CHAPTER 5

Factor Mobility and Migration

The largest movement of people in the world occurs every year around the beginning of February, as millions in China travel to be with their families for the Lunar New Year. In 2006, to mark the Year of the Dog, about 11 million people traveled out of Shanghai alone, and 10 million traveled into the city; 60 million people traveled on the last day of the festivities. In February 2008 ice and snow storms frustrated the plans of an estimated 200 million people trying to travel across China to be with their families for the New Year. Similarly, in the United States during the Thanksgiving period, millions take to the roads, airports, bus and train stations. The number of trips longer than 50 miles increases by half, with about 10 million people a day traveling over the holiday weekend, almost twice the daily average during the rest of the year.[1] The rising volume of holiday travelers in almost every country, rich or poor, is a telling reflection of just how many people live and work in a place other than where they were born.

This chapter is about the mobility of labor and capital, how their movements help to concentrate economic activity, and how these flows mitigate differences in welfare that can accompany economic concentration. It emphasizes movements of labor, especially, for two reasons. First, although many countries and regions are still thirsty for investment, national reforms and international agreements since the 1970s have eliminated most restrictions on the flow of capital. The scarcity of capital in some places now has less to do with actual barriers and more to do with unfavorable investment conditions.[2] In a globalizing economy capital is mobile and will move quickly. Labor, by contrast, tends to be less mobile for cultural and linguistic reasons. Second, a strong policy consensus supports the free flow of capital for foreign direct investment, even if this consensus is not always fully manifested in the policies of the many countries where external and internal obstacles remain. Relative to capital, labor is subject to more political restrictions and to explicit and implicit barriers. Some novel insights come from considering agglomeration economies and human capital together. Based on these insights, this chapter makes a case for facilitating the voluntary movement of people.

Textbooks teach us that the factors of production—capital and labor—move to places where they will earn the highest returns, and that these are the places where each factor is scarce. But by recognizing that increasing returns to scale are important, policies can be made better. Unlike unskilled labor and physical and financial capital, skilled labor—embodying human capital, a person's education, and endowment of skills and talent—earns higher economic returns where it is abundant, not scant. This explains the clustering of talented people in cities, the migration of entrepreneurs to leading areas within countries, and the rising number of skilled migrants moving to wealthy countries, all places where their skills seem plentiful but are nonetheless highly rewarded. Recognizing the growing benefits to human capital in areas where it has already accumulated changes the thinking about how governments should try to

raise growth and achieve spatial convergence in living standards.

But policy makers in many developing countries—particularly in South Asia and in Sub-Saharan Africa—have been conditioned by an early literature on migration to worry about the specter of rising urban unemployment, overburdened city services, social tensions in economically vibrant areas, and a "brain drain." As a result, many countries still restrict the movement of people. Yet direct and indirect restrictions, although not effective at stemming the flow of people, create unnecessary friction and impose the cost of forgone opportunities for economic growth and convergence in living standards.

Although researchers are now less skeptical about the benefits of labor migration, policy makers in both developing and developed countries are not so sure. What can they learn from each other? This chapter documents the disconnect between the implications of recent research and the migration policies in developing and developed countries, showing how they are changing.

Keep in mind three points:

- ***The facts about labor migration can be surprising. Although international migration still captures the greatest attention in the media, by far the largest flows of people are between places in the same country, and not from villages to cities, but from economically lagging to leading rural areas.***[3] Although the movement of people to cities is on the rise, particularly in South and East Asia, the most sustained pattern of internal mobility within developing countries has been from lagging rural areas, like Western Kenya and Bihar in India, to leading rural areas in those countries, like the Central Highlands and Punjab, and a large share of this migration is temporary.[4] And when people move across national borders, they do not go far.[5] Most international migration takes place within world regional "neighborhoods," particularly between developing countries.[6]
- ***Movements of capital and labor are driven by the benefits of agglomeration.*** Early migration theories were based on surplus labor, fixed "exogenous" rates of growth, and job creation—and these theories viewed the outmigration of skilled people as both socially traumatic and an economic loss. New theories recognize that migration, when driven by economic forces, is a positive and selective process. The interactions between agglomeration and labor migration power places forward.
- ***The policy challenge is not how to keep households from moving, but how to keep them from moving for the wrong reasons.*** Instead of trying to fight the pull of agglomeration economies on workers and their families, governments should work to eliminate the factors that push people out of their home areas. By doing so they can improve the quality of migration and encourage economic growth. Labor mobility driven by economic reasons leads to greater concentration of people and talent in places of choice and adds more to agglomeration benefits in these places than to congestion costs.

From mercantilism to globalization to autarky, and back again

Restrictions on the flow of capital, labor, and goods fragmented the world economy between the two world wars, but globalization picked up speed after the end of the Cold War in 1990, loosening the restrictions and integrating the world economy. Capital mobility within and across countries increased. International labor mobility—particularly unskilled labor—declined after the mass movements in the nineteenth century and only recently began to rise. But the mobility of people within countries has accelerated. So, for the movement of labor over the last century, distance has diminished, but divisions not only have increased (many more borders) but indeed may have become more obstructive (many more restrictions).

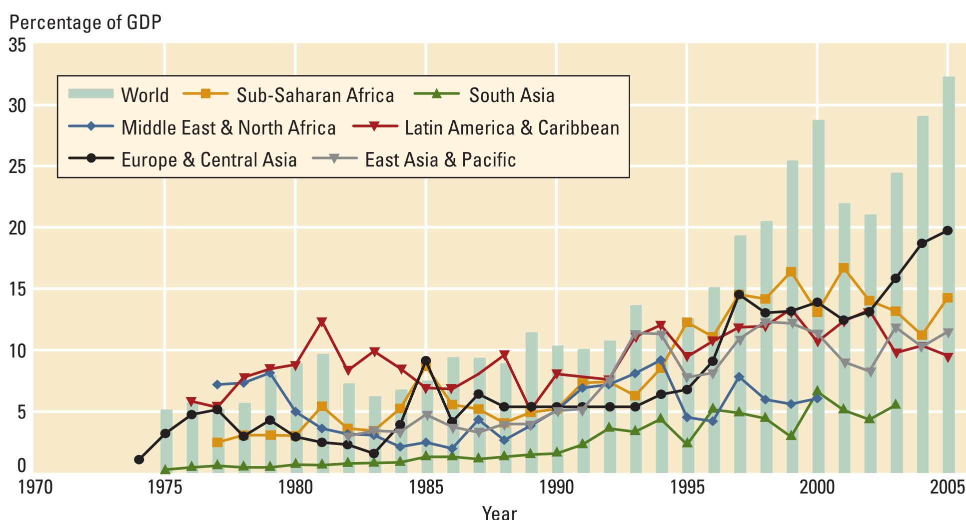
Capital flows—up sharply since the 1970s

The mobility of capital across borders, particularly investment capital, has increased since the 1970s. The world is returning to an age of capital mobility abandoned at the onset of World War I. From 1880 to 1914, a growing share of the world economy operated under the classic gold standard and a global financial market centered in London.

The gold-standard fixed exchange rates and underpinned a stable and credible regime that enforced discipline on countries. Interest rates tended to converge and capital to flow with relative ease across borders, constrained only by the limits of technology. Many rapidly industrializing countries outside Europe—in the Americas and in Asia—took part in an increasingly global economy.[7]

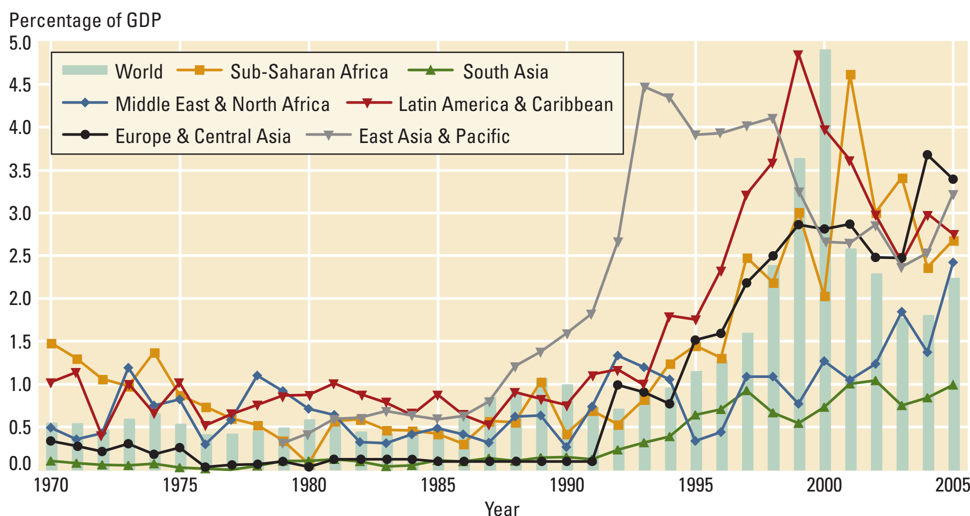
The fluid economic environment was destroyed by two world wars and the global economic retraction in between. From 1914 to 1945, monetary policy was used to pursue national aims, domestic policy goals, and "beggar-thy-neighbor" trade strategies that encouraged strict capital controls. International capital flows petered out, and investment from abroad was viewed with suspicion. So prices and interest rates across countries fell out of sync. Even during the Bretton Woods era from the end of World War II to 1971, as countries attempted to rebuild the global economy, fears of mobile capital that had taken hold during the interwar years proved difficult to dispel. Indeed, capital controls were sanctioned to prevent currency crises.

Figure 5.1 International capital flows have surged since the 1970s
Gross private capital flows



Source: World Bank 2007j.

Figure 5.2 A large share of capital now flows as direct investment
Foreign direct investment, net inflows



Source: World Bank 2007j.

But the growing volume of trade made it difficult to constrain the flow of capital, and in the early 1970s, the constraints began to loosen. Fixed exchange rates were abandoned, creating an international economic environment that could accommodate capital flows and market development. Political stability, structural reforms, and regulatory structures lowered the risks to foreign investment in developing countries, and capital markets responded with enthusiasm (see figures 5.1 and 5.2). By 2000, capital mobility returned to levels seen in 1914.[8]

Capital has become the most mobile factor of production. Converging real interest rates, declining spreads between deposit and lending rates, and shrinking risk premiums on the sovereign debt of developing countries are evidence of an international environment in which capital can go where it wants to, even if it does not always go where people wish it would. Indeed, recent comparisons of the marginal product of capital between high-income and lower-income countries show little evidence of friction preventing the flow of capital to poor countries. Instead, the lower capital ratios in poor countries are explained by lower efficiency and a lack of complementary factors.[9]

Labor flows across borders—blocked for much of the twentieth century

In a pattern similar to that of capital flows, from a peak in the late-nineteenth century, the mobility of labor across borders declined for most of the twentieth century, with the rise of economic barriers at the onset of the Great Depression and World War II. Geographers have long recorded the movement of humankind, from the earliest migrations out of Africa to Europe and Asia,[10] to the resurgence of movement across borders. They categorize the modern history of international migration into four distinct periods: mercantile, industrial, autarkic, and postindustrial.[11]

During the mercantile period, from 1500 to 1800, the movement of people around the world was dominated by Europeans. Agrarian settlers, administrators, artisans, entrepreneurs, and convicts emigrated out of Europe in large numbers. During the industrial period that followed—sometimes referred to as the first period of economic globalization, an estimated 48 million emigrants, between 10 and 20 percent of the population, left Europe (see table 5.1).[12] Unlike international migration today, the movement of people across borders in the first and second periods of labor migration was not driven by a lack of economic growth or development in the sending countries. Indeed, the first country to industrialize and the most advanced at the turn of the twentieth century—Great Britain—was by far the largest sending country. Economic analysis shows a positive correlation between emigration and the extent of industrialization in the sending country.[13]

A long period of autarky and economic nationalism began in 1910. Unprecedented restrictions were placed on trade, investment, and immigration, stifling the international movement of capital and labor. The trickle of international migrants consisted mainly of refugees and displaced persons, unrelated to economic development.

The postindustrial period of migration began in the 1960s, characterized by new

Table 5.1 In the late-nineteenth century most international migrants came from better-off Europe
Top sending countries in 1900 and 2000

Top emigrant-sending countries in 1900	Percentage of sending country's population in 1900	Top emigrant-sending countries in 2000	Percentage of sending country's population in 2000
British Isles	40.9	Mexico	10.0
Norway	35.9	Afghanistan	9.9
Portugal	30.1	Morocco	9.0
Italy	29.2	United Kingdom	7.1
Spain	23.2	Algeria	6.7
Sweden	22.3	Italy	5.7
Denmark	14.2	Bangladesh	5.0
Switzerland	13.3	Germany	4.9
Finland	12.9	Turkey	4.5
Austria-Hungary	10.4	Philippines	4.3
Germany	8.0	Egypt, Arab Rep. of	3.5
Netherlands	3.9	Pakistan	2.4
Belgium	2.6	India	0.9
Russian Federation–Poland	2.0	United States	0.8
		China	0.5
France	1.3		
Europe	**12.3**		
Japan	0.9		
Total (Europe and Japan)	11.1	Total (of countries listed)	1.9

Sources: Massey 1988, Parsons and others 2007, in Ozden and Schiff 2007.

forms, no longer dominated by flows out of Europe. People began to move from lower-income countries to wealthy countries, with a surge in migrant labor from Latin America, Africa, and Asia. In the 1970s, countries that had been major sources of migrating labor to Northern Europe and the Americas—such as Italy, Portugal, and Spain—began to receive immigrants from Africa and the Middle East. The growing wealth of oil-rich countries in the late 1970s made economies in the Persian Gulf new destinations. And by the 1980s, migration to East Asian countries spread beyond Japan to Hong Kong, China; the Republic of Korea; Malaysia; Singapore; Taiwan, China; and Thailand.

Today, about 200 million people are foreign born, roughly 3 percent of the world population.[14] The flows of new international migrants have varied—from a 2-percent increase between 1970 and 1980, to 4.3 percent from 1980 to 1990, and to 1.3 percent from 1990 to 2000. Poor and middle-income countries now send the most emigrants, led by Bangladesh, China, the Arab Republic of Egypt, India, Mexico, Morocco, Pakistan, the Philippines, and Turkey (see table 5.1). But Italy, Germany, and the United Kingdom still rank near the top, each accounting for between 3 million and 4 million emigrants.

The volume and flow of international migration is no longer mainly associated with population growth or demographic pressure. Unlike the 1960s and 1970s, international immigrants are not from the poorest, least developed countries. Voluntary international movements of people tend to originate from countries with rapidly growing economies and falling fertility rates. Emigration today is the outcome less of desperation and more of integration.[15]

The pattern of international migration is also shifting, from South-North to South-South.[16] Although the top three receiving countries are members of the Organisation for Economic Co-operation and Development (OECD)—the United States, Germany, and France, in that order—Côte d'Ivoire, India, the Islamic Republic of Iran, Jordan, and Pakistan are now among the top 15 destinations. But migration of labor from the low- and middle-income countries of the South to the wealthy countries of the North is still large, 37 percent of international migrants in 2000. Movement between Northern countries made up 16 percent of

Table 5.2 Close to home: the largest international flows of labor are between neighboring countries
Percentage of world migrants recorded as a bilateral movement between pairs of countries/regions, circa 2000

	Destination countries/regions												
Countries/ regions of origin	**USA**	**Canada**	**UE15 & EFTA**	**AU & NZ**	**Japan**	**HI MENA**	**LAC**	**ECA**	**MENA**	**AFR**	**EAP**	**SAS**	**Total**
USA	n.a.	0.16	0.34	0.04	0.02	0.03	0.43	0.04	0.05	0.03	0.15	0.02	1.29
Canada	0.54	n.a.	0.10	0.02	n.a.	0.01	0.02	0.01	n.a.	0.01	0.01	0.01	0.74
EU15 & EFTA	2.22	0.98	5.59	1.13	0.01	0.14	0.68	0.78	0.16	0.39	0.20	0.19	12.47
AU and NZ	0.06	0.02	0.16	0.23	n.a.	n.a.	n.a.	0.01	n.a.	0.01	0.03	0.01	0.55
Japan	0.28	0.02	0.06	0.02	n.a.	n.a.	0.04	0.01	n.a.	n.a.	0.05	0.01	0.50
HI MENA	0.10	0.03	0.06	0.01	n.a.	0.12	n.a.	0.02	0.72	0.01	0.04	0.03	1.14
LAC	10.22	0.36	1.45	0.05	0.13	0.10	**2.07**	0.17	0.08	0.14	0.14	0.25	15.15
ECA	1.27	0.39	4.75	0.26	n.a.	0.92	0.07	**16.98**	0.33	0.34	0.18	0.41	25.88
MENA	0.47	0.17	2.85	0.10	n.a.	1.49	0.04	0.16	**1.79**	0.28	0.05	0.12	7.52
AFR	0.41	0.12	1.58	0.10	n.a.	0.25	0.02	0.11	0.18	**7.00**	0.03	0.16	9.97
EAP	3.32	0.71	1.09	0.63	0.54	0.48	0.06	0.14	0.14	0.09	**3.86**	0.27	11.32
SAS	0.83	0.31	1.13	0.12	0.01	2.66	0.02	0.13	2.07	0.14	0.37	**5.67**	13.46
Total	19.71	3.25	19.14	2.72	0.74	6.22	3.45	18.56	5.53	8.44	5.10	7.15	100

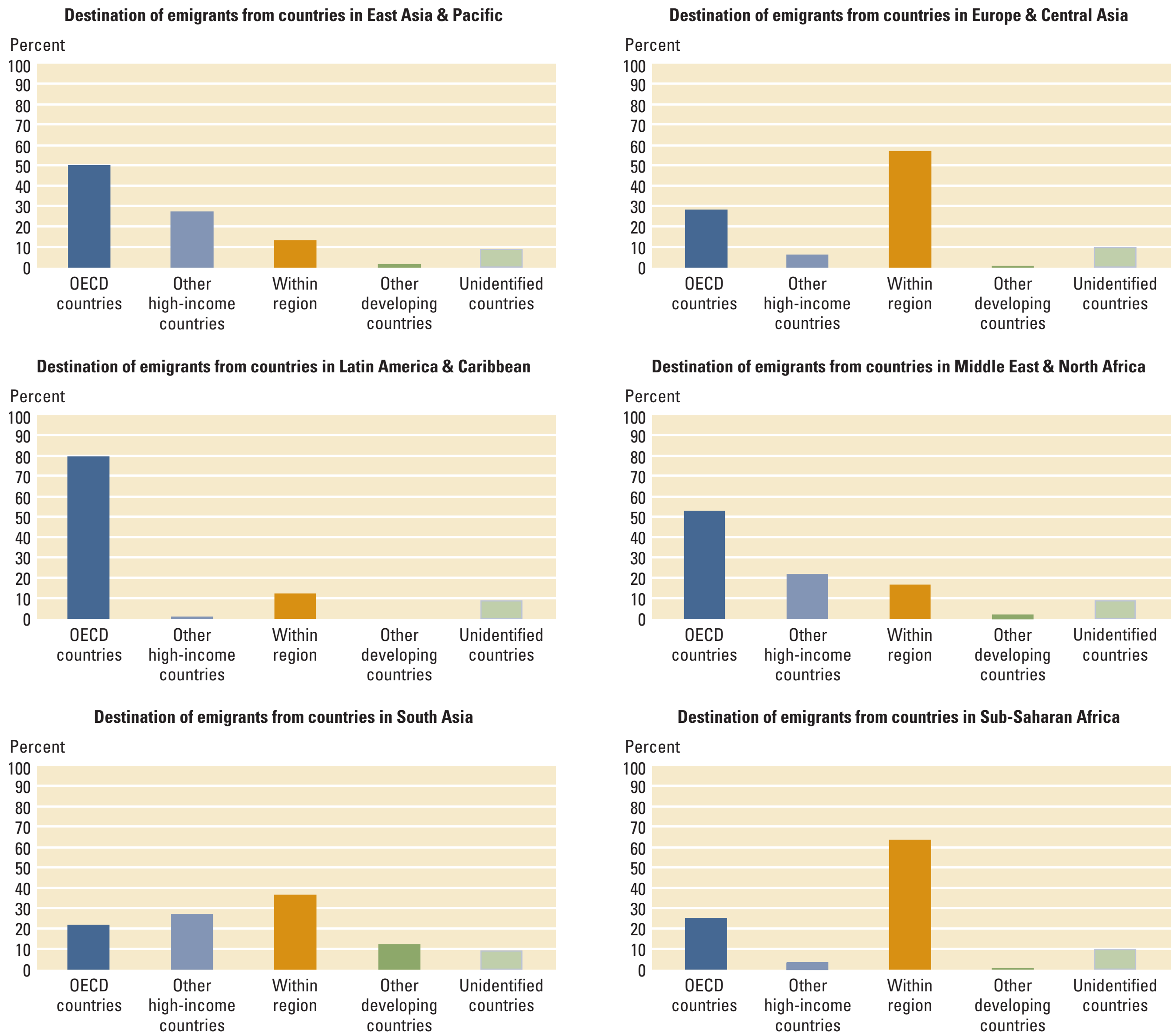
Source: Parsons, Skeldon, Walmsley, and Winters 2007.
Notes: AFR = Africa; AU = Australia; EAP = East Asia and Pacific; ECA = Europe and Central Asia; EU15 = European Union 15; EFTA = European Free Trade Association; HI MENA = High-income countries in the Middle East and North Africa region; LAC = Latin America and the Caribbean; NZ = New Zealand; SAS = South Asia; n.a. = not applicable.

migration and that between Southern countries accounted for 24 percent, with Argentina, China, Côte d'Ivoire, India, the Islamic Republic of Iran, Jordan, Pakistan, and South Africa as important destinations.

There is a strong tendency for labor to move between countries in the same world neighborhoods, particularly for South-South migration (see table 5.2). Migration of labor is usually from countries with a shared land border.[17] While only 30 percent of immigrants to the United States, 20 percent to France, and 10 percent to Germany come from countries with which they share a border, 81 percent of immigrants to Côte d'Ivoire, 99 percent to the Islamic Republic of Iran, and 93 percent to India are from neighboring countries.

International migrants tend to stay within regional neighborhoods, particularly in developing world regions, most notably in Sub-Saharan Africa (see figure 5.3). Almost

Figure 5.3 Migrants from East Asia, Latin America, and the Middle East and North Africa go mainly to OECD countries, but most in South Asia and Sub-Saharan Africa stay close to home



Source: Ratha and Xu 2008.

BOX 5.1 Regional labor mobility has been falling in Sub-Saharan Africa

The rate of labor migration within developing regions is highest in Sub-Saharan Africa, but it has fallen since the 1960s. More than 60 percent of emigrants from Sub-Saharan countries move to other countries in the region. The higher rate of labor movement within the region relative to other developing world regions is partly a consequence of the large number of land borders, but also of the relative permeability of these borders and the difficulty of monitoring the flow of people crossing them, despite numerous legal restrictions.

Migrants represented just over 3.5 percent of the population in Sub-Saharan Africa in 1960 but only 2.3 percent by 2000. In 1960 the stock of migrants relative to the population was much higher in Southern Africa than in other corners of the region, but it has since fallen to about the level of migrants in Western Africa (see the table below). In Eastern Africa and Central Africa the stock of migrants has fallen significantly.

Voluntary migration across borders in Sub-Saharan Africa is motivated by the same reasons that prompt people to move within a country: to pursue job opportunities and to diversify risks to income. Indeed, the economic rationale for movement from a lagging to a leading area of the same country is virtually indistinguishable from that for moving across a border in a region like Sub-Saharan Africa, where these movements are over relatively small distances and for the most part unmonitored. But many migrants also move across borders within a framework of formal agreements between countries. Since the 1960s, a web of bilateral and multilateral agreements has grown in an attempt to reap the benefits and control the costs of labor mobility within subregional neighborhoods.

In West Africa governments have attempted to manage population movements within the Economic Community of West African States (ECOWAS), which has had the most influence on the flow and composition of migration in Sub-Saharan Africa. Established in 1975, ECOWAS includes a protocol allowing the free movement of people and the right of residence and establishment for the citizens of its member countries.

The Southern African Development Community (SADC), a loose alliance of nine countries of Southern Africa formed in 1980, coordinated development projects to lessen economic dependence on South Africa during the Apartheid era. Part of this alliance was a provision for the flow of labor between member countries. The recent anti-immigrant violence in South Africa is a setback for regional integration and migration.

Kenya, Tanzania, and Uganda have formed the East African Community (EAC), a regional intergovernmental organization for interterritorial cooperation with roots extending to 1948 before independence. The EAC, gaining strength as a framework for economic integration since 1999, recently introduced East African passports and temporary passes to speed the movement of labor.

The movement of labor across borders in Sub-Saharan Africa's neighborhoods could be encouraged. During economic contractions, policy makers in these neighborhoods feel the same xenophobic political pressures as governments in rich countries do to favor native workers and ration public services to nonnatives. Less than one-third of governments in Sub-Saharan Africa have ratified the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families. To really reap the benefits from labor mobility for faster economic growth with convergence across Sub-Saharan Africa's regional neighborhoods, much more can be done to welcome migrants and open channels for the flow of remittances to their home countries.

Source: Lucas 2006.

Sub-Saharan Africa's stock of migrants has fallen since 1960
Per 1,000 population, by regional neighborhood

Neighborhood	1960	1970	1980	1990	2000
Eastern Africa	37.3	31.6	35.3	31.2	17.9
Central Africa	40.7	44.2	35.9	20.6	16.0
Southern Africa	49.7	40.6	33.3	34.5	30.6
Western Africa	28.0	27.3	34.6	28.5	30.0
Sub-Saharan Africa	35.6	32.8	35.0	29.0	23.0

Source: UN Population Division, in Lucas 2006.

17 percent of recorded international migration around 2000 occurred within Europe and Central Asia, though a large part of this resulted from border changes and changes in the definition of who was "foreign born" in these countries. The second highest rate of labor mobility between countries in the same region was for Sub-Saharan Africa (see box 5.1).

Cross-border migration within subregional neighborhoods flows to countries that act as economic engines of growth in developing regions—to Côte d'Ivoire in West Africa, to South Africa in Southern Africa, to Thailand from countries in the Greater Mekong Region in South Asia (see box 5.2), and to Argentina from Bolivia, Chile, Paraguay, and Peru. Distance is not the whole story. Divisions, in the form of language and culture, also determine the pattern of international migration, with more than half of migrations occurring between countries

with a common language. Of course, a common language and other cultural factors reinforce the neighborhood effects.

Immediately after World War II—when economies were growing rapidly, wage inequality was falling, and the volume of labor movement across borders was low—international migration was not really a thorny political issue. But after 1975—as growth in high-income countries slowed, wage inequality increased, and the volume of international migrants swelled—immigration became a heated topic of debate in electoral politics. Indeed, selective "managed immigration" policies first introduced in Australia and Canada in the 1980s are becoming popular in other high-income destination countries.[18]

With the return to globalization since the end of the Cold War, the movement of labor across borders resumed, but governments still restrict the number and influence the characteristics of immigrants. This contrasts sharply with the "first era of globalization" in the nineteenth century, when the flows of labor were free of obstruction. Restrictions on immigration arise and are sustained by wage inequality in receiving countries, rather than by unemployment or absolute wages. They are more likely to be tightened when international labor flows increase and to be loosened in periods of domestic support for trade.[19]

Internal labor mobility—growing rapidly, despite restrictions

With improvements in transport technology and infrastructure, the mobility of labor within countries rose steadily throughout the twentieth century, accelerating in its last two decades. The volume and velocity of internal voluntary migration, of concern to policy makers for decades, are growing despite predictions to the contrary.[20] Declining agriculture and rising manufacturing have changed the distribution of labor in low-income and emerging middle-income countries since the mid-twentieth century in South Asia and Sub-Saharan Africa, and long before in East Asia and Latin America. Migration of labor from lagging to leading rural areas remains the dominant internal movement in most of the developing world,[21] except in Latin America, where movements between cities dominate.[22] Rural-to-rural migration, difficult to document, has been largely ignored.[23]

Migration from rural areas to cities has been gaining importance since the mid-1970s, especially in the urbanizing economies of South and East Asia, with the rapid rise of manufacturing and services. In India, where movements from poor to rich

BOX 5.2 *Cross-border migration in the Greater Mekong Subregion*

The Greater Mekong Subregion (GMS), with 315 million people, comprises Cambodia, the Lao People's Democratic Republic, Myanmar, Thailand, Vietnam, and the Guangxi and Yunnan provinces of China. Despite marked disparities in economic development among its members, the subregion is extremely dynamic, with annual growth rates averaging above 6 percent in recent years.

Thailand's higher wages, faster growth, and more favorable social and political climate attract people trying to escape poverty in Cambodia, Lao PDR, and Myanmar. For Thailand the migrants are a reservoir of cheap and flexible labor and a boost to its competitiveness in some sectors. And Thailand alone is estimated to have 1.5 million to 2 million regular and irregular migrants from the GMS. Removing them could reduce Thailand's GDP by around 0.5 percentage points a year.

By some estimates, more than half of migrants enter Thailand holding legal documentation and then overstay, becoming illegal. Migrants are disproportionately young, of working age, and male. Those from Myanmar are, on average, less educated and less literate than the average for the populations of origin, indicating a push to migrate, or negative self-selection. But self-selection is positive among migrants from Cambodia, who have slightly higher education attainment than the population back home.

Remittances from Thailand to Cambodia, Lao PDR, and Myanmar are estimated at $177 million to $315 million a year. In Cambodia they are important for 91 percent of the households interviewed in one of the main sending provinces.

Much of this migration, however, will remain irregular and unregulated, increasing the vulnerability of migrants, the majority of whom do not use social services because they fear deportation. One of the biggest problems is ensuring access to schooling for children, who also suffer from a lack of health care. For the same reasons that migrant adults rarely receive health treatment, migrant children rarely receive vaccinations.

Despite the benefits of labor mobility, facilitating legal flows of people has been slow. Sending countries generally lack the capacity to manage the mass export of labor and to protect the rights of their nationals abroad. Receiving countries have fairly weak migration frameworks, often implemented hastily as an "after-the-fact" response to large numbers of migrants. The absence of an adequate legal and policy framework, typical of regional neighborhoods in developing country regions, increases the costs (and risks) of migration and reduces its benefits.

Source: World Bank 2006e.

BOX 5.3 *From facilitating to restricting to (again) facilitating labor mobility in China*

In the second half of the twentieth century, China undertook some of the most active internal migration policies ever observed, initially to great economic benefit, but increasingly to the detriment of growth and development. Now, these policies are changing again.

In the 1950s the government sought to stimulate industrialization through policies that encouraged rapid urbanization. Households were given incentives to move to cities, and rural workers responded en masse, answering the demand to participate in reconstruction and industrial development. As a result of these efforts, the urban population of China had by 1953 grown by a third, to 78 million. The first Five-Year Plan (1953–58) promoted urban development, creating forces that pulled people to the cities, complemented by the collectivization of agriculture and the establishment of the commune system.

In apparent response to a larger-than-expected flow from villages, the government tried to stem the flow, centralizing hiring, restricting travel, and rationing grain in cities. But these measures failed to slow the outflow of Chinese rural workers, and the pressure on cities grew so much that the government mobilized to move millions back to the countryside. Then, with the Great Leap Forward (1958–60), the government abandoned all attempts to control the flow of labor, again seeking to accelerate industrial development, motivating another surge of workers to China's cities. By 1960 China's urban population had doubled from that in 1949.

In the 1960s and first half of the 1970s, the urban population fell, a consequence of the relocation of intellectuals and urban elites to the countryside during the Cultural Revolution (1966–76). Then, with an abrupt shift in policy in 1976, the flow of people to the cities surged anew.

In the early 1980s the government became particularly preoccupied with the speed of urbanization. Although rural-to-urban migration was responsible for only 20 percent of the growth of China's cities from 1949 to 1980, evidence of burdened infrastructure and services in Shanghai and Beijing occupied the attention of policy makers.

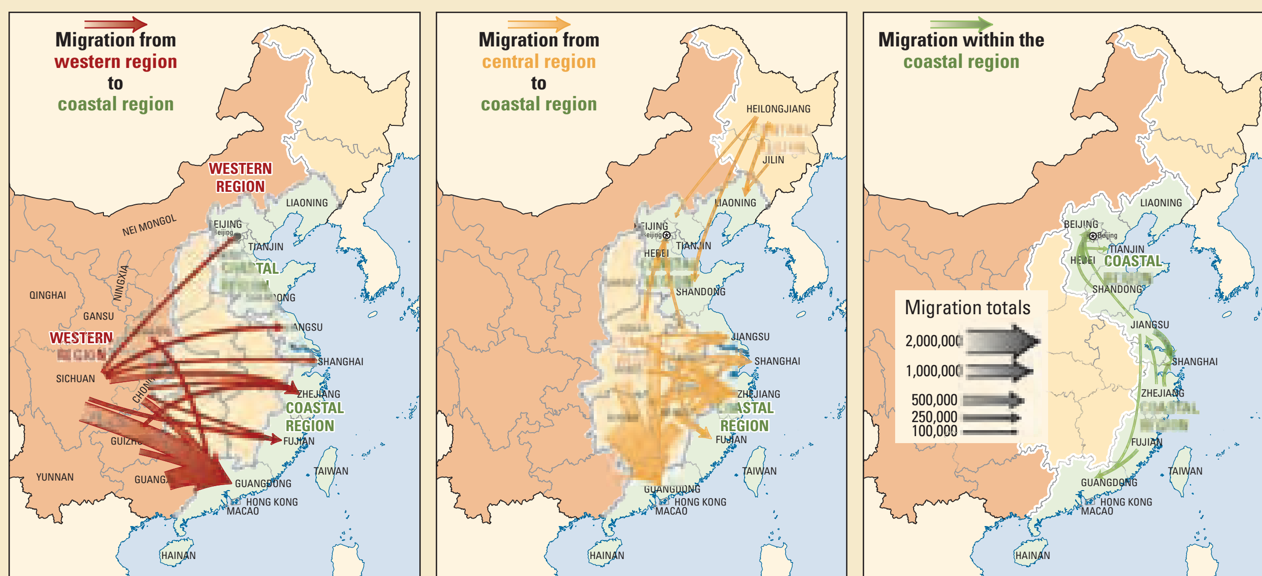
The *hukou* household registration system became the main policy tool to regulate the flow of workers. It has four tenets:

- Migration, especially to urban areas, should be allowed only if compatible with economic development.
- Rural-to-urban migration must be controlled strictly.
- Movements between settlements of similar population size need not be controlled.
- Flows from larger to smaller settlements or between rural areas should be encouraged.

Under the *hukou,* each individual has an official place of residence, and the documents verifying residence are similar to a passport. People are allowed to work legally, to receive social security benefits including health coverage, and to access food rations only in their place of residence. A change in official place of residence can be granted only by permission, similar to a local authority granting a visa. But some forms of legal temporary migration would be allowed to meet shifts in labor demand.

As the government's preoccupation with the size of China's cities and the pace of urban growth changed, the *hukou* was tightened or loosened—for example, by relaxing the residency requirement to receive food rations or extending the rights of temporary migrants. Despite the controls, lax

China's industrial growth and concentration has been accompanied by massive movements of workers
Internal labor migration between 1995–2000



Source: Huang and Luo forthcoming, using data from the Population Census of China.

BOX 5.3 *From facilitating to restricting to (again) facilitating labor mobility in China—continued*

enforcement allowed large flows of migrant workers to settle in cities under "temporary" status. Indeed, in the past 30 years, the labor force requirements to fuel China's spectacular growth performance have relied on migrants who are temporary under law but in fact permanent residents.

Today the movement of people from rural areas to cities is again surging. One in five rural workers migrates, and migrants account for a third of urban employment. In 2005 average incomes in cities were three times the rural average. The mechanization of farming has added to the pool of surplus labor. And China's industries are in constant need of low-cost labor.

Recognizing the growth dividend from allowing labor to flow freely, the government has been loosening the *hukou* in recent years, even facilitating migration. Migration restrictions have declined. The labor market has become more efficient. And mobility decisions are much more responsive to economic factors.[a] Beginning with pilot programs in selected municipalities, migrants from rural areas will be given access to health and social protection services, training, labor market information, and job search assistance, and recourse to legal action in cases of employer abuse.

Recent research suggests that the restrictions have taken a toll: many Chinese cities are smaller than they should be.[b] In many areas, such as Chengdu and Chongqing, governments are again facilitating a rapid rural-urban migration (see chapter 7).

Source: WDR 2009 team.
a. Poncet 2006.
b. Au and Henderson 2006a.

rural agricultural areas have historically been the dominant form of internal migration, movements from villages to cities have increased sharply in recent years. Migration from the poor Indian state of Bihar has doubled since the 1970s, mainly to cities, and not to the agriculturally prosperous states in India's Northwest, as before. In Bangladesh two-thirds of all migration from rural areas is to cities. And in China, with the easing of residency restrictions, migration from rural areas to cities now predominates (see box 5.3).

Uniform measures of internal migration are rare. Because there are so few household surveys that regularly measure labor mobility, and the questions asked about migration vary, comparable indicators can be calculated for only a few countries. Questions about migration are more likely to be asked in countries that experience large movements of labor and with governments that are concerned about migration. Among the countries included in table 5.3, for example, are stable nations (such as Argentina and Costa Rica), where migration is more likely to reflect economic motives, as well as countries that have recently experienced conflict (such as Bosnia and Herzegovina, the Democratic Republic of Congo, Rwanda, and Sierra Leone), where internal mobility is also due to flight from the threat of violence.

Skills—the motor of internal and international migration

A rush of labor matching the migrations out of Europe at the turn of the twentieth century has not yet taken place, and perhaps it never will. But unlike the flow of unskilled labor, that of skilled labor—with human capital—has been on the rise. Globalization and selective migration policies are likely to ease travel for skilled labor within countries and across borders.

Within countries, education attainment continues to determine who moves and who does not—certainly from rural areas to cities. People with more education are more likely to migrate in their own country (see figures 5.4 and 5.5).[24] Many temporary, seasonal migrants with little or no education also migrate.[25] But education boosts the velocity of labor mobility, by opening employment opportunities farther afield and shortening the job search at migrants' destination.[26]

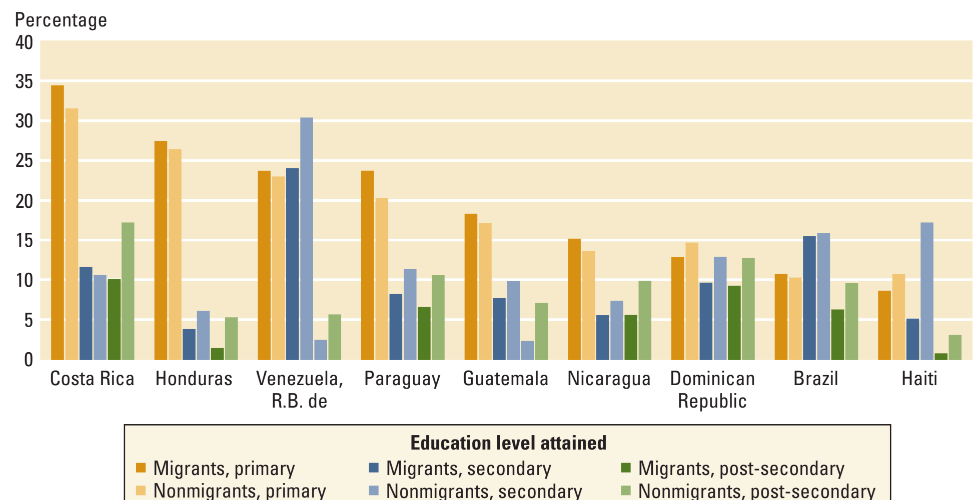
Education also increases the likelihood of people moving abroad. The international migration of skilled workers relative to that of unskilled workers has been rising since the 1970s for every developing world region (see figure 5.6). The highest proportions of skilled emigrants (as a percentage of the educated workforce) are from Africa, the Caribbean, and Central America. Many Central American

Table 5.3 Rates of labor mobility vary widely across countries in the developing world

Country and year of survey (ranked by stock of migrants)	Internal migrants (% of working-age population)	Recent migrants (less than five years, % of total working-age population)	Recent migrants (% of internal migrants)	Country and year of survey (ranked by stock of migrants)	Internal migrants (% of working-age population)	Recent migrants (less than five years, % of total working-age population)	Recent migrants (% of internal migrants)
Bosnia and Herzegovina 2001	52.5	12.8	24.5	Costa Rica 2001	19.9	2.5	12.4
				Brazil 2001	19.5	3.3	16.7
Paraguay 2001	39.0	7.3	18.7	Sierra Leone 2003	19.0	3.7	19.3
Bolivia 2005	37.7	5.0	13.3	Nicaragua 2001	18.6	3.1	16.9
Morocco 1998	33.4	6.0	18.1	Guatemala 2006	17.5	3.3	19.1
Azerbaijan 1995	33.2	19.4	58.4	Haiti 2001	17.5	2.8	15.8
Honduras 2003	29.0	5.5	19.2	Argentina 2006	17.2	1.4	8.1
Venezuela, R. B. de 2004	28.3	3.0	10.7	Kyrgyz Republic 1997	16.2	4.7	29.2
				Romania 1994	15.1	1.9	12.8
Congo, Dem. Rep. of 2005	27.1	7.8	28.9	Croatia 2004	14.7	1.2	8.0
Dominican Republic 2004	26.9	4.0	14.9	Bulgaria 2001	14.3	1.4	10.0
				Cambodia 2004	14.2	2.8	19.4
Armenia 1999	24.5	22.4	91.7	Tajikistan 2003	9.9	1.5	15.7
Mauritania 2000	24.2	2.9	12.0	Mongolia 2002	9.8	0.0	0.4
Albania 2005	23.9	4.1	17.3	Kazakhstan 1996	9.3	1.4	14.7
Ecuador 2004	22.7	5.3	23.4	Madagascar 2001	9.3	0.0	0.0
Vietnam 1992	21.9	3.1	14.3	Mozambique 1996	8.1	0.0	0.2
Rwanda 1997	21.5	5.9	27.6	Malawi 2005	2.7	1.1	43.2
Colombia 1995	20.1	5.3	26.3	Micronesia 2000	1.2	0.3	23.6

Source: WDR 2009 team, estimates using household surveys.
Note: Internal migrants are individuals who are not living in the same district in which they were born. This definition does not count returnees as migrants—that is, persons who moved away from their place of birth in the past, but returned by the time of the survey. *Recent migrants* migrated in the five years before the year of the survey.

Figure 5.4 In Latin America and the Caribbean internal migrants are more educated than those who stay behind
Education comparison between internal migrants and nonmigrants at place of origin and at time of migration

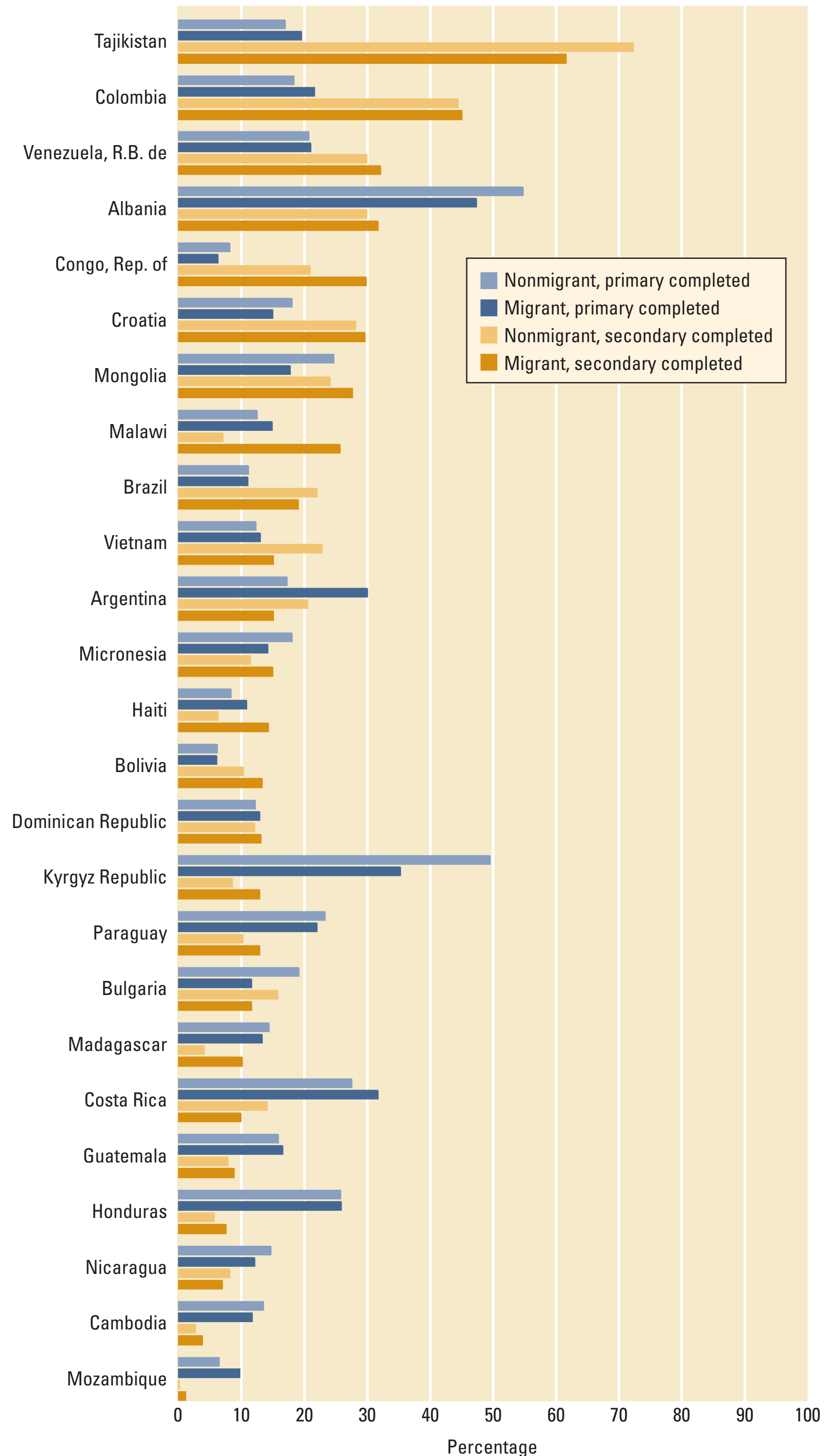


Source: WDR 2009 team drawing from selected household surveys.

and island nations in the Caribbean had more than half their university-educated citizens living abroad in 2000. And close to 20 percent of skilled workers have left Sub-Saharan Africa.[27] This could be taken as evidence that human capital is becoming more mobile internationally—or that "selective" immigration policies in wealthy countries are biasing the composition of international migration toward those with skills. But the increase in the migration of skilled labor is due to the rise in higher levels of education worldwide, most notably for countries sending the majority of international migrants. In relative terms, the cross-border movement of skilled labor has remained fairly constant as a share of the stock of skilled labor in sending countries. Rather than human capital becoming more mobile, more human capital is simply available, propelling larger volumes of migration.[28]

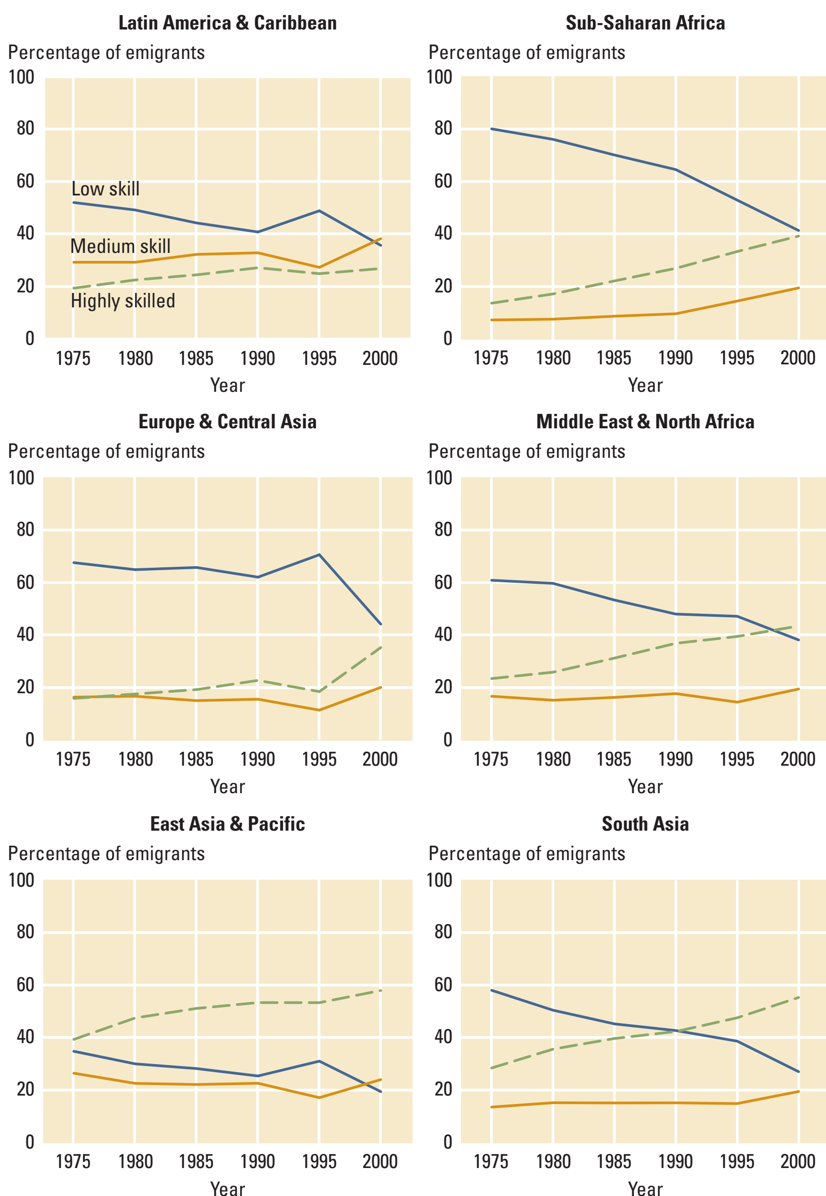
The rapid development of telecommunications and other forms of information and communication technology has separated the mobility of human capital from the mobility of labor. In a trend likely to accelerate, more services in the production processes of industries based in wealthy countries are being located "offshore" in low- and middle-income countries, where human capital is cheaper. What began with the export of software development and maintenance services from the Indian city of Bangalore to firms across the world has developed into a burgeoning trade in services requiring a wide array of skills, from simple customer communications—particularly from countries like India and the Philippines, where English is widely spoken—to financial accounting and computer maintenance. There is, as yet, no evidence that the export of "disembodied" human capital over telephone lines and the Internet will substitute for the flow of skilled workers. But by creating the possibility of separating human capital from labor, information and communication technology has further increased the mobility of skills relative to people.

Figure 5.5 Internal migrants are more schooled than workers in the places to which they move
Comparison between internal migrant and nonmigrant workers at migrant's place of destination



Source: WDR 2009 team drawing from selected household surveys.

Figure 5.6 Migration from developing countries is becoming more skilled



Source: Docquier 2006.

Labor mobility and voluntary migration for economic gain are the human side of the agglomeration story.

As for firms, localization and urbanization economies arise from knowledge spillovers between people in proximity. For this reason, people are often more economically productive when they are around others, especially for people with skills. Migration and agglomeration feed off each other. Whether this is agglomeration in leading places within a geographic area, in leading areas within countries, or in leading countries within regions, human capital flows to economically leading places. At every spatial scale, migration is the way that people who invest in education and skills realize the returns on their investment.

An important insight of the agglomeration literature—that human capital earns higher returns where it is plentiful—has been ignored by the literature on labor migration. Preoccupied with urban unemployment and squalor in the fast-growing cities of the South, early research on labor migration advocated restrictions.[29] Governments often acted on these prescriptions, instituting migration abatement policies, but to little effect: flows from the countryside to cities and from lagging to leading provinces continued unabated. The only effect of restrictions may have been forgone economic growth and slower spatial convergence in living standards.

Increasing returns to scale and spillovers from clustering—especially human capital-related spillovers—make clear the growth and welfare payoffs of policies that facilitate movements of labor from lagging to leading places. The implications for policy are powerful. Rather than an impending destructive tide of humanity, the swelling flows of people from villages to cities could be a boon for economic growth and the convergence of welfare. Moving from the local spatial scale, to the national, and then to the international, the benefits from clustering are the same—and the problems facing policy makers grow and become more complex. Put plainly, they do not want to lose people and human capital.

Economic theory now recognizes that governments should not try to hold on to

Labor mobility: learning from a generation of analysis

Until recently, two strands of economic literature—labor migration and economic growth, each with a powerful impact on developing-country policy makers—have evolved along separate tracks and diverged. But as shown in the arguments and evidence on agglomeration economies in chapter 4, the two phenomena are closely intertwined in the real world.

people. The pull of agglomeration forces in prosperous places is simply too strong for any opposing measure to be sustained. Another aspect of the pull of agglomeration has been well studied by economists but is often overlooked by governments. Migrants who move to cities, to leading areas, or to leading countries are rarely disconnected from their home places. Most migrants maintain strong and active links with their home communities and send remittances. And they do much more than remit capital. They send back information and technical assistance, and when a place is ready, they often bring back ideas, knowledge, expectations of good governance, and links to leading markets. Sending governments that put the right policies in place can capture these benefits for faster growth and faster convergence in living standards.

Migration theory now recognizes the benefits of agglomeration

Economists' notions about what motivates people to move and what such movements mean come from theories of economic growth and convergence. Whether couched in a classical framework[30] or in the recent models of "endogenous growth,"[31] where people are free to move, they will move to compete away differences in wages between locations. Since higher wages at the destination reflect an initial shortage of workers relative to capital—or a large endowment of capital per worker—the arrival of new migrants will slow the accumulation of capital per worker and the growth of wages. In contrast, the accumulation of capital per worker in the places migrants leave will speed up as they go, accelerating wage growth for workers who stay behind. By this mechanism, incomes in different locations are predicted to eventually converge.

The first theories of labor migration originated in the analysis of economic growth in developing countries.[32] These early theories partitioned a developing economy into a traditional agrarian rural sector and a modern manufacturing sector centered in urban areas. The main idea was that with economic development, particularly with progressive mechanization of agriculture, labor in rural areas is always in surplus. But in the growing modern manufacturing sector it is not. So, in rural areas, every additional worker, irrespective of innate talents or education attainment, has zero marginal productivity, but each potentially has a positive marginal productivity in manufacturing. This opens a gap in earnings and an incentive for labor to migrate from rural areas to cities in search of manufacturing jobs. Agriculture supplies an unlimited labor force to manufacturing, and the transfer of labor between the two sectors takes place through rural-urban migration. This migration continues until the "disguised unemployment" of workers in rural areas is absorbed into manufacturing in urban areas.

Movements from rural to urban areas were considered desirable when accompanied by economic growth. In what has become known as the Todaro class of migration models,[33] prospective migrants decide whether to move by comparing the expected future income streams they could earn in the city and in the rural home, after taking into account the costs of actually moving and searching for a job.[34] A key feature of the early Todaro models is that the economy's rate of growth—and by extension the rate of employment creation in the modern manufacturing sector—was assumed to be constant and set independent of the model. This classical framework—with an exogenously determined rate of economic growth and constant rate of employment creation in the manufacturing sector—explained rising urban unemployment in cities like Nairobi. But it also created what came to be known as the Todaro Paradox: any policy to improve urban economies could lead to more urban unemployment because the improvements would induce even more migration from rural areas.

Few economic models have had as much impact on policy makers in developing countries as these early labor migration theories. Across the developing world, but especially in South Asia and Sub-Saharan Africa, the Todaro Paradox provided a basis for strong disincentives and even outright restrictions on the movement of labor.[35] The Todaro model suggested that prohibiting internal migration over and above what

BOX 5.4 *Labor and social policies restrain migration in Eastern Europe—not good for growth*

Internal migration increased in several countries in Eastern Europe and Central Asia at the beginning of the transition away from planned economies. But this may have been a one-time phenomenon. Much of the sudden increase in migration in the Commonwealth of Independent States appears to have been driven by the return of people to their ethnic homelands and the departure of workers from areas they had been sent to by central planners. More than 1 million people relocated from Siberia and the Russian North and Far East to the more central parts of the Russian Federation, about 12 percent of the populations of these areas.

These movements may have run their course. Migration has slowed despite differences in income and the quality of life. Internal migrants in the Czech Republic, Poland, and the Slovak Republic represent less than 0.5 percent of the working population, much less than 1.5 percent in Germany, and nearly 2.5 percent in France, the Netherlands, and the United Kingdom.

People of working age in Europe's economically depressed areas mainly don't move because extensive unemployment benefits and social assistance reduce the pressure to migrate from declining areas. Under Poland's unemployment insurance, qualified workers receive fairly generous benefits for periods ranging from six months in areas with low unemployment to 18 months in areas with high unemployment. In addition, unemployed workers close to the retirement age receive preretirement benefits linked to their pensions. Low-income households are also eligible for guaranteed temporary social assistance benefits. Housing policies may discourage migration. During the transition, homes typically were transferred to their occupants at little or no cost. So the cost of remaining in one's home is low. At the same time, rent control discourages new construction, driving up the cost of housing in regions that are expanding economically. The high cost of housing in economically prosperous places can whittle away at the income gains workers might expect from migration.

Also discouraging migration are uniform national minimum wages unadjusted for costs of living, collective bargaining arrangements, and job protection laws. In other regions where the informal economy is dominant, labor market regulation is less binding. But in the formerly planned economies of Central and Eastern Europe, minimum wage and job protection regulations matter. In Poland, where the minimum wage is relatively high, national wage-setting appears to inhibit the migration of workers from economically depressed areas. Elsewhere in the region, where legislated minimum wages are relatively low, they do not appear to have a similar effect on internal labor mobility.

Sources: Dillinger 2007, Paci and others 2007.

is required for full employment in manufacturing could increase national welfare because output in both agriculture and manufacturing can be maintained at optimal levels.

In the late 1970s and early 1980s, however, economists began to question the classical models, pointing out the weaknesses of the Todaro framework, which failed to capture the dynamic nature of labor movements. It minimized differences in the appetite for risk among prospective migrants. It did not account for differences in education attainment and how these differences can influence job searches. It ignored pertinent motivations and household characteristics that could influence a family's choice of who will migrate. And it neglected the possibility of migration for jobs in the urban informal economy and the pull these could exert independently of the modern manufacturing sector.[36]

In parallel, some economists in the mid-1980s began to think differently about economic growth, mainly by reformulating the way classical growth models treated technical progress. Human capital and ideas were different from other factors of production—they exhibited increasing returns to scale.[37] And because the generation of ideas and human capital are in essence social activities—clustering people in a way that has no comparison in the process of accumulating physical capital—these models could explain why cities are important. They also could explain why human and financial capital do not move from where they are already abundant—rich countries, leading areas in countries, and cities—to where they seems to be scarce—poor countries, lagging areas, and rural communities.[38]

If there are external effects from clustering human capital, cities can jump-start and maintain economic growth. Although urban specialists had long held this view,[39] it was sufficiently novel for economists. Researchers in urban economics enthusiastically took up the hunt for the theorized positive external effects from human capital spillovers. Theoretical and empirical studies sought to quantify what happens to productivity, wages, and land prices when the aggregate stock of human capital in a city increases.[40] Evidence began to emerge of social returns to education accruing to specific geographic areas, supporting arguments in favor of a greater concentration of economic activity, if not the clustering of labor specifically.[41]

These arguments did not themselves spill over into the mainstream labor migration literature until the turn of the century. This should come as little surprise: the

fundamental assumptions for the classical migration models are at odds with those embraced by the new growth theorists and by those emphasizing agglomeration economies (see box 5.5).

Migration, growth, and welfare: divergence or convergence?

In a world with increasing returns to scale, will selective, voluntary migration lead to economic divergence or convergence? A large volume of empirical work from developed and developing countries bolsters an emerging consensus that governments should not see voluntary internal population movements as a threat. Indeed, internal migration offers societies an opportunity for economic growth and the convergence of welfare.

In contrast to the emerging consensus on migration within countries, the benefits and costs of international migration are still the subject of debate. The preeminence of place in determining the return on an individual's investment in human capital is most dramatically observed in the difference the simple act of crossing a border can make to earned income. An adult male Bolivian with nine years of schooling in Bolivia will earn roughly US$460 per months in dollars that reflect purchasing power at U.S. prices. But a person with the same education, talent, and drive would earn about 2.7 times that much if he worked in the United States. A similar Nigerian educated in Nigeria would earn eight times as much by working in the United States rather than in his native country. This "place premium" is large throughout the developing world.[42] Although the benefits to an individual from migrating from a poor country to a wealthy country are clear, is the accelerated flow of skilled labor out of developing countries more likely to help or to hinder their growth and convergence prospects? The answer is disputed.

But what is not disputed is the growing volume of internationally remitted earnings, which now outpace all other capital flows to poor and middle-income countries. In 2007 the flows of remittances to many developing countries surpassed those of foreign direct investment and equity for the first time.[43] And these are only the flows of remittances that governments and researchers can observe—just a fraction of what is actually sent through formal and informal channels. Allowing the freer flow of skilled and unskilled labor across national borders would probably do more to reduce poverty in developing countries than any other single policy or aid initiative.[44]

BOX 5.5 *From Lewis to Lucas: the economic perspective on migration has changed*

The insights from economists that have had the greatest impact on how policy makers view migration share similar origins, in theories of economic growth. The evolution of economic thought on migration—and particularly on the growth payoff from clustering labor and talent in cities—spans the work of two Nobel Laureate economists, W. Arthur Lewis and Robert E. Lucas, Jr.

Lewis laid the foundations for the study of labor migration with his two-sector model of economic growth in developing countries. But theorists studying economic growth since Lewis took a different path from those who used his insights to focus narrowly on labor migration.

The classical migration models inspired by Lewis assumed an exogenously determined and constant rate of economic growth. In sharp contrast, the new growth theorists—inspired by Lucas's contention that there are positive external spillovers from clustering human capital—internalized growth in models that allowed for increasing returns to scale. The classical theories modeled each additional migrant as lowering the probability of employment, contributing to urban unemployment, and raising congestion costs. The new growth theorists and later the proponents of urban agglomeration economies could imagine in that migrant an additional source of human capital to drive the agglomeration engine of growth.

In 2002 Lucas bridged the gaps between these diverging strands of the development literature, in a theoretical study of migration from rural to urban areas in low- and middle-income countries.[a] He posited a transfer of labor from a traditional sector, employing a land-intensive technology, to a modern human capital-intensive sector, with an unending potential for economic growth. In Lucas's model, cities are places where new immigrants can accumulate skills required by modern production technologies. In the conclusion to the paper, referring to the attraction to cities driven by gains from agglomeration, he writes:

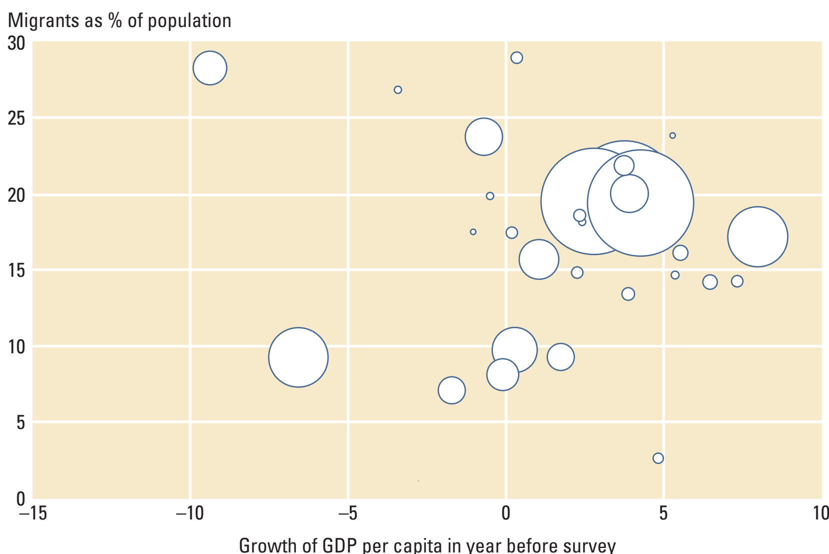
> "Even in the rapidly growing economies of the post-colonial world, the passage from a 90 percent agricultural economy to one that is 90 percent urban is a matter of decades. Since everyone has the option to migrate earlier rather than later, something must occur as time passes that makes the city a better and better destination."[b]

The new insight from theories that acknowledged spillovers from clustering human capital is that, while the returns to scale in agriculture are constant, the returns to scale in manufacturing and services are increasing. The policy implications of adopting one view or the other are profoundly different. A policy maker persuaded by the classical view would restrict the movement of labor, particularly flows of migrants from villages to towns and cities. In contrast, a policy maker who recognizes the external benefits of human capital would do exactly the opposite, facilitating migration and clustering, particularly of workers with skills.

Source: WDR 2009 team.
a. Lucas Jr. 2004.
b. Lucas Jr. 2004.

Labor migration promotes growth. Within countries, the accumulated empirical evidence shows that labor migration increases the earnings prospects of people who move. It also shows that labor migration contributes to aggregate growth by improving the distribution of labor, driving concentration. And by clustering skills and talent, migration drives agglomeration spillovers. In the United Kingdom the estimated long-run wage premium for men who migrate is about 14 percent, and for women about 11 percent.[45] Wage premiums ranging from 7 percent to 11 percent have been found among internal migrants in the United States.[46] These gains for individual migrants translate into gains for the broader economy. In many countries high rates of internal labor mobility have been associated with periods of sustained economic growth, as in the United States from 1900 to 2000,[47] Brazil from 1950 to 1975,[48] Japan from 1950 to 1975,[49] the Republic of Korea from 1970 to 1995,[50] and China from 1980 to 2005. Among a selection of developing countries with comparable measures of internal migration drawn from household surveys, a positive association is found between internal labor mobility and economic growth (see figure 5.7).

Figure 5.7 Internal labor mobility and economic growth often go together



Source: WDR 2009 team estimates using selected household surveys.
Note: Marker shows land area of country. Marker in the upper-left-hand corner is República Bolivariana de Venezuela in 2004.

Research in Bangladesh, China, the Philippines, and Vietnam suggests that internal migration has helped to drive growth.[51] In Brazil internal migration has raised productivity by allowing producers to reap the benefits of agglomeration.[52] Conversely, in China, restrictions on the movement of labor impede growth by constraining city size. Because Chinese cities are kept artificially smaller than they might otherwise be, the country has experienced welfare losses from forgone higher growth rates.[53] And in India past restrictions on the movement of labor may have kept the size of Indian cities inefficiently small, at a cost in forgone growth (see box 5.6).[54] Internal migrants are clearly economically active. In 24 of the 35 countries with comparable survey indicators, migrants are as or more likely than locally native people of working age to be employed (see figure 5.8).

In today's developed countries, leading and lagging areas converged. As for earnings and living standards between the leading and lagging areas, historical evidence of the impact of the internal labor movement during the nineteenth century in today's developed countries supports convergence.

At the start of the nineteenth century, the majority of nonindigenous people in the United States lived on the eastern seaboard. By century's end, more than 2 million square miles had been added to the country's original land area (see "Geography in Motion 1: Overcoming Distance in North America"). Robust institutions were critical in settling such a large land mass. The U.S. Constitution along with the Northwest Ordinance (1787) provided the framework for transforming unsettled areas into states. Factor mobility was enhanced by the commerce clause in the Constitution, explicitly prohibiting state governments from restraining trade across state boundaries. State and local governments provided public goods and infrastructure to attract settlers. In the 1820s real wages of "common" (unskilled) nonfarm labor were about 33 percent higher in the Midwest than in the Northeast. Between 1820 and 1860, the Midwest's share of the unskilled northern labor force rose from 23 to 45 percent. As the Midwest's share of

BOX 5.6 *Implicit barriers to mobility: place-based entitlement and divisions in India*

Policy barriers to internal mobility in India are imposed by omission rather than by commission, exemplifying the implicit obstacles to migration in many developing countries. Current policies do not allow communities to fully capture the benefits of labor mobility. The costs and risks of migration would be significantly lowered by greater flexibility in the way households use public services and social entitlements, and in the deployment of targeted assistance for mobile populations. Negative attitudes held by government and ignorance of the benefits of population mobility have caused migration to be overlooked as a force in economic development.

Recent evidence shows that population mobility in India—having stabilized in the 1970s and 1980s—is rising. India's 1961 census classified 33 percent of the population as internal migrants—people living and working in a place other than where they were born. The share of migrants is larger in cities (about 40 percent of the population) than in rural areas (about 30 percent). But by far the largest flows of migrants—within districts, across districts, and across states—are from lagging rural to leading rural areas. Since the 1960s rural-to-rural migration flows typically have been more than twice the volume as the next largest flows, from rural areas to cities. Rural-rural migration accounted for roughly 62 percent of all movements in 1999–2000. Workers from lagging states like Bihar, Orissa, Rajasthan, and Uttar Pradesh routinely travel to the developed green revolution states of Gujarat, Maharashtra, and Punjab to work on farms.

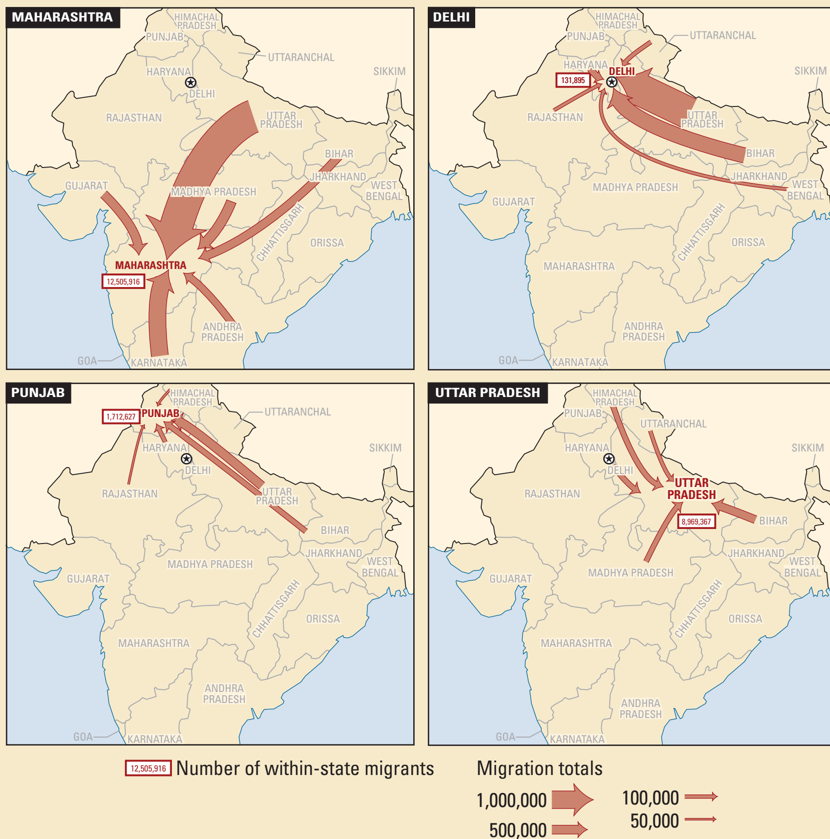
In India both distance and division limit labor mobility. The highest levels of movement are recorded within the same district. The flow of migrants across state lines is a trickle. Since 2001 there has been a slowdown in permanent or long-term migration (see the map below). The share of lifetime (permanent) interstate migrants—at about 4 percent—is much lower than the total migrant population. Most of these permanent migrants live in cities. In addition to geographic distance, the strong differences in culture and language can discourage movement far from a person's home place.

Although official data sets indicate a slowdown in permanent rural-urban migration, microstudies find that circular migration is emerging as a dominant form of migration among the poor. Short-term migrants have been estimated to number 12.6 million but recent microstudies suggest that the figure is 30 million and rising.

The economic benefits of migration are not always recognized by policy makers. Two forms of policy have been attempted to counter migration in India. The first response has been to increase rural employment, in an attempt to stem movement out of rural areas. This policy implicitly assumes that deteriorating agriculture leads to out-migration and that improved employment opportunities in lagging rural areas can reduce or reverse migration. These measures include the recently introduced National Rural Employment Guarantee Program, which promises 100 days of wage labor to one adult member in every rural household who volunteers for unskilled work, numerous watershed development programs that aim to improve agricultural productivity, and programs to develop small and medium towns.

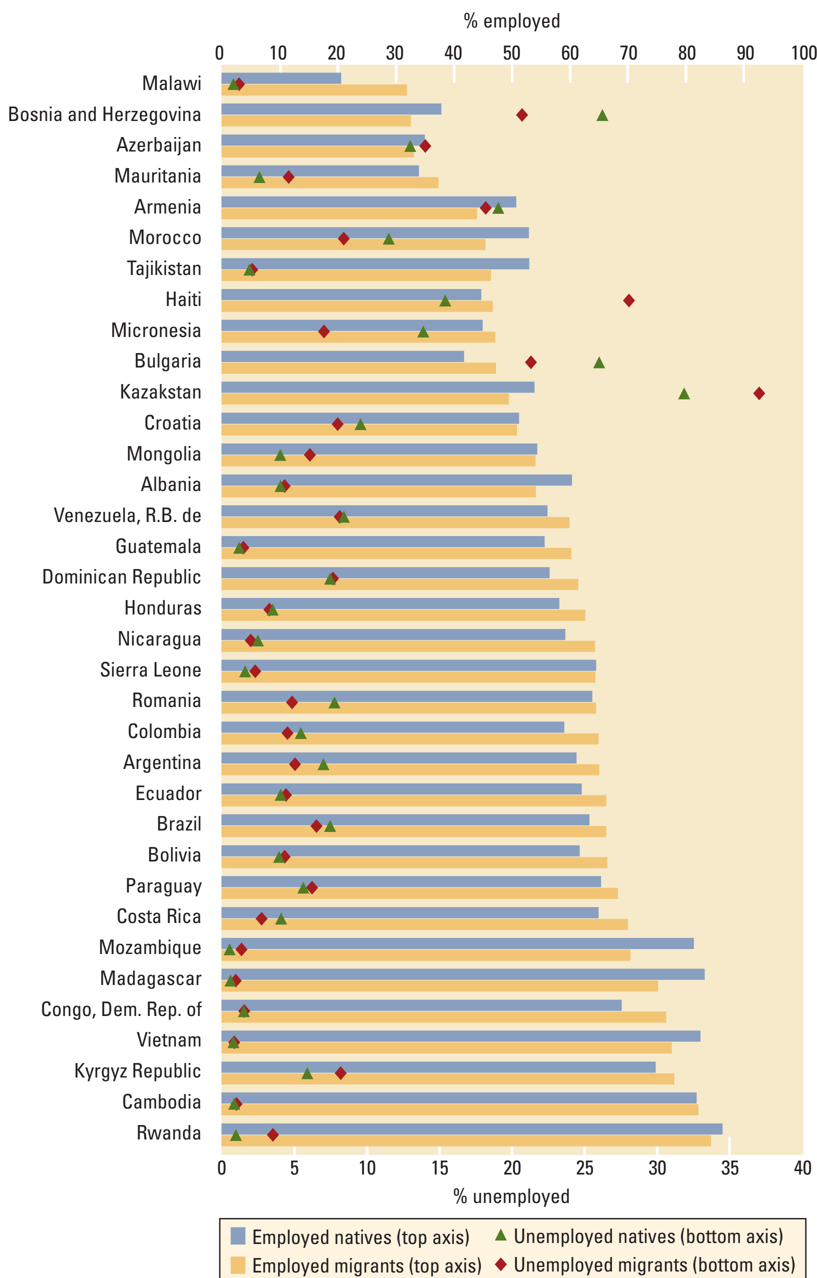
The second policy response is implicit. Because of the perceived negative effects, local governments remain hostile toward migrants, while employers routinely disregard laws to protect their rights and needs. In many cases welfare policies and social services are designed for a sedentary population. This is best exemplified by location-specific entitlements to social services, housing subsidies, food rations, and other public amenities especially important to working poor people.

Internal migrants in India flow to prospering Delhi and Maharashtra
Internal migrant flows reported in 2001 census



Source: WDR 2009 team, based on census data from the Census of India.

Figure 5.8 Internal migrants are more likely to work than natives
Comparison of internal migrants and native workers



Source: WDR 2009 team using household surveys.

the labor force increased, its wage advantage eroded to roughly 17 percent in the 1850s, and to 10 percent in the four decades after the Civil War. State data on farm wages point to a long-term narrowing of geographic wage differences in response to internal migration, a process that can be dated back even before the Civil War.[55]

In France wage differences between the Paris metropolitan area and the countryside, large in the mid-nineteenth century, eroded as labor poured into the city. More generally, wage differences across French *départements* narrowed significantly over the second half of the nineteenth century. Across Canadian cities, wage differences evolved precisely as would be expected if Canadian migrants treated the entire country as a single labor market.[56] And across England wage differences did not erode much during industrialization. This was not because the labor force was immobile, as history shows English labor moved freely from low- to high-wage areas. Rather, it was because the forces that sustained industrial development in various parts of England were so persistent that internal migration in any one period was not enough to cause wage gaps to decline.[57]

Throughout the twentieth century, labor mobility continued to be integral to concentration and convergence across the two geographically expansive and economically prosperous countries of North America. In the United States labor mobility was greater than in Europe, distributing labor from low- to high-wage states, converging state per capita incomes through most of the twentieth century.[58] With the notable exception of the U.S. South (see box 5.7), regional convergence in wage rates coincided with cross-regional labor market institutions and information flows.[59] Similarly, in Canada, labor mobility continued to narrow per capita income differences among Canadian provinces from 1910 to 1921. And when internal migration petered to a trickle between 1921 and 1960, convergence in income also slowed.[60]

Disparities in income and welfare between places were higher in the 15 countries of Western Europe where labor mobility has been much lower than in North America throughout the twentieth century. The variation in employment across subnational areas of the United States is much lower than that across subnational economic areas of the European Union (EU). In parts of the EU where employment is highest, the employment rate is 60 percent higher than where it is lowest. In the United States the difference is only 22 percent.[61] The greater equity in employment outcomes in the United States is a

direct consequence of higher labor mobility and a more tightly integrated national labor market.[62]

Convergence, after divergence, in developing countries. More recent empirical studies show the positive impact of net migration on income convergence in Japan.[63] So do estimates from India, the Russian Federation, and the United Kingdom.[64] These studies may underestimate the full impact of migration on the convergence in living standards by failing to take into account the differing skills of migrants flowing in and out of areas, and by ignoring the indirect negative impact of housing and labor market rigidities. Analysis that distinguishes between (1) the flow of skilled and unskilled migrants and (2) the levels of human capital in migrants' places of origin and destination shows a large impact of labor mobility on convergence.

Much of the empirical evidence of the impact of internal migration from low- and middle-income countries is consistent with expected convergence, after an initial divergence. As Japan grew, regional income inequality followed a bell-shaped curve, initially increasing in 1955–61, but then falling in 1961–75. Research attributes the convergence to labor migration.[65] In China after the economic reforms of 1978, income differences between subprovincial areas initially widened after economic reforms from 1978–96, but later declined with greater integration and internal labor migration.[66] In India and Indonesia higher internal labor mobility is associated with lower income inequality,[67] and migration increased equality in Mexico. But in Chile, lower-than-expected rates of internal migration may be to blame for high income inequality.[68] And in Brazil, where both social inequality and spatial mobility of labor are high, some research suggests that inequality would be even higher if not for internal migration.[69]

Most early research on internal migration and convergence across areas within countries focused only on a small part of migration as an economic force: labor market adjustments and changes in wage differences between areas. The impact of remittances was ignored. Yet in Sub-Saharan Africa, remittances account for 15 percent of rural income. In Uganda labor mobility has a positive effect on household expenditure. Comparable households enjoy much higher per capita spending if they migrate within their own district or to another district than if they stay in their native area. The incomes of Ugandans who migrate from lagging to leading areas are 10 to 60 percent higher than nonmigrants in origin or destination areas.[70] In Tanzania, in the Kagera region between 1991 and 2004, internal migration

BOX 5.7 ***Why did the U.S. South take so long to catch up? Division.***

Researchers have long questioned why wages and incomes in the U.S. South were so different from the rest of the country for so long. Although wages and incomes in the South have caught up, particularly since the Great Depression, the process seems to have been remarkably slow before the 1940s (see "Geography in Motion 1: Overcoming Distance in North America").

Before the New Deal, the southern labor market was isolated from the rest of the country, with large wage gaps. Yet, there was little migration out of the southern states, even among African Americans who suffered the lowest wages and the most social discrimination and political disenfranchisement. Before the 1920s demand for low-skilled labor in the industrializing North was satisfied by migrating workers from Europe. Employers in northern factories showed a preference for low-skilled European immigrants over blacks, and the abundance of European migrants made it affordable to indulge this preference. This would change with the restrictions on movement across borders, tightened in the 1930s.

Until World War II, there were few established flows of either information or labor between the South and the North. Given the cumulative dependence of migration corridors, this impeded the movement of low-skilled workers of all races out of southern states. Southern workers found opportunities by moving westward.

Even when the flows of migrants from the South to the North began to grow, wage and income differences persisted. Scholars explain that the Great Migration of rural southern blacks to northern cities involved a disproportionately educated segment of the population. After World War II, the selective migration of African Americans moderated, with return migration associated with economic growth in the South.

With the gradual buildup of information and migration corridors between North and South, the elimination of legal racial discrimination in the wake of the civil rights movement, and the improvement in the education of African Americans students with the racial integration of schools, the wages and incomes in southern states gradually converged with those in northern states. Indeed, since the 1970s, labor migration between the North and the South and other areas of the United States has been a safety valve easing economic pressure during recessions. The differing impact of economic downturns across areas of the country have spurred large movements of workers from states where the economy was contracting to other, more prosperous areas. In the early 1990s, a sizable number of workers migrated from the Northeast to states in the South.

Sources: Rosenbloom and Sundstrom 2003; Margo 2004; and Vigdor 2006.

added 36 percentage points to consumption growth.[71]

Remittances from internal migration have a positive impact in other developing regions as well. In Bangladesh temporary migrants to Dhaka send up to 60 percent of their income to family members in their home places, covering a large share of the household budgets of migrant-sending households. In several Latin American countries remitted earnings not only augment the consumption of receiving households, but also lower the incidence of poverty in their communities[72] and increase the investment in education.[73] And in East Asia remittances from migrant family members increase investment in education and capital-intensive household enterprises in the Philippines.[74] In China the ministry of agriculture expects that the remittances of migrant workers will soon be more than earnings from agriculture for rural households.

For the communities left behind, internal migration is critical for overcoming poverty and smoothing household consumption in the wake of unexpected shocks. Indeed, World Development Report 2008 *Agriculture for Development* identifies internal migration as an important "pathway out of poverty" for rural households that can no longer rely solely on agriculture for their livelihood.[75] Even in situations in which supporting the permanent resettlement from villages to cities may be fairly costly, within the means of only better-off households, seasonal and temporary migration can more immediately mitigate downward shocks to consumption in rural areas than even the best-designed social assistance program.[76]

Members of rural households in Bangladesh migrate to cities to diversify household income when harvests are lower than expected. Internal migration in China raises the consumption of households in migrants' home communities, and the increase is greater for poorer households. And the out-migration of Chinese workers allows those who remain in rural areas to work more. The gains associated with internal migration increase housing wealth and consumer durables as well as agricultural production.[77] Indeed, the selective phenomenon that determines who moves seems to work both ways. Those with higher academic achievement choose to migrate to jobs in China's cities, and people who are better at farming choose to stay.[78]

Pulled or pushed? The development benefits of migration are seen when people move voluntarily. Large numbers of people—particularly in the poorest countries—are also forced to move by deteriorating living conditions and conflict. People are "pushed" off their land when agriculture is in decline, by the pressures of population growth, and when

Table 5.4 Most migrants move for economic reasons, but many are pushed out by poor services

	Percentage of internal migrants reporting reason for migration		
	To seek employment or join family	For education, health, or better living conditions	For sociopolitical or other reasons
Malawi	95	1	4
Morocco	91	2	7
Romania	87	10	3
Ecuador	86	12	2
Nicaragua	84	5	11
Albania	82	11	7
Mozambique	81	4	15
Vietnam	80	7	13
Armenia	78	1	21
Tajikistan	78	10	12
Kazakstan	77	14	9
Bolivia	77	17	6
Dominican Republic	76	21	3
Cambodia	75	2	24
Paraguay	74	24	2
Guatemala	72	24	4
Bulgaria	71	28	0
Congo, Dem. Rep. of	69	6	25
Kyrgyz Rep	69	28	3
Madagascar	62	28	11
Bosnia & Herzegovina	55	1	43
Rwanda	54	5	41
Azerbaijan	44	5	52
Mongolia	41	28	30
Sierra Leone	23	3	74
Mauritania	23	74	4

Source: WDR 2009 team estimates using household survey data.
Note: "Sociopolitical" refers to different circumstances and events, depending on the country and year specified, that lead to involuntary internal displacement.

environmental change makes continued cultivation of certain areas no longer viable. Historically, droughts have had sudden and prolonged impacts on the distribution of the population, particularly in Sub-Saharan Africa[79] and South Asia.[80]

Another important "push" that propels internal migration—mundane, but no less critical—is the lack of adequate public services (see table 5.4 and box 5.8). In many developing countries, schools, health care centers, hospitals, and public and private amenities are located in areas of economic activity. With a concentration of economic mass, public services can be withdrawn from smaller towns and villages.[81] Several studies document the migration to large economic centers by people in search of better education and health services.[82] This movement, though voluntary,

BOX 5.8 *Migrating to economic density: rational decisions or bright lights?*

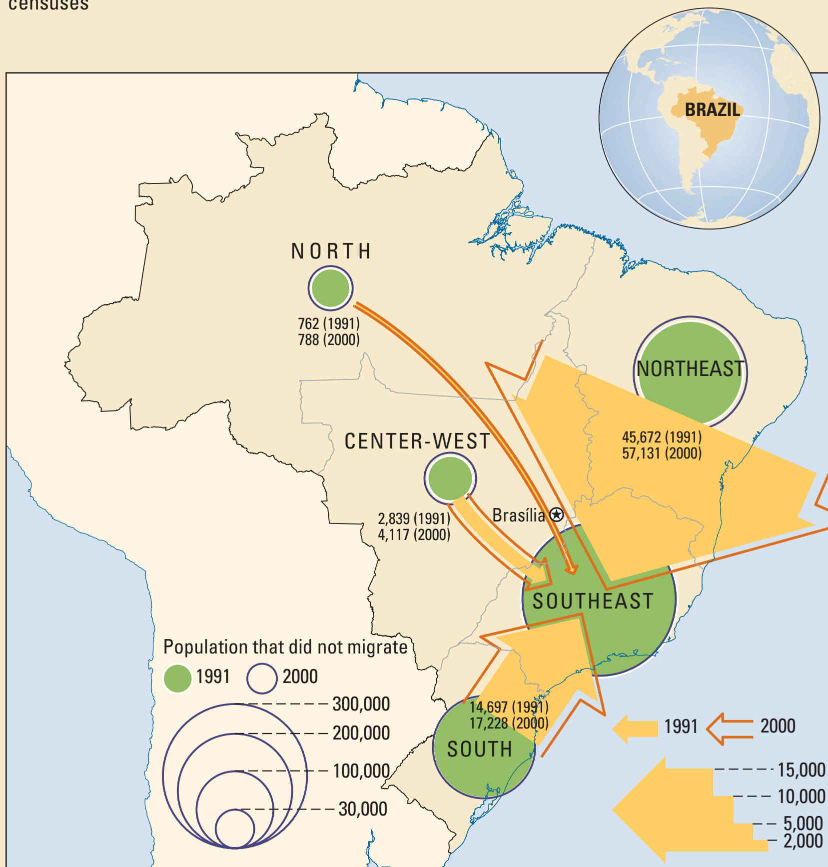
Twenty percent of poor men born in Brazil's Northeast—one of the country's lagging areas—now live in its prosperous Southeast. A large demographic shift occurred from villages to towns and cities in the 1970s, and from towns to cities in the 1990s.

Economists have long argued that migration decisions are motivated by the possibility of earning higher wages. But since many migrants do not find jobs after moving, this attraction may be irrational. Some policy makers in developing countries believe that rather than adding to the economy in their new neighborhoods, migrants subtract from them by worsening the problems of livability. This belief has resulted in deterrents ranging from disincentives to draconian regulations to limit the movement of people.

Recent empirical evidence from four decades of Brazilian census data shows something different. Working-age men migrated not only to look for better jobs but also to get better access to basic public services such as piped water, electricity, and health care. Results from models of migration behavior that focus only on the migrant's desire to move in search of better jobs can be biased, because places with better public services also have more job opportunities. Firms like to locate where workers would like to live. By ignoring the importance of public services, some econometric estimates may overstate a migrant's willingness to move in response to wage differences.

To determine how much public services matter, a rich data set of public services at the municipality level was combined with individual records from the Brazilian census to evaluate the relative importance of wage differences and public services in the migrant's decisions to move. Predictably, wage differences are the main factor influencing migration choices. For the better off, basic public services are not important in the decision to move. But for the poor, differences in access to basic public services mattered. In fact, poor migrants are willing to accept lower wages to get access to better services. A Brazilian minimum wage worker earning R$7 per hour (about US$2.30 in February 2008) was willing to pay R$420 a year to have access to better health services, R$87 for better water supply, and R$42 for electricity. Poor migrants are rational.

Brazilians move to the prosperous Southeast
Internal migration of adults, ages 25–35, based on reported region of birth in 1991 and 2001 censuses



Source: WDR 2009 team, based on census data from the Instituto Brasileiro de Geografia e Estatística.

Contributed by Somik Lall and Christopher Timmins.

BOX 5.9 *Too early to tell? The impact of African emigrants on Africa*

The brain drain is debated most heatedly for Sub-Saharan Africa. Concern is justified, but emigrants and diaspora groups have contributed much to Africa's development.

Early accounts of voluntary migration from Africa tell of small numbers of Africans going abroad to study in religious schools and monasteries in Europe in the 1700s. Many of these students translated the Bible into African languages. In doing so, they produced some of the earliest attempts to introduce written text to what were predominantly oral-language traditions. One such student, Jacobus Capitein, who emigrated from what would become Ghana to study in the Netherlands, is credited for spreading the use of the written word in his native country.

Another Ghanaian, Kwegyir Aggrey, from a later generation of emigrants, traveled to the United States to study at Columbia University. With the support of American philanthropists, he returned to Ghana to found the country's first nondenominational school, which would later become the University of Ghana. Many of the region's seats of learning have similar origins.

Most of Africa's independence leaders were part of what might have been termed a brain drain in the 1930s and 1940s. Kamuzu Banda, Jomo Kenyatta, Julius Nyerere, and others were from a generation of students who emigrated to the United States and Europe and formed plans to fight for independence.

The economic and social contribution of these emigrants to their countries of origin are difficult to quantify but impossible to deny, and have made all the difference to the development prospects of Sub-Saharan Africa.

Source: Easterly and Nyarko 2008.

is more likely to add to congestion costs in cities than to agglomeration benefits.

International brain drains—or gains? There is concern about the volume of skilled workers leaving Sub-Saharan Africa and the Caribbean. As a percentage of the total stock of highly educated people, the number of skilled emigrants looks high. On the whole, though, most skilled migrants to high-income countries come from the larger middle-income countries like Brazil and India. Migration prospects in these countries induce more human capital accumulation, increasing not only the number of skilled migrants but also the skills of the global workforce generally.[83] A "brain gain" is likely when the rate of emigration of skilled workers from a country is between 5 and 10 percent. Concern arises for the stunted development prospects of some countries in Sub-Saharan Africa, Central America, and the Caribbean, where the emigration of skilled labor is much higher. In 2000 the rate of skilled emigration from Sub-Saharan Africa was 13.1 percent, from Central America it was 16.9 percent, and from the Caribbean it was 42.8 percent.[84]

Critics of the "brain drain–brain gain" debate point out that it ignores real-world patterns of international migration. Skilled workers do not "drain away" as much as "circulate" among countries in the world economy. The benefits of attracting and retaining skilled people do not have to be distributed in a zero-sum game among countries. In addition to the large flows of international remittances, many skilled migrants work hard to return to their countries with improved prospects as entrepreneurs, armed with capital, new skills, and ideas. Several political, academic, and business leaders in developing countries began as emigrants (see box 5.9). Cross-country research on the determinants of economic growth has not found evidence of a negative impact associated with the emigration of people with skills.[85]

Practical policies for managing migration

Not everyone chooses to migrate. Moving can be a costly, difficult, and disruptive decision. Indeed, a generation of research shows that the movements of labor—from villages to towns, between towns and cities, across borders in the same region, and from poor to distant wealthy countries—are selective. Migrants are not the same as people who stay behind. And while many individuals move in search of a better job or higher education, many others—particularly those in the rural areas of low- and middle-income countries—seek basic schooling and health care for their families. But this migration is economically inefficient. By overlooking the provision of basic social services in outlying areas—such as schools, primary health centers, and even basic public infrastructure—policy makers can unwittingly influence the choice to migrate, motivating households to move for reasons other than to exploit economic opportunities. While the move is welfare improving for these families, the economy may end up worse off.

By focusing more attention on providing education, health, and social services in outlying, economically lagging areas,

Table 5.5 What does a practical policy toward migration do? Recognize agglomeration benefits.

	Migration of unskilled labor	Migration of skilled labor
Internal migration	**Neutral,** but discouraging if agglomeration economies are unlikely. Policies should encourage migration for economic reasons and discourage migration in search of public services. Remove explicit and implicit restrictions as well as place-based service entitlements.	**Strongly supportive,** particularly to capture agglomeration gains where these are likely. Invest in services in peripheral areas to build portable human capital. Increase the flow of labor market information, so migrants arrive better informed of employment possibilities.
Cross-border migration within regional neighborhoods	**Supportive,** particularly for welfare and diversification gains from remitted earnings.	**Supportive,** where markets in regional neighborhoods are integrated and gains from agglomeration can spill over to the sending country.
Cross-border migration outside regional neighborhoods	**Supportive,** particularly for welfare gains from remitted earnings.	**Neutral,** as there is a possible foregone agglomeration from an accelerated brain drain, but possible gains from knowledge transfer of return migrants, and strong incentives for human capital investment from the prospect of migrating.

Source: WDR 2009 team.

governments can go a long way toward eliminating some of the reasons households are pushed to migrate. These efforts can, in turn, improve the quality of migration. Labor mobility that leads to greater concentration of people and talent in locations of choice will contribute more to agglomeration benefits than it adds to congestion.

The impact of policies on the welfare of migrants and the broader economy should fuel skepticism of attempts to restrict labor mobility. Encouragingly, there is a growing shift away from restrictions on population mobility and toward facilitation and encouragement. But other than allowing people to move and settle where they will earn the highest return on their labor and human capital, can governments do more to help capture the benefits of agglomeration?

Migration results from forces that "pull" as well as those that "push" individuals to leave. One big pull is the agglomeration economies in cities. But people are also pushed out by the lack of social services. In Africa disparities in school enrollment and neonatal care between cities, towns, and villages are attributable to the near absence of schools and health facilities in outlying areas.[86] Evidence from Central Asia shows that in the isolated parts of Tajikistan, schools are inadequately heated, drinking water is scarce, and arrangements to clear garbage and sewage are lacking.[87] In China the government is emphasizing a more even distribution of basic services to address the gaps in living standards between the coast and the interior. By prioritizing education, health, and social services in outlying areas over other investments, governments can eliminate some of the reasons households are pushed to migrate. These efforts can shape the composition of migration in a way that growing concentrations are more likely to add to agglomeration economies, rather than pile up congestion costs.

By recognizing the selective nature of voluntary labor migration, and the implications of increasing returns to scale, the economic arguments and empirical evidence in this chapter support a more positive view of labor mobility than that held by policy makers in poor and middle-income countries in the past. From this perspective, a practical policy stance will differ according to the human capital endowment of prospective migrants and whether the agglomeration spillovers from clustering talent can be captured and taxed by governments (see table 5.5).

All the evidence on the benefits of education suggests that policy makers should be concerned about the rapid loss of talent to countries far outside their regions. But the potential costs in forgone human capital from outright restrictions on skilled emigration are high. A far more practical and sustainable policy stance would operate along two tracks. First, raise the private, individual costs of acquiring human capital to match the private individual returns from migration of skilled workers abroad. Second, reap the benefits from diaspora communities in the world's prosperous places, by encouraging their economic and political participation at home, and by making it easy for them to retain citizenship, vote, and eventually resettle if they so choose.