

## Can immigrants ever earn as much as native workers?

Immigrants initially earn less than natives; the wage gap falls over time, but for many immigrant groups it never closes

Keywords: immigration, wages, inequality, assimilation, integration

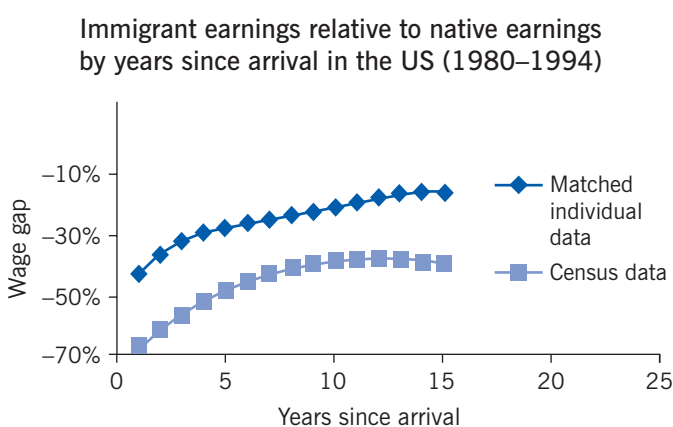
### ELEVATOR PITCH

Immigrants contribute to the economic development of the host country, but they earn less at entry and it takes many years for them to achieve parity of income. For some immigrant groups, the wage gap never closes. There is a wide variation across countries in the entry wage gap and the speed of wage assimilation over time. Wage assimilation is affected by year of entry, immigrant skill, ethnicity, and gender. Policies that facilitate assimilation of immigrant workers provide support for education, language, and employment. Such policies can also reduce selection barriers to entry, encourage naturalization, and target selection of immigrants.

### KEY FINDINGS

#### Pros

- + Immigrants earn less than natives at entry to the host labor market, but their relative wages increase over time in the host country.
- + Wage assimilation among highly-educated immigrants is usually faster than among lower-educated immigrants.
- + Policies to increase skills, such as language and local training and work experience, can promote assimilation.
- + Wage subsidy policies promote employment assimilation.



Source: Based on Figure 1.

IZA  
World of Labor

#### Cons

- Origin country education and training are less valued in the host country than native skills.
- Migrants from ethnic groups that are the most dissimilar to native workers receive lower wages than other migrants.
- Most active labor market policies have little impact on the assimilation of immigrants into employment.
- Policies that segment labor markets reduce wage assimilation.
- Immigrant selection policies benefit higher-skilled immigrants.

### AUTHOR'S MAIN MESSAGE

Immigrants earn less than natives when they enter the host country, but their wages grow over time. But some immigrant groups never reach wage parity with natives. Policies that encourage education and help immigrants develop skills that are valued by local employers or subsidize private-sector wages for new immigrants can create better jobs for immigrants, increase their earnings, and promote assimilation. Policies that remove barriers to entry into jobs and provide a pathway to citizenship also encourage immigrants to invest in themselves. Countries benefit from immigrants who can fill labor shortages, and society also benefits if immigrants become more productive, active, and integrated residents.

## MOTIVATION

Labor migration occurs for three reasons: work, family reunification, and refuge. Labor migrants fill market needs in the host country, and their success and assimilation contribute to local economic development. Refugees are admitted for humanitarian reasons, and their acceptance into a country indicates a willingness to help those most in need. Family reunification fulfills another humanitarian goal, which is to keep families intact and children and elderly parents protected.

Labor migration may be permanent or temporary. Temporary migrants are often undocumented or brought into the country to fill specific labor market needs. Permanent migrants have an incentive to invest in skills that are valued in the host labor market. This investment will benefit them and across generations as immigrants become more similar to natives in their skills and behavior.

Temporary immigrants, however, have less incentive to invest in local skills and culture. Their time in the host country is more uncertain, and these investments are less likely to result in higher incomes and better jobs. Labor migrants and refugees who do not assimilate are often marginalized or confined to ethnic enclaves. This separation lessens social interaction within a country and, in the extreme, generates social unrest and resentment between groups.

Policies that facilitate assimilation in the labor market for immigrants can increase labor productivity, domestic output, and social cohesion. Immigrants who are self-sufficient pay local taxes and need fewer public resources for the maintenance of their families. Their children benefit from the assimilation of immigrant parents and are afforded more opportunities to move up the economic ladder. It is therefore economically and socially beneficial for the host country that immigrants assimilate and integrate with society.

More positive immigration policy initiatives may be necessary in order to ensure that assimilation and integration are possible for all immigrants.

## DISCUSSION OF PROS AND CONS

Assimilation in the labor market means that the wages, employment, and occupational selection of immigrant and native workers become more similar over time. This contribution focuses in particular on wage assimilation.

Wage assimilation depends on the immigrant's wage at entry into the host country relative to the wage of comparable natives and the speed with which the relative wage grows over time. Development of effective policies to facilitate immigrant assimilation requires an understanding of how wage equality evolves.

This contribution briefly reviews the most common theoretical explanations for wage inequality and identifies the policy mechanisms through which this type of inequality can be redressed.

### **Wage assimilation theory as a guide to policy**

Effective policies to promote wage assimilation of immigrants are grounded in an understanding of why the initial immigrant-native wage gap exists and how the gap evolves with experience in the host country. Economic theory provides a foundation for understanding the assimilation process and is a useful guide to the development of effective assimilation policies.

Economic theories of wage assimilation can be broadly classified as “human capital” and “segmented labor market” theories.

### ***Human capital theory***

Human capital theory generally assumes that labor markets are open and competitive for all workers. Competitive firms hire the most productive workers, immigrant or native, at the lowest cost. The wage is directly related to the productivity of labor, and productivity depends on the worker’s human capital or skill, i.e., education, work experience, and language ability. The immigrant’s productivity and wage at entry to the host country are lower than a comparable native worker’s productivity and wage because education and experience acquired abroad are not perfectly transferable across borders. The skill of first-generation immigrants increases if they invest in learning the local language and cultural norms, and acquire training and work experience in the host country.

Immigrant wages grow as their host-market skills increase, and the immigrant–native wage gap narrows. The assimilation of high-skilled labor is faster than the assimilation of lower-skilled labor if the skill acquired in the host country complements their skill at entry [1].

Second-generation immigrants face lower assimilation costs because they are exposed to local education and institutions from birth, and they speak the local language. They also benefit from the transfer of labor market information and skills from their parents. Assimilation across successive generations is faster than for first-generation immigrants because successive generations enter the labor market with host-country skills that first-generation immigrants have to develop.

Policies based on the insights from human capital theory help new immigrants obtain the host-country specific skills that increase their wage growth. Human capital policies include language, education and training, and job placement programs. These new skills then transfer across generations.

### ***Segmented labor market theory***

Labor markets are never perfectly competitive or completely open to immigrants. They can be what is referred to as “segmented,” in that some workers are eligible to work and others are not. Segmentation can be legally enforced through trade union collective bargaining arrangements with firms, specific worker credentials for entry into jobs, or “guest-worker” programs.

Also, if legal barriers to entry are strong within the host country, wage assimilation is more difficult for immigrants, and in many cases immigrant wages will never equal native wages.

Policies that are based on the insights from segmentation theory include: “international credentialing” (i.e., a formal recognition of academic qualifications) and removal of labor-market entry barriers. The government can also promote labor market diversity by lowering the costs of naturalization. Naturalization signals to employers that immigrant workers know the local language and are familiar with the host-country customs, culture, and institutions, etc. Citizens have more job choice, and they may have greater access to social services, which would then facilitate their search for a better-paying job [2].

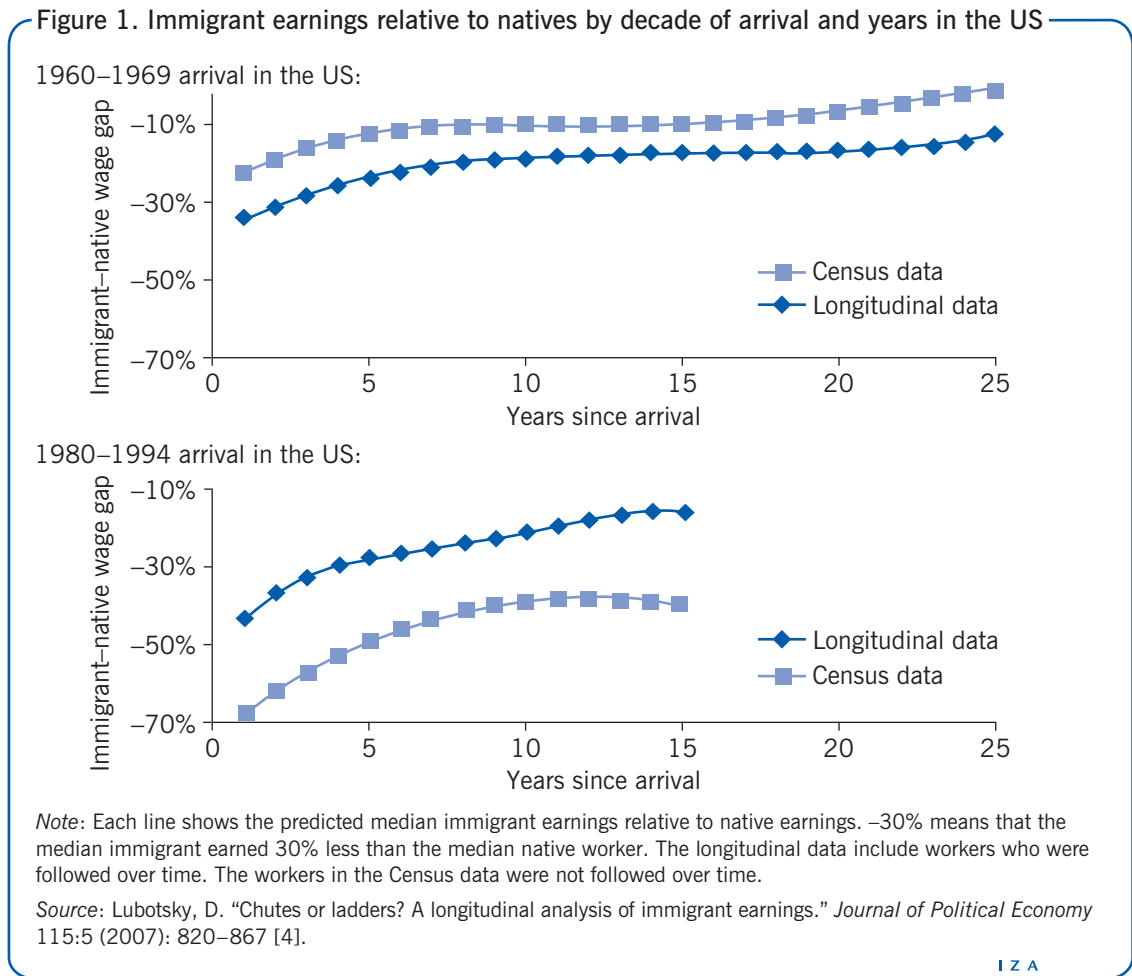
Immigrant selection affects the quality of immigrant labor and assimilation in the host country. The decision of immigrants to move from their country of origin depends to an extent on their expected income or security gains compared to remaining at home [3]. Host-country

immigration policies affect this decision to move and, by extension, the quality of immigrant labor. Policies that match potential immigrants to available jobs in the host country, or give admission priority to immigrants with particular skills, qualifications, and good job prospects, etc., can improve employment prospects and wages, and consequently narrow the immigrant–native wage gap.

### The evidence on wage assimilation

Many studies since the 1970s have estimated the wage gap between immigrants and natives and the speed of assimilation in the host-country market. Almost all of these studies examine immigration into higher-income countries, even though 40% of migratory flows today are to middle- and low-income countries. The most recent wage assimilation studies use data from household surveys, such as the census, or longitudinal surveys that track the same households over time. Changes in the productivity or quality of immigrants over time are taken into account in these estimations [3].

Figure 1 shows the importance of immigrant quality to the assimilation pattern in the US. This study includes immigrants who entered the US between 1960 and 1969 and 1980 and 1994. It compares the assimilation patterns observed with census surveys and longitudinal data [4]. The figure suggests that the quality of immigrants, in terms of employment potential, declined over time. The earnings gap at entry is larger for the more recent immigrants, their assimilation



rate is faster, but their wages never equal the wages of native workers. The estimates differ by the methods and data used in the analysis, but nevertheless display the same assimilation pattern over time.

Figure 2 presents the assimilation patterns for men and women estimated over 15 OECD countries, using data from 1994 to 2000 [5]. The authors estimate the assimilation patterns separately for all workers and a sample that excludes the self-employed. The differences in assimilation in these two samples are small. Immigrant men receive an entry wage that is 42–44% lower than the native wage. The entry-wage gap for women is 41–43%. Immigrant wages are equal to native wages after 19 years in the host country for men and 18 years for women. The authors measure differences in entry wages by region and country of origin.

Figure 2 reports the differences for immigrants from EU and non-EU countries. The wage entry-wage gap is smaller for EU immigrants than for other immigrants, particularly men. The speed of assimilation is the same in the pooled country model for all workers, and it takes more than 20 years for non-EU immigrants to assimilate because of their higher gap at entry [5].

This contribution considered 40 wage assimilation studies for high-income host countries published between 1997 and 2014, and the majority examine only the wages of men. Several patterns can be observed.

First, as seen in Figure 2, assimilation varies by gender. Women usually have a smaller gap at entry and assimilate in fewer years than men. Second, assimilation varies by ethnicity or the region of origin. Immigrants from countries that are more similar to the host country in language, customs, and institutions have a lower entry-wage gap and assimilate more rapidly. Several studies show that English-speaking immigrants to English-speaking countries assimilate faster than other immigrants. Also, immigrants to Spain from South America outperform other immigrants. Third, almost all assimilation studies estimate the effect of education and work experience on entry wages, but the separate effects of origin- and home-country human capital are difficult to identify. Immigrants with higher levels of education and work experience typically have higher entry wages than other immigrants. The few studies that separately identify the effects of investments in host and home country education and work experience find that host country investments, especially for work experience, have larger positive effects on wages than home country investments.

Figure 2. Wage gap at entry and years to parity with native workers: 15 OECD countries

Countries	Years of the data	Immigrant–native wage gap (%): men, women	Years to parity: men, women
OECD, pooled	1994–2000		
All workers		42, 43	19, 18
No self-employed		44, 41	
Origin:			
EU		38, 42	
Not from EU		45, 43	

Notes: The immigrant–native gap shows how much lower (%) immigrant wages are relative to native wages.

Sources: Adsera, A., and B. Chiswick. “Are there gender and country of origin differences in immigrant labor market outcomes across European destinations?” *Journal of Population Economics* 20:3 (2007): 495–526 [5].

Human capital theory predicts that high-skilled workers assimilate faster than low-skilled workers, but only a few of these studies estimate differences in the rate of assimilation by skill. The human capital prediction is supported in studies of English-speaking countries. However, a recent study of assimilation in Spain finds the opposite pattern. Accordingly, immigrants in high-skilled jobs that require college credentials have a larger entry-wage gap than immigrants in low-skilled jobs that do not require a degree. And neither group fully assimilates. The entry gap for high-skilled workers is 50%, falling to 30% after 10 years in the host country. The entry gap for low-skilled workers is 21%, falling to 14% after 10 years. The disparity is, in all likelihood, caused by market segmentation and strict credentialing requirements, which impact upon high-skilled workers more than others [6].

Immigrant status at entry is important for assimilation. Refugees are more likely to be permanent residents than economic migrants, and their longer expected duration in the host country motivates investment in skills that are relevant and needed in the host country. Rapid assimilation would be expected from this kind of investment. However, refugees are more likely to move from conflict situations and may be more dissimilar in language and culture than other immigrants. Such characteristics may make assimilation more difficult. The literature is mixed on how entry status affects assimilation.

### **What are the policy implications?**

The theoretical and empirical review of the assimilation literature in this contribution suggests that policy interventions can affect the speed of assimilation. Assimilation policies can be classified into three groups based on the combined theoretical and empirical understanding of the assimilation process. The first group includes policies that affect the human capital and job placement of immigrants. The second group includes policies that affect labor market segmentation against immigrants. The third group includes policies that affect citizenship and immigrant selection.

#### ***Human capital and job placement of immigrants***

Policies in this context are grounded in human capital theories of assimilation. Such policies are designed to increase the productivity of immigrants in the host-country labor market and to help immigrants access appropriate jobs.

Language programs have had mixed success with respect to wages. Participation in a government-sponsored language program in Norway for immigrants from Morocco, Pakistan, and Chile improved their language proficiency, and completion of the program signaled language proficiency to employers. As a result, participants in the program were more likely to be hired than other immigrants, but wage assimilation was not affected [7]. Similarly, language programs in Denmark included training in the use of Danish in the labor market. This three-year, part-time training increased language proficiency, and proficiency increased employment. However, there was no evidence that this program affected earnings [8].

An important conclusion from analyses of different language programs is that language education is more effective if it is coordinated with employment or focused on job-related communication. Language programs that are too lengthy and which concentrate on general fluency can delay entry into work (lock-in), and as a consequence, the negative effect from losing work experience can then dominate the gains from better language skills in employment and wage assimilation [8].

Recent comprehensive reviews of active labor market policies (ALMP) in OECD countries found mixed evidence on their effectiveness for immigrant employment assimilation. None of these studies looked at wage assimilation [2]. ALMP programs include training, wage subsidies for private sector jobs, public employment, services (counseling, job training) and sanctions, and other programs. The typical program is short term, and the effect on employment is short term. The most effective programs enroll immigrants soon after they arrive.

The only type of program that had a significant impact on employment was the wage subsidy program. A subsidized wage gives the employer an incentive to hire workers who do not have local work experience but are bound by high contracted wages at the start of the job. A good example of an effective ALMP is Denmark's "step model" [2]. In Step 1, new immigrants are enrolled in language courses based on their education. In Step 2, immigrants participate in ALMP designed to place them in jobs. In Step 3, employers can receive wage subsidies to hire immigrants for a maximum of one year. The wage subsidies comprise the most effective part of the employment intervention but are also infrequently used. Employment assimilation is faster among participants in the step program, but wage assimilation has not yet been assessed [2].

### ***Labor market segmentation***

The second group of assimilation policies affects labor market regulations and credentialing restrictions that segment markets for immigrants and natives. A recent study compared the wages and employment of immigrants in Australia, Canada, and the US [9]. Australia's labor market includes high union contract coverage, centralized and coordinated wage setting, and binding wage floors. The US model is low union coverage, low unemployment insurance replacement, and decentralized wage setting. Canadian institutions fall in between these two. The US system is characterized by more inequality in wages and less inequality in employment than in Canada or Australia. The authors find that assimilation in total earnings is largely due to employment assimilation in Canada and Australia and wage assimilation in the US, where wages are not set but negotiated.

Professional credentialing across borders is a third initiative that falls within this set of policies. Employers have difficulty judging the qualifications and work experience of immigrants. Credentialing provides information to firms and increases the value of the skills immigrants acquired at home. Research shows that employer attitudes toward foreign credentials change if they are better able to assess the immigrant's education, training, and experience.

Denmark and Canada recently adopted credentialing reform. Denmark has standard procedures for assessing regulated and unregulated professional credentials. The digital Competence Card provides information on the immigrant's language, professional, and other work skills. Competency in each category is assessed through the Public Employment Service. Canada's "2009 Pan-Canadian Framework for the Assessment and Recognition of Foreign Qualifications" sets out standards that apply across provinces for "improving fairness, transparency, timeliness, and consistency" [2].

The "Bologna Process" is an attempt to assure higher education quality and recognition of foreign degrees by 47 signatory countries. Canada's recent immigration reform included funding to develop a metric to evaluate the quality of foreign universities and a requirement that foreign university degrees are assessed and ranked. The assessment is incorporated in the point system used to select immigrants. The impact of this new education ranking system is however not known at this time [10].

### *Citizenship and immigrant selection*

The third set of policies targets immigrant selection and citizenship. Canada and Australia are two recent reformers on immigrant selection. Both use a point system to determine which applicants can enter the country legally. The Australian system was reformed in the late 1990s and places more emphasis on age, language, and skill. Points are assigned to the applicant and his or her spouse on all three dimensions. The reform tightens access to income from social security benefits and lowers the period of time over which these benefits can be received. An evaluation of the impact of the point system on immigrant selection showed that the higher-skill requirements increased labor force participation and employment and reduced unemployment, but only for women. The employment of refugees was not affected by the reform. The expectation is that reform promotes wage assimilation through these positive effects on employment outcomes [11].

Naturalization (the acquisition of citizenship) signals to employers that workers are better integrated. It may also improve the bargaining position of immigrant workers with firms, open up job opportunities, and increase earnings. Germany's experience with citizenship reform illustrates how citizenship can impact assimilation. In 2000 the residency requirement for citizenship for adults was lowered from 15 to eight years. A study of the impact of the reform on citizenship, employment, and wages found that more immigrants became citizens, and that wages of female immigrants increased with citizenship—no wage effect was found for male immigrants. Moreover, immigrants from poorer countries had larger gains from citizenship than other immigrants [12].

The preconditions for and costs of obtaining citizenship vary. In Europe, proof of integration in the host country is a prerequisite for citizenship, and requires passing exams on civics and language. Most OECD countries recently tightened their preconditions for citizenship. More than half of all eligible Mexican immigrants in the US do not meet the English-language requirement and do not apply for citizenship, even though the returns to US citizenship increase over time. Further restrictions on access to citizenship reduce assimilation [2].

Guest-worker programs were studied in Germany and the US [13]. Guest workers are protected in many ways from discriminatory firm employment policies, but guest workers are temporary and usually confined to blue-collar or agricultural jobs. Guest workers are also less mobile than other workers. The structure of these programs prevents assimilation with native workers, in general, but reduces the disparity in wages between immigrant and native workers in the restricted sectors of the market.

## **LIMITATIONS AND GAPS**

The studies reviewed in this contribution are limited in four ways. First, there is not much literature on wage assimilation in large middle- and low-income host countries. This is largely due to the lack of publicly available data on immigrants in these countries. Russia and India are important destinations for many immigrants from transition and conflict countries, and we need to know what is happening to them over time.

Second, all of the studies reviewed examine assimilation of workers employed in wage or salary jobs, but most studies exclude the self-employed. The self-employment rate among immigrants in many OECD countries is equal to, or exceeds, the self-employment rate among natives and is an alternative to unemployment [8]. Hence, these studies miss a crucial part of the immigrant population. There are studies of entrepreneurship among immigrants, but most



do not track wage assimilation. Wage assimilation can occur through entrepreneurship, and policies in place in many countries encourage entrepreneurship among immigrants. However, research is needed on the long-term impact of these programs on income [8].

Third, most studies focus on the assimilation of legal residents. A large percentage of immigrants are temporary and undocumented and underrepresented in the data. If the undocumented are more likely to be low-wage workers, then our estimates of assimilation are biased because of the non-random selection of workers observed in the data.

Finally, there is a shortage of policy work on wage assimilation. We understand the assimilation process and how policy affects wages in theory, but most studies do not measure the direct impact of policy on wage gaps over time and across groups. The studies that evaluate the effectiveness of language courses and ALMP focus on employment outcomes, not earnings. Employment is the first step to wage assimilation, but more research is needed on the effect of language training, skill development, and labor market policies on wages.

## SUMMARY AND POLICY ADVICE

Immigrants earn less than natives when they enter their new country, but their wages grow over time. The wages of first-generation immigrants in high-income countries are close to native wages after 20–30 years in the host country. But some immigrant groups never reach parity with natives.

The review of the literature suggests three broad policy options to speed assimilation: develop and document immigrant skills; increase employment opportunities; and create a low-cost pathway to citizenship. First, language training that is coordinated with employment and skill documentation, such as Denmark's Competency Card, is an effective skill-enhancement policy. Global credentialing breaks barriers to entry that skilled immigrants face in the labor market. Second, the most effective policies for employment assimilation are wage subsidies. Immigrants gain access to better jobs and are trained on the job. These programs hold promise for increasing wages. Third, temporary guest-worker programs segment immigrants in the labor market. In contrast, naturalization encourages immigrant investment and job mobility. Assimilation is faster if there is less segmentation and a low-cost pathway to citizenship.

As a consequence, countries can benefit from immigrants who fill labor shortages (in increasingly aging societies). And society further benefits if immigrants become productive, integrated, and active residents.

## Acknowledgments

The author thanks two anonymous referees and the IZA World of Labor editors for many helpful suggestions on earlier drafts. The author would also like to thank Joni Hersch (Professor of Law and Economics at Vanderbilt University).

## Competing interests

The IZA World of Labor project is committed to the *IZA Guiding Principles of Research Integrity*. The author declares to have observed these principles.

© Kathryn H. Anderson

## REFERENCES

### Further reading

Benton, M., M. Sumption, K. Alsvik, S. Fratzke, C. Kuptsch, and D. Papademetriou. *Aiming Higher: Policies to Get Immigrants into Middle-Skilled Work in Europe*. Migration Policy Institute and International Labour Office, 2014. Online at: <http://www.migrationpolicy.org/research/aiming-higher-policies-get-immigrants-middle-skilled-work-europe>

Schultz, T. "Immigration quality and assimilation: A review of the US literature." *Journal of Population Economics* 11:2 (1998): 239–252.

### Key references

- [1] Borjas, G. *The Slowdown in the Economic Assimilation of Immigrants: Aging and Cohort Effects Revisited Again*. NBER Working Paper No. 19116, 2013.
- [2] OECD. *International Migration Outlook 2014. Special Focus: Mobilising Migrants' Skills for Economic Success*. Paris: OECD Publishing, 2014.
- [3] Borjas, G. "The economics of immigration." *Journal of Economic Literature* 32:4 (1994): 1667–1717.
- [4] Lubotsky, D. "Chutes or ladders? A longitudinal analysis of immigrant earnings." *Journal of Political Economy* 115:5 (2007): 820–867.
- [5] Adsera, A., and B. Chiswick. "Are there gender and country of origin differences in immigrant labor market outcomes across European destinations?" *Journal of Population Economics* 20:3 (2007): 495–526.
- [6] Rodríguez-Planas, N. "Wage and occupational assimilation by skill level: Migration policy lessons from Spain." *IZA Journal of European Labor Studies* 1:8 (2012).
- [7] Hayfron, J. "Language training, language proficiency, and earnings of immigrants in Norway." *Applied Economics* 33:15 (2001): 1971–1979.
- [8] OECD. *Jobs for Immigrants, Volume 1: Labour Market Integration in Australia, Denmark, Germany and Sweden*. Paris: OECD Publishing, 2007.
- [9] Antecol, H., P. Kuhn, and S. Trejo. "Assimilation via prices or quantities: Sources of immigrant earnings growth in Australia, Canada and the United States." *The Journal of Human Resources* 41:4 (2006): 821–840.
- [10] Grubel, H. *Canada's Immigrant Selection Policies: Recent Record, Marginal Changes and Needed Reforms*. Studies in Immigration Policy, Fraser Institute, 2013.
- [11] Cobb-Clark, D. "Public policy and the labor market adjustment of new immigrants to Australia." *Journal of Population Economics* 16:4 (2003): 655–681.
- [12] Gathmann, C., and N. Keller. *Returns to Citizenship? Evidence from Germany's Recent Immigration Reforms*. CESifo Working Paper Series No. 4738, 2014.
- [13] Schmidt, C. "Immigrant performance in Germany: Labor earnings of ethnic German migrants and foreign guest-workers." *The Quarterly Review of Economics and Finance* 37:1 (1997): 379–397.

**The full reference list for this article is available from the IZA World of Labor website (<http://wol.iza.org/articles/can-immigrants-ever-earn-as-much-as-native-workers>).**