

# World Bank Research *Digest*

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## Migration is Key for Reducing Poverty and Sustaining Economic Growth

**G**lobal migration is a human story. It may have started as soon as *Homo Sapiens* began walking on two legs, and it is unlikely to end any time soon. Most of this migration is voluntary and legal. Indeed, according to a 2019 World Bank report, nearly 90 percent of the world's 266 million migrants moved voluntarily for economic, social, and climate reasons.

Global migration has become an important instrument to lower poverty rates in developing countries and raise productivity in developed countries. In 2015, the migrant population generated about 10 percent of global GDP, even though it accounted for less than 4 percent of the global population—with nearly 90 percent of the economic benefits of migration realized in developed nations.

Migration is also a great leveler, providing better prospects for the struggling millions in the developing world. In 2018 low- and middle-income countries received \$530 billion in remittances—which is more than three times the size of official development assistance. Migrants held more than \$500 billion in annual savings, which can be mobilized via diaspora bonds for financing for development projects.

The World Bank's research on migration, which is carried out throughout the institution, offers compelling hard evidence on the economic gains. The goal is to inform the public and help policy makers make informed decisions within the existing political and economic constraints. This issue of the digest highlights examples of World Bank research on migration.

The first three articles focus on

migrants' incomes. One suggests that national migration policies should focus on easing the costs of short-term dislocations of native-born workers and distributing more widely the economic benefits generated by labor mobility. The second shows that the economic payoff to moving to a richer country comes immediately—and persists for generations. The third finds that easing restrictions to migrate from China's rural villages to booming cities boosts the welfare of the poorest households.

The next four articles explore the trioka of aging, education, and migration. A study on test outcomes indicates that exposure to immigrant classmates does not go hand in hand with lower scores for native children. Another study suggests that wages are more influenced by aging and education than migration. A third study finds that diasporas of highly skilled migrants—such as inventors—offer a path toward the internationalization of inventive activity. And a fourth study indicates that migration offers perhaps an even better way than trade to cope with the rising share of older people in the world's population.

The following two articles focus on recent studies that take a new approach to determining migration patterns—notably, those of “transit migrants”—and the length of time refugees spend in exile. A final article describes a new Migrant Rights Database, which will enable country comparisons as the international community works toward a global standard for migration governance and the protection of human rights.

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# How Labor Markets Fit Into the Global Migration Debate

**Migration policies should help lower short-term dislocation costs of native-born workers and more widely distribute economic benefits**

The rich have many assets; the poor have only one—their labor. Because good jobs are slow to come to the poor, the poor must move to find productive employment. Migrants' incomes increase three to six times when they move from lower- to higher-income countries. The average income gains for a young unskilled worker moving to the United States is estimated to be about \$14,000 per year. If the number of immigrants in high-income countries were doubled, by moving 100 million young people from developing countries, the annual income gain would be \$1.4 trillion. This global welfare gain dwarfs the gains from the removal of all restrictions on international flows of goods and capital.

These income gains, however, remain largely notional because most people cannot move. Only about 3 percent of the world's population live in a country in which they were not born, a proportion that has not changed much over six decades of otherwise unprecedented global integration, via trade, investment, and knowledge flows. Distances in space, culture, and language are inherent impediments to mobility. But the most important barriers are national borders—partly fueled by citizens' worries about what migrants and refugees would do to jobs and wages, welfare programs, crime levels, school quality, and their national identity.

A new report authored by Çağlar Özden and Mathis Wagner seeks to address the tension between compelling academic evidence on the economic gains and the stark public opposition to immigration. It suggests that what is needed is a labor market-oriented, economically motivated rationale to the political opposition to migration.

## A Pattern of High Concentrations

One of the report's key findings is that global migration patterns lead to high concentrations of immigrants in certain places, industries, and occupations. For example, the top 10 destination countries account for 60 percent of global immigration. In the United States, four states host half of all immigrants, and 10 counties host half of the immigrants in these four states.

These patterns are what would be expected from an adjustment mechanism that is aimed at productivity gains, wage increases, and poverty reduction. But they pose a problem as market forces rush to fulfill unmet demand, especially for domestic populations who have easily substitutable skills and occupations. Furthermore, the positive effects and benefits in the destination labor markets tend to be more diffuse and slower to realize, whereas the costs are more concentrated, immediate, and easily attributable to immigration.

*Effective migration policies must work with, rather than against, labor market forces*

What policies could be adopted to ensure the benefits of migration are shared by host and immigrant communities for generations to come? The report highlights the following:

- Effective migration policies must work with, rather than against, labor market forces. For example, where there is large unmet demand for seasonal work, temporary migration programs (like those in Canada or Australia) could address labor market shortages while discouraging permanent undocumented migration.

- Quotas should be replaced with market-based price mechanisms, such as fees, to manage migration flows. Such tools can pay for the cost of government assistance to support

dislocated workers. In addition, the most pressing needs of the labor market can be met by matching migrant workers with employers that need them the most.

- The creation of a pathway to permanent residency for migrants with higher skills and permanent jobs, which will provide incentives for them to fully integrate in the labor markets and acquire skills specific to the destination country.

*Quotas should be replaced with market-based price mechanisms, such as fees, to manage migration flows*

The bottom line for the global migration debate is that it is a mistake to ignore the distributional impact and dislocation such flows would generate, especially in destination countries, as the efficiency gains are realized. But it is also a mistake to deny or ignore the significant efficiency gains. The solutions—that is, the policies—rest in making the pie as large as possible, and, at the same time, figuring out a way to distribute it more equally.

# How Big is the Payoff From Migration? Evidence from a Lottery

**Outcomes for migrant lottery winners suggest the economic payoff to moving to a richer country comes immediately and persists for at least a decade**

Tonga—an archipelago of islands in the Pacific about three hours north of New Zealand by plane—has a gross national income (GNI) per capita of \$4,150 (in 2005 PPP \$), which is about one-sixth of the level of that of New Zealand. In 2002, New Zealand introduced a new migration program, the Pacific Access Category (PAC), that lets a quota of 250 Tongan permanently migrate each year. But will migration help boost the income of the Tongans, and if so, how long will the boost last?

This matters, and not just for the Tongans. The same story is being played out all over the world, given the massive income gap between rich and poor nations. In 2014, GDP per capita in high-income OECD countries was nine times that of middle-income countries, and 68 times that of low-income countries. Moreover, small, typically island states (mostly in the Pacific or Caribbean) are the origin countries most affected by migration.

A recent study by Gibson, Mackenzie, Rohorua, and Stillman

tries to answer this question by examining the impacts of migrating from Tonga to New Zealand via the oversubscribed PAC (between 2002-05), where a lottery with 10 percent odds of success was used to fill the available slots. It compares Tongans who had successful applications in the lottery, and who immigrated to New Zealand almost a decade ago, with unsuccessful applicants in this same lottery. The effort and cost of tracking applicants down a decade after applying for migration, coupled with the migration lottery, make this study unique in its ability to provide estimates of the long-term causal impacts of migration.

## A Lifetime Win

The results suggest that the economic payoff to migrating to a richer country comes immediately, and then hardly grows. The wages of principal applicants were NZ\$340 (US\$260) per week higher due to the impact of migration (controlling for ex ante characteristics, the lotteries entered, and the type of survey). The weekly wages for the control group (lottery losers in

Tonga) were NZ\$126, so the gain from migrating represents a 271 percent increase in weekly earnings—very similar to the 263 percent gain estimated in the first year after migrating (figure 1).

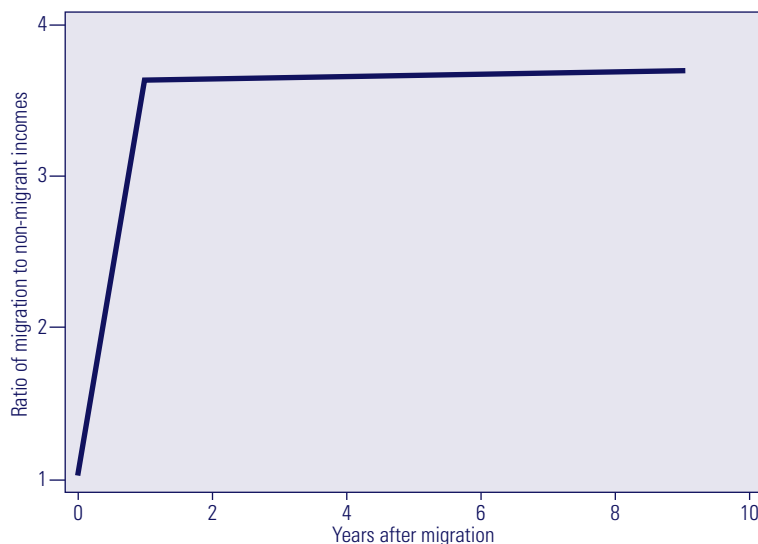
Since the migration impact appears to be stable over time, and because the authors observed no return migration after a decade, the lifetime income gain from winning the

PAC lottery and migrating is straightforward to estimate. The typical PAC migrant moves to New Zealand aged around 32. Assuming the individual works for 33 years thereafter (the public pension in New Zealand is available from age 65), the lifetime earnings gain is NZ\$583,440. A further expected benefit in retirement of NZ\$186,760 accrues because the New Zealand pension is more generous than Tongan ones. In net present value terms, with a 5 percent discount rate, the lifetime gain due to migration is at least NZ\$315,000 (US\$237,000), even before allowing for non-monetary benefits (like consumption, durable asset ownership, savings, and dietary diversity) and wealth accumulation effects.

These findings support the idea that cross-country wage differences are due to better institutions, higher quality capital, and other factors in rich countries that serve to raise the productivity of all workers—rather than attributes that are embedded in native workers (like language skills, higher education, and country-specific knowledge) and take time for migrants to accumulate.

*Small, typically island states (mostly in the Pacific or Caribbean) are the origin countries most affected by migration*

Figure 1. Wages of Migrants Quickly Jump to a Multiple of that of Non-Migrants, Before Stabilizing Over the Next Decade



John Gibson, David Mackenzie, Halahingano Rohorua, and Steven Stillman, "The Long-Term Impacts of International Migration: Evidence from a Lottery," *The World Bank Economic Review*, Volume 32, Issue 1, February 2018. World Bank, Washington, DC.

## Reducing Barriers to Migration Boosts Welfare in China's Rural Villages

**A greater ability to migrate from China's rural villages to booming cities boosts goods consumption with poorest households key beneficiaries**

In developing countries, barriers to the movement of labor are a common institutional feature that may contribute to geographic poverty traps—regardless of whether these constraints are maintained by formal institutions, cultural or linguistic differences across regions, or simply high transaction costs associated with finding migrant employment. This occurs because the barriers may reinforce an inefficient allocation of resources across regions and influence investment levels in poor areas, potentially hindering growth. However, when they are removed, the resulting improved efficiency of resource allocation may boost rural living standards—as occurred in China in the 1990s.

What is the impact of out-migration on the distributional effects of migration within villages, along with the sectoral distribution of household activities across the within-village wealth distribution? This matters because remittances to household or family members remaining in rural

areas may supplement income earned locally and directly reduce exposure to poverty. Out-migration may also have indirect effects on household and individual welfare within their home communities—either in the form of increased wages with the depletion of the local labor force, or through remittances from migrant employment that are invested in local production. But to date, there is little in the literature on this topic.

A recent study by de Brauw and Giles tackles this issue by examining how lower barriers to migration for work contributed to changes in welfare in rural China. The authors use a panel household survey (from 88 villages and 6,305 households) spanning the period from 1988-2002, during which the population of rural migrants working in cities increased from roughly 20 million to over 110 million. Over this period, institutional changes—notably, a 1988 law allowing migrants to establish legal temporary residence and a new national ID card necessary to obtain legal residence—made it easier to migrate temporarily for work (figure 1).

### A Boost for Living Standards

The results of the study highlight how reducing barriers to migration would boost welfare. They include:

*Higher consumption.* Out-migration has a positive effect on annual changes in log consumption between 1988 and 2002: out-migration explains between 2 and 2.9 percent of the annual increase in consumption per capita, or between 65 and 93 percent of the annual consumption growth recorded in the sample villages between 1988 and 2002.

*Poorest villagers benefit most.* Whether households participate directly in migration or not, consumption grows more rapidly among households in the poor and middle terciles of the initial average consumption distribution.

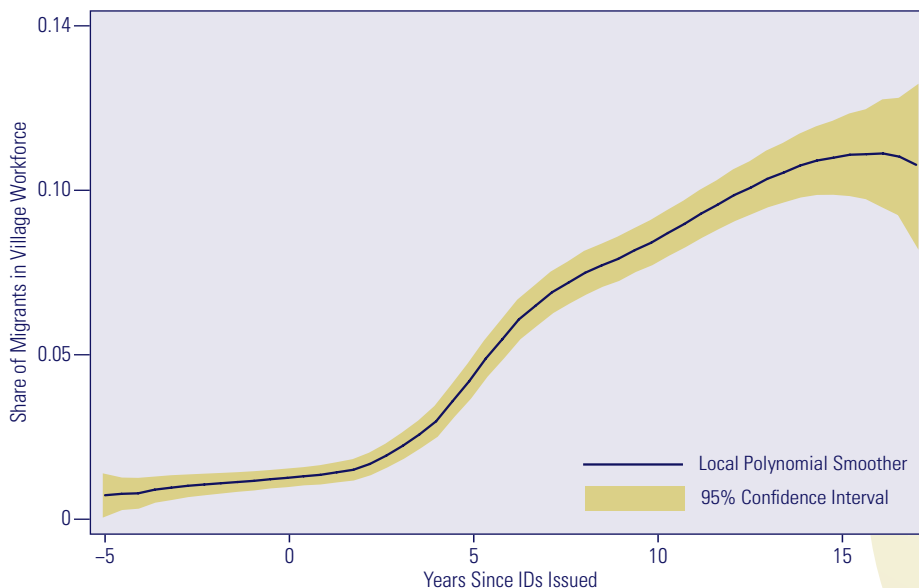
*Higher incomes.* Later in the study period (after 1995), incomes also increase among all households, although the increase is faster among householders that were initially poorer.

*Shifts in labor allocations and investments.* Out-migration from the village leads to labor reallocation across activities, and labor allocation changes differ by wealth tercile. Agricultural labor days decline among poorer households, who also provide a relatively larger increase in days spent working outside the home township. More affluent households, by contrast, increase labor supply to local non-agricultural activities, potentially reflecting general equilibrium effects contributing to increased local opportunity as migrants remit earnings. As for investment, poorer households invest more in housing and durable goods, while more affluent households invest more in non-agricultural productive assets.

Looking ahead, as residential registration is eliminated, and more elderly and children join migrant family members in China's cities, there will be a need for future research on the welfare impacts of family migration—including educational access, the performance of migrant children in urban schools, and access to care for the elderly and infirm migrant family members.

Alan de Brauw and John Giles, "Migrant Labor Markets and the Welfare of Rural Households in the Developing World: Evidence from China," *The World Bank Economic Review*, Volume 32, Issue 1, 2018. World Bank, Washington, DC.

Figure 1. Migrants Take Up a Bigger Share of Workforce After National IDs Issued



# Exposure to Immigrant Classmates and Natives' Test Scores

## Immigration debates rage on, but native children will find new friends in school, not worse learning outcomes

As immigration continues to dominate political debates, a growing number of policymakers and citizens are concerned that the presence of immigrant children in schools may harm native children's learning outcomes. In Italy, for example, the Ministry of Education introduced a law in 2010 that caps the share of foreign-born students in public school classrooms at 30 percent.

Such measures, however, are largely motivated by anecdotal evidence of disruption, rather than clear-cut results of rigorous econometric estimations—in fact, the literature on this topic is quite thin. In addition, economic theory is inconclusive about whether immigrant concentration in the classroom produces positive or negative effects, if any, on the performance of natives. That said, there are reasons to suspect that immigrant children from different socio-economic backgrounds, countries of origin, or with different durations of stay in the host country may have a different impact on native children.

A recent paper by Bossavie explores what has occurred in the

Netherlands, a country that in 2011 had 1.77 million immigrants (about 11 percent of the population). As in most European countries, the majority of these immigrants came from lower-income countries. Early waves involved former Dutch colonies (Indonesia, Suriname, and the Dutch Antilles); later waves involved Morocco, Turkey, Iraq, Afghanistan, and Iran. The author uses a rich dataset of students in a panel of primary schools in the Netherlands, which includes detailed information on the background of immigrant and native children—such as the duration of stay of immigrant classmates in the country. This rare access to timeline information enables him to separately estimate the impact of foreign-born peers who recently arrived in the Netherlands versus those who arrived at an earlier age.

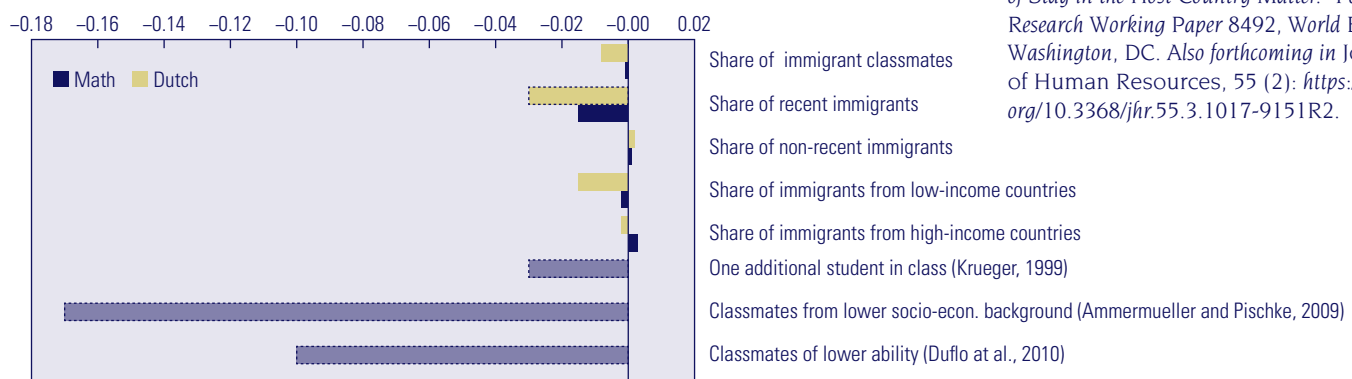
To estimate the effect of immigrant children in the classroom on natives' test scores, the study uses small changes in immigrant concentration across cohorts within the same school. It, therefore, assumes that small variations in the share of foreign-born students across cohorts within the same school are driven by factors exogenous to native children's test scores. The study also presents a range of balancing and placebo tests, whose results support the validity of the identification strategy.

## Duration of Stay Matters

The key finding is that in primary schools in the Netherlands, the test scores of native children overall are not affected by immigrant children. But if there are any spillover effects, the magnitude will depend on the duration of stay of first-generation immigrant classmates. For example, immigrant children who have been in the country for some time do not have any detrimental effect on natives, whereas there is a small negative impact of the presence of recent immigrants on natives' learning outcomes in Dutch language only—that is, not in mathematics (figure 1). These effects tend to be slightly larger when immigrant children have not been exposed to the Dutch language prior to migrating, but even then, they remain quite small.

Yet despite the small magnitude of these estimated effects, the study highlights the importance of effective inclusion and assimilation of immigrant children—like facilitating command of the host country's language. It indicates that after only a few years in the country, when immigrant children gain greater proficiency in the local language, they do not have any adverse effect on natives' learning outcomes. Because of the similarities in the immigration context shared by the Netherlands and other countries, notably the predominance of immigrants from low socio-economic backgrounds, the study's findings can be of relevance beyond the Dutch context.

Figure 1. Immigrant Classmates Don't Affect Dutch Students' Test Scores Overall  
Estimated Effect of a One-Standard Deviation Change in Class Composition on Students' Test Scores (in Standard Deviations)



Note: The blue and yellow bars display the effect of a one-standard deviation increase in the share of immigrants in the classroom on the average test score of Dutch students in the classroom (in standard deviations), estimated from Bossavie (2018). An increase by one standard deviation in the share of recent immigrants corresponds to a 5 percentage points increase. The three light blue bars at the bottom display the effect sizes of other changes in classroom composition estimated by other papers in the literature, also in standard deviations. Statistically significant effects at the 5 percent level are outlined in dotted blue.

Laurent Bossavie. 2018. "The Effect of Immigration on Natives' School Achievement: Does Length of Stay in the Host Country Matter." Policy Research Working Paper 8492, World Bank, Washington, DC. Also forthcoming in *Journal of Human Resources*, 55 (2): <https://dx.doi.org/10.3368/jhr.55.3.1017-9151R2>.

# How Aging, Education, and Migration Affect Wages

**Aging and education have the strongest influence on wages, favoring the low-skilled, with immigration a minor factor that also helps reduce wage gaps**

In industrial countries, the composition of the labor force is being shaped by three forces: aging, education, and migration. Aging is a powerful, gradual process that evokes concern but little policy action. Immigration is blamed for the predicament of the low-skilled and is provoking a political backlash. Education is viewed as a panacea to which access is unequally distributed.

What is the relative and combined effects of these labor supply forces on wages across different skill and age groups? This is a pertinent question as increased wage inequality dominates the political and academic debate, yet it remains to be addressed.

In a recent paper, Docquier, Kone, Mattoo, and Özden explore the labor market implications of the changes in the education and age structure of the population between 2000 and 2010, drawing on the new Database on Immigrants in OECD countries (DIOC). Given that workers of different ages or education levels are not perfectly

substitutable—and that immigrants and natives are imperfect substitutes across age-education cells (based on U.S. and UK evidence)—the impact on wages is derived using a model with imperfect substitutability between different types of workers. It also assumes no technological changes.

## Age and Education, Not Migration, Dominate

The most striking feature is the decline across all countries in the share of the young low-skilled workers, which is matched by the increase in the share of the skilled (young and old) in almost all countries. In addition, there has been an increase in the share of the old low-skilled in most countries. Further, the number of international migrants grew from 2.9 percent of the world population in 2000 to 3.3 percent in 2010. Migrants represented 11 percent of the total population in OECD countries.

How do these changes affect wages? The results show that the change in the age and skill structure of the workforce is the dominant factor on wage changes. This impact is quite uniform and egalitarian, favoring the low-skilled workers by making them relatively scarce and enabling them to work with a larger number of

higher-skilled people—unlike the old, high-skilled, who suffer a large negative impact (figure 1). Age and education account for most of the large positive impact, while immigration, the villain in much political discourse, turns out to be a relatively feeble and actually a positive phenomenon.

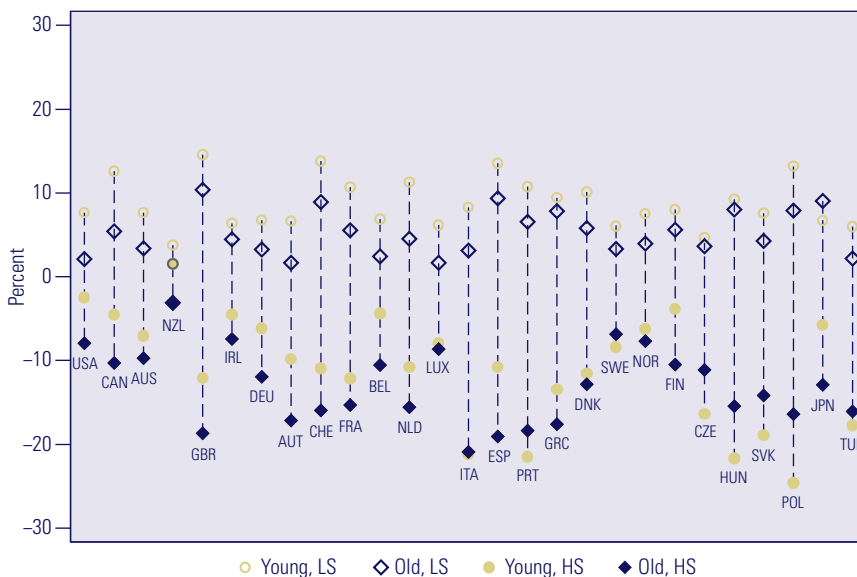
The relative impact of these factors, however, differs across OECD countries:

- In most of Western Europe, Japan, and the United States, ageing and changes in the stock of skills, account for most of the changes in wages, and migration plays a marginal role.
- In the Anglo-Saxon countries (Australia, Canada, New Zealand, the United Kingdom, and Switzerland), which have relatively liberal and skill-biased migration policies, immigration accentuates the egalitarian impact of ageing on wages.
- In countries that have seen significant labor outflows—such as Ireland and certain Eastern European countries (the Czech Republic, Slovakia, Hungary, and Poland) that now have access to Western European labor markets—the impact of ageing is partially offset by emigration.

What happens if the model allows for sufficiently strong skill-biased technological change? The results show that this change offsets the egalitarian effects of higher skill endowments. It also reconciles the narrowing of wage gaps predicted by the model with the higher skill premium observed in many countries. And it confirms skill-biased technological change as a key contributing factor to wage inequality in past decades. Nevertheless, abstracting from technological changes helps to isolate and highlight the relative impact of labor supply forces that are shaping the wage structure in industrial economies—both to inform the political debate and to identify reform priorities.

Figure 1. Low-Skilled Workers Benefit Most in Terms of Wage Gains

Wage effects of socio-demographic changes by age-education group



Frederic Docquier, Zovanga L. Kone, Aaditya Mattoo, and Çağlar Özden. 2018. "Labor Market Effects of Demographic Shifts and Migration in OECD Countries." Policy Research Working Paper 8676, World Bank, Washington, DC.

# Highly Skilled Migration: “Brain Drain” or “Brain Gain”?

## Diasporas of highly skilled migrants, such as inventors, offer a path toward the internationalization of inventive activity

As migration flows across national borders intensify, the oft-quoted broad figures hide an important variation: unlike in the past, highly skilled individuals represent a substantial and increasing share of international mobility flows. During the 2000s, the number of tertiary educated immigrants living in OECD countries increased by 70 percent compared with only 10 percent for the low-educated ones. And migration rates for the tertiary educated are higher than those for the rest of the population and generally increase with further education.

Moreover, bilateral flows are becoming skewed. OECD countries (especially the Anglo-Saxon ones) are the larger receptors of global talent. Plus high-skilled migrants originate in a larger number of countries, including emerging and middle-income ones. This trend has brought back old concerns about “brain drain” and the depletion of skills resources in origin countries. However, high-skilled emigrants can also contribute to their home country’s development in a number of ways—referred to as “brain gain”—by sharing embedded knowledge and accessible resources, such

as capital or the expatriates’ network of colleagues and acquaintances.

Against this backdrop, diaspora networks are being increasingly studied in the context of trade, foreign direction investment, international diffusion of ideas, and firms’ internationalization strategies. A recent study by Ernest Miguez contributes to this literature by investigating how high-skilled emigrants activate their diaspora networks, overcome international barriers, and foster the internationalization of knowledge production. Specifically, it looks at inventor diasporas and the production of patents in international teams for a sample of developed, receiving countries and a group of developing, sending economies from 1990 to 2010. The use of inventor data offers two main advantages. Patent data (together with inventor information) are registered and so can be organized on a yearly basis—unlike census data, which are collected only every 10 years. Also, the level of education attained may differ markedly among tertiary educated workers.

Among this group, Canada, Australia, and, notably, the United States stand out as being the primary receiving countries, when compared to their resident stock of inventors from developing countries, while Japan is, and has been over the years, one of the developed countries with a smaller share of inventor immigrant population (figure 1). Meanwhile,

technology-leading European countries (like Germany or France) lag way behind compared to the United States. And the share of inventors from developing countries is considerable—and it is on the rise in recent years.

## Diaspora Networks Could Offer “Brain Gains”

The results show a robust effect of high-skilled diasporas on the internationalization of inventive activity between developed, receiving countries and developing, sending economies: a 10 percent increase in the inventor diaspora abroad is associated with a 2.0–2.2 percent increase in international patent collaborations. The evidence found survives the inclusion of a large number of controls, fixed-effects, robustness checks, and identification issues. Moreover, the effect is stronger for inventor-to-inventor collaborations (co-inventorship) than for applicant-to-inventor co-patents (R&D offshoring), which suggests that diaspora effects specifically mediate interpersonal relations between co-workers.

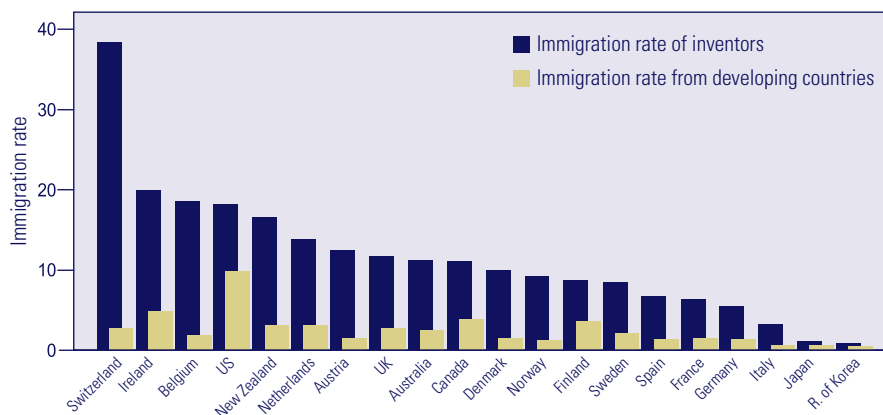
These findings do not suffice to conclude that a “brain gain” exists that makes up for the loss of high-skilled human capital of sending economies. Note, however, that boosting international co-inventorship and team formation is only one of the multiple brain gain effects of emigrant inventors—which may eventually include the international diffusion of knowledge or the accumulation of human capital in sending economies.

These findings also support the idea that exploiting high-skilled diaspora networks in technology frontier economies might be an instrumental way of engaging in international innovation networks. This subject matter ranks high among policymakers in these countries, as witnessed by the 2015 visit of the Indian Prime Minister to Silicon Valley.

Ernest Miguez. 2016. “Inventor Diasporas and the Internationalization of Technology.” Policy Research Working Paper 7619, World Bank, Washington, DC.

Figure 1. Some Receiving Countries Have a Much Higher Share of Immigrant Inventors from Developing Countries than Others

Immigration rates of inventors, 2001–2010, receiving countries



## Aging, Trade, and Migration

**Dynamic sectors may relocate to younger markets when population ages. Immigration can prevent this relocation more effectively than tariffs**

**B**y 2050, the percentage of the world population over 60 years of age is expected to reach 21 percent—a dramatic increase from 12 percent in 2013, and just 8 percent in 1950, according to the United Nations. What are the economic implications of this trend for aging economies?

A recent study by Chisik, Onder, and Qirjo tackles this question by asking, in theory, how demographic aging could shift trade policy preferences in an economy. It features several technical innovations. A key one is that it focuses on demand changes, unlike most studies on demographic changes and trade, which focus on factor market changes. The authors do this by breaking away from a convenient, but empirically challenged, assumption: the marginal (and average) propensity to consume a good are not dependent on income. Instead, their model combines Stone-Geary form preferences, where the demand for non-tradable services rises disproportionately when income increases, with a monopolistic competition model that helps show how trade costs can interact with market size in forming firms' location decisions.

### A Case for Immigration and Trade

The results suggest that both immigration (especially of younger people) and trade offer policy offsets to the negative outcomes from demographic aging.

*First, in aging societies, production may shift toward sectors that are neither easily tradable nor prone to rapid productivity growth.* To see this, note that the old consume more services like health-care or long-term care and the young consume more goods like smartphones. For example, a 2013 survey of Canadian households found that

expenditures on health care (apart from what is provided by national insurance) comprised 7.6 percent of goods and services spending for households headed by a senior aged at least 65 years old and only 2.9 percent for a household headed by someone under 30. In addition to health care, seniors would be more likely to purchase personal and household maintenance services than the young.

Therefore, the higher the share of old people in the population, the higher the demand for services (which are more difficult to import than manufactured goods) and the lower the demand for goods that can be imported. As a result, more firms find it lucrative to get into the services business when demand pushes the price of services up. Some firms may cease producing goods and become service providers, and others move overseas where demand for goods like smartphones remains large. Technically speaking, aging has a firm delocation effect. By itself, such delocation is not necessarily a bad thing: the economy produces more services because it consumes more of them. The problem is that industries like those producing smartphones are often more innovative than non-tradable services. Thus, the aging country would potentially lose income in the long-term, as its workers would miss an opportunity to become more productive.

*Second, with demographic aging, more firms move overseas if trade barriers are low.* When firms can freely ship back their products after moving overseas, moving closer to a larger overseas market becomes more appealing, as the home market is not lost. But if the ageing country imposes egregiously high tariffs on imports, smartphone producers might rethink their relocation decisions. Thus, from a protectionist point

of view, erecting barriers at the border may appear to make sense economically. However, this logic is shortsighted: when one country erects barriers, its partners do the same in response. In the end, a trade war may be triggered, which would hurt the ageing country more than the partner. Yes, some firms would come back home, but the losses from paying more for imports and earning less from exports are much greater than these gains.

*Third, in comparison, allowing in young immigrants provides a better mechanism to mitigate the firm delocation effect.* Immigration can reduce the demand-driven effects of an aging society—as long as it is not too tilted toward older immigrants. If the immigrants are primarily young, the population is initially small, purchased services are a small percentage of total income, or the difference between young and old consumption patterns is small, then a country's share of manufacturing will increase along with increased immigration. This study's results on the age of immigrants suggests why countries like Australia, Canada, and New Zealand may have stressed a point-system (which rewards youth among other things) over family reunification (which can attract elderly parents).

*The problem is that industries like those producing smart-phones are often more innovative than non-tradable services*



# Global Spillovers of National Migration Policies

## Current and potential migrants constantly weigh location-specific utility levels, migration costs, and (expected) future opportunities

The migration paths of international migrants often include multiple destinations and transit routes. Many people—so-called transit migrants—leave their birth countries and live in different locations before settling permanently in a foreign country or returning home. Between 2001 and 2012, around 9 percent of the people who migrated to the United States were living in a country other than their birthplace prior to their arrival. This pattern is even more common for migrants with tertiary education: nearly 14 percent of them did not come directly from their birth countries.

High-income OECD countries are key transit stops for immigrants. Among those living in Australia, Canada, or the United Kingdom just before their arrival in the United States, over 30 percent were born in a different country. Although Canada, the United Kingdom, and Australia are far apart geographically, they are important transit routes for each other and for the United States, owing to

common language and similar institutions. The cost of moving from the United Kingdom to California is probably lower than the cost of moving from the United Kingdom to Japan, although both destinations are about 6 thousand miles away from the United Kingdom. Hence, when a computer scientist from a developing country decides to migrate to the United Kingdom, she is probably also accounting for job prospects in Silicon Valley. Thus, when one takes transit migration into account, mitigation policy is no longer a bilateral economic issue.

Yet transitory migration patterns are not explored in depth in the international migration literature. Canonical global migration models are static, not allowing for repeated migration decisions or transit routes. In a recent paper, Artuc and Özden construct a novel dynamic model of global migration that is aimed at incorporating and explaining transit migration patterns; it uses the World Bank global migration database and the American Community Survey. In the model, migrants decide to stay in their current location or move to another one every period, taking instantaneous utility payoffs and bilateral mobility barriers into account.

However, the distance between the current location and a new destination brings almost no additional cost for high-skilled transit migrants.

What happens when the moving cost from Canada to the United States rises to a level such that migration levels decrease by about 99 percent? The results show that migration from other countries to Canada falls between 3 percent and 18 percent, even though there are no changes to migration costs or benefits regarding Canada. The impact is especially high for Latin American and Caribbean migrants. Another potential effect is the impact on other critical transit countries. But the findings show that there is almost no impact on migration from most countries to the United Kingdom when the Canada–U.S. border is closed—although there is higher migration from Canada to the United Kingdom, as the Canadians are also unable to move to the United States.

How about when the moving cost to the United States rises to a prohibitive level for direct migrants from developing (non-OECD) origin countries? The results show that Canada and the United Kingdom become more attractive destinations, because they are high-income economies with similar income opportunities for migrants—and also provide a pathway to the United States. Migration to Canada and the United Kingdom increases by between 25 percent and 45 percent for many Central American and Caribbean countries, and by a staggering 165 percent for the Other Caribbean region (includes Haiti and other smaller island countries) (table 1).

With these findings in mind, we shall adapt the famous medieval proverb to modern times: “*All roads lead to America*,” even when some roads are closed.

Erhan Artuc and Çağlar Özden. 2016. “Transit Migration: All Roads Lead to America.” 2016. Policy Research Working Paper 7880, World Bank, Washington DC.

**Table 1. Migration to U.S. from Developing Countries is Blocked**

Birth Country	to U.S. via Canada	Directly to Canada	to U.S. via UK	Directly to UK
Canada	0.0	0.0	3.5	0.0
Mexico	6.6	9.4	6.6	9.4
El Salvador	29.2	43.9	28.0	43.9
Guatemala	16.1	22.0	15.9	22.0
Other Central America	17.9	25.8	17.6	25.8
Cuba	19.3	25.9	18.6	25.9
Dominican Republic	21.6	29.8	21.0	29.8
Jamaica	30.5	46.8	28.3	46.7
Other Caribbean	94.6	165.4	87.6	165.3
Brazil	2.8	3.9	2.8	3.9
Colombia	6.3	6.8	6.0	5.8
Other South America	4.9	5.5	4.5	5.5

### “All Roads Lead to America”

The study begins by asking whether language and distance matter for transit migrants when all paths are open. The results show that common language lowers transit migration costs significantly, with migration increasing 60 percent for unskilled and 95 percent for skilled migrants.

# Getting a Better Sense of How Long Refugees Have Been in Exile

**A rigorous review of UNHCR data finds that more than half of global refugees have spent 4 years or less in exile, a historical low**

Policy makers—from East Africa to South Asia, from the Mashreq to the European Union—are struggling to find an adequate response to a global refugee crisis, which has deep and potentially significant political, economic, and social consequences. Developing countries host the bulk of refugees. Yet, recent events demonstrate that without an adequate international response, the crisis cannot be easily contained to a few host countries; some refugees engage in secondary movements and increasingly try to reach OECD countries.

From an operational viewpoint, the type of support needed in protracted situations, as opposed to relatively short crises, differs. Where the crisis is short, humanitarian aid may suffice; when it lasts, development interventions are required. This means that the very nature of the needed response to a refugee crisis is determined by the (expected) duration of the crisis.

Using data from the UN High

Commissioner for Refugees as of end-2015, a recent study by Devictor and Do proposes a new approach to estimating the average and median durations of exile, and their variations over times. The authors re-calculate the earliest date at which various cohorts of refugees (including asylum seekers and people in refugee-like situations) could have arrived in each situation, and then aggregate all situations into a single “global refugee population.”

## A Snapshot of the “Global Refugee Population”

What are the results? First, the study shows that among the “global refugee population”—currently at 15.5 million—there have been distinct episodes of displacement since 1991 (figure 1).

- There is a large cohort of about 8.9 million “recent refugees,” who arrived over the last 4 years. It includes about 4.8 million Syrians, as well as people fleeing from South Sudan (0.7 million), Afghanistan (0.3 million), Ukraine (0.3 million), the Central African Republic (0.3 million), and Pakistan (0.2 million).

- Another large cohort, of about 2.2 million, has spent between 5 and 9 years in exile. It includes refugees from Afghanistan (0.5 million), the

bulk of the current Somali refugees (0.4 million), and people fleeing from Colombia (0.3 million) and Myanmar (0.2 million).

- About 2 million people have been in exile between 10 and 34 years. This cohort includes years during which numbers are relatively low, and two episodes where they are higher—around 14 years ago, with the arrival of about 0.2 million Sudanese refugees, and around 24 to 25 years ago, with the arrival of about 0.1 million Somalis and 0.1 million Eritreans.

- Another 2.2 million refugees have been in exile for 35 to 37 years—mainly Afghans, but also about 0.3 million ethnic Chinese who fled into China during the 1979 war with Vietnam.

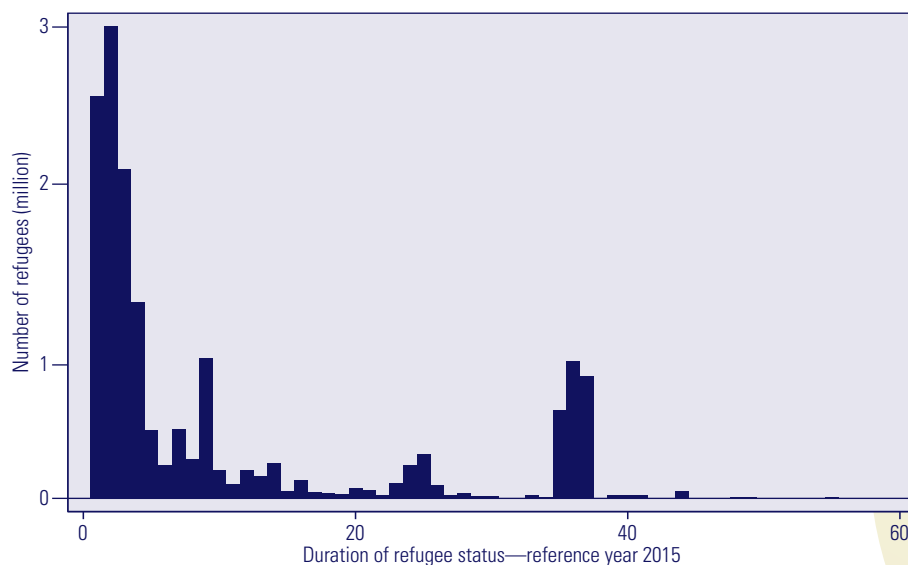
- There is also a tiny cohort (mainly Western Saharans) that has been in exile for up to 55 years.

Second, as of end-2015, the median duration of exile is 4 years—meaning half of the refugees worldwide have spent 4 years or less in exile. The median has fluctuated widely since 1991, between 4 and 14 years, and is now at a historical low. By contrast, the average duration is 10.3 years, and has been relatively stable since the late 1990s (between 10 and 15 years).

Third, while the number of refugees in exile for over 20 years has been remarkably stable since 1991, at 5 to 7 million throughout most of the period, the average duration of exile increases over time—largely because of the lack of a solution for Afghan refugees.

Figure 1. More than Half of Global Refugees Have Spent 4 Years or Less in Exile

Number of refugees by year of exile



Xavier Devictor and Quy-Toan Do, 2016. “How Many Years Have Refugees Been in Exile.” Policy Research Working Paper 7810, World Bank, Washington, DC.

# Creating a Migrant Rights Database

**New Migrant Rights Database enables country contrasts as global community crafts a global standard for migration governance and human rights protection**

With the signing of the Global Compact for Migration, international policy makers and activists are pursuing a global standard for migration governance and the protection of migrant rights. However, there remains a shortage of data about the baseline of international legal standards and the extent to which this baseline is reflected in the laws of different destination states.

The Migrant Rights Database seeks to address this gap. It applies a novel instrument to create an objective, cross-national accounting of the laws protecting migrant rights in national legal frameworks. The database permits aggregation, disaggregation, and

an objective system of benchmarking—all contained in an efficient coding instrument that can be applied cross-nationally and over time. In this pilot study by Gest and Wong, the authors apply the database's 65 binary indicators to five important destination states: Germany, Mexico, the Russian Federation, South Africa, and Turkey.

## Rights Provisions Vary Across Countries

The results reveal variations within and across the selected countries (figure 1). Among the countries analyzed, South Africa and Mexico score the highest at 73.4 percent and 72.3 percent, respectively (out of a total possible score of 100 percent) (table 1). South Africa offers strong protections of rights relating to vulnerable migrants; life; nationality; and freedom of thought, opinion, and assembly. Mexico offers strong protections

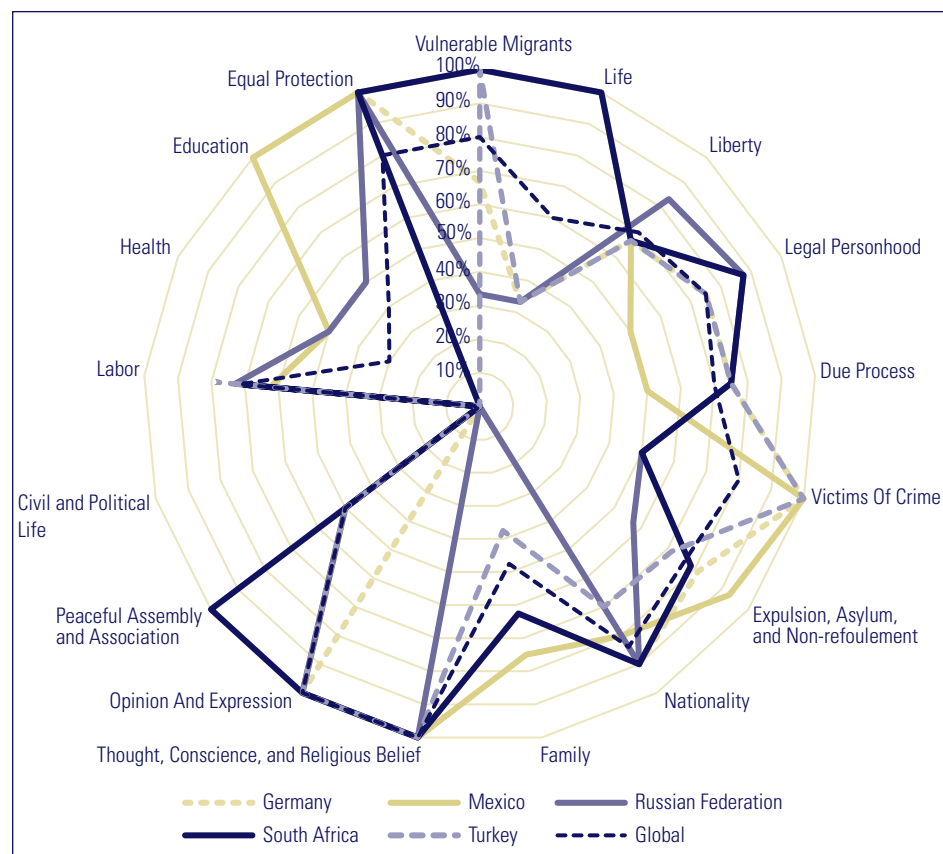
related to family, education, expulsion, asylum, and non-refoulement. On the other hand, Russia and Turkey score lowest at 65.7 percent and 66.4 percent, respectively.

Interestingly, disaggregating the scores by specific categories of rights reveals greater nuance and variation. For example, Turkey, one of the lowest scoring countries, features the most complete protection of migrant rights related to labor, while South Africa and Mexico, the two highest scoring countries, are below the international baseline for rights associated with victims of crime and due process rights. The greatest variation appears in categories related to the rights of legal personhood, vulnerable migrants, family, expulsion, asylum, and non-refoulement. None of the selected countries protect migrant rights to civic and political participation.

The pilot database demonstrates its use beyond comparative analysis. It is also a means of uncovering and highlighting where derogation takes place and for which specific rights. Further, the results reveal the areas in which there is a near cross-national consensus on the protection of migrant rights. From the initial coding, promising areas of law include rights associated with nationality; freedom of thought, conscience, and religious belief; freedom of opinion and expression; labor; and equal protection.

With an eye toward strengthening rights protections, future work has the potential to shed new light on heretofore undiscovered relationships between migration flows, migrant rights protections, and positive integration outcomes that not only improve the lives of migrants but also improve societies more generally. This research works to fulfil Sustainable Development Goal 10.7—“to facilitate orderly, safe, and responsible migration and mobility of people, including through implementation of planned and well-managed migration policies”—and it responds to calls for the collection of better cross-national data.

Figure 1. Migrant Rights Database  
Comparative and global mean spider plot



(continued on page 12)

**Table 1. Overall Measures of Migrant Rights Protection**  
In percent

Category (number of indicators)	Germany	Mexico	Russian Federation	South Africa	Turkey
Vulnerable migrants (3)	67	100	33	100	100
Life (3)	33	100	33	100	33
Liberty (6)	67	67	83	67	67
Legal personhood (4)	75	50	88	88	75
Due process (4)	75	50	75	75	75
Victims of crime (2)	100	100	50	50	100
Expulsion, asylum, and non-refoulement (8)	81	93	57	79	71
Nationality (5)	90	80	90	90	70
Family (4)	63	75	0	63	38
Freedom of thought, conscience, and religious belief (1)	100	100	100	100	100
Freedom of opinion and expression (2)	100	100	100	100	100
Freedom of peaceful assembly and association (2)	0	50	50	100	50
Civil and political life (2)	0	0	0	0	0
Labor (12)	73	63	73	71	79
Health (4)	50	50	50	0	0
Education (2)	50	100	50	0	0
Equal protection (1)	100	100	100	100	0
<b>Aggregate mean (65 indicators)</b>	<b>69</b>	<b>72</b>	<b>66</b>	<b>73</b>	<b>66</b>

Justin Gest and Tom K. Wong. 2018. "Migrants Rights Database." KNOMAD Working Paper 34. World Bank, Washington, DC.

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Washington, DC 20433, USA



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