22

International Migration and Development

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1 Introduction

Migration is a complex and dynamic process that impacts both the communities where migrants originate and those where they live. Historically, international migration played a significant role in the integration of the European economies with those of the overseas countries of European settlement, but since 1950, international migration has had a relatively minor role in promoting the integration of the developing countries into the world economy, especially when compared with the role of international trade. Although international migration continues to be highly regulated, international migration flows continue to increase and diversify. The persistence of large wage differences between countries, particularly between the high-income countries and the rest, and of demographic imbalances caused by the low or even negative growth of the native labor forces of developed countries coupled with the continued growth of those of developing countries suggest that international migration will continue to be an important factor in the world economy for decades to come. Therefore, it is relevant to understand the role that international migration can play in increasing human welfare and, possibly, in enhancing development outcomes.

Economists have long grappled with questions about migration, such as what propels it, why it is selective and what are its economic implications. Although there is no overarching theory of migration that fits every instance

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of this complex phenomenon, economic thinking has contributed the major guiding frameworks for assessing how migration and the development process interact. Two major effects of migration have long been the object of considerable research: (a) the selectivity of migration and its impact on wages, and (b) the potential of remittances to improve livelihoods and promote productive activities. These two topics are the focus of this chapter.

Recently, attention has been paid to more intangible effects of international migration, such as its relationship with trade (Felbermayr et al. 2015; Tadesse and White 2015), with the diffusion of knowledge (Bahar and Rapoport 2016) or with the generation or directionality of foreign direct investment (Kluger and Rapoport 2005 and Kluger and Rapoport 2007; Leblang 2011). However, much of this research is still being developed and has touched only lightly on the implications for developing countries. There has also been increasing attention paid to the role of expatriate populations or "diasporas" in promoting or supporting development at home, mainly as a result of government efforts to engage their expatriate populations (Plaza and Ratha 2011; Plaza 2013; Newland and Plaza 2013). However, most of the literature on diasporas and development is descriptive and, largely because of the relative recency of the interventions described, their rigorous evaluation is still lacking. For these reasons, this chapter will not cover these emerging topics.

Development is a process that can take decades or even generations to enrich an economy and ensure a satisfactory level of welfare for the whole population. Furthermore, the concept of development itself has been changing. Whereas it was once equated with increases in gross domestic product (GDP) or income per capita, there is now a more holistic view of what it entails—a view that encompasses a wide spectrum of improvements in people's well-being. With regard to international migration, a common view among governments has been that development, by resulting in the availability of more and better jobs in a country, is the only way to reduce migratory pressures. However, migration scholars have pointed out that the development process itself may generate international migration by, among other things, raising incomes and allowing more people to afford the costs of moving to another country. It has also been generally thought that when countries become "developed", the international migration of their citizens ceases. Until now, there has not been a long enough time series of estimates of net migration by origin and destination to find out how realistic these views are. This chapter presents a new set of such net migration estimates covering the period 1960–2010. They corroborate the importance of "South-to-North" migration, show that low-income countries experience very low net outflows of international migrants in comparison with those experienced by middle-income

countries (i.e. they corroborate that poverty hinders participation in international migration), and they reveal that migration among developed countries, far from ceasing, has been on the rise.

This chapter presents, first, an overview of global migration trends, including new estimates of net migration by origin and destination since 1960; it then describes the main tenets of the economic theories most influential in guiding research on international migration and development, and proceeds to review the results of research on the linkages between the selectivity of international migration and wages, and on the impact of remittances in enhancing development outcomes in developing countries.

2 International Migration Since 1960

An important obstacle in elucidating what the impact of international migration may be is the paucity of complete and reliable statistics on the phenomenon. Even today, many countries fail to produce statistical information on the flows of international migrants. Consequently, to obtain a global view of migration trends, one has to resort to indirect evidence. Population censuses, though usually carried out in most countries only once every decade, provide information on the migrants residing in a country, most often in the form of numbers of foreign-born. Since persons born abroad must have moved into the country of enumeration at some point in their lives, they qualify as international migrants.[1] Using those data, the United Nations Population Division (UNPD) has been producing comprehensive sets of estimates of the total number of migrants (i.e. the migrant stock) present in each country at specific points in time.[2]

Census data on the number of foreign-born persons classified by country of birth provide information on the origin of migrants. From a compilation of those data from all censuses carried out since 1955, the World Bank has produced estimates of the number of international migrants classified by country of origin and country of destination for the years 1960, 1970, 1980, 1990 and 2000. The United Nations Population Division has produced similar estimates for the years 1990, 1995, 2000, 2005, 2010 and 2015. From those data it is possible to estimate net migration by origin and destination over each decade from 1960–1970 to 2000–2010. The estimation procedure used is

[1] Note that in cases where countries split apart, people who moved as internal migrants before the split become international migrants after the split when the place of birth is used to identify international migrants.

[2] See United Nations Population Division (2005 and 2015a).

based on the fact that the number of foreign-born persons in a country changes because of: (a) the net addition or subtraction of foreign-born persons through migration, and (b) the deaths of foreign-born persons in the country. By estimating the latter, it is possible to estimate net migration flows.[3]

2.1 The Stock of International Migrants

Estimates of the global number of international migrants show that it doubled from 1960 to 1990, passing from 75 million to 153 million, and that it reached 245 million in 2015 (Table 22.1). In 1991, when the former USSR disintegrated into 15 independent states, the number of international migrants identified by place of birth increased markedly because people who had been internal migrants within the USSR became international migrants virtually overnight. For estimation purposes, this increase was backdated to 1990 and is presented separately in Table 22.1. The global estimates of the migrant stock show that there has been an increasing concentration of international migrants in developed countries. In 1960, the number of international migrants in developing countries (43 million) surpassed that in developed countries (29 million) by a wide margin. By 1990, the developed countries excluding the USSR had about the same number of international migrants as the developing countries as a whole (61 million vs. 62 million), but by 2015, the number of international migrants in developed countries was about a quarter higher than in developing countries (122 million vs. 98 million).

At the regional level, Asia has hosted the largest number of international migrants since 1960, followed by Europe and Northern America[4] (if one dis-

[3] If the number of foreign-born persons living in a country at time t_0 is FB_0 and that at time t_1 is FB_1, then:

$$FB_1 = FB_0 - D + NM$$

where D represents the deaths to the foreign-born over the period t_0–t_1 and NM is the net number of foreign-born migrants arriving (or departing) during the period t_0–t_1. Then, NM can be obtained as follows:

$$NM = FB_1 - FB_0 + D$$

Because the full matrix of net flows by origin and destination is estimated, one can obtain for each country not only the net migration of the foreign-born but also the net migration of natives by summing over all the possible destinations of those natives. Hence, the overall net migration can be calculated for each country.

[4] Northern America is the region composed of Bermuda, Canada, Greenland, St. Pierre et Miquelon, and the United States.

Table 22.1 Number of international migrants by major region, 1960, 1990 and 2015 (in millions)

Region	1960	1990	2015
World	75	153	245
Developed countries excluding the former USSR	29	61	122
Developing countries	43	62	98
USSR (Former)	3	30	24
Africa	9	16	21
Asia	28	40	70
Western Asia	4	14	38
Europe (excluding the former USSR)	14	28	58
European Union	13	25	53
Latin America and the Caribbean	6	7	9
Northern America	13	28	54
Oceania	2	5	8

Source: Estimates made by author from UNPD (2005, 2015a and 2017)

regards the former USSR in 1990). By 2015, Asia hosted 70 million international migrants, 38 million of whom were in Western Asia, where the oil-producing countries belonging to the Gulf Cooperation Council (GCC) are major magnets for migrant workers and Israel is an important country of immigration. In Europe, 53 million of the 58 million international migrants in the region were being hosted by members of the European Union, and in Northern America, Canada and the United States were jointly hosting nearly as many international migrants as the European Union (54 million). In Oceania, the number of international migrants had quadrupled since 1960, to reach 8 million in 2015, largely driven by immigration to Australia and New Zealand. In Africa, the number of international migrants had more than doubled between 1960 and 2015, from 9 million to 21 million, a good portion of the increase resulting from refugee flows within the continent. Lastly, the migrant stock in Latin America and the Caribbean had increased the least since 1960 and was a low 9 million in 2015.

2.2 International Migration Flows

Estimates of the decennial net migration flows between developed and developing countries are shown in Table 22.2. Note that most estimates are negative because they are presented from the perspective of the region of origin and represent a net population loss. The totals represent the overall net loss due to emigration from countries of origin but, because the numbers are net over a decade, they represent a lower bound for the number of people who might have migrated over that decade since persons who left and returned to

Table 22.2 Estimates of net migration between and among developed and developing countries, 1960–2010

Period	Developing to developed	Developing to developing	Developed to developed	Developed to developing	Total
Estimated net migration flow (in millions)					
1960–1970	−5.0	−5.2	−6.3	0.6	−15.9
1970–1980	−11.0	−6.7	−2.0	0.1	−19.5
1980–1990	−12.5	−8.4	−3.9	−0.2	−25.0
1990–2000	−17.3	−1.2	−4.0	1.5	−21.0
2000–2010	−22.5	−19.2	−7.0	−1.1	−49.9
Percentage female					
1960–1970	49.5	49.1	45.6	22.0	48.8
1970–1980	48.2	36.6	79.5	89.0	47.2
1980–1990	48.7	38.7	57.4	93.2	47.1
1990–2000	50.3	51.5	56.4	58.1	51.0
2000–2010	52.6	34.9	58.2	30.4	46.1

Note: The former USSR is excluded from the estimates referring to dates prior to 1990
Source: Estimates made by author on the basis of data produced by the World Bank (migrants by origin and destination) and the United Nations Population Division (2015b). The data from the United Nations Population Division were used to obtain estimates from 1990 onward

their country of birth within that decade would not be reflected in the net number. At the world level, the total net outflows presented in Table 22.2 would be balanced by net inflows to the countries of destination.

As Table 22.2 shows, total net emigration has been increasing from one decade to the next, passing from nearly 16 million in 1960–1970 to 50 million in 2000–2010. Except for the 1960s, net migration from developing to developed countries (also called "South-to-North" migration) has been the largest component of the total net outflow, accounting for at least half the total outflow from 1970–1980 to 1990–2000 and for 45% of the total during 2000–2010. This "South-to-North" migration is usually the main focus of studies assessing the impact of migration on development.

Net migration from developing countries to other developing countries, also called "South-to-South" migration, increased decade on decade from 1960 to 1990, but declined markedly in the 1990s as a result of major repatriations of refugees taking place during that decade. In 2000–2010, "South-to-South" migration rose sharply, to 19 million, not far behind the 23 million level reached by South-to-North migration.

Net migration between developed countries, which was the largest component of overall net migration in the 1960s, declined sharply during the 1970s, when the main labor-importing countries in Europe discontinued their guest-worker programs, but has been rising since then and involved a net movement of 7 million persons in 2000–2010.

Lastly, net migration from developed to developing countries has been the smallest component of overall net migration and has been positive during several decades, implying a return of people born in developed countries from their stay in developing countries, a movement that was common during the decolonization process of the 1960s and 1970s and that occurred in the 1990s when Russian-born populations in the developing successor states of the former USSR returned to the Russian Federation.

The participation of women and girls in international migration flows has been significant. Their share of overall net migration has fluctuated between 46% and 51%, respectively. They have accounted for close to half the net migration from developing to developed countries, and they have been a majority in the net migration from developed countries to other developed countries. A distinct underrepresentation of women and girls has been noticeable in "South-to-South" migration, especially during 2000–2010, when female migrants accounted for a low 35% of that net flow.

One problem with the classification of countries as "developed" and "developing" or "North" and "South" is that several countries in the global "South" have high income levels. It is therefore useful to consider net flows between groups of countries defined by income level according to the 2017 classification used by the World Bank. Table 22.3 shows the results. It is clear that, except for the low-income countries, the largest outflows from the other three groups of countries have been directed to today's high-income countries. The outflows from upper-middle-income countries to the high-income countries have tended to be the largest, but in 2000–2010, they were surpassed by those from the lower-middle-income countries. In the 1960s, the largest outflows were from some of today's high-income countries to other high-income countries, reflecting in good part the large migration of European workers to the labor-importing countries of Europe. Outflows from high-income countries to other high-income countries declined markedly during the 1970s but have been increasing since then. During 2000–2010, high-income countries are estimated to have gained nearly 6 million migrants from other high-income countries.

The net migration estimates by income grouping reveal that low-income countries are the least likely to experience large outflows of international migrants. Low-income countries have often been sources of refugees or asylum seekers. In the 1990s, the positive flows they experienced from countries with higher incomes were related to the repatriation of refugees taking place during that decade and from repatriations following the first Gulf War. In 2000–2010, the outflow of international migrants from low-income countries to upper-middle-income and high-income countries increased but was still a low 3.5 million.

Table 22.3 Net migration between and among country groupings defined by income level, 1960–2010 (in millions)

	From high-income countries	From upper-middle-income countries	From lower-middle-income countries	From low-income countries	Total
1960–1970					
To high-income countries	−8.35	−2.76	−1.92	−0.22	−12.85
To upper-middle-income countries	0.13	−0.58	−0.29	−0.08	−0.79
To lower-middle-income countries	0.11	0.47	−0.86	−0.98	−1.29
To low-income countries	0.34	−0.03	−0.44	−0.82	−0.96
1970–1980					
To high-income countries	−2.23	−8.40	−5.78	−1.17	−17.12
To upper-middle-income countries	0.14	−0.40	−0.37	−0.28	−0.86
To lower-middle-income countries	−0.13	0.34	−0.28	−1.08	−1.19
To low-income countries	0.10	−0.06	−0.02	−0.36	−0.34
1980–1990					
To high-income countries	−2.89	−8.50	−8.59	−0.99	−22.11
To upper-middle-income countries	0.19	−1.08	−1.08	−0.80	−2.73
To lower-middle-income countries	−0.28	0.15	1.17	−0.14	0.88
To low-income countries	−0.02	−0.05	−0.43	−0.54	−1.04
1990–2000					
To high-income countries	−3.23	−13.93	−7.39	−0.98	−25.52
To upper-middle-income countries	0.47	−0.42	−1.46	0.78	−0.63
To lower-middle-income countries	−0.04	2.19	1.49	0.19	3.84
To low-income countries	−0.04	−0.03	−0.35	1.94	1.52
2000–2010					
To high-income countries	−5.89	−14.95	−18.15	−2.43	−41.42
To upper-middle-income countries	−0.79	−0.66	−3.25	−1.03	−5.73
To lower-middle-income countries	−0.14	−0.21	0.81	−0.94	−0.48
To low-income countries	−0.03	−0.03	−0.04	0.62	0.53

Note: The former USSR is excluded from the estimates referring to dates prior to 1990. The totals for estimates from 1990 on do not exactly add up to the totals presented in Table 22.2 because some entries in the original data could not be classified by income level and were therefore excluded from the calculations presented in this table

Source: Estimates made by author on the basis of data produced by the World Bank (migrants by origin and destination) and the United Nations Population Division (2015b). The data from the United Nations Population Division were used to obtain estimates from 1990 onward

These estimates of net migration by income level provide some confirmatory evidence for the conclusion reached by the US Commission for the Study of International Migration and Cooperative Economic Development, which stated that "the economic development process itself tends in the short term to stimulate migration by raising expectations and enhancing people's ability to migrate" (Papademetriou and Martin 1991:221–2). Indeed, low-income countries, where the development process is lagging behind, are the least likely sources of international migrants, whereas countries where the development process is more advanced, including both middle-income and certain high-income countries that are considered as fully developed, are more likely to be important sources of international migrants.

2.3 Immigrants and Emigrants as a Percentage of the Population

In 2015, the global migrant stock represented just 3.3% of the world population, but whereas migrants in developing countries represented a low 1.6% of the total population of the developing world, those in developed countries accounted for 11.7% of their population. Few countries or areas had high proportions of international migrants. In only 38 of the 232 countries or areas of the world did international migrants constitute over 30% of the population and, with the exception of Saudi Arabia, all those countries had fewer than 10 million inhabitants. Regarding countries with at least 1 million inhabitants, international migrants constituted over 10% of the population in just 38 of them (Table 22.4). In contrast, the share of international migrants was below 3% of the populations of 90 countries.

Estimates of the emigrant stock for each country (i.e. the totality of persons born in that country who reside abroad) show that, in 2015, just 43 among the 158 countries with at least 1 million inhabitants had an emigrant stock equivalent to more than 10% of their population (Table 22.5). No country with more than 50 million inhabitants had an emigrant stock above 10% of its population, but among this group, Mexico had the highest percentage of emigrants, equivalent to 9.8% of its population. Among the 32 countries with populations ranging from 1 million to 10 million inhabitants and with an emigrant stock equivalent to at least 10% of their respective populations, 16 were successor states of countries that disintegrated after 1990 and, therefore, many of their emigrants had actually been internal migrants at the time of migration.

Table 22.4 Countries with more than 1 million inhabitants where the immigrant stock constitutes over 10% of the population, 2015

Immigrants as percentage of population		Immigrants as percentage of population	
Population from 1 million to under 10 million		*Population from 10 million to 50 million*	
United Arab Emirates	88.4	Saudi Arabia	32.3
Qatar	75.5	Australia	28.2
Kuwait	73.6	Canada	21.8
Bahrain	51.1	Kazakhstan	20.1
Singapore	45.4	Spain	12.7
Oman	41.1	Belgium	12.3
Jordan	41.0	Netherlands	11.7
Hong Kong	38.9	Greece	11.3
Lebanon	34.1	Ukraine	10.8
Switzerland	29.4		
Israel	24.9		
New Zealand	23.0	*Population over 50 million*	
Austria	17.5	Germany	14.9
Cyprus	16.8	United States	14.5
Sweden	16.8	United Kingdom	13.2
Ireland	15.9	France	12.1
Gabon	15.6		
Estonia	15.4		
Norway	14.2		
Croatia	13.6		
Latvia	13.4		
Libya	12.3		
Slovenia	11.4		
Belarus	11.4		
Denmark	10.1		

Source: United Nations (2015a)

Among the 11 countries with populations ranging from 10 million to under 50 million and having an emigrant population equivalent to at least 10% of their respective populations, 5 have been important sources of refugees and an additional 2 are successor states. That leaves just 4 countries (the Dominican Republic, Poland, Portugal and Romania) whose emigrants may have been responding mainly to economic opportunities abroad.

Among the countries with over 50 million inhabitants, Table 22.5 lists those with an emigrant stock equivalent to at least 4% of their respective populations. The list includes countries that have been and continue to be major countries of emigration, such as Bangladesh, Mexico and the Philippines, but also countries that are considered today to be major countries of destination, such as Germany, Italy and the UK. This outcome underscores the complexity of international migration: all countries experience inflows and outflows of foreign-born persons as well as inflows and outflows of natives.

Table 22.5 Countries with a population of between 1 million and 50 million with an emigrant population equivalent to at least 10% of their resident population and countries with at least 50 million inhabitants with an emigrant population equivalent to at least 4% of their resident population, 2015

Emigrants as percentage of population		Emigrants as percentage of population	
Population from 1 million to under 10 million		*Population from 10 million to 50 million*	
State of Palestine	76.2	Syrian Arab Republic	26.7
Puerto Rico	48.1	Kazakhstan	23.0
Bosnia and Herzegovina	46.7	Portugal	22.1
Albania	38.4	Romania	17.1
Jamaica	37.2	Somalia	14.4
Armenia	32.1	Afghanistan	14.4
Trinidad and Tobago	26.7	Ukraine	13.0
TFYR Macedonia	24.8	Cuba	12.4
El Salvador	22.8	Dominican Republic	12.4
Republic of Moldova	21.9	Poland	11.6
Georgia	21.2	Haiti	11.2
Croatia	20.4		
Lao People's Dem. Rep.	20.2	*Population over 50 million*	
Ireland	18.8	Mexico	9.8
Lithuania	18.6	United Kingdom	7.5
New Zealand	17.4	Russian Federation	7.4
Latvia	16.9	Myanmar	5.5
Lesotho	16.7	Philippines	5.2
Bulgaria	16.4	Germany	5.0
Belarus	15.7	Italy	4.9
Cyprus	15.3	Republic of Korea	4.6
Estonia	15.1	Bangladesh	4.5
Hong Kong	14.4	Turkey	4.0
Lebanon	13.6		
Mauritius	13.4		
Kyrgyzstan	13.0		
Paraguay	12.7		
Azerbaijan	11.9		
Serbia	10.9		
Nicaragua	10.5		
Eritrea	10.3		
Uruguay	10.1		

Source: Calculated from United Nations (2015b)

Some countries experience significant native emigration at the same time that they attract important inflows of foreign-born migrants. Achieving high levels of development does not guarantee the immobility of natives even if the number of those emigrating may diminish with higher development levels.

2.4 Types of International Migrants

The preceding discussion has characterized international migrants as foreign-born persons and as immigrants or emigrants depending on the country perspective used (country of destination or country of origin). However, both the literature on international migration and, perhaps more importantly, the governments setting rules on which international migrants to admit, distinguish different types of migrants. Based on the purpose for admission, four basic categories can be distinguished: (a) *settlers*, that is, persons admitted for the purpose of settling permanently in the country of destination; (b) *migrant workers*, that is, persons admitted specifically for the purpose of exercising an economic activity, usually of bounded duration; (c) *migrants for family reunification*, that is, persons admitted because they are close relatives of either citizens of the country of destination or of other migrants; and (d) *refugees*, that is, persons granted asylum owing to a well-founded fear of persecution. Nowadays, countries usually admit international migrants under several of these categories.

Most of the economic literature on migration focuses on "labor migration", a term that is generally left undefined. In a review of labor migration programs, Ruhs (2013) reports that 46 countries, 34 of which have high incomes, have special programs to admit migrant workers. All of them have at least one program allowing the admission of high-skilled workers, but 35—27 of which are high-income countries—also have programs allowing the admission of low-skilled workers. These 35 countries include 14 members of the European Union plus Norway and three of the countries of immigration (Canada, New Zealand and the United States) plus Israel, all of which also admit other types of migrants which, in many cases, constitute the majority of their migrant inflows. In Latin America, five countries—Argentina, Brazil, Colombia, the Dominican Republic and Venezuela—allow the admission of low-skilled workers but, although Ruhs provides no statistics on the numbers involved, they are known to be small. The remaining 11 countries that admit low-skilled workers are all located in Asia.

Indeed, the major countries of labor migration, in the sense that their migrant inflows are sizable and consist mostly of migrant workers, are located in Asia. The two major groups of Asian labor-importing countries are: (a) the members of the Gulf Cooperation Council (GCC)—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates—countries that began importing foreign workers in the late 1960s to develop their oil fields and whose economic expansion has relied and still relies heavily on a foreign labor force made mostly of temporary foreign workers under contract, and (b)

the rapidly developing countries of East and Southeast Asia, mainly Hong Kong, Japan, Malaysia, the Republic of Korea, Singapore and Taiwan, that, for both demographic and economic reasons, have been admitting low-skilled foreign workers since at least the 1980s to satisfy the labor demand in selected sectors of their economies. Because none of these countries considers itself a "country of immigration", they all enforce the temporary stay of migrant workers via systems of visas and work or residence permits that are not renewable in the country of destination. They thus enforce the "circular migration" of foreign workers, since those wishing to extend their period of employment abroad have to return to their countries of origin to restart the application process which usually takes a few months to complete. For most of the labor-importing countries of Asia, international migration has been a positive and, in many cases, a crucial factor in facilitating economic development.

In countries where migrant workers are not the main type of international migrant admitted, studies of labor migration usually focus on all migrants who happen to be economically active in the receiving country, irrespective of whether they were admitted specifically as migrant workers or not. The earlier literature on labor migration implicitly assumed that all migrant workers were male, and studies often do not make clear whether the data considered refer only to male migrants or to both sexes combined. When a gender perspective is adopted, it often means that only female migrants are considered. Comparative studies by sex are rare.

3 The Main Economic Theories on International Migration

3.1 The Neoclassical Theory of Migration

From the economic perspective, international migration is a mechanism to redistribute labor. Adam Smith viewed the migration of workers as caused by differences in the supply of and demand for labor in different locations. He sustained that in England the laws that hindered the poor from moving from one locality to another only served to maintain inequality between places. He argued therefore in favor of dismantling barriers to the free circulation of labor in order to permit the natural tendency of workers to move from low-wage to high-wage areas to express itself and, consequently, to facilitate not only the economic progress of both the areas of origin and those of destination but also that of the migrants themselves. This view underpins the neoclassical economic theory of migration (Sjaastad 1962; Harris and Todaro

1970; Todaro 1976), which posits that workers tend to move from regions with a labor surplus where low wages prevail to regions with labor deficits where wages are higher. Capital tends to move in the opposite direction. As a result of worker migration, labor eventually becomes less scarce at destination and scarcer at origin. In a perfectly neoclassical world, this process of "factor price equalization" (the Heckscher-Ohlin model) eventually results in the convergence of wages at the sending and receiving ends. According to this theory, therefore, in the long run, wages equalize and the incentive for migration disappears.

This neoclassical view of migration has its roots in attempts to explain why rural-to-urban migration has been a constituent part of the development process (Lewis, 1954; Ranis and Fei 1961). However, as the process of urbanization proceeded in developing countries, the premises of the theory were belied by the fact that rural-to-urban migration often continued even under conditions of rising unemployment in the urban sector. To make allowance for this outcome, Todaro (1969) and Harris and Todaro (1970) introduced the risk of not finding a job at destination and the costs of migration into the neoclassical model. According to the formulation of the Harris-Todaro model, people choose to move whenever the expected benefits of migration are higher than the costs involved. The costs can be tangible or intangible, including the costs of travel, job search, adaptation to a new environment and so on. The benefits of migration are measured in terms of net returns at the individual level discounted over a certain time horizon. Net returns are estimated as the difference between expected earnings in the country of destination and expected earnings in the community of origin. Expected destination earnings are the earnings at destination estimated on the basis of an individual's skills multiplied by the probability of that individual getting a job at destination. Similarly, expected earnings in the community of origin are the observed earnings multiplied by the probability of employment at origin. Net returns are summed over the time horizon discounted by a factor that reflects the greater utility of money earned in the present than in the future, and the sum is taken as an estimate of the benefits of migration (Sjaastad 1962; Harris and Todaro 1970; Todaro 1976; Massey et al. 1993). The subtraction of estimated costs leads to a measure of the expected gains from migration. This approach implies that migration's occurrence depends not only on wage differences between countries but also on differences in unemployment levels between the country of origin and that of destination. Furthermore, since expected earnings depend on an individual's characteristics (including human capital), factors leading to the selectivity of migration are explicitly taken into account. Lastly, any factor

that reduces the costs of migration tends to increase its likelihood of occurring. Empirical tests of the neoclassical model for the causes of migration support the premise that higher wages and better employment opportunities at destination compared to those at origin are incentives to migrate (Todaro 1980; Greenwood 1985; Pedersen et al. 2004). Todaro and Maruszko (1987) have also developed a model for undocumented international migration that adds to the original model the probability of being captured and deported as well as an "illegality tax".

3.2 The New Economics of Labor Migration

In the 1980s, a new theory known as the "new economics of labor migration" (NELM) was proposed to explain why migration often occurs despite lower expected income at destination than at origin and why migration often involves only temporary stays at destination. NELM focuses on the micro level, but instead of assuming that migration decisions are made by individuals acting largely on their own, it assumes that people act collectively, typically within households or families, not only to maximize expected income but also to minimize risks and to loosen constraints associated with a variety of market failures that are particularly common in developing countries where crop insurance markets, futures markets or unemployment insurance either do not exist or are beyond the reach of most people (Stark 1991). Thus, NELM assumes that households are risk averse and posits three hypotheses about the determinants of migration: (a) the insurance hypothesis, (b) the investment hypothesis, and (c) the hypothesis of relative deprivation.

According to the insurance hypothesis, households attempt to minimize risks to their economic well-being by diversifying the allocation of family labor (Stark and Levhari 1982). From this perspective, sending certain family members to work in another country where wages and employment conditions are largely independent of local economic conditions is a form of insurance against the deterioration of the latter.

According to the investment hypothesis, households use international migration and the remittances it generates to obtain the capital they need to increase the productivity of the assets they have or may acquire in the community of origin. Such a function of migration is of particular importance for households in developing countries where capital markets are weak, access to banking services is limited, particularly for lower-income people, and families without adequate collateral find it virtually impossible to borrow at reasonable interest rates.

The relative deprivation hypothesis posits that households send family members to work abroad not only to improve income in absolute terms but also to increase income relative to other households in a reference group (Stark and Taylor 1989; Stark 1991). Thus, if in a community the income of affluent households increases whereas that of poor households remains unchanged, the relative deprivation of the latter increases and, consequently, their incentive to participate in international migration rises as well, even if no change in the wages expected at destination occurs.

The new economics of labor migration (NELM) has important implications for the interrelations between international migration and development. First, it implies that migration can occur even in the absence of wage differentials between areas of origin and destination, since migration may be fuelled by the desires of households in the place of origin to diversify risks. Second, because there are strong incentives for households to engage in both international migration and local economic activities, an increase in the return to the latter may heighten the attractiveness of migration as a means of overcoming capital and risk constraints on investment in local activities. Therefore, successful economic development within areas of origin need not reduce pressures for international migration (Massey et al. 1993). Third, international migration will not necessarily stop once wage differentials between countries of origin and destination have been eliminated because, as long as other markets within countries of origin are nonexistent, imperfect or inaccessible, incentives for migration may continue. Fourth, governments of countries of origin can influence migration not only through labor market policies but also through those that shape insurance and capital markets. In addition, government policies and economic changes that modify the income distribution will change the relative deprivation of some households and will thus affect the incentives to migrate. In particular, when poor households in areas of origin do not share equitably in the income gains of other households, their propensity to send some family members abroad will increase.

3.3 The Importance of Networks

The focus of the new economics of labor migration (NELM) on the household or family group as the key decision-making unit in migration opened the door to the consideration of how having relatives abroad facilitated migration or, in the language of economics, reduced its costs. Research has

shown that migrants often rely on kin or friends already established in the country of destination to obtain accommodation, find a job or secure financial and other types of support during an initial period of adaptation. Having such support reduces the risks of and increases the returns to migration. The concept of a "migration network" was proposed to encompass all interpersonal ties that connect migrants, former migrants and non-migrants in areas of origin and destination (Gurak and Caces 1992; Massey et al. 1993). Network connections are a form of social capital that people can draw upon to gain information and material or psychological support to facilitate migration and the adaptation process. Migrant networks contribute to maintain the migration momentum even after the factors responsible for initiating the flow have lost their relevance. They play a role in making migration a diffusion process so that as time elapses migration flows become less selective in socioeconomic terms and migrants become more representative of the sending community as a whole. The realization that the ties between migrants who are already established in the communities of destination and persons remaining in the communities of origin as embodied by migration networks persist over time and may grow stronger as more people migrate has led to the concept of "transnational communities" and to a focus on the "diaspora", that is, the group of all expatriates from a given country whose prosperity abroad and acquisition of valuable skills may be leveraged to promote or support development in the countries or communities of origin (Plaza and Ratha 2011; Plaza 2013).

3.4 Migration Intermediaries

Karpestam and Andersson (2013) note that there is a strong focus in economics on the role of institutions in the development process and highlight the role of what they call "underground institutions" that facilitate unauthorized migration and the access of asylum seekers to Western democracies for a fee. Institutions are indeed important in shaping international migration and not just the unauthorized type. In the case of labor migration between Asian countries, for instance, a whole "recruitment industry" has developed to secure contracts for and transport low-skilled migrants to the countries of employment. In most cases, these intermediaries are regulated and, because they work for profit, have an interest in maintaining the flows of migrants. Estimates of recruitment costs show that they amount to a large share of the salaries that migrant workers expect to earn while abroad. Because paying those costs significantly reduces the ability of migrants to remit to their families and therefore hinders the

improvement of their families' welfare, there is interest in reducing those costs. Thus, recruitment costs are to be monitored under target 10.7 of the Sustainable Development Goals, a target that focuses on facilitating the orderly, safe, regular and responsible migration and mobility of people (United Nations 2016). If recruitment costs were to fall, they would make it possible for people with fewer initial resources to migrate and their remittances would then be more likely to produce a more equitable income distribution at origin.

4 The Effect of Migration and Migration Selectivity on Wages at the Macro Level

Neoclassical migration theory posits that labor migration will eventually reduce wage differences between origin and destination. Chiswick and Hatton (2002) review the evidence for wage convergence between the main European countries of origin and the transatlantic destinations of European migrants during the period of massive migration in the late nineteenth and early twentieth centuries. They conclude that in almost all instances, wages did converge, rising at origin and declining at destination, and that international migration was responsible for large shares of that convergence. In Portugal and Spain, however, the failure to industrialize led to a divergence of their real wages with respect to those of the countries of destination despite the effects that emigration had in the other direction.

Regarding the effects of post–World War II migration flows to developed countries, multiple studies have shown that they have had small effects on the wages in receiving countries (Chiswick and Hatton 2002; United Nations 2006). In the United States, immigrants have tended to concentrate in a few regions, possibly prompting natives to migrate elsewhere in the country, thereby disseminating the wage effects of international migration to the whole economy where those effects become diluted. In assessing wage impacts, it is crucial to consider low-skilled and high-skilled workers separate, since they are not substitutes for each other in production. Thus, if immigrants are mostly low skilled, they will tend to depress the wages of all low-skilled workers at destination but raise the returns of complementary factors, namely, high-skilled workers and capital. Immigration of predominantly high-skilled workers will tend to lower the wages of high-skilled workers but raise the wages of low-skilled workers and the returns of capital.

Borjas (1987) has explored the factors that lead to the selectivity of international migrants to the United States. In analyzing the wages of different

migrant cohorts in relation to those of natives as captured by the 1970 and 1980 censuses of the United States, he found that one of the important determinants of migrant selectivity was the difference between the income distribution in the country of origin and that in the United States. Provided there was a positive correlation between the earnings a worker might expect in the United States and the earnings he would expect in the home country (i.e. provided the worker's human capital was valued similarly in both countries), if the income distribution of the home country was less unequal than that of the United States, its emigrants would be positively selected in terms of human capital, whereas if the income distribution of the country of origin was more unequal than that in the United States, its emigrants would be negatively selected. However, these findings do not hold in other contexts. Grogger and Hanson (2011) note that migrants residing in OECD (Organisation for Economic Co-operation and Development) countries are positively selected in terms of schooling with respect to the population at origin. This positive selection is evident even with respect to developing countries where relative returns to skills exceed those in the OECD countries (i.e. where the income distribution is more unequal than in OECD countries). Their analysis shows that migrant selectivity is influenced by absolute differences in wage levels for skilled migrants rather than by relative returns. This result is consistent with the original formulation of neoclassical migration theory. In a world where wage-level differences matter, high-skilled workers from low-wage countries have a strong incentive to migrate, even if the relative returns to skill are high in the source country, a fact that explains why the brain drain is a real concern for developing countries. Grogger and Hanson also estimate the fixed costs of migration between 102 countries of origin and 15 OECD countries of destination and find that they are large, often being an order of magnitude greater than source-country earnings for low-skilled workers. This finding explains why international migration to rich countries is generally not an option for the poor in most developing countries. Lastly, Grogger and Hanson consider why skilled migrants tend to be attracted more by Canada and the United States than by European countries and find that the size of after-tax wage differences for skilled migrants is the dominant factor in explaining those migrant preferences.

Docquier et al. (2010), using data on migration flows to OECD countries during 1990–2000 classified by origin, destination and level of education, have analyzed the effects of immigration and emigration on the wages of non-migrants who are college graduates (high educational attainment) and non-migrants who completed at most a high-school education (low educational attainment). Their simulation uses an aggregate production model which assumes that: (a) in the long run, capital adjusts to the labor supply so that the

capital to labor supply ratio remains constant; (b) workers with high educational attainment and those with low attainment are combined in a labor function with constant elasticity of substitution selected within the range of 1.3 and 2 so as to be consistent with the estimates produced by most labor market studies; (c) immigrants and natives within the same education category are allowed to be imperfect substitutes; and (d) the human capital (skill) intensity has a productivity externality because immigration and emigration alter the skill composition in the economy. The results of a range of simulations show that immigration had zero or a small positive long-run effect on the average wages of non-migrant natives in the rich OECD countries.[5] With average values for the parameters involved, the positive effect ranges from zero in Italy to +1.7% in Australia. Emigration had a mild to significant negative long-run effect on the wages of non-migrants, which ranged from zero in the United States (because of its low emigration) to −0.8% in the UK and −0.7% in Portugal. That is, immigration tended to improve the income distribution of European countries, while emigration worsened it by increasing the wage gap between the highly educated and the less educated non-migrants. These results suggest that the increasing emphasis European countries have put on the admission of skilled migrants may be having deleterious economic effects in OECD countries of origin.

4.1 The Wage Implications of Migration When Whole Families Migrate

All the formulations of the neoclassical model of migration discussed earlier assume that people who migrate in order to work abroad do so individually, as they actually do when admitted under the types of labor migration programs described in Sect. 2.3. However, migration often involves the relocation of complete nuclear families, as is usually the case among permanent settlers admitted by the countries of immigration, such as the United States. Noting that families often include more than one worker, Mincer (1978) considered the effects of earnings differentials across space on family migration. In that context, one family member may anticipate gains in potential earnings, while another may expect losses after moving to the place of destination. Hence, the possibility of conflicting goals exists. Assuming that a family consists of at least two married adults, with or without dependent children, Mincer (1978) shows that migration can create "tied movers" or "tied stayers",

[5] The rich OECD countries in this case include all those in Western Europe plus Australia, Canada and the United States.

and that the difference between the individual's and the couple's optimal strategy depends upon the degree of correlation in the gains from migration of the spouses. Only when there is perfect correlation do the optimal strategies of the individual and the couple coincide.

Borjas and Bronars (1990) extended Mincer's approach to analyze the selectivity of migration to the United States. When married couples are considered, the selectivity effect that Borjas (1987) had documented for individuals weakens because some low-skilled migrants who would not have migrated on their own to a place with a higher level of income inequality than that at origin may do so if they are married to skilled persons. Such "tied" migrants with low skills are not likely to fare as well in the labor market of the area of destination and therefore may reduce the average wage of all migrants, as Borjas and Bronars (1989) show in the case of the migration of married couples to the United States.

5 The Impact of Remittances

Migrant remittances are the most direct and tangible benefit of migration. Globally, the amount remitted is estimated to have increased more than fivefold since 1995, from US$102 billion then to US$574 billion in 2016, of which US$429 billion went to low- and middle-income countries (United Nations 2006; World Bank 2017). Remittances as a share of GDP compare favorably with foreign direct investment (FDI) and official development assistance (ODA). In addition, remittances to developing countries have tended to be relatively stable and acyclical, that is, they have not fluctuated much with the business cycles (World Bank 2015). Therefore, remittances have been able to sustain consumption when economic adversity has hit. Whereas financial flows become volatile during financial crises, remittances, particularly those to countries with an expatriate population disseminated over various destinations, have shown much less year-to-year variability.

Remittances are a source of foreign exchange for the countries that receive them. Because of their relative stability, they can increase a country's creditworthiness and may allow it to obtain more favorable terms of debt service. Since 2009, the World Bank has included remittances in its assessment of how much debt a country may carry (Ratha 2013).

Migrant workers are probably the most consistent senders of remittances because they usually leave their families behind in the country of origin. The institution consisting of the varied money transfer services used by migrants to remit money home has been profiting from migration by charging rela-

tively high fees per transfer (World Bank 2006a, 2017). Given the growing ubiquity of efficient and cheap electronic transfer services, even in low-income countries, there is ample room to reduce those costs and thus increase the remittances actually reaching migrants' families. Transfer costs have been falling but the pace of decline is expected to accelerate as governments work to meet the goals they set for themselves in order to achieve sustainable development. Reducing remittance transfer costs is a means of meeting target 10.7 of the Sustainable Development Goals, making it a development priority (United Nations 2016).

According to the new economics of labor migration (NELM), migration can be a means of getting the funds necessary to make productive investments at origin. Studies focusing on the use of remittances, however, have usually found that they are mostly used for consumption. Other uses of remittances commonly reported in the literature include debt repayment, the education of children, the acquisition of land or housing, and the improvement of housing. Most of these studies focus exclusively on households with migrants abroad and on the use of remittance funds. Economists have noted that such an approach cannot reveal the true effect of remittances. For one thing, money is fungible, so that the right questions to ask are whether household income increases because of migration and how that increase changes the way the household allocates its total income, not just the part coming from remittances. Since data about how households behave before and after the migration of a member are usually not available, inferences about how household income allocation may have been impacted by migration can be made by comparing households with migrants abroad to similar households without migrants abroad. But even using this approach, the problem in trying to assess the impact of remittances is that neither migration nor remittances are random. Migration is selective. The characteristics or attributes of individuals, the households they belong to and their context, both observable and not observable, influence both who migrates and what migration's impacts are. The decision to remit and how much to remit almost certainly is shaped by the characteristics of both migrants and the households left behind. Therefore, in order to obtain unbiased estimates of the likely impact of remittances on any outcome, it is necessary to address the issue of endogeneity intrinsic to the relation between migration and remittances. The standard approach to address such endogeneity is to use appropriate instrumental variables in the statistical specification of the analytical models used (Taylor and Castelhano 2016). Although more studies are following this approach, it has not been standard practice in the past. For the most part, the studies cited in what follows use methods that explicitly address the endogeneity and selectivity issues involved.

5.1 The Use of Remittances: Consumption Versus Investment

Adams and Cuecuecha have analyzed the use of remittances in several countries. In all cases, they compare households receiving remittances with households that have similar characteristics and income levels but do not receive remittances. They consistently use estimation models that control for endogeneity and selection bias. They also make a distinction between consumption (in food, consumer goods and consumer durables) and investment, which includes expenditures in education and in the acquisition or improvement of housing. Their findings support the view that remittances can lead to higher investment in human capital (education) and physical capital (housing).

Studying Ghana in 2005–2006, Adams et al. (2008a) find that any differences in the marginal spending behavior between remittance-receiving and non-receiving households are explained completely by the observed and unobserved characteristics of households. In contrast with other studies, which find that remittances are spent disproportionately on consumption or investment goods, Adams et al. conclude that households receiving remittances in Ghana do not spend more at the margin on food, education or housing than similar households that do not receive remittances. In a second study carried out five years later, Adams and Cuecuecha (2013) find that households receiving international remittances in Ghana spend less at the margin on food and more on education, housing and health than they would have done had they lacked remittances. Receipt of remittances also reduces the likelihood of their being in poverty.

In Guatemala, Adams and Cuecuecha (2010a) find that, in comparison with what they would have spent in the absence of remittances, households receiving international remittances spend less at the margin on food and households receiving any remittances, whether from internal or international migrants, spend more at the margin on education and housing. In contrast, in Indonesia, households receiving remittances in 2007 spent more at the margin on food and less on housing compared with what they would have spent in the absence of remittances (Adams and Cuecuecha 2010b). This pattern of expenditure arises because households receiving international remittances in Indonesia are poorer than other types of households and have therefore less capacity to invest. In these circumstances, international remittances had a large statistical effect on the reduction of poverty.

Yang (2006) uses panel data for households in the Philippines gathered before and after the 1997 Asian financial crisis to analyze the effects of a sudden increase in remittances. The crises brought about a devaluation of the

Filipino peso against most of the currencies earned by Filipino migrants abroad. Consequently, the remittances received by most households rose in local currency. Yang found that households receiving higher amounts of remittances increased their expenditures on education, reduced the hours worked by children aged 10–17, increased the hours worked by the self-employed members of the household and were more likely to start relatively capital-intensive enterprises in transportation, communication or manufacturing. The increase in remittances had no significant effect on consumption.

Woodruff and Zenteno (2007) examine how international remittances influenced the capital invested in 6044 small enterprises in urban Mexico in 1998. Most of those enterprises were very small: 60% had no hired employees and an investment below US$1500. Woodruff and Zenteno estimate that international remittances, principally from the United States, accounted for more than a quarter of all capital invested in small and micro-enterprises in Mexico. In regions of Mexico with the highest rates of migration to the United States, that share increased to 40%.

5.2 The Impact of Remittances on Agricultural Productivity

In rural areas where liquidity or risk constraints prevent households from making productive investments, sending a migrant to earn cash abroad may permit the household to boost productivity on the family farm. Productivity impacts, if they materialize, are unlikely to be immediate, since in the short run the family loses a worker. Some time may pass before the household accumulates sufficient capital to make productive investments and adjusts in other ways to the loss of labor. Taylor and Lopez-Feldman (2010), studying the effect of migration from rural Mexico, find that households with migrants abroad in a given year earn significantly higher returns on their land in later years than households that did not have emigrants. The impact varies according to when the migration occurred. Effects are small after one or two years and peak at seven to ten years after the migration occurred. This study shows that the effects of remittances on productivity may take some time to accumulate. Therefore, taking account of time since migration is important in assessing its economic impact. The study also suggests that migration competes primarily with local wage work, altering the composition of rural incomes away from local wages and in favor of migrant remittances. The effect of migration in raising overall incomes depends critically on other household assets, particularly landholdings. In households without migrants in the United States, the returns to land

are lower but the education of the farmer plays a more important role in improving overall income, primarily via work in off-farm activities.

In the rural areas of Burkina Faso, Wouterse and Taylor (2006) found that remittances from intercontinental migrants, by increasing household income, increased livestock production but decreased participation in more labor-intensive staple production and non-farm activities among members of the households that migrants left behind. The positive effect of intercontinental migration on livestock production suggests that remittances enable households to overcome entry barriers resulting from missing and imperfect credit markets. The negative effect on staple production and non-farm activities is consistent with a missing or imperfect labor market in rural areas, coupled with the loss of household labor because of migration. Households with intercontinental migrants abandon or choose not to engage in activities that compete for household time and produce lower returns compared to those from intercontinental migration.

Rozelle et al. (1999) and Taylor et al. (2003) find that internal migration from rural areas in China reduces crop production because of the loss of labor but remittances offset that effect by providing increased access to cash. Benjamin and Brandt (1998) find evidence that participation in rural-to-urban migration in China loosens risk constraints on farm investments by rural households.

5.3 The Effect of Remittances on Household Income

Taylor (1992), Taylor and Wyatt (1996) and Taylor et al. (2003) find evidence that migrant remittances have indirect effects on household incomes, consistent with the new economics of labor migration hypothesis that they loosen constraints on production. In Mexico, Taylor and Wyatt (1996) find that a US$1 increase in remittances increases household income by US$1.85, that is, remittances generate an indirect effect of US$0.85 per dollar remitted. They also find that the indirect effects of remittances are higher in households with non-tradable (ejido) land rights, which are likely to increase the demand for complementary inputs that can be financed by remittances. In China, Taylor et al. (2003) found that each yuan remitted by a migrant is associated with 1.36 yuan of additional crop income, compensating for the loss of scarce family labor that migration entails.

Just as remittances can boost household income over and above their actual value, so can they reduce it when they disappear. Taylor and Filipski (2014) find that every dollar of remittances lost during the recession caused by the

financial crisis of 2007–2008 reduced household income in rural Mexico by US$ 1.73.

5.4 Remittances and the Alleviation of Poverty

Adams and Page (2005) find that both international migration and international remittances correlate with lower levels of poverty at the country level. They estimate that, on average, a 10% increase in the share of international remittances in a country's GDP reduces by 1.6% the prevalence of poverty. In Ghana, Adams et al. (2008b) find that remittances reduce poverty by a large amount and that the reduction is greater for households receiving remittances from international migrants (88%) than for those receiving remittances from internal migrants (69%). They also find that both types of remittances increase income inequality. In Nepal, the World Bank (2006b) estimates that the increase in migrant remittances between 1995–1996 and 2003–2004 accounts for about a third of the reduction in poverty that took place during that period. In Lesotho, Gustafsson and Makonnen (1993) estimate that, in the early 1990s, if the remittances sent by migrants working in the South African mines had stopped, poverty in Lesotho would have increased by 15%.

López-Córdova (2005) finds that in rural Mexico remittance receipts have little or no effect on the proportion of households in extreme poverty, but they reduce the share of households in the next level of poverty. This result is consistent with the view that migration, as a costly endeavor, may not be a viable option for the poorest. Nevertheless, it does relieve poverty for those who can afford to migrate.

Reverse causation is a serious concern in trying to assess the impact of remittances on poverty. If remittances serve as a type of household insurance against worsening economic conditions, when those conditions arise, remittances will increase and will therefore be positively correlated with poverty. Omitted variables can also lead to a misinterpretation of the relationship. Sound macroeconomic policies, for instance, may both promote a reduction of poverty and attract more remittances intended for investment, so that poverty and remittances would be negatively correlated, without remittances being a cause of declining poverty. Yang and Martinez (Yang and Martínez 2006) use the unique natural experiment that the Philippines underwent after the 1997 Asian financial crisis to disentangle the relation between poverty and remittances. Because Filipino migrants work abroad in a variety of countries and the currencies in which they are paid gained value against the Filipino peso by different amounts after 1997, the sudden, heterogeneous and exogeneous changes in exchange rates allowed the estimation of the resulting impact of remittance increases on household income and poverty in the

households that the migrants left behind. Yang and Martínez estimate that a 10% increase in remittances over the pre-crisis level produced a drop of 2.8 percentage points in the poverty rate of households with migrants abroad. Furthermore, because Filipino migrants going to specific countries tend to originate in specific regions of the Philippines, the size of the remittance shocks induced by different exchange rates varied by region. In regions with more favorable mean exchange rate shocks, aggregate poverty rates, not just those among households with migrants abroad, also declined, implying that the increase in remittances had beneficial spillover effects on households without migrants.

5.5 The Effects of Remittances on Children's Education

As noted already, from the perspective of human capital, improving children's education is an investment. Hence, to the extent that the additional income accruing to the household because of remittances is spent on education, it may be considered an investment in the expectation of increased future productivity. As Taylor and Castelhano (2016) note, migration can affect spending in children's schooling in three ways: (a) by increasing overall household income via remittances so that the household can afford to spend more in education; (b) by changing incentives if, for instance, it is perceived that more education will lead to better earnings either at origin or abroad; and (c) by reducing the ability of the household to supervise children or by changing the opportunity costs of attending school if children are expected to perform more tasks than before the migration of a family member occurred. Because these potential effects can run counter to one another, it is difficult to isolate them econometrically.

In a study of the Dominican Republic, Amuedo-Dorantes and Pozo (2010) find that remittances increase the probability of school attendance among children in households with migrants abroad, especially for those attending secondary school and not being the oldest child in the family. In rural Mexico, Lopez-Cordova (2005) finds that schooling outcomes are mixed. Remittances increase school attendance for 5-year-olds but have no significant effect for 6–14-year-olds, and decrease attendance for 15–17-year-olds. These results confirm the hypothesis that returns for Mexicans having completed high school education but no more are low in the United States relative to Mexico and, therefore, it is rational for children who intend to migrate to the United States when they grow up to drop out before completing high school.

In El Salvador, in 1997, when 15% of all households received international remittances, Cox-Edwards and Ureta (2003) found that remittances had a much larger impact on school retention rates than other types of income. Remittances lowered the hazard that a child would drop out of elementary school by 54% in urban areas and by 14% in rural areas. Acosta (2006 and 2011), analyzing the 1998 data for El Salvador, underscored the importance of considering outcomes by sex. He found that both boys and girls under 14 years of age were more likely to be enrolled in school in households that received remittances than in those without that source of income. Remittances also increased school attendance and reduced labor force participation among girls aged 14 or over but had no significant effect on the schooling or labor activities of boys of the same age. A more recent study by Jakob (2015) using data for El Salvador referring to the period 2004–2012 and focusing on children aged 6–19 years old shows that, when the analysis is carried out on the data organized as yearly cross-sections and using instrumental variables similar to those used in other studies, the effects of migration and remittances on school enrollment are negative, implying that they reduce enrollment. He concludes that these findings are biased because of the use of weak instrumental variables and the lack of controls for changes over time. When he uses a sample stratified by wealth and made to imitate panel information so that changes over time can be controlled for, the effect of having a migrant abroad becomes significant and positive in enhancing overall school enrollment and remittances become significant in increasing school enrollment in private schools.

5.6 An Overall Assessment of the Impact of Remittances on Development

This brief review of selected research on the impact of remittances illustrates the fact that, although the empirical literature on those impacts is large and varied, few firm conclusions can be derived from it. Adams (Adams Jr. 2011), for instance, after reviewing 50 empirical studies, concludes that remittances generally contribute to reduce poverty in the countries of origin of migrants but that they can have detrimental effects on their labor supply, education and economic growth. In a previous review (Adams Jr 2007), he had concluded that remittances tended to be spent less on consumption than on education and housing and that households receiving remittances were more prone than households without remittances to engage in entrepreneurial activities. Although there is some truth in these generalizations, the main message is that the impacts of remittances are conditional, varying according to place, time and context. Furthermore, the impacts of remittances go beyond the remittance-

receiving households and reshape the migrant-sending economies over time. Households receiving remittances tend to spend their income locally, stimulating local economic activity and creating multiplier or spillover effects that alter outcomes for households lacking either migrants abroad or remittances. Some of these spillovers may be positive, such as increasing the demand for locally produced goods or services, and some may be negative, such as pushing up prices. Because approaches to detect the effect of remittances often depend on a comparison of outcomes for households with migrants and those without migrants, to the extent that spillover effects make the latter group experience similar outcomes as the former, it may be impossible to detect the true overall effect of remittances. Furthermore, just as the impact in remittance-receiving households may evolve over time, so may the spillover effects. Any study that uses data from a single period to examine the general-equilibrium effects of migration risks missing important dynamic impacts. To understand the full impacts of remittances, we need to see how the economic conditions of a household or of individuals change over time in response to the influx of remittances and to other economic conditions (Taylor and Castelhano 2016).

One important insight provided by the new economics of labor migration (NELM) and confirmed by research is that failures in credit markets are a barrier for rural households and low-income households in the urban areas of developing countries to engage in productive investment. One way to improve accessibility to credit for all households is to promote the channeling of remittances through banking institutions, credit unions or micro-finance institutions that can offer savings accounts to the recipients of remittances and use the accumulated funds to provide loans for those who wish to engage in productive investment. In 2005, a number of micro-finance institutions entered the remittance market by offering remittance transfers to their clients. Mata (2009) shows that by 2006, the fact of having entered the remittance market had had a positive effect on the savings to assets ratio of micro-finance institutions, indicating that, by channeling remittances, they were indeed being able to attract more savings.

In sum, although remittances play an increasingly vital role in securing and actually improving the livelihoods of millions of people in the developing world, it is unlikely that migrants and remittances alone can trigger sustained national development and economic growth. Remittances alone cannot address structural obstacles to development, such as misguided macroeconomic policies, deficient infrastructure or legal insecurity. The potential of international migration to facilitate the development process can best be unleashed when governments manage to establish a development-friendly environment, with a stable economy and institutions that facilitate entrepreneurship.

6 Conclusion

This chapter has reviewed some of the consequences that international migration has on economic outcomes. In the receiving countries of the developed world, most of which have been increasingly selecting migrants on the basis of skills, the impact of recent migration on wages has tended to be small and largely beneficial. Because skilled persons seek high absolute wages, rich countries are magnets for skilled personnel, often to the detriment of the countries of origin, particularly developing countries with small populations where the stock of skilled persons was small to start with. This problem is of long standing and has prompted the adoption of measures to reduce or palliate the loss of skilled workers from the most affected developing countries, with emphasis in the area of health. Although, it is generally accepted that the emigration of skilled workers can have more negative consequences on countries of origin than that of unskilled workers, a systematic assessment of those consequences has not been done. It has been pointed out, however, that even if skilled workers remained in their countries of origin, local conditions would prevent them from making the contributions that they are potentially capable of. This point is crucial: for the beneficial consequences of international migration to reach their full potential in countries of origin, it is necessary that those countries offer a propitious environment. Otherwise, although migration can help remove some of the obstacles to improve livelihoods and productivity, such as the lack of insurance or credit markets, it cannot by itself address all the constraints typical of underdevelopment.

As this chapter has shown, the high levels of migration directed from middle-income countries to high-income countries have led to a boom in global remittances which have been contributing to improve the livelihoods of millions of people. The studies reviewed show that remittances not only ensure a satisfactory level of consumption but are also used to improve agricultural productivity or to make investments in small or microenterprises. In several contexts, remittances increase the school enrollment of children in households with migrants abroad. In addition, remittances boost household incomes and reduce poverty. The studies reviewed stress the need to analyze impacts over an extended time horizon, since those impacts are likely to vary over time. A question that these studies have not answered is whether the households receiving remittances eventually manage to thrive without that external boost to income. Because international migration is unlikely to cease over the coming decades and the development process has still a long way to go in the majority of developing countries, answers to this and other ques-

tions regarding the linkages between international migration and development will continue to be relevant for a long time to come.

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