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# EQUIPPING IMMIGRANT SELECTION SYSTEMS FOR A CHANGING WORLD OF WORK

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## COUNCIL STATEMENT

By Demetrios G. Papademetriou, Meghan Benton,  
and Kate Hooper

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*The 19th Plenary Meeting of the Transatlantic Council on Migration*

## Council Statement

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## Executive Summary

The world of work is changing in ways that defy easy prediction. Artificial intelligence and machine learning, automation, and digitization are set to transform many sectors beyond recognition, with some entire occupations (or many of their component parts) eliminated while others are created. These developments are also reshaping where and how people work, with more working remotely or joining the ranks of a new wave of freelancers and other workers who do not fit the traditional “employee” mold.

The dramatic pace of this change is having a disruptive effect on labor-market institutions around the world, from social protection policies and how work is organized, to collective bargaining, work standards, and minimum wages. It has also given rise to a stubborn policy dilemma: sizeable groups of resident workers are left behind as employers seek employees with higher education levels and skills, even as employers find some job vacancies hard to fill. While addressing this challenge will require constant adjustments to education, training, and social protection systems, and creative approaches to regional economic development, it also has extensive implications for how policymakers design and regulate immigrant selection systems.

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*Selection systems will need to bring in immigrants who can help drive future economic growth, and not merely meet today's job and skills needs.*

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The next decade will be a testing time for many advanced economies—and for the decisions governments make about which foreign workers to admit and on what terms. Aging populations, and the prospect of shrinking workforces and dwindling tax bases, raise questions about how to meet future skills and labor needs and support social protection systems. Many countries are looking to immigration to help mitigate these trends. Demand for health and care workers is also rising at a time when many workers in the health sector are retiring, and countries need younger workers to offset rising old-age dependency ratios.

Lessening the negative impacts of these trends will depend on policies designed to improve labor-market participation rates, prolong working lives, place much greater emphasis on productivity-enhancing investments in training and education, *and* design smart immigration programs to attract and retain the talented workers and entrepreneurs of the future. Selection systems will need to bring in immigrants who can help drive future economic growth, and not merely meet today's job and skills needs—a strategy that is inherently risky in such a dynamic environment. In turn, they will need to select for different types of skills as the jobs of tomorrow are likely to place an even larger premium on highly specialized and advanced cognitive, communication, social, and other soft skills, which governments have not historically been good at assessing. And they will need to ensure that the spoils of immigration are evenly distributed and do not flow only to metropolitan centers.

### **Four Questions for Designing Future-Proof Selection Systems**

Immigration policymakers are tasked with selecting economic-stream immigrants with the right skills to thrive in the labor market and with finding ways to retain this talent as global competition grows. As more and more countries enter the race for skilled workers, governments looking to attract, admit, and retain them will need to grapple with a number of questions, including:

- **How to anticipate future labor-market needs.** This includes deciding whose projections to trust in a situation where no economic forecasts are either as truly objective or as methodologically robust as their purveyors might maintain. In fact, the very existence of shortages is contested by



economists, and incorporating them into immigration systems is thought to create incentives for employers and industry bodies to exaggerate labor-market needs. Meanwhile, questions remain about which data are most relevant (and reliable), especially given that there is often a time lag before certain data, such as vacancy surveys, are published. Governments will need to explore new ways to access up-to-the-minute forecasts, while navigating the inherently political process of evaluating the evidence at hand and formulating an appropriate response.

- ***How to strike the appropriate balance between employer/demand-driven selection and policies that focus on human capital.*** Doing so is an exercise in tempering short-termism with pursuit of long-term goals. Since employers are better than governments at selecting for the higher-level and more specialized skills that are growing in importance, a job offer will continue to be the best predictor of future labor-market success. But all immigration systems will need to find policy levers that can enable them to select some candidates with skills and education that go beyond immediate labor needs to build up the country's pool of human capital.
- ***How to build an element of regional variation into the immigration system.*** This will help a government spread immigration's contributions to economic growth beyond major metropolitan centers, where most immigrants (particularly highly skilled immigrants) settle and where most investments of all types are concentrated. Policymakers could consider devolving some immigration policy responsibilities to the subnational level (to regions or cities), but such an approach needs to be embedded within broader regional development strategies for the economic revitalization of poorer regions and supported by measures to help immigrants build ties to these communities—and vice versa.
- ***How to decide on the appropriate mix of temporary and permanent migration, and how to think about pathways between the two.*** Admitting workers on a temporary basis can help countries meet short-term economic needs while minimizing longer-term costs, such as those associated with social service use. It also offers the best mechanism for “trialing” potential long-term residents and “flexing up” and “flexing down” the workforce. But temporary programs need to balance flexibility with enforcing employment contracts, ensuring fair working conditions, and where appropriate, offering immigrant workers the option to change employers and a clear pathway to permanent residence to avoid entrenching exploitation.

The hallmarks of future-proof immigrant selection systems will be transparency, consistency, and the flexibility to respond to the latest information on labor-market needs *and* immigrant integration outcomes. To understand how demand for skills and competences is evolving, immigration policymakers will need to work closely with public and private stakeholders across different sectors, and experiment with policies to admit immigrants with the ability to thrive in fast-changing labor markets.

## I. Introduction

Labor markets around the world are in the grip of dramatic changes. As many jobs have become more demanding in terms of their analytical and technical skills, traditional middle-wage jobs have continued to decline.<sup>1</sup> Meanwhile, knowledge- and service-intensive sectors such as education, health care, and

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1 For example, jobs in the manufacturing sector in the United States have declined over the past 40 years, driven by uncompetitive products, the effects of offshoring as trade agreements enabled production to move overseas, and by developments in automation and robotics. See Justin R. Pierce and Peter K. Schott, “The Surprisingly Swift Decline of US Manufacturing Employment,” *American Economic Review* 106, no. 7 (2016); Daron Acemoglu et al., “Import Competition and the Great US Employment Sag of the 2000s,” *Journal of Labor Economics* 34, no. 1 (2016).



professional services have been expanding, creating new opportunities for highly skilled workers. Many countries are therefore confronting an apparent paradox: a sizeable share of residents unable to find work that pays family-sustaining wages, alongside rising shortages of skilled professionals. This mismatch between the skills employers need and those that workers possess, in addition to “locational” (geographic) mismatches between where workers and jobs are, looks set to increase over the coming decades. This portends far-reaching consequences for economic growth, the vitality of entire regions, social protection and education systems, and the fundamental question of what role immigration should play: whether, when, how, and on what scale should countries recruit workers from abroad, and what skills profiles should they prioritize.

Designing selection policies that can look ahead and respond to emerging trends is more important than ever. Artificial intelligence, automation, and digitization will transform labor markets beyond recognition. Some sectors will contract while others will grow; certain occupations and tasks will be eliminated while new ones will be created; and many more jobs will change as their routine elements are automated. Jobs are likely to become increasingly segmented between in-demand, high-skilled roles and more precarious, lower-skilled positions, with many workers (including newly arrived refugees and other migrants) facing uncertain futures. At the same time, as populations get older and the workers who support them also age, new pools of talent will be needed to keep economies competitive. While the pace and scale of these labor-market changes is almost impossible to predict,<sup>2</sup> the ramifications for immigration systems must be constantly reassessed to ensure that those admitted through economic streams have the educational and skill foundations to meet today’s as well as tomorrow’s labor needs.

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*Selecting the thinkers, workers, and innovators with the skills to thrive in dynamic and competitive economies will become an ever more complex endeavor.*

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While it is also crucial to regularly assess and update policies to support the educational and professional development of native-born workers, most countries do not produce enough well-qualified workers to meet the needs of their economies when and where they need them, making skills autarky a pipe dream. As workforces shrink and labor and skills needs change, this trend is likely to pick up pace. Countries will also face growing global competition for the talent they need as demand for specialized skilled workers grows and emerging economies become increasingly attractive immigrant destinations. In the process, selecting the thinkers, workers, and innovators with the skills to thrive in dynamic and competitive economies will become an ever more complex endeavor, with increasingly high stakes. Governments run the risk of recruiting immigrants to fill short-lived jobs that are subsequently automated or moved overseas, wasting human capital and potentially fueling un- and underemployment and stoking resentment among local populations.

In this climate of uncertainty, governments will need to craft flexible immigrant selection systems that can respond to emerging evidence on labor and skills needs. This Council Statement examines the social, economic, and demographic trends that are reshaping labor markets, distilling their ramifications for selection policies. It analyzes some of the main design choices policymakers face as they seek to maximize the benefits of economic-stream migration while minimizing its risks. And it makes recommendations for

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<sup>2</sup> Estimates of job destruction and job creation vary widely, the result of uncertainty about the effects of these changes and how employers, governments, and social institutions will adapt. Technological change may allow businesses to rethink entire business models, resulting in significant churn; on the other hand, its impact may be modest, with businesses facing barriers to investing in and adopting new technologies.



how governments can “future proof” their immigration systems and attract, select, and retain the right workers to help their future economies thrive.

## II. Selecting for Economic Growth in Changing Labor Markets

Governments must be highly attuned to the labor needs of today, while keeping a constant eye on preparing the workforce of tomorrow. To this end, immigrant selection systems are an increasingly important tool in their policy toolbox. But as competition between countries for talent grows, governments will need to work hand-in-glove with businesses to better understand what skills they need, and with both employers and skilled migrants to understand how to make immigration systems more accessible and attractive.

Many high-income and fast-growing middle-income countries are experimenting with initiatives to attract foreign-born talent for emerging or expanding sectors (such as artificial intelligence and robotics). But these efforts do not address the bigger picture: labor markets and the nature of work itself are changing, with profound implications for the economic immigrants countries need to select, and on what terms. Governments will need to rethink their approach to identifying and admitting talent, including how they attract those with “unique” skills (who can drive innovation), “scarce” skills (including for low- or middle-skilled roles), and the “soft” skills that are valued by the knowledge economy and may support their adaptation to changing labor markets.<sup>3</sup>

### A. A Changing World of Work

A confluence of social and economic trends is transforming labor markets and in turn, demand for workers. Workforces in many destination countries are shrinking as people age, raising questions about meeting labor-market needs and sustaining increasingly overburdened social protection—and especially, retirement—systems. Meanwhile, advances in artificial intelligence, machine learning, and other digital technologies are reshaping many industries, while simultaneously changing where jobs are located.<sup>4</sup> Managing the effects of these changes, including the growing polarization of the workforce, requires constant and committed analysis and coordination among education and training, employment, social policy, and immigration and integration policymakers.

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3 Transatlantic Council on Migration, “Second Meeting of the Transatlantic Council on Migration: Discussion Summary,” in *Talent, Competitiveness, and Migration*, eds. Bertelsmann Stiftung and Migration Policy Institute (Gütersloh, Germany: Verlag Bertelsmann Stiftung, 2009).

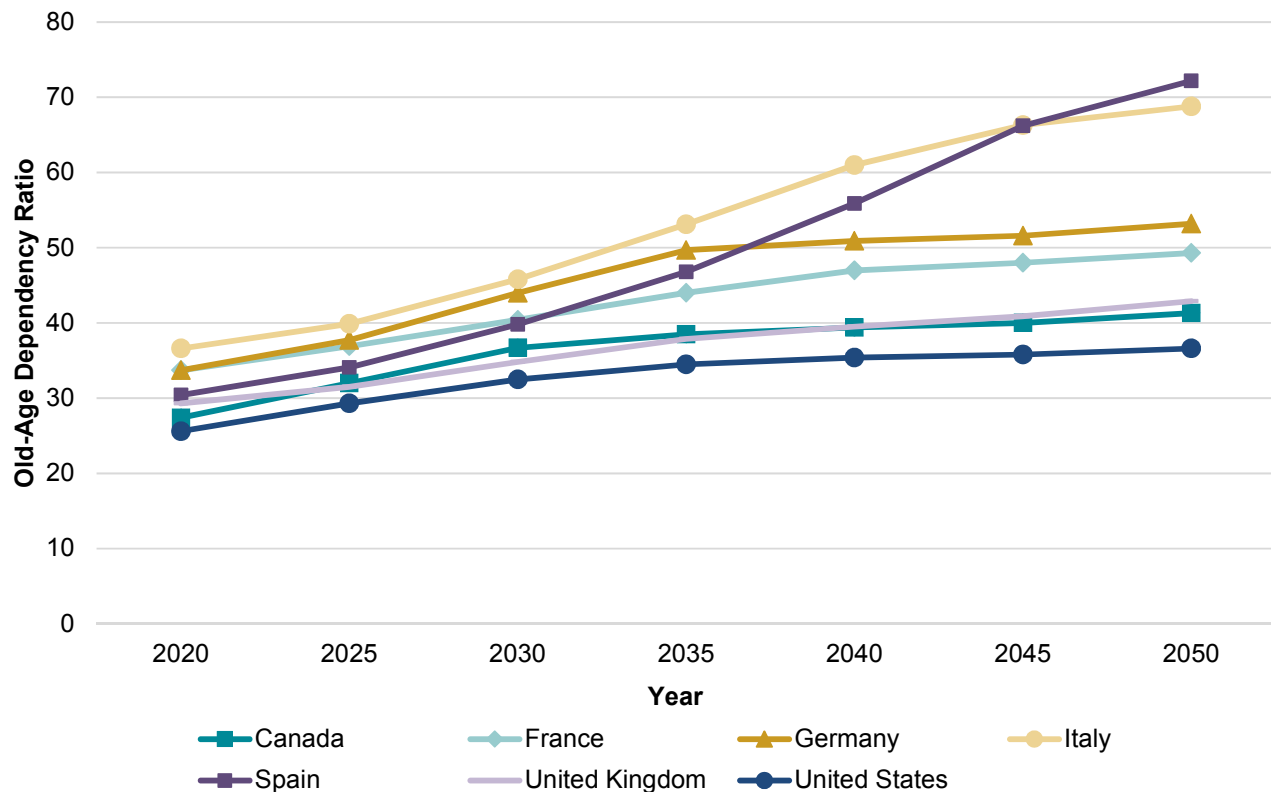
4 Economic growth is increasingly concentrated in sectors and industries hiring skilled workers and in large metropolitan areas, with less-skilled workers and smaller cities and rural areas being left behind. This gap has widened in the aftermath of the economic crisis. In the United States, for example, recovery from the economic crisis was concentrated in large metropolitan areas (e.g., Chicago, Houston, Los Angeles, and New York). Between 2010 and 2014, job growth for U.S. counties with more than 1 million residents was double that of counties with fewer than 100,000 residents. See Demetrios G. Papademetriou, Kate Hooper, and Meghan Benton, *In Search of a New Equilibrium: Immigration Policymaking in the Newest Era of Nativist Populism* (Washington, DC: Migration Policy Institute, 2018), 8-10, [www.migrationpolicy.org/research/immigration-policy-making-nativist-populism](http://www.migrationpolicy.org/research/immigration-policy-making-nativist-populism); Economic Innovation Group, *The New Map of Economic Growth and Recovery* (Washington, DC: Economic Innovation Group, 2016), <https://eig.org/wp-content/uploads/2016/05/recoverygrowthreport.pdf>.



## I. Demographic Changes

In many destination countries, populations are aging rapidly as fertility rates fall and people live longer. Governments are already facing a scenario where the working-age share of the population is declining compared to the population ages 65 years and older—and this trend is projected to accelerate over the next few decades (see Figure 1). These trends raise several pressing questions for policymakers: first, how to sustain economic growth and meet labor and skills needs (including for workers in elder care) with a dwindling workforce, and second, how to support a growing retired population while the tax base shrinks and alleviate the growing pressure on welfare and pensions systems.

**Figure 1. The Projected Rise in the Old-Age Dependency Ratio in Selected Countries, 2020–50**



*Note:* The old-age dependency ratio measures people ages 65 and over relative to those of working age (ages 15 to 64); it is projected to rise for all wealthy countries, although the rate of change varies.

*Source:* United Nations, “World Population Prospects 2019,” accessed June 24, 2019, <https://population.un.org/wpp/>.

As people age and require more support, spending on health and elder care will rise exponentially, both for individuals and societies.<sup>5</sup> Coupled with the aging of the health-care workforce itself, health-

<sup>5</sup> James Buchan, James Campbell, Ibadat Dhillon, and Anita Charlesworth, “Labor-Market Changes in the Health-Care Sector and the Role of Immigration” (paper tabled at the 19th plenary meeting of the Transatlantic Council on Migration, *Building Migration Systems for a New Age of Economic Competitiveness*, Migration Policy Institute, Brussels, September 24-25, 2018).



and elder-care jobs at both the high- and low-skilled ends of the spectrum are likely to grow.<sup>6</sup> Digital and social innovations could potentially help alleviate some lifestyle-related health conditions and complement in-person care, but technology is unlikely to replace these services entirely (see Box 1).

### **Box 1. How Will Population Aging Affect Health-Care Jobs and Migration?**

The health-care and social assistance sectors (which include elder care, child care, and social work) are projected to add one-third of all new jobs in the United States between 2016 and 2026. This growth is occurring at both the high- and low-skilled ends of the spectrum, in contrast to some other sectors that are seeing a squeeze on low-skilled jobs as a result of digitization and automation.

Technology could mitigate, but not reverse, this exponential rise in demand. While technology already allows for remote consultations, many health services, such as elder care, rely on interpersonal relationships and the human touch, pointing to a ceiling of what can be automated. But technological and social innovations—from mobile apps to health-tracking devices to government “nudges” to promote healthy behavior—could reduce the incidence of health conditions aggravated by certain lifestyle choices (such as heart disease and lung cancer), potentially lowering demand for some health and care services. Meanwhile, personalized “precision” medicine enabled by innovations such as genome sequencing, ingestible sensors, and predictive diagnostics could lead to the development of early warning systems for socially and financially costly health conditions such as dementia.

Projections of health-care needs indicate that demand for care workers will increase across high- and middle-income countries, and not just those that currently have fast-aging populations. While immigration will continue to be a source for skilled health workers, governments will also need to invest intensively in workforce training and education and to create financial incentives to work in underserved regions. At the same time, immigrant-receiving countries must ensure that immigrants who are brought in—or who arrive through other channels, such as asylum or broader protection systems—receive the support needed to do the jobs for which they were trained, including through credential recognition and additional training. Because “brain waste” and skills and locational mismatches are such enduring challenges in the health sector, countries will have to be strategic about how they augment and deploy their health workforces to reduce the risk that people are working in the “wrong” place or the “wrong” specialty, affecting the quality of care.

Sources: U.S. Department of Labor (DOL), Bureau of Labor Statistics, “Employment Projections 2016-2026” (news release, DOL, Washington, DC, October 24, 2017), [www.bls.gov/news.release/pdf/ecopro.pdf](http://www.bls.gov/news.release/pdf/ecopro.pdf); DOL, Bureau of Labor Statistics, “Home Health Aides and Personal Care Aides: Job Outlook,” updated April 13, 2018, [www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm#tab-6](http://www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm#tab-6); Jessica Bland et al., *The NHS in 2030: A People-Powered and Knowledge-Powered Health System* (London: Nesta, 2015), [www.nesta.org.uk/report/the-nhs-in-2030-a-people-powered-and-knowledge-powered-health-system/](http://www.nesta.org.uk/report/the-nhs-in-2030-a-people-powered-and-knowledge-powered-health-system/); James Buchan, James Campbell, Ibadat Dhillon, and Anita Charlesworth, “Labor-Market Changes in the Health-Care Sector and the Role of Immigration” (paper tabled at the 19th plenary meeting of the Transatlantic Council on Migration, *Building Migration Systems for a New Age of Economic Competitiveness*, Migration Policy Institute, Brussels, September 24–25, 2018).

<sup>6</sup> Health and social care are projected to add one-third of new jobs in the United States by 2026. See U.S. Department of Labor (DOL), Bureau of Labor Statistics, “Employment Projections 2016-2026” (news release, DOL, Washington, DC, October 24, 2017), [www.bls.gov/news.release/pdf/ecopro.pdf](http://www.bls.gov/news.release/pdf/ecopro.pdf); Buchan, Campbell, Dhillon, and Charlesworth “Labor-Market Changes in the Health-Care Sector and the Role of Immigration.”



Large-scale immigration has long been touted as a solution for these challenges, but this perspective overlooks two important issues. First, the benefits of large pools of new workers will not materialize if these newcomers do not enter the formal labor market at levels commensurate with their skills and experience, or if governments do not invest in training and education to meet the demands of fast-changing economies.<sup>7</sup> Indeed, in a scenario of poor labor-market integration, higher volumes of immigration can be expected to produce comparatively worse labor-force outcomes.<sup>8</sup> Second, migrants age too, meaning that countries will need more of them each year to sustain the workforce and, crucially, their social security contributions—an unsustainable policy in the current political landscape in many countries. In turn, an approach to meeting labor demand that relies too heavily on immigration reduces incentives for employers and policymakers to strengthen education and training systems to build and update the skill base and employability of the whole population.

Instead of looking to expand the labor force through immigration, policymakers should constantly revisit the fundamentals of who works, how, and for what length of time. Doing so will require tapping underused sources of labor, such as stay-at-home parents, recent retirees, and minorities and marginalized communities, and encouraging their labor-market participation through positive measures (such as training and child-care assistance), the tactical use of social supports, and flexible working options.<sup>9</sup> Policymakers can also explore incentives or tax concessions for employers to provide jobs, training, and other benefits to these workers. It will also require investing heavily in the share (and qualifications) of the population entering or rejoining the labor market, including young people and recent immigrants, to develop and apply valuable skills, and reduce brain waste and skills mismatches.

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At the same time, policymakers will need to make some hard decisions about who can access the social assistance system and under what conditions (including raising the retirement age and closing the gap between when people no longer work and when pensions become available). They will also need to critically assess what services a state can realistically provide with a diminishing tax base. Productivity gains (independently of and through a greater reliance on human-capital-focused immigration<sup>10</sup>) could

7 Demetrios G. Papademetriou and Meghan Benton, *Towards a Whole-of-Society Approach to Receiving and Settling Newcomers in Europe* (Washington, DC: Migration Policy Institute, 2016), [www.migrationpolicy.org/research/towards-whole-society-approach-receiving-and-settling-newcomers-europe](http://www.migrationpolicy.org/research/towards-whole-society-approach-receiving-and-settling-newcomers-europe).

8 A 2019 study of demographic scenarios for the European Commission's Joint Research Centre explored the effects of different volumes of immigration and levels of integration on the future European labor force. The analysis found that the labor-market integration of immigrants (and especially female immigrants) was key; a scenario with higher volumes of immigration coupled with low labor-market participation rates resulted in worse outcomes than one where governments admitted fewer immigrants but invested in successful policies to help new arrivals join the labor market. In turn, while higher immigration would increase the working-age population, this would eventually increase the non-working population as immigrants retire and start drawing on social assistance. Ultimately, the authors argue that "the most feasible and effective remedy to negative consequences of population ageing is neither focusing on higher fertility nor more migration, but rather increasing labour force participation." See Wolfgang Lutz et al., *Demographic Scenarios for the EU – Migration, Population and Education* (Luxembourg: Publications Office of the European Union, 2019), <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/demographic-scenarios-eu>.

9 Demetrios G. Papademetriou, "Demographic Dilemmas and How to Manage Them" (presentation, Genoa, May 2018).

10 Demetrios G. Papademetriou and Kate Hooper, *Competing Approaches to Selecting Economic Immigrants: Points-Based vs. Demand-Driven Systems* (Washington, DC: Migration Policy Institute, 2019), [www.migrationpolicy.org/research/selecting-economic-immigrants-points-based-demand-driven-systems](http://www.migrationpolicy.org/research/selecting-economic-immigrants-points-based-demand-driven-systems).



also mitigate some of the demand for services and for increased immigration over the medium to long term.

## II. Automation, Artificial Intelligence, and Digitization

Another set of issues revolves around the disruptive effects that automation, artificial intelligence and machine learning, and digitization are having and will continue to have on the labor market. These forces are at work in many sectors, including those that currently employ large numbers of immigrants, such as agriculture, construction, health care, hospitality, meatpacking, retail, and even many routine jobs in the tech sector. With some exceptions, these developments are likely to place a premium on workers with increasingly specialized skills, and those with higher-level cognitive, emotional, and social skills that are more resistant to automation. At the same time, the automation of certain tasks will transform or even eradicate certain occupations (for example, routine jobs in fast-food services, cashier and checkout roles in retail, and many truck, taxi, or other driving jobs). Meanwhile, offshoring is likely to continue as new forms of remote collaboration enable many “tradable”<sup>11</sup> high-skilled occupations—from medicine and legal services to advanced computer programming—to be carried offsite too.

Several sectors that employ large numbers of foreign workers look set to see radical transformations in the coming years (see Box 2). A 2018 study suggested that half of third-country nationals in the European Union were in occupations at high risk of automation.<sup>12</sup> But while the potential for disruption is widely acknowledged, it remains very difficult to predict the scale and speed of this change. Estimates of how many jobs may be eliminated by technology vary wildly from around 10 percent to 50 percent, making analysis of labor-market needs difficult.<sup>13</sup> It is unclear how quickly these technologies will be adopted and how far-reaching their effects will be, with cost and perceived risk among the factors that shape employers’ decisions in this regard. For example, while agriculture has historically been resistant to automation due to tight profit margins, frequent price fluctuations, and easy access to foreign workers (including those without legal status), this calculation may very well change if the supply of cheap labor diminishes.<sup>14</sup> Occupations are likely to be both eliminated and created, and many jobs are likely to change as their routine elements are automated, placing greater emphasis on the lifelong education and training that can help workers change occupations or take on new responsibilities.<sup>15</sup>

11 Tradable goods can be sold in different markets, and tradable occupations are those that can be easily carried out in different locations.

12 Frederico Biagi, Sara Grubanov-Bsokovic, Frabrizio Natale, and Raquel Sebastian Largo, *Migrant Workers and the Digital Transformation in the EU* (Luxembourg: Publication Office of the European Union, 2018), <https://ec.europa.eu/jrc/en/publication/migrant-workers-and-digital-transformation-eu>.

13 Estimates of the extent of job destruction vary widely, hinging in part on whether analysts predict whole occupations or just certain tasks will be automated. In one of the most famous predictions, Carl Frey and Michael Osborne predicted that 47 percent of U.S. jobs are susceptible to automation and face a high risk of being automated in the next decade or two. By contrast, the Organization for Economic Cooperation and Development (OECD) estimates that on average, 14 percent of jobs are at high risk of automation (meaning that at least 70 percent of the tasks could be automated)—and just 10 percent in the United States—with another 32 percent of jobs likely to undergo significant change as some of their tasks are automated. The OECD research also predicted large differences by country (with 34 percent of jobs in Slovakia at high risk of automation, compared with 6 percent of jobs in Norway). See Carl Benedikt Frey and Michael A. Osborne, “The Future of Employment: How Susceptible Are Jobs to Computerisation?” *Technological Forecasting and Social Change* 114 (2017): 254–80; Ljubica Nedelkoska and Glenda Quintini, “Automation, Skill Use and Training” (Social, Employment, and Migration Working Paper No. 202, OECD Publishing, Paris, March 2018), <https://doi.org/10.1787/2e2f4ee4-en>.

14 Sarah Gordon, “Why Brexit Could Be Good News for Britain’s Farmers,” *Financial Times*, August 23, 2018, [www.ft.com/content/cef81570-a591-11e8-926a-7342fe5e173f](http://www.ft.com/content/cef81570-a591-11e8-926a-7342fe5e173f); Philip Martin, *Immigration and Farm Labor: Challenges and Opportunities* (Oakland, CA: Giannini Foundation of Agricultural Economics, 2017), [https://s.giannini.ucop.edu/uploads/giannini\\_public/dd/d9/ddd90bf0-2bf0-41ea-bc29-28c5e4e9b049/immigration\\_and\\_farm\\_labor\\_-\\_philip\\_martin.pdf](https://s.giannini.ucop.edu/uploads/giannini_public/dd/d9/ddd90bf0-2bf0-41ea-bc29-28c5e4e9b049/immigration_and_farm_labor_-_philip_martin.pdf).

15 According to McKinsey’s analysis, 3 to 14 percent of the global workforce will need to switch occupation. See James Manyika et al., *Jobs Lost, Jobs Gained: Workforce Automations in a Time of Automation* (N.p.: McKinsey Global Institute, 2017), [www.mckinsey.com/~media/mckinsey/featured%20insights/future%20of%20organizations/what%20the%20future%20of%20work%20will%20mean%20for%20jobs%20skills%20and%20wages/mgi-jobs-lost-jobs-gained-report-december-6-2017.ashx](http://www.mckinsey.com/~media/mckinsey/featured%20insights/future%20of%20organizations/what%20the%20future%20of%20work%20will%20mean%20for%20jobs%20skills%20and%20wages/mgi-jobs-lost-jobs-gained-report-december-6-2017.ashx).



Technological developments, however, will also allow companies to refine their business models and potentially relocate some of their operations. There is no guarantee that all new jobs will be located in wealthier destination countries, for example.<sup>16</sup> As a result, some of these tradable jobs may be resistant to automation but may be easily relocated (including highly skilled or professional jobs in medicine, law, and accounting); meanwhile, some other, nontradable jobs may not be relocated but could instead be automated (see, for example, developments in retail, such as shelf-stacking and self-checkout, and in supply chains, automated warehouses).<sup>17</sup>

## **Box 2. How Will Automation Affect the Jobs Immigrants Do?**

Service-heavy sectors such as retail and hospitality, which have large shares of foreign-born workers, have already seen considerable disruption. Bricks-and-mortar retail has been losing out to online sellers for some time; in the United Kingdom, 40,000 jobs were lost over the last decade, while in the United States, department stores have lost 18 times more workers than coal mining since 2001. The restaurant sector already has self-service kiosks, table touch screens, and online ordering, and many routine jobs such as burger-flipping could soon be automated too. While people may value face-to-face interaction and expertise in pricier restaurants or boutique stores, they may value price above all else in others. Higher-level communication, supervisory, and creative skills are likely to become more important for workers in these sectors.

Sectors such as agriculture, where labor needs fluctuate with the season and wages are low, can struggle to hire local workers, and employers have often relied on immigrants to plug these gaps. Yet employers have turned to technology to increase productivity when their hand is forced; for instance, mechanical harvesting was developed in the United States following the end of the Bracero guest-worker program, though many employers still opted to hire large numbers of unauthorized immigrant farmworkers from Mexico, and later Central America. Agricultural employers have also been forced to create year-round jobs where their workers can assume different roles, such as caring for and later harvesting crops, and operating and fixing equipment.

While technology is unlikely to replace jobs requiring dexterity or that deal with unpredictability (e.g., construction), it could reduce some of the “boom and bust” of labor needs that make migrant workers desirable. In construction, robot-orientated design could help architects simulate the lifecycle of their construction projects to make better long-term decisions and break jobs into their component parts; in agriculture, farmers could rent drones for part of the year instead of relying on seasonal labor.

Many jobs seen by native workers as poorly compensated, socially undesirable, or even dangerous are also ripe for automation. In meatpacking and processing, a sector with large labor needs, robotics firms have made progress in complex machine butchering and deboning. Again, not all jobs are susceptible to automation; nontradable jobs that require a mix of cognitive and interpersonal skills, physical dexterity and hand-eye coordination, and specialized skills (such as use of machinery and knowledge of animal welfare, anatomy, and food safety) are likely to resist mass automation.

16 Ehsan Vallizadeh, Joan Muysken, and Thomas Ziesemer, “Offshoring of Medium-Skill Jobs, Polarization, and Productivity Effect: Implications for Wages and Low-Skill Unemployment” (working paper 2015-004, United Nations University–Maastricht Economic and Social Research Institute on Innovation and Technology, Maastricht, February 4, 2015), <https://ideas.repec.org/p/unm/unumer/2015004.html>.

17 Bernhard Boockmann, “Offshoring Potential and Employment Dynamics” (IAW Discussion Paper 111, Institut für Angewandte Wirtschaftsforschung, Tübingen, Germany, October 2014), <https://econpapers.repec.org/paper/iawiawdip/111.htm>.



## Box 2. How Will Automation Affect the Jobs Immigrants Do? (cont.)

Truck driving, a sector with an aging workforce and undesirable working conditions, is often seen as the posterchild of future automation in the form of driverless vehicles. But for autonomous trucks to become the norm, countries would need to make massive investments in infrastructure, which many will find too difficult. And while technology could automate trucking and associated jobs, it could also help upskill and improve working conditions—for instance, by enabling truck drivers to get some rest while on the road for long periods of time, breaking long journeys into smaller segments, or connecting long and local haul routes (with the former provided by self-driving trucks and the latter by humans). The speed, scale, and character of digital transformation will thus depend on a confluence of labor supply and demand factors—many of which are in the hands of policymakers.

Sources: Chris Weller, “Here’s What It’ll Be Like to Eat at Restaurants of the Future,” *Business Insider*, August 31, 2016, [www.businessinsider.com/future-restaurants-robot-automation-2016-8](http://www.businessinsider.com/future-restaurants-robot-automation-2016-8); British Retail Consortium (BRC), *Retail 2020: Fewer but Better Jobs* (London: BRC, 2016), [http://brc.org.uk/media/54304/retail\\_2020\\_-\\_final.pdf](http://brc.org.uk/media/54304/retail_2020_-_final.pdf); Derek Thompson, “The Silent Crisis of Retail Employment,” *The Atlantic*, April 18, 2017, [www.theatlantic.com/business/archive/2017/04/the-silent-crisis-of-retail-employment/523428/](http://www.theatlantic.com/business/archive/2017/04/the-silent-crisis-of-retail-employment/523428/); Malek Murison, “Agtech: How Robotics Could Dig Farmers out of Brexit Hole,” *Internet of Business*, April 27, 2018, <https://internetofbusiness.com/agtech-robotics-farmers-brexit-hole/>; Thomas Bock, “The Future of Construction Automation: Technological Disruption and the Upcoming Ubiquity of Robotics,” *Automation in Construction* 59 (November 1, 2015): 113–21; Rachel E. Gross, “Bring on the Butcher Bots,” *Slate*, January 24, 2016, [www.slate.com/articles/technology/future\\_tense/2016/01/robots\\_are\\_getting\\_into\\_the\\_meatpacking\\_business.html](http://www.slate.com/articles/technology/future_tense/2016/01/robots_are_getting_into_the_meatpacking_business.html); Alexis C. Madrigal, “Could Self-Driving Trucks Be Good for Truckers?” *The Atlantic*, February 1, 2018, [www.theatlantic.com/technology/archive/2018/02/uber-says-its-self-driving-trucks-will-be-good-for-truckers/551879/](http://www.theatlantic.com/technology/archive/2018/02/uber-says-its-self-driving-trucks-will-be-good-for-truckers/551879/).

According to one prediction, the future labor market will be divided into “thinkers,” “makers,” and “traders.” In order to thrive, regions will need to have an edge in at least one of these three areas: ideas and innovations (e.g., technological and science clusters), how these are translated into high-quality products (e.g., advanced manufacturing regions), or whether they can benefit from international links as trading hubs.<sup>18</sup>

Predictions of job loss and job creation also have a strong regional dimension. The picture varies across different countries, reflecting the relative size of different sectors<sup>19</sup> and other factors that can affect the uptake of new technologies (such as the availability of cheap labor). For instance, the Organization for Economic Cooperation and Development (OECD) found that while South Korea has a large share of jobs in sectors deemed at high risk of automation (e.g., manufacturing), its occupational structures combine routine tasks with other social or creative tasks, meaning its jobs are less vulnerable to automation than those in Canada, for example.<sup>20</sup> Advanced economies are projected to be hardest hit by job losses, while the forecast is more mixed for emerging economies. For example, although China and India are projected to lose tens of millions of jobs to automation by 2030, these economies will also experience large job gains that one forecast suggests may even eclipse their losses, driven by higher value-added production and increases in jobs that require customer interaction, care provision, or creative skills (e.g., health care and education).<sup>21</sup>

18 Rosabeth Moss Kanter, “Thriving Locally in the Global Economy,” *Harvard Business Review*, August 2003, <https://hbr.org/2003/08/thriving-locally-in-the-global-economy>.

19 Broadly, jobs will continue to be lost in manufacturing, services (including retail), and office and administrative roles, while others will be created, mostly in computer, mathematical, and science and engineering-related fields. See Till Alexander Leopold, Vesseline Ratcheva, and Saadia Zahidi, *The Future of Jobs Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution* (Geneva: World Economic Forum, 2016), [www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf).

20 Nedelkoska and Quintini, “Automation, Skill Use and Training.”

21 Manyika et al., *Jobs Lost, Jobs Gained*.



To sum up, while profound labor-market disruption looks set to happen under every scenario, there is considerable uncertainty about the local dynamics of labor-market change and the exact scale of job losses. Moreover, this uncertainty will have ramifications of its own, as countries must strive essentially in the dark to secure their future economic competitiveness and build their future workforce.

### III. Growing Labor-Market Polarization

Labor markets are always segmented, but economic forecasts predict that they will systemically polarize, or “hollow out,” as jobs skew toward higher-skilled, higher-paid positions on one end and lower-skilled, lower-paid roles on the other. Certain tasks are expected to be eliminated in favor of more high-skilled roles, resulting in significant churn within industries and sectors and requiring workers to retrain and upskill constantly if they are to keep working in the same profession. This trend can already be seen in the United States and the European Union.<sup>22</sup> However, the picture is complex and varies across countries.<sup>23</sup> The prognosis for middle-skilled jobs also varies by sector. For instance, while the labor market is hollowing out in parts of the construction sector and administrative jobs, a “new middle” is being created in the form of health, mechanical maintenance, and service jobs.<sup>24</sup> At least in the short run, middle-skilled jobs are projected to show some growth in Western Europe while low-skilled jobs will decline.<sup>25</sup>

It may be more salient to speak of a different type of polarization: a division into permanent, full-time, traditional jobs and more flexible types of work including “contingent” labor. The growth of the “gig economy” and online platforms allows people to take on short-term or flexible work and can provide a valuable source of income for people who struggle to thrive in the traditional labor market (including many immigrants).<sup>26</sup> But without the stability and protections offered by traditional employer-worker relationships, the gig economy (and other short-term or “zero-hour” contracts) can enable illegal and precarious work and exploit the vulnerability of these workers.<sup>27</sup>

While these trends affect workers across the skill spectrum (for instance, in the emerging use of the gig economy for skilled work, such as certain medical, legal, and other professional services<sup>28</sup>), they pose the

22 Between 2002 and 2014, the share of high-skilled jobs in the United States increased by 7.2 percentage points, while routine medium-skilled jobs saw a 9.5 percent drop. See OECD, “Future of Work and Skills” (paper presented at the 2nd Meeting of the G20 Employment Working Group, Hamburg, Germany, February 15–17, 2017), 11, [www.oecd.org/els/emp/wcms\\_556984.pdf](http://www.oecd.org/els/emp/wcms_556984.pdf). Similarly, in the European Union, many countries saw decreases in employment shares of middle-paying jobs between 1993 and 2010, while shares of high-paying jobs increased. See David Autor, “Why Are There Still So Many Jobs? The History and Future of Workplace Automation,” *Journal of Economic Perspectives* 29, no. 3 (2015): 15.

23 Germany, for instance, has a robust middle-skilled manufacturing core that runs counter to the trend elsewhere. In the United Kingdom, by contrast, the polarization into what the Britons call “lovely” and “lousy” jobs has been more salient. According to a prominent analysis, employment grew in high- and low-skilled jobs between 1979 and 1999, while it shrunk in middle-skilled jobs. See Maarten Goos and Alan Manning, “Lousy and Lovely Jobs: The Rising Polarization of Work in Britain,” *The Review of Economics and Statistics* 89, no. 1 (2007): 118–33.

24 Harry Holzer, *Job Market Polarization and US Worker Skills: A Tale of Two Middles* (Washington, DC: Brookings Institution, 2015), [www.brookings.edu/wp-content/uploads/2016/06/polarization\\_jobs\\_policy\\_holzer.pdf](http://www.brookings.edu/wp-content/uploads/2016/06/polarization_jobs_policy_holzer.pdf).

25 European Centre for the Development of Vocational Training (Cedefop), “Skills Forecast,” accessed April 24, 2018, [www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/employment-trends](http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/employment-trends).

26 European Commission, European Political Strategy Centre, “The Future of Work: Skills and Resilience for a World of Change” (strategic notes issue 13, European Commission, Brussels, June 10, 2016), 4–5, [http://ec.europa.eu/epsc/publications/strategic-notes/future-work\\_en](http://ec.europa.eu/epsc/publications/strategic-notes/future-work_en).

27 Zero-hour contracts refer to employment contracts with no guaranteed hours (which means that employees work on an as-needed basis). For a discussion of the way that the gig economy enables exploitation and illegal work, see Liz Alderman, “Food-Delivery Couriers Exploit Desperate Migrants in France,” *The New York Times*, June 16, 2019, [www.nytimes.com/2019/06/16/business/uber-eats-deliveroo-glovo-migrants.html](http://www.nytimes.com/2019/06/16/business/uber-eats-deliveroo-glovo-migrants.html).

28 For example, some U.S. apps such as Heal and Pager now offer on-demand home visits by doctors or nurses, while others (e.g., Teladoc or MDLIVE) offer video- or phone-based consultations. Pager initially marketed itself as the “Uber for health-care.” See Jennifer Jolly, “An Uber for Doctor Housecalls,” *The New York Times*, May 5, 2015, <https://well.blogs.nytimes.com/2015/05/05/an-uber-for-doctor-housecalls/>.



greatest harm for vulnerable workers in lower-skilled roles, both native and foreign born.<sup>29</sup> The growth of the gig economy and contingent work portends an age where many lower-skilled workers lack the security of a permanent job. The trend of an increasingly bifurcated labor market in advanced economies is not a new development, but economic exploitation and precariousness for foreign workers (especially if they lack legal status) is set to get worse across many future scenarios.<sup>30</sup> To maintain public confidence and avoid entrenching social and economic disadvantage, countries will need to ensure that immigration does not contribute to rising inequalities and economic marginalization for the worst-off (both those who lose jobs to automation and those for whom precarious work is the only option). Ultimately, this may require more radical thinking about social protection, access to health insurance, and pensions.

## B. What Are the Implications for Selection Policies?

Uncertainty about the labor and skills needs of the future labor market, coupled with the likely growth in demand for specialized workers with higher level technical *and* tacit and soft skills, presents new challenges and opportunities for immigration systems—while reinforcing the importance of getting the fundamentals right. Selection policies will need to be in a constant state of learning and adaptation to ensure they are admitting the right workers and entrepreneurs to meet current economic and labor-market needs, while also building the economies of the future. They must also be mindful to avoid selecting workers for jobs or sectors in decline, which can leave governments and the broader society on the hook for the costs of supporting and retraining them. And clearly, selection policies will need to be embedded in broader immigration systems that make admission decisions along the continuum between interests (e.g., labor-market needs) and values (e.g., asylum and family migration).

The economic trends discussed in the previous section have important implications for immigrant selection systems:

- **Advanced skills, which will experience unprecedented demand, remain difficult for selection systems to assess.** Labor-market analyses suggest there is likely to be a premium placed on identifying people with more advanced technical skills in areas such as data science and software development, *and* with the soft skills valued by the knowledge economy. The latter skillset ranges from strong social and interpersonal skills (including the ability to work collaboratively), to creativity and communication skills, to higher-level cognitive capabilities (including abstract and systems thinking).<sup>31</sup> Because such traits can be applied across occupations, they can help equip workers to navigate fast-paced labor-market changes. However, evaluating advanced expertise and even more so, intangible qualities, poses a conundrum for selection systems that are used to assessing formal education and work

29 Immigrants are often over-represented in low-skilled work to begin with. In 2014, a greater share of first-generation immigrants in the European Union worked in unskilled blue-collar occupations, compared to the native born (including second-generation immigrants). Data from 2012–13 found immigrants in OECD countries and the European Union held about one-quarter of low-skilled jobs on average, although these data vary significantly by country, with immigrants holding about 1 percent of low-skilled jobs (or less) in Poland and Turkey, and 76 percent of low-skilled jobs in Luxembourg. See Eurostat, “First and Second-Generation Immigrants – Statistics on Employment Conditions,” updated September 2016, [https://ec.europa.eu/eurostat/statistics-explained/index.php/First\\_and\\_second-generation\\_immigrants\\_statistics\\_on\\_employment\\_conditions](https://ec.europa.eu/eurostat/statistics-explained/index.php/First_and_second-generation_immigrants_statistics_on_employment_conditions); OECD, *Indicators of Immigrant Integration 2015: Settling In* (Paris: OECD Publishing, 2015), 127, [www.oecd.org/els/mig/Indicators-of-Immigrant-Integration-2015.pdf](http://www.oecd.org/els/mig/Indicators-of-Immigrant-Integration-2015.pdf).

30 For an exploration of four potential scenarios in the future labor market and their implications for immigrant integration, see Meghan Benton and Liam Patuzzi, *Jobs in 2028: How Will Changing Labour Markets Affect Immigrant Integration in Europe?* (Brussels: Migration Policy Institute Europe, 2018), [www.migrationpolicy.org/research/jobs-2028-changing-labour-markets-immigrant-integration-europe](http://www.migrationpolicy.org/research/jobs-2028-changing-labour-markets-immigrant-integration-europe).

31 See, for example, Autor, “Why Are There Still So Many Jobs?” 26–7. See also Lee Rainie and Janna Anderson, “The Future of Jobs and Jobs Training,” Pew Research Center, May 3, 2017 [www.pewinternet.org/2017/05/03/the-future-of-jobs-and-jobs-training/](http://www.pewinternet.org/2017/05/03/the-future-of-jobs-and-jobs-training/).



experience (and which can even struggle with that task<sup>32</sup>). Moreover, systems that rely on points to select economic immigrants may be able to prioritize these more intangible qualities, but they can ultimately only pick from the available pool of applicants—which limits the search for the “best” to the “best available.”

- ***As jobs increasingly become decoupled from physical locations, demand for some skills-based mobility may change.*** Remote work and digital collaboration are reducing the importance of physical location to work, especially in sectors such as technology, giving firms more flexibility to decide where to create jobs.<sup>33</sup> But location will remain important in many sectors, especially when it comes to business clusters and cities, and their “soft” infrastructure (such as universities and cultural activities), which provides the intellectual backbone of innovation.<sup>34</sup> At a lower-wage level, robotics may facilitate outsourcing, as cheaper workers abroad will be able to operate robots performing routine tasks in the high-income world, such as using drones to clean hotel rooms.<sup>35</sup> While these trends could ultimately reduce some skills-based mobility, a more immediate result will be greater interdependence between immigration policies and firm location decisions; barriers to bringing people into the country could encourage companies to outsource jobs or open offices in other countries.
- ***Increased freelancing and “gig” work at all skill levels may make the traditional employer sponsorship model less suitable for some forms of economic migration.*** The growth of more flexible and informal types of work points to a world where fewer people hold full-time, permanent contracts and instead work on a more short-term basis, potentially for more than one employer at a time (and even for employers in multiple countries).<sup>36</sup> Immigration, employment, tax, and social security systems are not well-adapted to such non-traditional workers.<sup>37</sup> Some countries are experimenting with ways to admit people on a more flexible basis, for example for short-term employment assignments or for freelance work.<sup>38</sup> But moving away from systems built around the traditional employer-employee relationship would require a rethinking of how to enforce compliance with immigration rules, tax obligations, and employment standards, and how to evaluate the skills and experience of applicants in the absence of an employer sponsor.
- ***As global competition for skilled workers heats up, countries will need to think strategically about how to attract and retain talent.*** Traditional destination countries are likely to face growing competition for skilled workers from emerging economies and other new destinations, some of which have introduced their own points-based admission systems

32 Judging the value of foreign credentials and understanding how similar credentials (on paper) compare remain challenges for selection systems.

33 The Online Labour Index, which tracks digitally delivered freelance work, has found a 20 percent increase in demand for on-line “gig work” since it started collecting data in 2017. This has been the case in sectors as diverse as software development, graphic design, and professional services. See Otto Kässi and Vili Lehdonvirta, “Online Labour Index: Measuring the Online Gig Economy for Policy and Research,” *Technological Forecasting and Social Change* 137 (2018): 241-48.

34 Max Nathan, *The Human-Capital Needs of Tech City, London* (Washington, DC: Migration Policy Institute, 2014), [www.migrationpolicy.org/research/human-capital-needs-tech-city-london](http://www.migrationpolicy.org/research/human-capital-needs-tech-city-london).

35 Richard Baldwin, *The Globotics Upheaval: Globalisation, Robotics, and the Future of Work* (Oxford: Oxford University Press, 2019).

36 In the United States, for example, temporary employment has accounted for a growing share of total employment since the 1990s, and particularly since the economic crisis. The temporary share of employment has also grown since the economic crisis in some European countries, including France, Italy, the Netherlands, Spain, and Sweden. See *The Economist*, “America’s Growing Temporary Workforce,” *The Economist*, July 18, 2016, [www.economist.com/graphic-detail/2016/07/18/america-growing-temporary-workforce](http://www.economist.com/graphic-detail/2016/07/18/america-growing-temporary-workforce); Bas ter Weel, ed., “Special Issue: The Rise of Temporary Work in Europe,” *De Economist* 166, no. 4 (2018).

37 Benton and Patuzzi, *Jobs in 2028*.

38 Germany, for example, offers a three-year freelancer residence permit. See German Federal Government, “Visa for Freelance Business,” accessed June 17, 2019, [www.make-it-in-germany.com/en/jobs/setting-up-a-business/visa/freelance/](http://www.make-it-in-germany.com/en/jobs/setting-up-a-business/visa/freelance/); Service-Portal Berlin, “Residence Permit for Freelance Employment – Issuance,” accessed June 17, 2019, <https://service.berlin.de/dienstleistung/328332/en/>.



inspired by those of traditional immigrant destinations. For example, China introduced a new selection system for economic migrants in 2017 that uses a points system to evaluate candidates with a job offer, drawing on the experiences of Canada, New Zealand, the United Kingdom, and others,<sup>39</sup> while South Korea introduced a similar “hybrid” program in 2017 to select skilled workers for the manufacturing, agriculture, and fishing industries.<sup>40</sup> Emerging economies such as Chile, India, Mexico, and Taiwan are actively recruiting foreign entrepreneurs either with start-up visas or supportive infrastructure such as investment incentives, incubators, and accelerators.<sup>41</sup> And many large companies are establishing outposts in flourishing new tech clusters. In India, for instance, Gurgaon near New Delhi is a hub for Google, Facebook, booking.com, and TripAdvisor; and Pune near Mumbai is becoming an emerging fintech hub, with Western Union and the Technology Engineering Centre.<sup>42</sup> Against this backdrop, governments will need to think carefully about how their selection policies and the rights they afford to immigrants will give their country the “edge” in both selecting and retaining immigrants.

■ ***Economic migration channels are just one piece of the broader immigration-policy puzzle.***

Ongoing mixed migration in many regions has reshaped the broader context for reforms to economic migration channels. Policymakers will need to balance efforts to bring in new skilled workers with continued investments in these recent arrivals. For many destination countries, especially in Europe, spontaneous mixed migration has transformed the conversation around immigration policy, fostering increasing skepticism among publics about the merits of immigration writ large and making dialogue over labor migration and selection (especially at the low-skilled level) increasingly complex.

Ultimately, efforts to rethink selection systems will increase the emphasis on the long-term goal of upskilling a country’s workforce. Since this project sits at the nexus of education, employment, social protection, and immigration policy, selection policies must be part of a whole-of-government approach that constantly adapts education and training systems to realize the potential of both existing and new workers (including spouses and immediate family members of selected migrants). It must also provide realistic options for people displaced by automation to retrain. Using these policy tools to build and maintain a workforce that gives an economy a competitive edge is not an exact science, since it depends both on what is economically needed and what is politically feasible. Governments must acknowledge growing unease about immigration and clearly communicating to their publics why some economic migration is still needed, even as they invest in integrating recent arrivals and helping them enter the workforce.

39 China’s selection system requires all applicants to hold a job offer and awards points for factors such as education, work experience, language proficiency, age, the location of the job, having skills or experience deemed to be in shortage by the province, and having graduating from a top-ranked university or working for a top-ranked enterprise. See Richard Hoffmann, “China’s New Point System for Expats,” Ecovis, March 30, 2017, [www.ecovis.com/focus-china/chinas-new-point-system/](http://www.ecovis.com/focus-china/chinas-new-point-system/); Papademetriou and Hooper, *Competing Approaches to Selecting Economic Immigrants*, 11-12.

40 Ock Hyun-ju, “New Visa Scheme to Allow Skilled Foreign Workers’ Long-Term Stay,” *Korea Herald*, July 19, 2017, [www.korea-herald.com/common\\_prog/newsprint.php?ud=20170719000993&dt=2](http://www.korea-herald.com/common_prog/newsprint.php?ud=20170719000993&dt=2); OECD, *International Migration Outlook 2017* (Paris: OECD Publishing, 2017), 204, [www.oecd-ilibrary.org/social-issues-migration-health/international-migration-outlook-2017\\_migr\\_outlook-2017-en](http://www.oecd-ilibrary.org/social-issues-migration-health/international-migration-outlook-2017_migr_outlook-2017-en).

41 Liam Patuzzi, *Start-Up Visas: A Passport for Innovation and Growth?* (Washington, DC: Migration Policy Institute, 2019), [www.migrationpolicy.org/research/start-visas-innovation-growth](http://www.migrationpolicy.org/research/start-visas-innovation-growth).

42 Ledetta Asfa-Wossen, “Tech Cities Reinforce India as a Relocation Hub,” *Relocate Magazine*, April 23, 2018, [www.relocatemagazine.com/technology-tech-cities-reinforce-india-as-a-relocation-hub-lawossen.html](http://www.relocatemagazine.com/technology-tech-cities-reinforce-india-as-a-relocation-hub-lawossen.html).



### III. Creating More Forward-Looking Selection Systems: Key Design Choices

In an era of growing labor-market upheaval, governments will need to be prepared to actively manage their immigration systems and enact reforms as these changes unfold. Policymakers will need to select immigrants with the right skills to thrive in the labor market (including the soft skills that selection systems struggle to identify and assess) and to adapt to its changing priorities, and they must find ways to retain this talent as competition grows. In doing so, policymakers face a number of design choices, which include:

- how to anticipate future-labor market needs, including whose projections to trust when no forecast can claim to be truly accurate or objective;
- how to determine the appropriate balance between demand-driven and human-capital-focused selection in order to temper short-termism and pursue longer-term goals;
- whether and how to build an element of regional variation into an immigration system to support the economic growth of less “attractive” and demographically challenged subnational jurisdictions; and
- how to decide on the appropriate mix of temporary and permanent migration, and what the pathways should be between the two.

#### A. Anticipating Future Labor-Market Needs

The most successful immigrant selection systems are evidence and outcomes driven. They use constantly updated information on the labor market and immigrants’ social and economic integration outcomes to inform and adapt their selection policies. This basic curiosity about policy outcomes—an essential requirement for any policy area—is also found in systems that are committed to testing new approaches to selection and scaling up successful initiatives, such as experimenting with start-up or tech visas to admit and support foreign entrepreneurs in emerging industries.<sup>43</sup>

But assessing current labor-market needs—let alone anticipating future ones—is immensely challenging, not least because many of the major players involved have an incentive to distort reality. Employers typically have a good grasp of labor-market dynamics, including in-demand skills and factors driving shortages, but they are also motivated by profit margins that may favor the hiring of less mobile, cheaper foreign workers rather than addressing the structural factors that impede the hiring and retention of local workers (such as low pay or a lack of investment in training). And all stakeholders can struggle to accurately anticipate how long current needs will persist, or what and when future needs may emerge.

Notwithstanding these constraints, countries have developed innovative methodologies for assessing labor-market needs that rely on a mix of quantitative data (such as employment and vacancy data, wages, and immigrant labor attachment and underemployment) and qualitative data (such as input from employers, industry and trade associations, and other stakeholders). Longitudinal data remain the gold standard for assessing integration outcomes and using them to inform admission policies, for example by shedding light on immigrants’ employment outcomes and the educational and skill profiles most strongly associated with rapid labor-market entry and skills utilization. But these data take time to collect and operate on a two- or three-year lag.

<sup>43</sup> Patuzzi, *Start-Up Visas*.



New sources of data can offer valuable insights into employment patterns and needs. Technology has changed how people advertise and search for jobs; data on job vacancies may contain information about positions advertised through job centers but neglect the growing number of jobs advertised online or through word-of-mouth (especially at the bottom half of the labor market).<sup>44</sup> Social media or web-scraped data, while not as robust or comprehensive, can offer valuable insights on current vacancies and in-demand skills and expertise.<sup>45</sup> Of course, recalibrating admissions policies must entail taking stock of the wider labor market, taking into account both the skills and experience of both principal applicants and their families who may also work, and examining emerging data on the volume and skill profiles of recent non-labor migrants.<sup>46</sup>

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*Engaging a wide set of stakeholders in scenario planning about particular sectors ... can help policymakers understand the range of possible outcomes.*

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Ultimately, how a government uses these data is a political exercise.<sup>47</sup> Quantitative data and the qualitative testimony of stakeholders can produce different pictures of current shortages. Statistical analyses can quantify vacancies and reported shortages but may offer few clues to the conditions driving these shortages—for example, whether the issue is a low supply of qualified workers or instead poor wages and working conditions that make recruitment and retention difficult. Policymakers need to constantly review the available quantitative and qualitative information and make judgment calls about what these “needs” really are and how immigration might address them. Nonetheless, engaging a wide set of stakeholders in scenario planning about particular sectors, even if the projections provided by employers should be taken with a grain of salt, can help policymakers understand the range of possible outcomes and the role of certain policies in moving the needle in one direction or the other.<sup>48</sup>

Using immigrant admissions to address putative future labor needs will require consideration of the country’s values and the potential tradeoffs of such a move. Policymakers will have to weigh the public’s tolerance for different scenarios—for example, whether publics skeptical about low-skilled migration are willing to pay more for goods and services. But there are also scenarios where projections of labor needs depend on ongoing policy decisions, such as whether policymakers opt to limit migration in the short term, and how much they are willing to invest in better education and training systems.

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44 Migration Advisory Committee, *Assessing Labour Market Shortages: A Methodology Update* (London: UK Home Office, 2017), [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/586110/2017\\_01\\_26\\_MAC\\_report\\_Assessing\\_Labour\\_Market\\_Shortages.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/586110/2017_01_26_MAC_report_Assessing_Labour_Market_Shortages.pdf).

45 For instance, the Migration Advisory Committee has begun using web-scraped Burning Glass data, which collects data from job adverts posted daily online. See Migration Advisory Committee, *Assessing Labour Market Shortages*.

46 For example, Canada’s Express Entry system concentrates on the individual attributes of the primary applicant, but it grants admission (and permission to work) to a whole family. See Daniel Hiebert, *The Canadian Express Entry System for Selecting Economic Migrants: Progress and Persistent Challenges* (Washington, DC: Migration Policy Institute, 2019), [www.migrationpolicy.org/research/canadian-express-entry-system-selecting-economic-immigrants](http://www.migrationpolicy.org/research/canadian-express-entry-system-selecting-economic-immigrants). Most permanent immigration systems behave similarly.

47 So much so that some countries, such as the United Kingdom, have established an independent advisory body to lead these labor-market analyses in an effort to depoliticize this process.

48 For instance, Uber’s work on scenario planning on the future of truck driving as part of its investment in driverless vehicles, found—perhaps counter-intuitively—that adding self-driving trucks into most scenarios could *increase* the number of truck driving jobs, through a shift from long haul to local haul. Engaging stakeholders such as investors in new technologies could thus help move beyond doomsday predictions toward more desirable outcomes by, for example, understanding how technology can improve job quality. See Alexis C. Madrigal, “Could Self-Driving Trucks Be Good for Truckers?” *The Atlantic*, February 1, 2018, [www.theatlantic.com/technology/archive/2018/02/uber-says-its-self-driving-trucks-will-be-good-for-truckers/551879/](http://www.theatlantic.com/technology/archive/2018/02/uber-says-its-self-driving-trucks-will-be-good-for-truckers/551879/).



## B. Balancing Demand and Human-Capital Considerations

As labor markets change at ever faster rates, policymakers will need to strike the right balance in their selection systems between assessing admissions applications based on demand-driven criteria, which can address current labor or skills needs, and human-capital criteria, which can meet emerging priorities. In practice, most selection systems now operate near the mid-point on the continuum between selection based on labor-market demand and human capital. Some countries rely on employers to select immigrants to fill existing vacancies, but they will often incorporate human-capital considerations (such as education, work experience, and host-country language proficiency) when assessing the prospective immigrant.<sup>49</sup> Other countries rely on governments to select people who have in-demand human capital or other important labor-market characteristics, but they may also require or favor prospective immigrants with a job offer.<sup>50</sup> The design and operation of selection systems are rooted in the political context and governance philosophy of different countries, which shapes how governments view the role of these systems in the labor market (and what success looks like) and how easy it is to reform the systems.<sup>51</sup>

Both approaches to selecting immigrants face their own challenges in light of the far-reaching labor-market changes that are to come. Employer-led systems can respond adeptly to current labor-market needs, but they have a limited ability (or indeed, desire) to address longer-term needs or to select people with traits that could support a country's overall economic competitiveness. Human-capital-focused systems, on the other hand, continue to experiment with how to select workers with valuable skillsets (e.g., technical or soft skills) and balance this with employer demand, which often favors lower- or middle-skilled workers.

When seeking the right balance between selecting immigrants to meet employer demand and build up a country's human capital, several steps could help governments adapt their selection policies and take better account of emerging labor-market needs:

- **Update shortage occupation lists to reflect future needs.** One way to incorporate emerging labor-market needs into admission policies better is to regularly update shortage occupation lists to reflect the needs of emerging or expanding industries. These lists, which are used to offer preferential access in many selection systems, can incorporate quantitative and qualitative data and offer a way for a wide array of stakeholders to weigh in on selection priorities.<sup>52</sup> But their value quickly dissipates if governments do not commit to reviewing

49 For example, Japan and South Korea have both introduced points tests to assess applicants in their employer-led systems. See Immigration Bureau of Japan, "Points-Based System for Highly Skilled Foreign Professionals," accessed September 29, 2017, [www.immi-moj.go.jp/newimmict\\_3/en/system/index.html](http://www.immi-moj.go.jp/newimmict_3/en/system/index.html); OECD, *International Migration Outlook 2017*, 204.

50 For example, New Zealand and Canada award substantial points to candidates with a job offer; Australia and Canada reward applicants with in-country education or work experience; and the United Kingdom requires applicants to hold a job offer. See Papademetriou and Hooper, *Competing Approaches to Selecting Economic Immigrants*.

51 The Trump administration proposed a plan in May 2019 to overhaul the U.S. permanent legal immigration system by curbing some categories of family-sponsored immigration in favor of more economic immigration, and by moving away from the existing employer-led system to instead use a points system to select economic-stream immigrants. Under this proposal, applicants would be awarded points based on their age, skills, job offer, education, higher wages, and plans to create jobs; they would also be required to learn English, pass a civics exam, and demonstrate their financial self-sufficiency. But as of the time of writing, this proposal has gained limited political traction in Congress. See Muzaffar Chishti and Jessica Bolter, "'Merit-Based' Immigration: Trump Proposal Would Dramatically Revamp Immigrant Selection Criteria, But with Modest Effects on Numbers," *Migration Information Source*, May 30, 2019, [www.migrationpolicy.org/article/merit-based-immigration-trump-proposal-immigrant-selection](http://www.migrationpolicy.org/article/merit-based-immigration-trump-proposal-immigrant-selection).

52 In Spain, for example, employers, trade unions, and regional governments are all involved in drawing up the shortage occupations list. This list is updated on a quarterly basis, with input from the Tripartite Labor Commission, an advisory body headed by the Secretary of State for Migration and with representatives from the government, business associations, and trade unions. See Kate Hooper, *Spain's Labour Migration Policies in the Aftermath of Economic Crisis* (Brussels: Migration Policy Institute Europe, 2019), [www.migrationpolicy.org/research/spain-labor-migration-aftermath-economic-crisis](http://www.migrationpolicy.org/research/spain-labor-migration-aftermath-economic-crisis).



and updating them regularly, especially given the fast-changing nature of some of these sectors, although this can be a very resource-intensive process.

- **Explore ways to measure and reward soft skills.** With projections pointing to a growing reliance on cognitive, interpersonal, and other non-technical skills, policymakers should consider ways to measure and reward soft skills in their admission policies. By placing a premium on qualities such as problem-solving and strong interpersonal skills, policymakers can ensure they are selecting immigrants with the skillsets to navigate changing labor markets. Employer-sponsored pathways, and particularly temporary-to-permanent pathways that allow employers to test workers on the job and allow workers to demonstrate their adaptability to the local labor market, are well-positioned to measure these traits.<sup>53</sup>
- **Experiment with new visa pathways for new types of work.** Certain growing industries, such as the tech sector, may not map neatly onto existing employer-sponsored or points-based admission routes. The tech industry, for example, hires some people on a short-term, flexible basis, and many tech workers may end up working on a freelance basis for different employers, potentially in different countries.<sup>54</sup> In turn, entrepreneurship in the tech industry can operate quite differently to other, more established sectors, with tech start-ups placing less of an emphasis on profit margins or job creation targets in favor of establishing large numbers of users for monetization at a later date.<sup>55</sup> Piloting new visas can provide an opportunity to test ways to meet demand in such industries.<sup>56</sup> For example, a number of countries have introduced start-up visas to recruit early-career entrepreneurs in tech and other sectors; these visas set lower investment and experience thresholds than traditional entrepreneurship programs, and in some places they also connect recipients with funding and mentoring opportunities.<sup>57</sup> Even if these pilots are ultimately unsuccessful, they can provide important insights—for example, Canada’s start-up visa program builds on the lessons of its previous entrepreneur programs. But as countries experiment, they will also need to consider the appropriate balance between these new routes and more traditional employer-sponsored channels.
- **Consider reforms to existing channels.** Policymakers should also explore avenues for revising existing admissions channels to make them more flexible. Self-employment channels, for example, can offer some scope for admitting immigrant professionals not sponsored by an employer, including entrepreneurs, while job-search visas offer a way to recruit people with in-demand skills and connect them with job opportunities (and ultimately, employer-sponsored visas). Within employer-sponsored channels, policymakers can also take steps to speed up the process and encourage applications for in-demand sectors, for example through priority assessments, offering preferential access for certain sectors, or preapproving certain employers.<sup>58</sup> While new visa pathways can

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53 However, Canada is exploring ways to incorporate soft skills into its points-based system, including ways to utilize U.S. Occupational Information Network (O\*Net) data, sponsored by the DOL Employment and Training Administration, which track occupational definitions and include the soft skills required to practice different occupations.

54 This is especially true in tech clusters such as Berlin and London, where EU free movement has placed minimal constraints on hiring EU workers, including as freelancers. See Nathan, *The Human-Capital Needs of Tech City, London*.

55 Tech companies rarely make money before they go public. Uber went public in February 2019, ten years after its launch, after reporting losses of \$842 million in 2018. Its business model has focused on the long-term goal of gaining market share rather than turning a short-term profit. See Kate Conger and Mike Isaac, “As Uber Prepares for I.P.O., Its Losses Pile Up,” *The New York Times*, February 15, 2019, [www.nytimes.com/2019/02/15/technology/uber-stock.html](http://www.nytimes.com/2019/02/15/technology/uber-stock.html).

56 Kate Hooper, *Exploring New Legal Migration Pathways: Lessons from Pilot Projects* (Washington, DC: Migration Policy Institute, 2019), [www.migrationpolicy.org/research/exploring-new-legal-migration-pathways-lessons-pilot-projects](http://www.migrationpolicy.org/research/exploring-new-legal-migration-pathways-lessons-pilot-projects).

57 Patuzzi, *Start-Up Visas*.

58 This approach rewards “trusted” employers who constantly meet all employment standards and other criteria (e.g., social investments in their employees) with a simplified application procedure.



help signal to employers and prospective immigrants alike that policymakers are tuned into emerging labor-market needs,<sup>59</sup> it is important to strike a balance between flexibility and simplicity to ensure that selection systems do not become too complicated to navigate.

### C. Using Immigration to Economically Revitalize Communities

Policymakers will also need to address how to use immigration to narrow, rather than exacerbate, regional inequalities. Immigrants typically settle in “gateway” cities where most economic activity, jobs, and other immigrants are located.<sup>60</sup> In doing so, they contribute to the phenomenon whereby dynamic metropolitan areas are getting richer and more populous, while the population dynamics and economic fortunes of many smaller cities and rural areas continue to decline. And as income inequality grows and demographic realities diverge among different parts of a country—with young and well-educated workers moving to cosmopolitan centers, leaving behind fast-growing populations of older people—rural areas and poorer regions may struggle to reverse these trends.<sup>61</sup>

One answer to this dilemma is to include regions and other subnational authorities (such as cities) in the design and/or implementation of immigration policy.<sup>62</sup> Labor and skills needs can vary significantly by region, reflecting both the demographic and economic trends set out in the previous section and the structure of local economies. National policies that place an emphasis on high-skilled migration—and attracting “the best and the brightest”—may not be appropriate for rural or poorer regions that may instead prioritize recruiting low- or middle-skilled workers for local industries.<sup>63</sup> This makes the case for deeper cooperation between immigration policymakers and regional and local actors to understand their interests and design policies that can meet their specific economic needs.

National policymakers can take several steps to include regions and localities more fully in immigration policy. One option is to incorporate measures into economic immigration channels to encourage immigrants to move to certain areas, such as regional shortage occupation lists, as is the case in Spain,<sup>64</sup> or rewarding an applicant’s ties with certain regions, as is the case in New Zealand, which awards points to skilled immigrants who hold a job offer located outside of Auckland.<sup>65</sup> Another more ambitious option is to introduce regional immigration programs that

59 Patuzzi, *Start-Up Visas*.

60 Such cities typically offer more economic opportunities for newcomers through the networks that previously arrived immigrants have established, though they also present greater challenges in other ways, for example in locating affordable housing.

61 One resulting issue is that employers in rural areas and poorer regions may struggle to meet the criteria set by national admission policies, such as income thresholds, making it difficult for them to recruit foreign workers to meet their labor needs. A recent review of regional immigration policy in Australia found that income thresholds were a poor proxy for the skill level of a job. Instead, wages varied widely according to local demand and supply for labor and the local cost of living. For instance, 2011 Australian census data on the salaries of automotive electricians/mechanics in full-time employment show that in some areas all were paid more than \$52,000/year, while in other parts of the country, 75 percent earned less than \$52,000/year. See Andreas Cebulla and Steve Whetton, *The Potential Benefits of Reforming Migration Policies to Address South Australia’s Needs—Report 2: Areas Where the Migration System Does Not Meet South Australia’s Needs* (Adelaide: University of Adelaide, South Australian Centre for Economic Studies, 2017), [www.adelaide.edu.au/saces/docs/publications-reports/migrationpolicyprojectreport2.pdf](http://www.adelaide.edu.au/saces/docs/publications-reports/migrationpolicyprojectreport2.pdf).

62 Ultimately, this decision also rests on the existing power-sharing structures between federal and regional or local government.

63 Demetrios G. Papademetriou, *Migration’s Local Dividends: How Cities and Regions Can Make the Most of Immigration* (Washington, DC: Migration Policy Institute, 2014), [www.migrationpolicy.org/research/migrations-local-dividends-how-cities-and-regions-can-make-most-immigration-transatlantic](http://www.migrationpolicy.org/research/migrations-local-dividends-how-cities-and-regions-can-make-most-immigration-transatlantic).

64 Government of Spain, Ministry of Labor, Migrations, and Social Security, “Qué es el catálogo de ocupaciones de difícil cobertura,” accessed July 25, 2019, [www.sepe.es/HomeSepe/empresas/profesiones-de-dificil-cobertura/profesiones-mas-demandadas.html](http://www.sepe.es/HomeSepe/empresas/profesiones-de-dificil-cobertura/profesiones-mas-demandadas.html).

65 New Zealand Immigration, “Points Indicator for Skilled Migrant Expression of Interest,” accessed July 25, 2019, [www.immigration.govt.nz/new-zealand-visas/apply-for-a-visa/tools-and-information/tools/points-indicator-smc-28aug](http://www.immigration.govt.nz/new-zealand-visas/apply-for-a-visa/tools-and-information/tools/points-indicator-smc-28aug).



allow subnational authorities to sponsor prospective immigrants, as is the case in Canada (e.g., its Provincial Nominee Program and its Atlantic Immigration Program) and in Australia (e.g., its regional skilled and business migration programs).<sup>66</sup> Such an approach enables regions or localities to recruit qualified foreign workers whose formal skills may nonetheless not be enough to compete nationally for high-skilled visas, and bring them to live and work in a place where they have a higher probability of succeeding while contributing to the economic revitalization of the communities they join.<sup>67</sup>

This type of preferential access to workers could also serve as a boon to attract investment in less economically developed regions. To date, less attention has been paid to potential opportunities related to how large firms make location decisions, and whether preferential access to visas for skilled migrants could be used to encourage companies to invest in certain areas as part of a regional economic development strategy. For instance, while many tech firms operating in the United States struggle to get the number of H-1B visas they would prefer to have, an additional pool of visas earmarked for certain regions allowing firms to pierce existing caps could persuade them to locate components of their operations there (e.g., by opening a satellite office or hiring employees to work remotely) instead of outsourcing. Such initiatives could complement existing efforts by poorer cities and regions to attract or retain residents and foster economic growth.<sup>68</sup>

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*Another challenge is ensuring that regional programs succeed in directing immigrants to certain areas and encouraging them to put down roots.*

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But devolving some immigration policy responsibilities to the subnational level, as done in Australia and Canada, requires coming to terms with certain immigration management challenges. Tailoring selection policies in this manner offers more flexibility, but it also adds complexity to the system. Policymakers will need to strike the right balance between greater flexibility and more consultations on the one hand, and on the other, ensuring the system remains transparent and retaining the leeway to adjust selection policies as needed. Another challenge is ensuring that regional programs succeed in directing immigrants to certain areas and encouraging them to put down roots instead of simply moving on to more cosmopolitan cities. Regional programs typically rely on temporary-to-permanent pathways, initially setting parameters on where immigrants can settle and work, but once this period expires they are free to relocate. Yet this approach risks interfering with market forces (which might favor the development of geographic clusters around different sectors) and the preferences of immigrants to go where they have family or coethnic ties, or more simply, where they believe they will

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66 See Hiebert, *The Canadian Express Entry System*; Anna Boucher and Amy Davidson, *The Evolution of the Australian System for Selecting Economic Immigrants* (Washington, DC: Migration Policy Institute, 2019), [www.migrationpolicy.org/research/evolution-australian-system-selecting-economic-immigrants](http://www.migrationpolicy.org/research/evolution-australian-system-selecting-economic-immigrants).

67 Margie McHugh and Demetrios G. Papademetriou, "Creating a More Responsive Immigration System by Engaging State and Local Actors in the Selection of Immigrants" (paper tabled at a meeting of the Regional Migration Study Group, Migration Policy Institute, Washington, DC, November 2012).

68 In the United States, a number of U.S. cities, towns, or counties have experimented with initiatives to attract or retain residents, with a particular emphasis on their younger populations. For example, some offer assistance with student loan repayments (e.g., Niagara Falls, New York, and some counties in the Kansas Rural Opportunity Zones). Others offer assistance to prospective homeowners by, for example, subsidizing mortgage down payments (e.g., New Haven, Connecticut); offering rebates to people building new homes (e.g., Harmony, Minnesota); or even providing a free lot of land on which to build a house (e.g., New Richland, Minnesota, and Curtis, Nebraska). See Papademetriou, Hooper, and Benton, *In Search of a New Equilibrium*; Sarah Berger, "These Towns Will Help Pay Off Your Student Loan Debt If You Move There," CNBC, January 4, 2018, [www.cnbc.com/2018/01/03/us-towns-that-offer-financial-incentives-to-live-there.html](http://www.cnbc.com/2018/01/03/us-towns-that-offer-financial-incentives-to-live-there.html).



do best.<sup>69</sup> Policies that direct immigrants to specific regions should therefore be accompanied both by measures to encourage investment in and the economic revitalization of these areas, and by measures to help immigrants succeed in the workplace (including support for credential recognition) and build ties to their communities (including social integration measures and access to family reunification).<sup>70</sup>

#### **D. Striking the Right Balance between Temporary and Permanent Migration, and “Bridging” Opportunities between the Two**

In an era of growing labor-market uncertainty, admitting workers on a temporary basis can help countries meet short-term economic needs while minimizing longer-term costs, such as the social services associated with the permanent admission of low-wage workers employed in precarious sectors. This approach avoids a scenario where, for example, a foreign worker loses their job and then must rely on state-funded support and training as they search for a new role. It also allows employers to bring in workers quickly (and often with less red tape) to meet fluctuating labor-force needs—a key consideration for sectors with fast-changing needs, a reliance on seasonal labor, or simply slim profit margins that leave little room for error when it comes to recruitment.

Temporary-to-permanent, or “bridging,” pathways are playing a more prominent role in many immigrant selection systems. This approach allows policymakers and employers to evaluate an immigrant’s labor-market potential in real time, instead of relying on an evaluation of their formal credentials, and to admit people with in-country experience, credentials, and professional networks—all traits associated with stronger labor-market outcomes.<sup>71</sup> Temporary pathways also offer more scope for stipulating certain conditions (e.g., where they must settle and for how long) and for policy experimentation and adjustment. At the same time, by providing a clear pathway to permanent residence, they reduce uncertainty for employers and immigrants, and can encourage immigrants to invest in their integration, for example by linking eligibility for permanent residence with maintaining employment, developing their language skills, integrating socially, or other priorities (such as paying taxes).<sup>72</sup>

Policymakers will need to strike a balance between creating flexible policies that allow employers to “flex up” and “flex down” their workforce, while protecting the integrity of immigration systems. Temporary programs that tie workers to one employer can leave migrants vulnerable to exploitation unless governments commit adequate resources to monitoring employers and enforcing contracts and labor standards. The ability to switch employers when a contract’s terms and conditions are not honored and some flexibility in access to permanent residence are good protections against exploitation and are often associated with higher pay.<sup>73</sup> In turn, another good practice is to allow workers who have demonstrated their economic benefit and developed host-country human capital

69 Madeleine Sumption, *Giving Cities and Regions a Voice in Immigration Policy: Can National Policies Meet Local Demand?* (Washington, DC: Migration Policy Institute, 2014), [www.migrationpolicy.org/research/giving-cities-and-regions-voice-immigration-policy-can-national-policies-meet-local-demand](http://www.migrationpolicy.org/research/giving-cities-and-regions-voice-immigration-policy-can-national-policies-meet-local-demand).

70 Evaluations from Australia and Canada point to retention being influenced by economic integration (e.g., sustaining employment and higher wages), access to family reunification, social contacts, job opportunities, and access to housing and public services. See Sumption, *Giving Cities and Regions a Voice*, 12–13.

71 For a discussion of how this approach could work in the United States, and the advantages of such an approach, see Demetrios G. Papademetriou, Doris Meissner, Marc R. Rosenblum, and Madeleine Sumption, *Aligning Temporary Immigration Visas with US Labor Market Needs: The Case for a New System of Provisional Visas* (Washington, DC: Migration Policy Institute, 2009), [www.migrationpolicy.org/research/aligning-temporary-immigration-visas-us-labor-market-needs-case-new-system-provisional](http://www.migrationpolicy.org/research/aligning-temporary-immigration-visas-us-labor-market-needs-case-new-system-provisional).

72 Papademetriou, Meissner, Rosenblum, and Sumption, *Aligning Temporary Immigration Visas with US Labor Market Needs*, 16–17.

73 For example, one study in the United States found changing from a temporary to permanent status was associated with higher earnings, likely linked to the ability to switch employers. See B. Lindsay Lowell and Johanna Avato, “The Wages of Skilled Temporary Migrants: Effects of Visa Pathways and Job Portability,” *International Migration* 52, no. 3 (2014), 85–98.



(such as language skills) to access options for a more secure status. Policymakers should also explore avenues to allow other temporary migrants with valuable skills and networks to “switch lanes” and stay in the country, for example by tapping students or recent graduates for entrepreneur programs.

The ease of access to a more secure status (such as permanent residence) communicates whether immigrants are seen as temporary workers or part of the community. Access to permanent residence and, over time, citizenship, and the rights associated with these statuses (such as family reunification and access to health services and education and training), all form part of the calculus that shapes where immigrants decide to move and settle.<sup>74</sup> Another set of factors includes how easily immigrants can get their credentials and overseas professional experience recognized, and the extent of the government’s commitment to speeding up this process through innovations such as bridging programs, provisional licenses, fast-track training programs, and other shortcuts to work.<sup>75</sup> Other considerations include whether the system is simple to navigate, and whether it can deliver fast and predictable results. Steps to speed up processing can include digitization, allowing prearrival assessments for certain requirements, or introducing trusted employers schemes.<sup>76</sup> While the design of the immigration system is one consideration among several in a prospective immigrant’s decision about a destination country, it is more easily tweaked than other influential variables, such as access to professional opportunities or quality of life.

## IV. Final Thoughts

Artificial intelligence, automation, and digitization will disrupt labor markets beyond recognition. But it is not the first time that social and economic systems have had to confront and adapt to—and in some ways, even shape—such dramatic changes. Labor markets evolve in response to changing circumstances, and most workers (and particularly, immigrant workers) have proven themselves resilient and adaptive to change. But complacency can be costly; global competition is unforgiving, and global markets can move quickly to take advantage of policy failures in a particular sector or country.

There is a near frenzy among some analysts and pundits to make dramatic projections about job losses. The harder task, however, is much more vital: considering how governments and their social partners can facilitate job creation and skills development through learning and deeper investments in marginalized people and places. Success in a fast-changing economic landscape will depend on smart, concerted efforts across all sectors and policy areas, from education and workforce development to trade, innovation, and regional development.

While immigration policy will only be part of the solution to changing labor markets, the importance of smart immigration systems that deliver speed and efficiency will be greater than ever. To maximize economic competitiveness, immigration rules must be clear, predictable, and well-enforced, thus enabling employers to plan their workforce strategically. But immigration systems must also be flexible enough to adapt to a fast-changing labor market, and sophisticated enough to identify and

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74 For full discussion of the factors that influence an immigrant’s choice of destination, see Papademetriou and Hooper, *Competing Approaches to Selecting Economic Immigrants*.

75 Bridging programs, for example, can allow skilled migrants to help fill gaps in their training and access in-country work experience, and thus avoid having to restart their training altogether. Canada, Sweden, and the United Kingdom are among the countries offering these programs for refugee doctors, for example. See Papademetriou and Benton, *Towards a Whole-of-Society Approach to Receiving and Settling Newcomers in Europe*, 23.

76 For instance, Canada’s Express Entry system reduced processing times in part through moving applications to a “digital logic”—all digital applications, electronic communication, social media for mass communication, and data collection at every stage. See Hiebert, *The Canadian Express Entry System*. For a discussion of Australia’s SkillSelect, which likewise allows Australian authorities to draw from a pre-screened pool of qualified candidates and has reduced processing times, see Boucher and Davidson, *The Evolution of the Australian System for Selecting Economic Immigrants*.



assess myriad intangible skills. As policymakers review their selection policies with an eye to using immigration to meet both current labor-market needs and those on the horizon, they will need to balance the sometimes-competing goals of predictability and adaptability.

The Transatlantic Council on Migration has identified the following principles for creating forward-looking, resilient economic-stream selection systems that can support economic growth and competitiveness:

- **Modernize selection systems for the digital age.** Economic competitiveness depends on all actors in the system—employers, entrepreneurs, and workers—being able to anticipate what will happen if they invest time and money in applying for a visa. Immigration policymakers, as a result, should constantly review how well their selection systems work, and whether there are opportunities to innovate the application process (for example, by digitizing applications or introducing two-step systems, like Canada’s Express Entry system<sup>77</sup>). One consideration is whether the application process is transparent, straightforward, and accessible for prospective immigrants, employers (including small and medium-sized enterprises), entrepreneurs, and regions. Another important element is whether the system produces timely and predictable results, and whether processing happens quickly enough to keep up with fast-moving labor needs. A final consideration is whether the system attracts the highest-quality workers—an Achilles heel for all points-based systems and an ongoing challenge for employer-led systems.<sup>78</sup>
- **Create and maintain a flexible and responsive system.** Policymakers should invest in systems that can swiftly collect, analyze, and respond to information on emerging labor and skills needs. Such systems enable them to experiment with new approaches for attracting, selecting, and retaining immigrants as labor markets evolve. Countries with parliamentary systems, and thus stronger executive powers on immigration, have more scope compared to countries with presidential systems to recalibrate their systems on a regular basis, and to build flexibility into their day-to-day operations—for example, by moving away from caps or quotas and toward more case-by-case decisions that balance input from employers and industry with human-capital considerations.<sup>79</sup> At the same time, governments should ensure that efforts to introduce more flexibility into their immigration systems, whether through case-by-case decision-making or even devolving some powers to cities and regions, do not result in them becoming bogged down with complexity.
- **Learn and improve by design.** Smart immigration policy needs to invest in data systems that allow the government to monitor integration and employment outcomes, and to adapt to emerging evidence. Australia, Canada, and New Zealand have all invested in collecting longitudinal data that can be used to track immigrant outcomes—information that can help inform and refine selection policies (by recalibrating the characteristics and distribution of points for selection criteria). Such data can also be used to adjust integration policies and outreach to prospective applicants, including by shedding light on barriers immigrants may encounter when they first enter the workforce, such as limited language proficiency, a lack of professional networks to connect them with employment opportunities, or issues with credential recognition. Some countries have set up advisory bodies (such as the United Kingdom’s Migration Advisory Committee) to gather information on labor-market needs and shortage occupations, immigrant outcomes, and the economic and social impacts of

<sup>77</sup> Hiebert, *The Canadian Express Entry System*.

<sup>78</sup> Papademetriou and Hooper, *Competing Approaches to Selecting Economic Immigrants*.

<sup>79</sup> In contrast to presidential systems, which split powers on immigration between the executive and legislative, parliamentary systems allow the government to regulate and legislate on immigration with the support of its parliamentary majority.



immigration, among other topics, and to provide input on government policy.<sup>80</sup> Better understanding these challenges allows policymakers to provide new arrivals with tailored support as early as possible, and to adjust their selection criteria.

- **Focus on lifelong education and training for all workers.** Economic competitiveness rests on a well-educated workforce and a society-wide commitment to lifelong education and training, in which employers, worker organizations, and government at all levels invest in people. While immigration policy contributes to the pursuit of competitiveness, it can only play a supporting role. Governments will need to rely primarily on their education and training systems to produce—and crucially, retrain—workers able to meet future, in addition to current, needs. This includes looking to groups that are underrepresented or marginalized in the labor market (such as young and older people, women, minorities, and immigrants) and supporting them into work. Investments in lifelong learning can help retrain displaced workers and offer opportunities to get vulnerable groups into work, alongside other policies such as remote or flexible work, business creation support, and even encouraging internal mobility for workers whose skills may be better used in other parts of the country. Developing a smart plan of action and implementing it will require immigration and integration policymakers to work across government with policymakers who hold the education and training, labor, and social policy portfolios.
- **Take global competition seriously.** As competition for talent grows, policymakers need to be clear-eyed about what they can offer immigrants and be candid about the strengths and weaknesses of their selection systems. Many of the factors that inform an immigrant's decision to relocate (such as professional opportunities, quality of life, or access to robust education and health-care systems) are outside of the control of immigration policymakers. But these policymakers can take concrete steps to improve the immigration “package” on offer, including access to permanent residence and citizenship, family reunification opportunities, and efforts to promote diversity and inclusion.

In an era of accelerating labor-market upheaval and growing competition for talent, the best immigrant selection systems will be transparent, consistent, and equipped to adapt to changing labor needs by utilizing the latest information on economic developments and integration outcomes. Immigration policymakers will need to work closely with public and private stakeholders in sectors ranging from science and technology to health policy if they are to look beyond current labor needs and understand how demand for skills and competences are likely to grow or wane. And it is paramount that policymakers communicate to their publics that they are actively preparing for these changes, both by investing in education and training and adapting social policies to encourage upskilling and reskilling so that no one gets left behind, and by constantly calibrating immigrant selection policies to support economic growth.

When actively managed, economic immigration systems can choose well-qualified immigrants who find jobs commensurate with their qualifications and thus contribute to the economy and swiftly integrate into the communities in which they settle. Selection can thus power the virtuous cycles that flow from good choices, made by immigration policymakers, employers, and the rest of the government together with society and its institutions. When these collaborations succeed, the whole becomes much greater than the sum of its parts. The synergies that are created can meet both the needs and expectations of employers, workers, and the broader society.

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80 The Migration Policy Institute has long called for the creation of a standing commission on labor markets and immigration in the United States. See Demetrios G. Papademetriou, Doris Meissner, Marc R. Rosenblum, and Madeleine Sumption, *Harnessing the Advantages of Immigration for a 21st-Century Economy: A Standing Commission on Labor Markets, Economic Competitiveness, and Immigration* (Washington, DC: Migration Policy Institute, 2009), [www.migrationpolicy.org/research/harnessing-advantages-immigration-21st-century-economy-standing-commission-labor-markets](http://www.migrationpolicy.org/research/harnessing-advantages-immigration-21st-century-economy-standing-commission-labor-markets).



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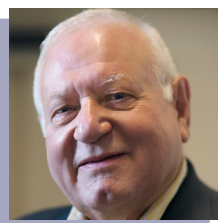
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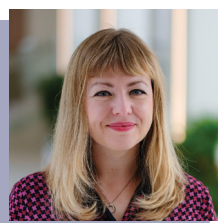
**Demetrios G. Papademetriou** is a Distinguished Transatlantic Fellow at the Migration Policy Institute (MPI), which he co-founded and led as its first President until 2014 and where he remains President Emeritus and a member of the Board of Trustees. He served until 2018 as the founding President of MPI Europe, a nonprofit, independent research institute in Brussels that aims to promote a better understanding of migration trends and effects within Europe; he remains on MPI Europe's Administrative Council and chairs its Advisory Board.

He is the convener of the Transatlantic Council on Migration, which is composed of senior public figures, business leaders, and public intellectuals from Europe, the United States, Canada, and Australia. He also convened the Regional Migration Study Group in 2011–15, an initiative that has proposed and is promoting multi-stakeholder support for new regional and collaborative approaches to migration, competitiveness, and human-capital development for the United States, Canada, Mexico, and Central America.

Dr. Papademetriou co-founded *Metropolis: An International Forum for Research and Policy on Migration and Cities* (which he led as International Chair for the initiative's first five years and where he continues to serve as International Chair Emeritus); and has served as Chair of the World Economic Forum's Global Agenda Council on Migration (2009–11); Founding Chair of the Advisory Board of the Open Society Foundations' International Migration Initiative (2010–15); Chair of the Migration Committee of the Organization for Economic Cooperation and Development (OECD); Director for Immigration Policy and Research at the U.S. Department of Labor and Chair of the Secretary of Labor's Immigration Policy Task Force; and Executive Editor of the *International Migration Review*.

He has published more than 270 books, articles, monographs, and research reports on a wide array of migration topics, lectures widely on all aspects of immigration and immigrant integration policy, and advises foundations and other grant-making organizations, civil-society groups, and senior government and political party officials, in dozens of countries (including numerous European Union Member States while they hold the rotating EU presidency).

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The Migration Policy Institute is a nonprofit, nonpartisan think tank dedicated to the study of the movement of people worldwide. MPI provides analysis, development, and evaluation of migration and refugee policies at the local, national, and international levels. It aims to meet the rising demand for pragmatic and thoughtful responses to the challenges and opportunities that large-scale migration, whether voluntary or forced, presents to communities and institutions in an increasingly integrated world.

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