic policies, including an appropriate exchange rate and a banking system that is cost-efficient and friendly to remitters and recipients. Most remittances are spent on consumption, reflecting the fact that the breadwinner is abroad and remittances substitute for local earnings. However, the portion of remittances saved and invested in the home country can be increased if the savings and investment climate favors these activities; that is, if there is little risk of devaluation or taxation or expropriation of local savings and there are opportunities to launch profitable small businesses.

Remittances and Development. Increasing the development impact of remittances is the second policy priority of national governments and international institutions. With remittances rising faster than Official Development Assistance and flowing through private channels to often poor areas that send migrants abroad, increasing the portion of remittances invested in job-creating businesses could reduce future emigration pressures.

Little evidence exists that programs targeted at migrants have significant development-enhancing effects, suggesting that growth- and business-friendly macro and micro environments hold more promise to encourage migrant investments. However, targeted programs to increase the development impact of remittances are spreading. These include Mexico's three-to-one program, which provides federal, state, and local government matches for remittance contributions invested in infrastructure improvement in migrant areas of origin.

In 2004, Mexican migrants in the U.S. raised \$20 million for such infrastructure investments. Federal, state, and local governments added \$60 million to fund, for example, infrastructure improvements in migrant villages. However, \$80 million is less than half of 1 percent of the \$18 billion in remittances received by Mexico, and World Bank (2005) reports that most of the Mexican hometown associations that raised funds for matching in 2004 invested less than \$10,000 in their communities of origin.

The World Bank 2005 report concludes that the development effects of matching program investments are "poorly documented."¹⁸ Other complaints were that the money to match migrant funds usually comes from overall development funds. If migrant and local development priorities differ—for example, when migrants want to restore the local church while local residents want a paved road or sewer system—migrant funds can lead to conflict over how scarce development funds should be allocated.

A more promising development-accelerating impact of remittances may be to lower the cost of borrowing money. Banks in Brazil, the Philippines, and other countries have floated bonds at lower-than-average interest costs because investors assume remittances will provide a continuing inflow of foreign exchange to repay them. Remittance securitization typically involves a borrowing bank establishing an offshore entity and pledging the remittances it anticipates to this entity. Correspondent banks channel remittances to the offshore entity, which pays off the bonds and funnels the surplus to the bank. Investors are willing to accept a lower interest rate from the offshore entity because there is less danger that the country will make it hard to convert local currency to foreign. Bonds based on the expected flow of remittances to El Salvador, for example, carry interest rates 1 to 2 percent less than the debt issued by the El Salvador government (World Bank 2005). Between 1994 and 2004, about 90 percent of the remittance-based debt issued involved three countries—Turkey, Brazil, and Mexico.

Matching migrants' investment contributions and lowering the cost of borrowing with remittance-backed bonds are examples of incremental development-enhancing steps. The U.N.'s high-level dialogue in September 2006 aimed to find larger development-enhancing benefits from migration. Some believe that the combination of remittances and diasporas is a key to more rapid development, with funds flowing from migrant-receiving to migrant-sending countries, accompanied by more trade in both directions.

Returns

The third R in the migration and development equation is returns. Ideally, migrants who have been abroad return and provide the energy and ideas needed to start or expand businesses, or return with the skills and discipline needed to raise productivity as employees. Migrants are generally drawn from the ranks of the risk takers at home, and if their savings from work abroad are combined with risk-taking behavior on their return, the result can be a new impetus for economic development.

On the other hand, if migrants settle abroad and cut ties to their countries of origin, or if they return only to rest and retire, migration may have limited development impact. In the extreme, returning to rest and retire can slow development if workers acquire a work-abroad and rest-at-home mentality, and this mentality spreads to children. There may also be back-and-forth circulation, which can under some conditions contribute to economic growth in both countries.

Countries such as China sometimes refer to their diasporas as "stored brain-power" abroad, to be welcomed home when needed, as in the Taiwanese case. It is much harder to persuade established migrants to return to the poorest countries. The International Organization for Migration operates a return-of-talent program for professional Africans abroad, providing them with travel and wage subsidies if they sign two-year contracts pledging to work in the public sector of their country of origin. The U.N. Development Program has a similar Transfer of Knowledge Through Expatriate Nationals program that subsidizes the return of teachers and researchers. Sussex University's Richard Black calls such programs "expensive failures" because they bring temporary returns but not the "investment that [long-term return] should bring."¹⁹

Even if migrants do not return immediately, they can contribute to development at home by maintaining links with their countries of origin, increasing the probability of an eventual return and perhaps forging trade and investment ties. One way for sending countries to maintain links with their nationals abroad is to permit dual nationality or dual citizenship, which Bhagwati (2003) argues can lead to a diaspora model of development, "which integrates past and present citizens into a web of rights and obligations in the extended community defined with the home country as the center." Bhagwati notes that migrants abroad can

generate “political remittances,” including ideas that help to speed up change in often-traditional sending countries.

There are two caveats to the current enthusiasm for diaspora-led development. First, it is often asserted that instead of promoting returns with subsidies, dual nationality, and other devices, sending countries should do more to retain migrants by reducing discrimination and other factors that prompt people to leave. An example is when only those from the tribe or political party in power are given access to universities and good jobs. It is generally cheaper to keep potential migrants at home than to induce migrants abroad to return. Second, the diaspora can be a force for conflict and economic stagnation rather than development at home. This is the case when migrants abroad provide the funds to prolong civil wars or conflicts.²⁰

NAFTA, Migration, and Development

Europe and the U.S. have distinctly different policies concerning economic integration with poorer neighbors that are sources of migrants. The European Union, built on the four freedoms—free movement of goods, services, capital, and labor—aims to foster the political and economic changes necessary to minimize emigration before granting workers freedom-of-movement rights. As a result, when there is freedom of movement, usually after seven years, few Italians or Spaniards migrate. The U.S. has followed a different path with NAFTA, hoping that freer trade and investment lead to faster economic and job growth in Mexico and reduced migration over time.

Migration was the central feature of Mexico–U.S. relations for most of the twentieth century, but the volume of cross-border flows rose remarkably in the 1990s. A third of all legal Mexican immigrants admitted in the twentieth century and a third of twentieth-century apprehensions were in the 1990s (*Table 1*). High levels of legal and unauthorized migration have continued in the twenty-first century despite rising levels of Mexico–U.S. trade and stepped-up border enforcement efforts.

The roots of this Mexico–U.S. labor migration lie in the U.S. government-approved recruitment of about five million Mexican workers between 1917 and 1921 and again between 1942 and 1964. Distortion and dependence resulted from these guest worker programs. Some U.S. farmers made investment decisions that assumed there would be a continued influx of Mexican workers, and some Mexicans became dependent on U.S. jobs and earnings. These developments allowed the labor migration that began with U.S. recruitment to take on a life of its own.

A combination of increased demand-pull pressures in the U.S., especially during the job booms of the late 1980s and late 1990s, and increased supply-push

Table 1
Mexican Immigration and Apprehensions: 1890–2003

Decade	Immigrants, annual average	Decade total	Decade as percent of 1890–2003 total	Apprehensions, annual average	Decade total	Decade as percent of 1890–2003 total
1890–1900	97	971	0	NA	NA	NA
1901–10	4,964	49,642	1	NA	NA	NA
1911–20	21,900	219,004	3	NA	NA	NA
1921–30	45,929	459,287	7	25,697	256,968	1
1931–40	2,232	22,319	0	14,746	147,457	0
1941–50	6,059	60,589	1	137,721	1,377,210	3
1951–60	22,981	229,811	3	359,895	3,598,949	8
1961–70	45,394	453,937	7	160,836	1,608,356	4
1971–80	64,029	640,294	10	832,150	8,321,498	19
1981–90	165,584	1,655,843	25	1,188,333	11,883,328	26
1991–00	224,942	2,249,421	34	1,466,760	14,667,599	33
2001–03*	180,557	541,670	8	1,008,017	3,024,052	7
Total		6,582,788	100		44,885,417	100

NOTES: Apprehensions record events, so one person caught three times is three apprehensions. Mexicans are 95 to 98 percent of those apprehended. Apprehensions for 1925–30 were 128,484; Border Patrol was created in 1924. *2001–03 values are not comparable to other decade totals because the period only covers three years.

SOURCE: *Statistical Yearbook of the Immigration and Naturalization Service* (now the *Yearbook of Immigration Statistics*), various years.

pressure in Mexico, especially after economic crises in the mid-1980s and mid-1990s, helped diffuse the origins and destinations of Mexican migrants. Today, more Mexicans come from southern and urban Mexico, and more are taking non-farm as well as farm jobs throughout the U.S. The U.S. labor force of 148 million in 2004 included 19 million Hispanics (13 percent), with perhaps 40 percent born in Mexico. The Hispanic share of net U.S. labor force growth over the 1994–2004 decade, 44 percent, is three times the Hispanic share of the labor force.²¹

Mexico–U.S. trade has increased as a result of NAFTA, but the rate of increase in Mexico–U.S. migration has been even faster. The Mexican government changed its economic policies in the mid-1980s from an inward-oriented import-substitution model to an outward-oriented model that assumed foreign investors would create jobs in factories to capitalize on low Mexican wages to produce goods for export. Mexican President Carlos Salinas sought to lock these free-trade policies into an international agreement through NAFTA.

NAFTA accelerated the lowering of trade and investment barriers among Canada, Mexico, and the U.S. that was already under way. The result was expected

to be more trade and employment as well as higher wages in all three countries. Some of the political leaders promoting NAFTA assumed that if trade and migration are substitutes in the long run, they are also substitutes in the short run. Then-President Salinas, for example, asserted in a Bush letter to Congress (May 1, 1991) that freer trade means “more jobs...[and] higher wages in Mexico, and this in turn will mean fewer migrants to the United States and Canada. We want to export goods, not people.”

However, Mexico–U.S. migration increased along with Mexico–U.S. trade. The estimated number of unauthorized Mexicans in the U.S. rose from 2.5 million in 1995 to 4.5 million in 2000 and to 6.6 million in 2005, when 60 percent of the 11 million unauthorized foreigners in the U.S. were Mexican (Passel 2006). Over 80 percent of migrants from Mexico in recent years have been unauthorized—most between the ages of 18 and 40.

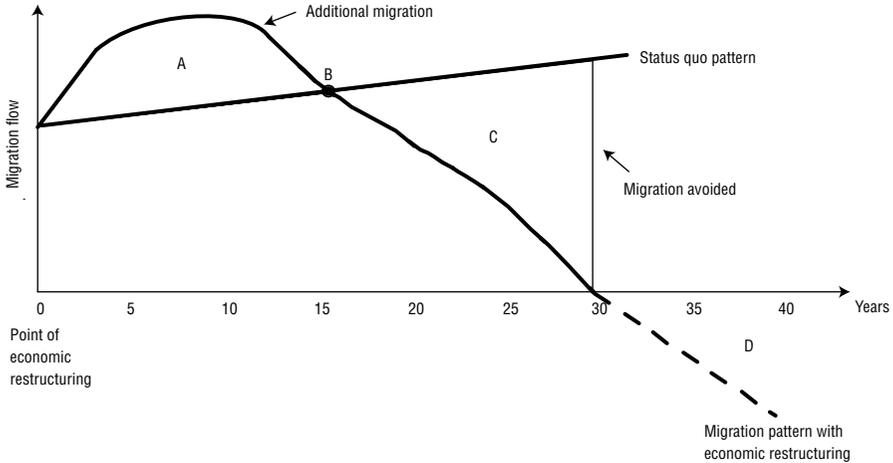
The upsurge in Mexico–U.S. migration between 1990 and 2005 has been called a migration hump—an assumed temporary increase in migration. A migration hump in response to closer economic integration means that the same economic policies that can reduce migration in the long run can increase it in the short run, generating “a very real short-term versus long-term dilemma” that can make it hard to persuade a skeptical public that freer trade is the best way to reduce unwanted migration (Martin 1993).

The steadily rising line in Figure 1 represents the status quo migration flow, with slightly rising migration reflecting demographic and economic differences. The hump line depicts the additional migration associated with freer trade and economic integration. The temporary increase in migration is represented by A, which occurs if freer trade displaces Mexicans but foreign investors need time to create additional factory jobs (or the jobs they create do not go to the workers displaced). Freer trade speeds up economic and job growth, and the downside of the hump is the movement toward the status quo, or B. As economic integration accelerates convergence in wages between migrant-sending and migrant-receiving areas, C represents the migration avoided by economic integration, and D represents the migration transition, which occurs when a net migrant-sending country becomes a net receiving country.

The critical policy parameters are A, B, and C—how much does migration increase as a result of economic integration (A), how soon does the migration hump disappear (B), and how much migration is “avoided” by the faster growth associated with economic integration (C)? Three factors are generally required to create a migration hump: a continued demand-pull for migrants in the destination country, an increased supply-push in the origin country, and migration networks that can move workers across borders.

The usual comparative static economic analysis focuses on equilibrium points, not the process of adjustment to reach them. The migration hump is precisely

Figure 1
The Migration Hump



SOURCE: Author's calculations.

this adjustment process. However, it is important to emphasize that once wage differences narrow to four-to-one or less and job growth offers more opportunities at home, the “hope factor” can deter especially irregular migration since most people prefer to stay near family and friends.²²

NAFTA got off to a promising start in Mexico, with employment rising in 1994. However, just before President Ernesto Zedillo was inaugurated in December 1994, an economic crisis led to a sharp devaluation of the peso. The U.S. provided emergency funds to stabilize Mexican government finances, but the number of formal-sector jobs shrank by over 10 percent. Job growth resumed in 1996, and formal Mexican employment peaked in 2000 as employment in maquiladoras reached 1.3 million, 10 percent of formal-sector jobs.

When the U.S. went into recession in 2000–01, maquiladora employment fell and many of the border assembly factories, especially those producing textiles and apparel, closed and moved to China and other countries with lower wages. Of the 700,000 new maquiladora jobs generated in NAFTA’s first seven years, 300,000 were eliminated between 2000 and 2003, and most are unlikely to reappear. The consensus is that Mexico must upgrade the skills of its workers and their productivity or risk losing even more jobs to lower-wage countries.

NAFTA gave industrial employment a boost in Mexico while accelerating rural-to-urban migration. About 25 percent of Mexicans live in rural areas, and 20 percent depend mainly on agriculture for income. The NAFTA villain in ru-

ral Mexico is increased imports of low-cost and subsidized U.S. farm commodities such as corn. Corn is planted on 50 percent of Mexican cropland, much of which is not irrigated, and some three million Mexican households depend at least partially on corn production. The availability of cheaper U.S. corn sends a clear signal that there is no future in small-scale and rain-fed corn production in Mexico.²³

Many evaluations of NAFTA's first decade conclude that trade-led growth was not sufficient to bring stay-at-home prosperity to Mexico. Real wages in Mexico were lower in 2001 than in 1994 despite higher productivity, and income inequality increased. Mexico's per capita economic growth was 1 percent a year between 1994 and 2003, compared with 7 percent a year in China. Poverty remains widespread. Half of the 104 million Mexicans in 2003 were considered poor, including 42 million who make less than \$2 a day (the daily minimum wage is about \$4).

U.S. Responses: Immigration Reform

In March 2005, the U.S. had 37 million foreign-born residents, 30 percent of whom were unauthorized (*Table 2*). The increase in unauthorized workers has been especially fast in recent years. The number rose by an estimated 4.4 million between 2000 and 2005, an average 880,000 a year. By comparison, 706,000 legal immigrants were admitted in 2003.²⁴

Opinion polls find that most Americans want additional steps taken to prevent illegal migration. A December 2005 *Washington Post*–ABC News poll reported that 80 percent of Americans think the federal government should do more to reduce illegal immigration, and 56 percent agree that unauthorized migrants hurt the U.S. more than they help it.²⁵ An April 2006 *Los Angeles Times* poll found that 63 percent of Americans favored stepped-up enforcement as well as a guest worker program to deal with illegal migration, while 30 percent favored stepped-up enforcement only.²⁶

Table 2

Status of Foreign-Born U.S. Population

Status, March 2005	Percent	Number (millions)
Naturalized U.S. citizens	31	11.5
Legal immigrants and nonimmigrants	39	14.4
Unauthorized	30	11.1
Total	100	37

SOURCE: Passel (2006).

The House and Senate have taken distinctly different approaches to the issue. The House in December 2005 approved the enforcement-only Border Protection, Antiterrorism, and Illegal Immigration Control Act (HR 4437) on a 239–182 vote. It includes a requirement for mandatory screening of employees to ensure that they are legally authorized to work in the U.S. Within two years of its enactment, all U.S. employers would have to submit Social Security and immigration data on newly hired workers to government agencies by telephone or computer, receiving a credit-card-type confirmation of each worker's right to work in the U.S. Within six years, employers would have to verify the status of their current employees.

The House bill contains several controversial items that include making “illegal presence” in the U.S. a felony and adding 700 miles of fencing along the Mexico–U.S. border. The House bill does not include a guest worker or legalization program, under the theory that enforcement must be proven effective before additional migrant workers arrive legally and the government deals with the unauthorized foreigners now in the U.S.

The Senate approved the Comprehensive Immigration Reform Act of 2006 (S 2611) in May 2006 on a 62–36 vote. Like the House bill, it contains measures that would increase border enforcement by adding agents and fences and require employers to submit data on newly hired employees to a government database. However, the Senate bill also includes a new type of guest worker program and an “earned path” from illegal to legal immigrant status.

The Senate-approved guest worker program would add H-2C worker visas to a list that already includes H-1A, H-1B, H-2A, and H-2B. Employers in any U.S. industry would have to attest that the employment of H-2C migrants “will not adversely affect the wages and working conditions of workers in the United States similarly employed” and not lead to the termination of U.S. workers 90 days before and after the H-2C migrants go to work. Foreigners in their countries of origin who receive job offers from U.S. employers filing such attestations would pay \$500 and pass medical exams to obtain three-year renewable work permits. After three years of U.S. work, H-2C guest workers would have to spend at least one year in the country of origin unless the foreigner has become a U.S. immigrant.

H-2C guest workers could change U.S. employers but only to work for other employers filing the same attestations regarding their need for migrants; migrants unemployed more than 45 days would be subject to removal. The H-2C guest workers could become immigrants while working in the U.S. in two ways: Their employers could apply for immigrant visas on their behalf after one year of work in the U.S., and the workers could apply for immigrant visas on their own after four years in the U.S. and if they are proficient in English and civics. In both cases, this path to immigrant status may be complicated by the requirement that the U.S. Department of Labor certify that no U.S. workers are available to fill the jobs for

which H-2C visas are sought, a process that today takes several years.

The H-2C program aims to be sensitive to U.S. labor market conditions by adjusting the number of visas to employer requests. The number of H-2C visas was initially set at 325,000 a year, to be immediately raised by 20 percent (to 390,000) if all H-2C visas were allocated within the first quarter of the fiscal year. That would make the ceiling for the next fiscal year 468,000. If H-2C visas were exhausted in the second quarter, an additional 15 percent of the fiscal year's visa ceiling would be made available immediately, and the annual ceiling would be raised by 15 percent for the next year. If the visas were exhausted in the third quarter, the factor would be 10 percent. If H-2C visas were not used up, the ceiling for the next year would be reduced by 10 percent.

During Senate deliberations, the starting number of H-2Cs was reduced to 200,000, but the adjustment formula remains, so that 600,000 H-2C guest workers could be admitted in the seventh year if all visas were used up each year in the first quarter.

Unauthorized foreigners already in the U.S. are divided into three groups by the Senate bill:

- Those in the U.S. at least five years could become “probationary immigrants” by proving they worked in the U.S., paid back taxes owed and a \$1,000 fee, and passed English and background tests. At the end of six years of continued U.S. work and tax payments and after an additional \$1,000 fee, they could apply for green cards or immigrant visas, although they would have to go to the back of the queue. (Total fees were raised to \$3,250 during Senate deliberations.)
- Those in the U.S. two to five years would have to satisfy the same requirements but would also have to return to their countries of origin and reenter the U.S. legally.
- Those in the U.S. less than two years would be expected to depart, although they could return with H-2C visas.

Unauthorized farmworkers would be treated differently. The Agricultural Job Opportunity, Benefits, and Security Act (AgJOBS) of the Senate bill would allow up to 1.5 million unauthorized foreigners who did at least 150 days of farmwork during the 24-month period ending December 31, 2005, to pay \$500 and obtain blue-card temporary-resident status. Blue-card holders who performed at least 100 days of farmwork each year during the next five years could become legal immigrants. While in blue-card status, foreigners could also do nonfarm work, travel legally in and out of the U.S., and get work authorization for their spouses, who would not have to work in agriculture, and legal status for their minor children in the U.S. When the qualifying farmwork is completed, blue-card holders could get

immigrant visas outside the global ceiling of 675,000 a year and country ceilings of 20,000 a year.

The House bill makes reducing illegal immigration and employment its top priority and does not deal with unauthorized foreigners in the U.S. or employer requests for new guest worker programs. Some House leaders have suggested that, as new enforcement measures make life more difficult for unauthorized foreigners, some will depart on their own, and the smaller number who remain could eventually be legalized.

The Senate bill involves a three-legged stool of enforcement, guest workers, and legalization—the comprehensive approach endorsed by President Bush. No one knows how its components might interact to affect workers and labor markets. For example, would legalization lead to a new industry creating work histories of at least two years or 150 days of farmwork, or would immigration adjudicators tap into administrative data to determine work done? Would workers without documentation leave the United States, or would they go further underground in the U.S. economy, complicating the enforcement of labor laws?

Conclusions

Is sending workers abroad a way to speed up development? Does opening front and side doors for migrants reduce backdoor illegal migration and generate win-win-win outcomes that speed up economic growth in migrant-sending and migrant-receiving countries?

Migrant and remittance numbers are rising faster than generally accepted answers to questions about how migration affects development. Sending workers abroad has been considered a means of reducing the number of surplus workers, and economic theory has suggested that the major contributions of migrants are in destination areas. New literature suggests that recruitment, remittances, and returns can accelerate development in migrant countries of origin. This reasoning suggests that developing countries should welcome the opportunity to send workers abroad to get more remittances and to benefit from the return of entrepreneurs or contributions from the diaspora.

The number of migrants has doubled in the past two decades, as have remittances to developing countries. Only time will tell if migration is a win-win-win proposition for migrants and receiving and sending countries. While there are clear benefits to migrants and the employers that hire them, the benefits to sending countries are less clear. It may be useful for states to be cautious of the theory that sending their best and brightest workers abroad will accelerate economic development at home, particularly when private market-led development has replaced state-induced development that protected infant industries.

Notes

- ¹ At purchasing power parity, which takes into account national differences in the cost of living, the world's gross national income was \$56 trillion, including 55 percent in high-income countries.
- ² Some maintained homes in both North America and Taiwan but spent so much time commuting that they were called "astronauts" to reflect the time they spent on airplanes.
- ³ Kofi Annan wrote that migrants take risks when crossing national borders "to overcome adversity and to live a better life" and that such migrant "aspirations have always been the motors of human progress" ("In Praise of Migration," *Wall Street Journal*, June 5, 2006).
- ⁴ For additional detail on Indian IT and African health care migration, see Martin, Abella, and Kuptsch (2005), 70–74.
- ⁵ According to one study cited by Teitelbaum (2003), bioscientists can expect to earn \$1 million less in their lifetimes than M.B.A.s graduating from the same university and \$2 million less if stock options are taken into account, suggesting one explanation for the very different composition of students in graduate and science M.B.A. programs.
- ⁶ The wage differential narrowed because of declining wages in the Gulf oil-exporting countries, not because of rising wages in Bangladesh.
- ⁷ Training times were typically short: Restaurants said that new workers needed eight days to master their jobs; hotels said 11 days.
- ⁸ Migrants are selected to fill some jobs precisely because they are "here to work" and do not have "negative attitudes." This "dual frame of reference and less-entitled status" helps newcomers to find so-called 3-D jobs (dirty, dangerous, and difficult) acceptable. However, many migrant workers and most of their children educated in the receiving country eventually want and expect upward mobility, posing the danger that a large and growing group of migrants and descendants could produce "a future of ethnic conflict" (Waldinger and Lichter 2003, 229, 233).
- ⁹ Even if there is no bilateral agreement or memorandum of understanding, there may be a social security agreement between labor-sending and labor-receiving countries. For example, China has social security agreements with Germany and Korea but no bilateral labor agreements.
- ¹⁰ Thai employers had to pay 10,000 to 50,000 baht to hire one of the detained migrants, a fee many considered too high for workers earning 130 to 180 baht a day. Employers that pay the fee usually deduct it from migrant wages, giving the migrants an incentive to run away, since working illegally provides a higher wage.
- ¹¹ A third type of transfer over borders is migrants' transfers, which represent the personal wealth of migrants who cross borders. An example is when the owner of IBM stock moves from the U.S. to Singapore and the value of the stock transfers as well.
- ¹² Note that 23 countries report all three indicators: workers' remittances, compensation of employees, and migrants' transfers.
- ¹³ The G-8 in April 2004 called on international financial institutions to improve remittance data, which led to the creation of the Technical Subgroup on Movement of Natural Persons, chaired by the United Nations Statistics Division. The subgroup recommended that "workers' remittances" in balance-of-payments data be replaced by "personal remittances," which would encompass cash and in-kind transfers received by resident households from nonresident households, including net compensation of persons abroad less than a year. Finally, the subgroup recommended that institutional remittances such as those from nongovernmental organizations be reported, so that total remittances would be the sum of personal and institutional flows (World Bank 2005, 87).

- ¹⁴ The World Bank reports that some migrants in rich countries remitted more funds after September 11, 2001, so they would have funds at home if they were deported. Such “defensive remittances” help to explain the tripling of remittances to Pakistan between 2001 and 2003 (World Bank 2005, 92).
- ¹⁵ Another factor increasing formal remittances is the spread of banks from migrant countries of origin to migrant destinations, where they offer services in the migrants’ language as well as ancillary services to migrant relatives at home.
- ¹⁶ Remittances include \$8.5 billion from overseas Filipino workers and \$3.1 billion from Filipinos settled abroad.
- ¹⁷ Encouraging migrants to use banks is part of a larger antipoverty strategy of providing banking services to the “unbanked” and spreading the reach of microfinance institutions.
- ¹⁸ *Global Economic Prospects 2006* asserts that Mexico’s three-to-one program, begun in 1997, established projects worth \$44 million by 2002 but concludes that “HTAs have not been very successful” in part because diasporas may not have good information on local needs or may have different priorities for infrastructure improvements (World Bank 2005).
- ¹⁹ Quoted in Alan Beattie, “Seeking Consensus on the Benefits of Immigration,” *Financial Times*, July 22, 2002, 9.
- ²⁰ Some governments are reluctant to welcome home refugees, viewing with suspicion those who fled a conflict for refuge abroad.
- ²¹ The U.S. labor force rose an average 1.7 million a year over the 1994–2004 period, from 131 million to 148 million, and employment rose an average 1.6 million a year, from 123 million to 139 million. Hispanic employment rose 700,000 a year, from 11 million in 1994 to 18 million in 2004.
- ²² South Korea made one of the world’s fastest migration transitions, sending 200,000 workers abroad in the early 1980s and receiving over 300,000 migrants today. However, some Koreans still want to emigrate, and about 11,000 a year do so. Private firms such as the Emigration Development Corporation advertise emigration opportunities to Koreans and collect fees for helping Koreans navigate such requirements as the Canadian point system.
- ²³ Rural Mexico is dominated by *ejidos*, the communal farms that include 103 million hectares, or 56 percent of the arable land and 70 percent of the forests. To ensure that peasants had land, *ejido* land could not be sold, which limited productivity-increasing investments. The 29,162 *ejidos* became synonymous with rural poverty; however, in 1992, the Mexican constitution was amended to allow the sale or rental of *ejido* land.
- ²⁴ The estimate of unauthorized immigrants is from Passel (2006). The Congressional Budget Office in a May 24, 2006, letter to Sen. Jeff Sessions (R-AL), estimated an inflow of 900,000 unauthorized foreigners a year.
- ²⁵ Dan Balz, “Political Splits on Immigration Reflect Voters’ Ambivalence,” *Washington Post*, January 3, 2006.
- ²⁶ Mark Z. Barabak, “Guest-Worker Proposal Has Wide Support,” *Los Angeles Times*, April 30, 2006.

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