
A NEEDED EVIDENCE REVOLUTION

USING COST-BENEFIT ANALYSIS TO IMPROVE REFUGEE INTEGRATION PROGRAMMING



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By Meghan Benton and Paul Diegert

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EXECUTIVE SUMMARY

Many Western European countries have dramatically ramped up spending on integration in the hope it will help the large numbers of recently arrived refugees find work and settle into their new societies. But very little is known about how best to target these investments. Governments have little hard evidence of what constitutes value for money in integration, in part because investments rarely pay off right away; it can take years or even generations for their full effects to be felt. There is also a dearth of high-quality evaluation to suggest which types of interventions—from subsidised work experience to training programmes—work best. Very few evaluations of integration policies can prove that the outcomes observed are the result of the intervention, and even most high-quality evaluations only look at the short-term effects of policies and programmes.

Governments have little hard evidence of what constitutes value for money in integration, in part because investments rarely pay off right away.

This report outlines ways policymakers can use a tool often employed by economists—cost-benefit analysis—to calculate the broader social value of their labour-market integration investments and to improve the quality of evidence in this field. It uses established methods from policy areas such as health and criminal justice where—like integration—spending may only pay off over a long timeframe. Such methods allow researchers to model the likely long-term outcomes of interventions, even in the absence of robust evaluation evidence on such interventions, or where initiatives are simply brand new. In other words, it allows decisionmakers to say: if a training programme has its desired effect, for every X euros of investment the programme is expected to produce a Y euro return over a 30-year time period.

A. Calculating the long-term social value of integration programmes

The type of cost-benefit analysis proposed models the relationship between the immediate outcomes of interventions (such as improving employment rates among participants) and their longer-term social effects (such as increasing lifetime earnings of participants or reducing crime). By looking beyond the fiscal benefits of a programme (i.e., money saved in taxes) and instead quantifying long-term effects, it better captures the full social value of integration programmes.

For instance, this methodology recommends exploring how investments in integration programmes for new arrivals might ultimately affect the second generation. Researchers can model how parental skills development and work affect children, and then calculate what these effects could mean for the children's lifetime earnings. It can also begin to put a value on social cohesion by modelling the relationship between integration outcomes and reductions in crime or neighbourhood segregation. A metric used in cost-benefit analyses in health policy, known as quality-adjusted life years (QALYs), can translate many of these social benefits into a quantifiable, financial figure.

Done right, this approach could be used to improve decisions about integration policy. It could also help policymakers reassure sceptical publics or the ministries that hold the purse strings that it is worth investing in integration. While setting up this type of economic modelling and customising it to the needs of a particular country would be labour intensive, once done, policymakers could more easily plug in the likely impact of different integration programmes to see where the best investments lie. Moreover, it could provide a framework to help guide better evaluations in the future. For example, this approach points to the need to consider a

broader set of outcomes when evaluating labour-market integration programmes—quality of employment and skills development as well as the more common rate of employment or self-sufficiency.

While the weakness of the evidence on integration measures means there are currently limitations to what such analysis can show, policymakers seeking to employ such economic modelling can draw on several causal mechanisms based on more established literature. These include how people build social networks, the relationship between unemployment and wage scarring (lasting negative effects of unemployment on earnings), and how parental stress and poverty affect the future earnings of children. Since very little of this literature is specific to immigrants, let alone refugees, any economic model will have to handle considerable uncertainty. And any cost-benefit analysis should be accompanied by efforts to improve the quality of evidence on integration policy, which would in turn to improve the robustness of estimates.

B. Filling gaps in the evidence

It is time to build an evidence culture into integration policy. While the 2015–16 migration crisis has fostered greater interest in robust evaluation (meaning with a control group), including in the form of randomised controlled trials, integration policymakers must become intelligent consumers of high-quality evidence. This means greater training on how to spot such evidence, use of control groups in evaluations becoming second nature, and increasing use of experimentation and piloting.

The migration crisis generated some natural experiments that researchers could leverage to fill some of these gaps.

But there are limitations to what can be learnt through evaluation alone. Even randomised controlled trials can only measure small interventions in environments that can be easily controlled. As a result, they should be complemented by longitudinal evidence on long-term integration dynamics. Only more in-depth studies will help answer some of the bigger questions in integration policy, such as whether it is better for newcomers to quickly enter work or to invest the time and money in developing host-country capital before entering the labour market. Other key questions could include: do integration programmes help people build language and vocational skills over time? How much do they move in and out of work? How quickly are they able to regain the occupational status they held in their country of origin? And what is the impact of different integration trajectories on refugees' children?

The migration crisis generated some natural experiments that researchers could leverage to fill some of these gaps. For instance, in countries where different regions were required to accept a certain portion of refugee arrivals, and this allocation was random, researchers could examine variation in refugee outcomes in different localities and how this may relate to the integration services provided in each. New policies introduced on a national level at the height of the crisis could also allow researchers to compare the outcomes of cohorts of refugees with similar demographic characteristics who arrived before and after their implementation. And the differential treatment of asylum seekers from different countries (as is the case where certain services are available to asylum seekers from countries with a high recognition rate and denied to those from elsewhere) can create a de facto control group, as could delayed access to services in places where they were oversubscribed.

The crisis also attracted new interest from think tanks, foundations, academics, and young researchers interested in contributing to the evidence base. There is a lot that could be done to capitalise on this energy and enthusiasm. Governments could help academics by investing in high-quality research in these areas and by making administrative data more readily available. Meanwhile, civil-society organisations could consider creating a platform to facilitate coordination and collaboration, including by guiding PhD students and early-career researchers towards high-value research questions.

Decision-making in integration policy is often based on political pressure, the desire to ‘do something’, or a change of administration, rather than rigorous evidence of what works. It is time for integration policy to catch up with other fields—from health to criminal justice to education—that have had an evidence revolution. Current levels of spending on integration offer an opportunity to begin to build an evaluation culture. More importantly, spending this money wisely to improve integration programming is essential to avoid greater societal costs further down the line.

I. INTRODUCTION

Europe has now experienced immigration on a large scale for several decades. Yet the collection and analysis of evidence on integration—how quickly newcomers enter work, develop skills and social networks, and feel a sense of belonging in the host country—are only just beginning to catch up. Studies point to persistent gaps between immigrants and the native born, but they rarely track progress over time or disaggregate by different groups of newcomers, making them blunt tools to analyse progress. What is clear is that it takes a long time to enter work, that people from rural areas and with lower levels of education tend to struggle more, and that breaking the cycle of intergenerational disadvantage is a pervasive challenge.¹ But the dearth of policy and programme evaluation makes it difficult to assess what measures could have a real effect on these processes. These questions have become even more critical following the 2015–16 European migration crisis.²

Studies point to persistent gaps between immigrants and the native born, but they rarely track progress over time or disaggregate by different groups of newcomers.

This state of affairs has persisted for so long that it has become something of a cliché to highlight the lack of evaluation in the field of immigrant—and specifically refugee—integration.³ Policymakers and researchers have made some progress towards improving the evidence regarding effective measures, with more studies focusing on the specific barriers that refugees and immigrants face. A number of governments have opened up well-guarded troves of administrative data, generating greater academic interest in this field. Several countries have commissioned path-breaking longitudinal surveys of immigrants and refugees. And an increasing number of evaluations of labour-market integration programmes include a control group, if not through randomised trial, then through nonrandom comparison.

- 1 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.
- 2 The 2015–16 European migration crisis brought both a substantial share of newcomers with higher levels of education and/or past professional experience (who need opportunities to unlock skills), and large numbers of arrivals with low education and skill levels (who need significant investments in basic skills simply to be able to access the labour market). See *ibid.*
- 3 See for instance, Iván Martín et al., *From Refugees to Workers: Mapping Labour Market Integration Support Measures for Asylum-Seekers and Refugees in EU Member States, Volume I: Comparative Analysis and Policy Findings* (Florence: Bertelsmann Stiftung and Migration Policy Centre, 2016), <http://cadmus.eui.eu/handle/1814/43504>; Klára Fóti and Andrea Fromm, *Approaches to the Labour Market Integration of Refugees and Asylum Seekers* (Luxembourg: Publications Office of the European Union, 2016), www.eurofound.europa.eu/publications/report/2016/labour-market-social-policies/approaches-to-the-labour-market-integration-of-refugees-and-asylum-seekers; Maria Vincenza Desiderio, *Integrating Refugees into Host Country Labor Markets: Challenges and Policy Options* (Washington, DC: Migration Policy Institute, 2016), www.migrationpolicy.org/research/integrating-refugees-host-country-labor-markets-challenges-and-policy-options. Many of these studies analyse existing studies, identify a long list of potential barriers, and an equally long list of potential measures, but then merely conclude that there is little to no evidence to support an argument in favour of one or the other measure.

Despite this progress, most governments are still far from true evidence-based policymaking in the field of refugee integration. The development of tools for comparing the evidence on policies and considering whether investments will have long-term payoffs are long overdue. This report considers how frameworks for assessing returns on investments, such as cost-benefit analysis,⁴ could help decisionmakers analyse the social value of diverse policy objectives. Cost-benefit analysis can serve at least three purposes: 1) providing a consistent comparison of the value of different policies, 2) examining the different sources of social value associated with a policy, and 3) helping policymakers weigh different goals, prioritise objectives, and think about the right indicators to measure them.

In countries that are increasing the funding for initiatives aimed at getting refugees and asylum seekers into work, new tools that strengthen the collection and use of evidence are especially timely and could have a significant impact.⁵ And in countries where labour-market integration programmes have been limited, a more systematic understanding of how investments pay off in the long run could help make the case among sceptical publics.

New tools that strengthen the collection and use of evidence are especially timely and could have a significant impact.

The goal of this report is to encourage policymakers and foundations to become intelligent consumers of cost-benefit analyses, and to understand the opportunities presented by such work. It begins by taking stock of current approaches to evaluating and measuring the success of labour-market integration programmes for asylum seekers and refugees. Next, the report sets out some questions policymakers will need to ask and describes the basic steps for conducting a cost-benefit analysis—including how to place a monetary value on noneconomic goods such as health and wellbeing. It then sets out the main causal mechanisms that could form the basis for this type of analysis—an area where research is acutely lacking. The penultimate section outlines some natural experiments that could improve evidence on the effectiveness of existing policies and programmes. Finally, the report concludes by assessing the follow-on research, data collection, and evidence gathering would further evidence-based policymaking in this area.

4 This report largely uses the term ‘cost-benefit analysis’ to refer to a decision-making framework that assesses the long-term costs and benefits of decisions. Some analysts prefer the term ‘cost effectiveness analysis’ as this acknowledges that some benefits may not easily be translated into monetary outcomes. This report adopts the narrower term since it is more readily used and understood, and because this report takes the view that most outcomes can be given a monetary value (at least as a proxy). Where the difference between these approaches is important, the report explains the chosen terminology and methodology.

5 For example, the Swedish Government committed to investing 1.669 billion SEK (more than 180 million euros) over the 2016–19 period in measures aimed at putting introduction programme participants on a fast-track to employment and reinforcing other labour-market oriented activities to accelerate the transition of new arrivals into economically active life. See Desiderio, *Integrating Refugees into Host Country Labor Markets*. The Austrian government has set up a special fund of 75 million euros, with 70 million euros redirected to active labour-market policies. See Austrian Federal Ministry of Finance, *Austria: Draft Budgetary Plan 2017* (Vienna: Austrian Federal Ministry of Finance, 2016), https://ec.europa.eu/info/sites/info/files/file_import/2016-10-12_at_dbp_en_1.pdf. And the German government agreed to allocate 7 billion euros to the *Länder* for the integration of refugees and asylum seekers for the 2016–19 period (2 billion euros per year, plus an additional half a billion in 2017 and 2019 specifically for housing). A large proportion of this is likely to go to labour-market integration. See *Der Tagesspiegel*, ‘Bund zahlt 7 Milliarden Euro für Integration’, *Der Tagesspiegel*, 7 July 2016, www.tagesspiegel.de/politik/fluechtlinge-bund-zahlt-7-milliarden-euro-fuer-integration/13847682.html.

II. LABOUR-MARKET INTEGRATION OF REFUGEES: WHAT IS AND ISN'T KNOWN

In recent years, a number of EU Member States have significantly increased the human and financial resources allocated to further the labour-market integration of refugees and asylum seekers. This comes amid heightened recognition of the persistent barriers these groups face to succeeding in host-country labour markets.⁶ However, little is known about what policies and programmes will speed an individual's employment trajectory—not to mention the interventions that could have broader positive impacts on the children of immigrants or broader society.

A. Evidence on refugees' labour-market integration

Refugees face numerous challenges finding work in their countries of residence, including limited language proficiency (and particularly field-specific technical language), a lack of host-country work experience or references, skills or qualifications that are not recognised or valued in the local labour market, limited networks, and difficulties navigating local employment culture.⁷ Additionally, refugees and asylum seekers are selected on the basis of their vulnerability rather than their skills, so they are less likely to fit easily into local employment opportunities. Moreover, refugees often spend time in limbo both in transit and at their final destination, while waiting for their protection claims to be processed.⁸ During these periods, their skills may atrophy or they may be barred from working.⁹

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As a result, refugees have historically taken longer to enter work than other groups. As Figure 1 shows, even after a decade of residence, the employment rates of people who arrived in Europe through humanitarian channels had not caught up with those of native-born adults. This suggests that refugees, unlike other immigrants, do not follow the classic pattern predicted by economic theory in which newcomers' occupational status and employment rates dip immediately after arrival but later return to their previous status after acquiring language, skills, and knowledge of the receiving country's institutions.¹⁰

6 For an overview, see Desiderio, *Integrating Refugees into Host Country Labor Markets*.

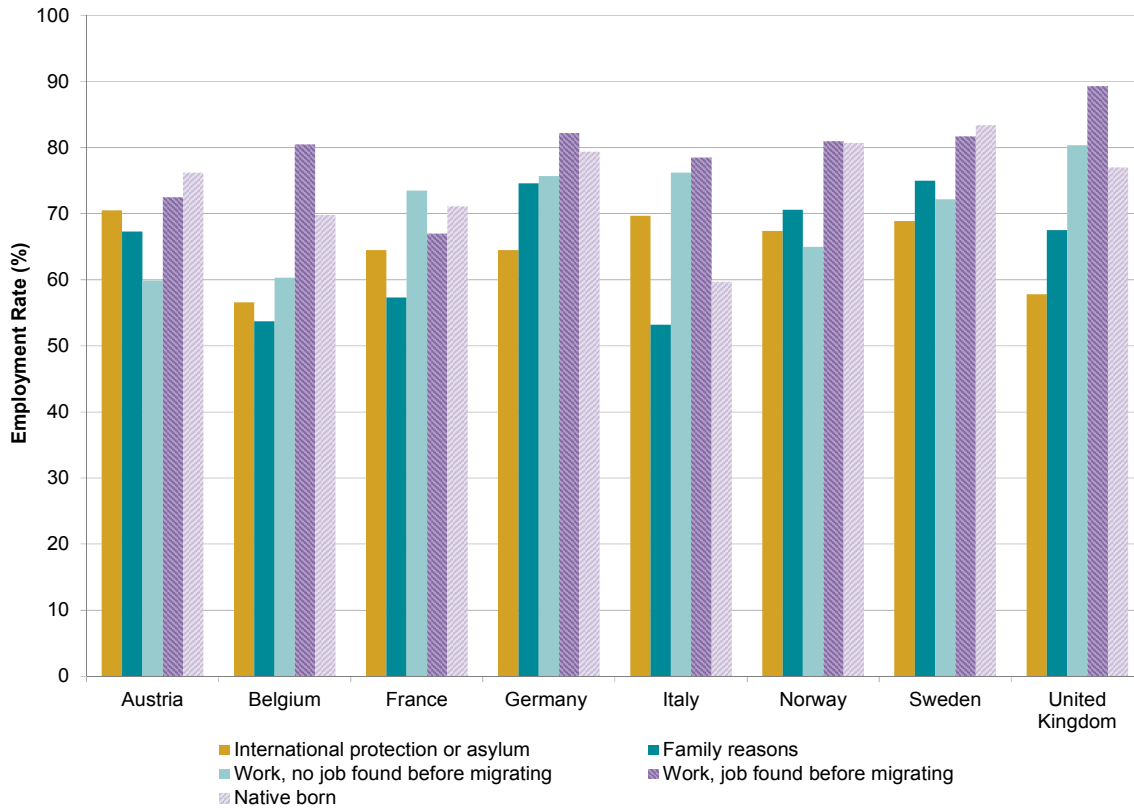
7 Refugee Interactive Skills for Employment (RISE), *Research Needs Analysis - Comparative Report* (Nottingham: Nottingham Trent University, 2013), <https://rise-project.eu/documents/2013/12/needs-analysis-report.pdf>.

8 One of the main debates since the onset of the migration crisis in 2015 has been whether to extend labour-market access and benefits to asylum seekers before their applications have been adjudicated. These restrictions have been eased in many European countries dealing with large-scale arrivals.

9 Desiderio, *Integrating Refugees into Host Country Labor Markets*.

10 See, for instance, Barry R. Chiswick and Paul W. Miller, 'Earnings and Occupational Attainment among Immigrants', *Industrial Relations: A Journal of Economy and Society* 48, no. 3 (2009): 454–65.

Figure 1. Employment Rate for Immigrants Resident in Select EU Member States for Ten Years or More, by Reason for Migration, and Corresponding Figures for Native-Born Adults, 2014



Notes: These data are for individuals ages 20 to 64. They include both EU and non-EU migrants.

Sources: Eurostat, ‘Employment Rate of First Generation of Immigrants by Sex, Age, Years of Residence and Reason for Migration [lfsa_14l1empr]’, updated 6 April 2016, http://ec.europa.eu/eurostat/web/products-datasets/-/lfsa_14l1empr; Eurostat, ‘Employment Rates by Sex, Age and Country of Birth (%) [lfsa_ergacob]’, updated 8 September 2016, http://ec.europa.eu/eurostat/web/products-datasets/-/lfsa_ergacob.

Since many refugees have low levels of education and may face limited prospects in the labour market, some commentators suggest that the outcomes of the second generation are the real test of integration.¹¹ Put simply, if a refugee’s vulnerability and protection is the main criteria for their admission, low employment rates may not be a cause for concern. But for the second and third generations, unemployment and social exclusion is more troubling. Many European countries have a history of intergenerational disadvantage and social exclusion among the descendants of immigrants, and so perceive their main integration policy challenge to be ensuring that the ramifications of the migration crisis do not longer long after inflows have abated.

B. Evidence on labour-market integration programmes

Many labour-market integration programmes in Europe were designed either for refugees or family arrivals. These two groups share many of the same characteristics, not least that neither are selected for their skills. For instance, introduction programmes in France and Germany that combined

¹¹ Papademetriou and Benton, *Towards a Whole-of-Society Approach to Receiving and Settling Newcomers in Europe*.

language, basic skills, and cultural training were largely designed for family arrivals; similar programmes in Sweden and other Scandinavian countries were designed to target refugees and their families. Meanwhile, northern European countries developed special initiatives for newcomers that combined language classes with the kind of subsidised work-experience programmes that had already been used successfully for the long-term unemployed among the broader population.¹² The frequent reorganisation of labour-market integration programmes coupled with the mainstreaming approach taken by many European governments that forces immigrants who do not fall into narrow target groups to rely on general employment services have made evaluation harder. However, it does mean that some evidence on immigrant integration, though not refugee specific, is available.

Most labour-market integration programmes have been evaluated only through qualitative, survey measures. For example, a recent comprehensive evaluation of Swedish labour-market programmes monitored employment support, credential recognition, skills assessment, subsidised work experience, traineeships, and even self-employment support for all disadvantaged groups. But it only recorded their status 90 and 180 days after completion of the programme, making it impossible to gauge the programmes' longer-term effects.¹³

Most labour-market integration programmes have been evaluated only through qualitative, survey measures.

Very few evaluations are robust enough to prove that any differences in integration outcomes were caused by the intervention. There are a handful of randomised controlled trials, which are often described as the gold standard of evaluation. But most of these are restricted to pilot studies or experiments investigating how changes in the behaviour of a service provider affect outcomes. For instance, an evaluation of intensive counselling and coaching by the Swedish Public Employment Service assigned participants into either a treatment group (intensive coaching) or a control group (regular introduction programmes) and found that intensive coaching increased an individual's chance of employment.¹⁴ Another trial examined the impact of early registration with the agency.¹⁵

Another approach is nonrandom comparison group studies. While a randomly assigned control group is the ideal comparison, it is sometimes possible to infer causal relationships by comparing the outcomes

12 Henrik Emilsson, *No Quick Fix: Policies to Support the Labor Market Integration of New Arrivals in Sweden* (Washington, DC and Geneva: Migration Policy Institute and International Labour Office, 2014), www.migrationpolicy.org/research/no-quick-fix-policies-support-labor-market-integration-new-arrivals-sweden.

13 Jan Norberg, *Arbetsmarknadspolitiska Program Årsrapport 2016* (Stockholm: Arbetsförmedlingen, 2017).

14 The study assessed measures such as intensive counselling and coaching by Public Employment Service caseworkers to see whether these improve the employment prospects of new immigrants in Sweden. A pilot introduction programme was in place from October 2006 to June 2008. Within the nine participating municipalities, new immigrants were randomly assigned into either an intensive coaching or control group (regular introduction programmes. The introduction programmes targeted immigrants granted permanent residence on humanitarian grounds and their families. At the end of the observation period, the treatment group showed a higher relative likelihood to be in regular employment, at 20 per cent compared to 14 per cent for the control group. See Pernilla Andersson Joona and Lena Nekby, 'Intensive Coaching of New Immigrants: An Evaluation Based on Random Program Assignment', *The Scandinavian Journal of Economics* 114, no. 2 (June 2012): 575–600.

15 Pernilla Andersson Joona and Lena Nekby, 'TIPping the Scales towards Greater Employment Chances? Evaluation of a Trial Introduction Program (TIP) for Newly-Arrived Immigrants Based on Random Program Assignment' (IZA Discussion Paper No. 4072, Institute of Labour Economics, Bonn, March 2009), www.iza.org/publications/dp/4072/tipping-the-scales-towards-greater-employment-chances-evaluation-of-a-trial-introduction-program-tip-for-newly-arrived-immigrants-based-on-random-program-assignment.

of the treated group to a comparison group that was not selected randomly.¹⁶ For instance, a number of recent studies exploit regional differences in how integration policies are introduced to construct a comparison group.¹⁷ Other studies compare participants of programmes to nonparticipants, using statistical methods to account for selection bias (as otherwise those selected for the programme could be people who would have succeeded even without it). For example, an evaluation of an occupational language training programme in Germany used a propensity-score matching approach to assess the effect of the programme.¹⁸ In addition, several studies have explored active labour-market programmes generally or included immigrants as subgroups in other studies. Many of these have also found disappointing results. For instance, a Norwegian analysis of welfare-to-work initiatives found they have a positive impact overall but no discernible impact on immigrants and single mothers.¹⁹

There are therefore two evidence challenges to contend with: 1) many evaluations are not robust, and 2) robust studies tend to measure only small changes or initial outcomes, meaning their results can seem underwhelming. For instance, the evaluation of the German occupational language programme described above examined the effect of the programme just 18 months after its start, at which time only 8 per cent of programme participants were employed.²⁰ Similarly, an evaluation of the Danish introduction programme only adopted a measure of self-sufficiency after completion, which did not capture long-term benefits or the quality of work or wages.²¹

III. INNOVATIVE APPROACHES TO MEASURING THE LABOUR-MARKET INTEGRATION OF REFUGEES

Despite the generally bleak picture of evidence and evaluation in the integration sphere, there are some fledgling signs of progress. There are a growing number of randomised controlled trials and

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- 16 Some of the most common approaches are propensity score matching (PSM) and the difference-in-difference (DID) estimator. The first matches individuals in the treatment group to individuals with similar characteristics in the comparison group to make the groups more comparable. The second considers differences in the rate of change in outcome between treatment and control groups. In some circumstances, this can eliminate the influence of unobserved characteristics on the outcome.
- 17 For instance, in Sweden, Åslund and Johansson made the most of the fact that a workplace introduction programme was introduced in a number of pilot municipalities before being rolled out nationwide. See Olof Åslund and Per Johansson, 'Virtues of SIN: Can Intensified Public Efforts Help Disadvantaged Immigrants?', *Evaluation Review* 35, no. 4 (1 August 2011): 399–427. Another series of studies led by Åslund exploited the spatial distribution of refugees and the fact that refugees were randomly assigned to different municipalities to explore the impact of ethnic enclaves and local labour-market condition. See Olof Åslund and Dan-Olof Rooth, 'Do When and Where Matter? Initial Labour Market Conditions and Immigrant Earnings', *The Economic Journal* 117, no. 518 (2007): 422–48.
- 18 Thomas Walter et al., *Evaluation 'Programm zur berufsbezogenen Sprachförderung für Personen mit Migrationshintergrund (ESF-BAMF-Programm)'* (Mannheim: Zentrum für Europäische Wirtschaftsforschung, 2014), www.zew.de/de/forschung/evaluation-programm-zur-berufsbezogenen-sprachfoerderung-des-bundes-fuer-personen-mit-migrationshintergrund-im-bereich-des-bundes/.
- 19 Marit Rønsen and Torbjørn Skarðhamar, 'Do Welfare-to-Work Initiatives Work? Evidence from an Activation Programme Targeted at Social Assistance Recipients in Norway', *Journal of European Social Policy* 19, no. 1 (1 February 2009): 61–77.
- 20 The probability of participating in another labour-market integration programme increased substantially, pointing to the need to measure impact over a longer timeframe to see whether these secondary educational investments pay off. See Walter et al., *Evaluation ESF-BAMF-Programm*.
- 21 Jens Clausen et al., 'The Effect of Integration Policies on the Time until Regular Employment of Newly Arrived Immigrants: Evidence from Denmark', *Labour Economics* 16, no. 4 (August 2009): 409–17.

other robust evaluations, as well as new longitudinal data studies and innovations in data integration, more frameworks for assessing success in immigrant and refugee integration, and the potential of cost-benefit analyses.

A. Data sources

Historically, data on immigrants, and particularly refugees, have been limited. But in recent years, the number of refugee-specific datasets has increased, and there has been greater awareness of the potential to integrate data across services and datasets. Available data can be separated into four broad categories:

- **Survey data.** Large social surveys, such as the Labour Force Survey and the EU Statistics on Income and Living Conditions (EU-SILC), contain rich data on wages, part-time work, living conditions, and other factors. However, these surveys mainly look at private households, which excludes individuals residing in subsidised public or temporary housing. This means these surveys are likely to undercount newly arrived asylum seekers and refugees. Moreover, the surveys rarely provide data on surveyed immigrants' reasons for migration, making it difficult to identify humanitarian arrivals.
- **Longitudinal surveys of immigrants.** Australia and Canada have a greater tradition of collecting immigrant-specific data. The Longitudinal Survey of Immigrants to Australia and Longitudinal Survey of Immigrants to Canada both record routes of entry. One of the main findings of both datasets is that language skills are a major factor in determining whether someone enters work quickly.²²
- **Longitudinal surveys of refugees.** More recently, some refugee-specific studies have sought to track outcomes over time. The German IAB-BAMF-SOEP Refugee Survey collects data on more than 4,500 refugees who entered the country between January 1, 2013 and January 31, 2016, and who applied for asylum (regardless of their current legal status).²³ Australia has run a longitudinal study of refugees before, but the latest is an especially ambitious attempt to examine noneconomic outcomes. Building a New Life in Australia will run from 2013 to 2018. Initial findings look at variables such as education, work experience, and language on arrival; confidence in using English to access government services; and housing.²⁴ Future results will help draw conclusions about how access to services and benefits shapes settlement—for instance, by collecting perceptions of life in Australia and information on physical and mental health.
- **Service-specific data.** Public employment services may be sitting on a wealth of data. In Germany, the Federal Employment Agency has been collecting information on 'persons in the context of refugee migration' since early 2016, which distinguishes between asylum seekers, recognised

22 Zubaida Haque, *What Works with Integrating New Migrants: Lessons from International Best Practice* (London: Runnymede Trust, 2010), www.runnymedetrust.org/uploads/publications/pdfs/WhatWorksWithIntegratingNewMigrants-2010.pdf.

23 Herbert Brücker et al., 'IAB-BAMF-SOEP Refugee Survey: Forced Migration, Arrival in Germany, and First Steps toward Integration' (BAMF Brief Analysis 5/2016, Federal Office for Migration and Refugees, Nuremberg, November 2016), www.bamf.de/SharedDocs/Anlagen/EN/Publikationen/Kurzanalysen/kurzanalyse5_iab-bamf-soep-befragung-gefuechtete.html. The survey collects data on refugees' reasons for forced migration, escape routes, cognitive abilities, personality traits, values, health, educational and employment-related biographies, language proficiency, earnings and assets, and family contexts and social networks. It also includes data on registration, asylum procedure status, accommodations, and use of integration and job-market policy measures and career counselling programmes.

24 Rebecca Jenkinson, Michelle Silbert, John De Maio, and Ben Edwards, *Settlement Experiences of Recently Arrived Humanitarian Migrants* (Melbourne: Australian Institute of Family Studies, 2016), <https://aifs.gov.au/publications/settlement-experiences-recently-arrived-humanitarian-migrants>; David Marshall, 'Building a New Life in Australia: The Longitudinal Study of Humanitarian Migrants' (issue brief, Australian Government, Department of Social Services, 2015), www.dss.gov.au/sites/default/files/documents/09_2015/data-highlight-no-2-2015-bnla.pdf.

refugees, and ‘tolerated persons’ (rejected asylum seekers who cannot be returned).²⁵ The agency has also collected information on unemployment insurance and social assistance.²⁶ However, only limited information on service participation is collected. The authors of a 2017 study on evaluation of integration measures in Germany recommended expanding information on support measures that refugees participate in, although they also suggested selecting statistical twins (participants and nonparticipants) and limiting the scope by only including districts in which the employment agency operates.²⁷

Most governments find it difficult to share data—either because of incompatible IT systems, legislative or ethical issues, or skills and knowledge barriers. Some statistical offices have pushed for better data integration on migration. For example, the Office of National Statistics in the United Kingdom is seeking to integrate its data with data from HM Revenue and Customs and the Department for Work and Pensions. Similarly, Canada is looking to link Immigration, Refugees, and Citizenship Canada data on permanent residents with data from the General Social Survey, the Canadian Community Health Survey, and the Immigration Longitudinal Database.²⁸ Such data integration could allow for a more sophisticated analysis of integration trajectories.

B. Frameworks for measuring success

While the evidence and data on the nuances of refugee integration are underwhelming, the number of frameworks for analysing the integration of refugees has grown considerably. In 2004, a study undertaken for the UK Home Office set out ten key domains in refugee integration.²⁹ The authors suggested that the fields of integration—employment, housing, education, and health—were both ‘markers’ and ‘means’ (indicators of positive integration outcomes as well as tools to facilitate further integration), making the valuable point that the fields of success were complex and interdependent. The *Settling In* reports published by the Organisation for Economic Cooperation and Development (OECD) measure progress on a set of integration indicators, from earnings to adult literacy and overcrowding in housing.³⁰

25 For a summary of the different legal statuses, see German Federal Ministry of Labour and Social Affairs, ‘Ways for Refugees to Gain Access to the Labour Market’, updated 7 October 2015, www.bmas.de/EN/Our-Topics/Fresh-start-in-germany/Ways-for-refugees-to-gain-access-to-the-labour-market.html.

26 However, the German Federal Employment Agency, does not include individuals as ‘persons in the context of refugee migration’ if they have either obtained a permanent residence permit or have been naturalised. Additionally, the agency does not include family members of refugees who arrive in Germany under family reunification visas in the ambit of this data collection effort. See Holger Bonin and Ulf Rinne, *Machbarkeitsstudie zur Durchführung einer Evaluation der arbeitsmarktpolitischen Integrationsmaßnahmen für Flüchtlinge* (Bonn: German Federal Ministry of Labour and Social Affairs, 2017), www.bmas.de/DE/Service/Medien/Publikationen/Forschungsberichte/Forschungsberichte-Arbeitsmarkt/fb-481-machbarkeitsstudie.html.

27 Ibid.

28 Citizenship and Immigration Canada, ‘IRCC Policy Relevant Research: Priority Knowledge Gaps’ (presentation, Pathway to Prosperity Conference, Toronto, November 2015), <http://p2pcanada.ca/wp-content/blogs.dir/1/files/2015/12/Yan-policy-knowledge-gaps-rev.pdf>.

29 Alastair Ager and Alison Strang, *Indicators of Integration: Final Report* (London: UK Home Office, 2004), <http://webarchive.nationalarchives.gov.uk/20110218141321/http://rds.homeoffice.gov.uk/rds/pdfs04/dpr28.pdf>.

30 Organisation for Economic Cooperation and Development (OECD), *OECD Regional Outlook 2016* (Paris: OECD Publishing, 2016), <https://doi.org/10.1787/9789264260245-en>.

Meanwhile, New Zealand has developed an outcomes framework for migrant settlement and integration, and a separate one for refugees.³¹ And the UK government is developing a similar framework for measuring the integration for newly arrived Syrian refugees, which will include consideration of employment, education, housing, language, health, security, and social capital.³²

While many EU-funded research studies have sought to benchmark and measure the integration of migrants across EU countries, these studies have generally compared the outcomes of migrants or refugees and the native-born population at a macro level, without controlling for individual characteristics.³³ Overall, the studies fall short of providing solid insights into what works, and who should benefit from investment.

These studies have generally compared the outcomes of migrants or refugees and the native-born population at a macro level, without controlling for individual characteristics.

C. Cost-benefit analysis

Accurately assessing the costs and benefits of investing in a particular policy or programme is no easy endeavour. In an ideal world, such a task would depend on a body of high-quality, robust evidence; for instance, several studies with a control group³⁴ and repeated over time. These studies could then be reviewed through a meta-analysis, which would quantify the likely average impact. In policy areas such as education and health, frameworks that assess the strength of impact, the cost of achieving such impact, and the strength of evidence are common.³⁵

In the integration field, however, rigorous studies are rare and useful meta-analyses even rarer. Factors behind this scarcity include the relative youth of the integration field and the fact that it spans other policy areas. In some cases, it was assumed that what works for broader disadvantaged groups would also work for immigrants. But as the proportion of immigrants and refugees in societies has grown, demand for evidence specific

- 31 Immigration New Zealand, 'New Zealand Migrant Settlement and Integration Strategy', accessed 1 May 2018, www.immigration.govt.nz/about-us/what-we-do/our-strategies-and-projects/settlement-strategy. The framework develops five outcome areas and defines success as the achievement of the following outcomes: working-age migrants find employment commensurate with their skills; migrants achieve educational and vocational qualifications; migrants confidently use English in their daily lives; migrants participate in and have a sense of belonging in their communities and New Zealand; migrants enjoy healthy lives and feel safe. The Refugee Resettlement Strategy chooses five slightly different indicators, prioritising language as the main dimension of education and adding housing (living in safe, secure, healthy, and affordable homes without needing government housing help).
- 32 Crucially, the UK government is trying to track the interactions between these dimensions. For instance, the question of whether children make more progress than their parents, and the conditions under which this occurs. The government will identify a set of benchmarks that take into account the specific vulnerabilities of refugees, such as considering whether children achieve their predicted grades (instead of comparing them to other groups' attainment). See Ed Pitchforth, 'Successful Refugee Integration – What Does this Look Like?' (panel discussion at the Annual Tripartite Consultations and Working Group on Resettlement, Auckland, 15 February 2017).
- 33 For example, Eurostat published study that sets out a list of indicators for assessing immigrants' integration in EU Member States by country of birth, gender, and age group. See Eurostat, *Indicators of Immigrant Integration: A Pilot Study* (Luxembourg: Publications Office of the European Union, 2011), <http://ec.europa.eu/eurostat/web/products-statistical-working-papers/-/KS-RA-11-009>. A 2015 OECD report considers immigrant integration in terms of income distribution, housing, health, education of second-generation children, and labour-market and civic engagement. See OECD, *Indicators of Immigrant Integration 2015: Settling In* (Paris: OECD Publishing, 2015), www.oecd-ilibrary.org/social-issues-migration-health/indicators-of-immigrant-integration-2015-settling-in_9789264234024-en.
- 34 A control group is a group of subjects who resemble the treatment group but who do not receive the intervention.
- 35 For an example of how such a framework is used in the field of education, see Education Endowment Foundation, 'Teaching and Learning Toolkit', accessed 8 February 2018, <https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit>.

to these groups has risen. Perhaps more importantly, the evidence that does exist is rather mixed because of the complexity of integration. For instance, evaluations of introduction programmes have found small positive impacts but also high costs, namely the large investments in time that delay access to the labour market (known as lock-in effects). Researchers, however, know little about whether these costs are worth bearing in the long run, because of the absence of longer-term evidence and a limited understanding of the broader dynamics affecting integration.

As a result, the main ingredients for evidence-based decision-making are lacking. Also absent is a clear theory of change for how integration happens. And the new frameworks outlined above in Section III.B. have not been accompanied by tools to deliver value for money in decision-making. In an ideal world, policymakers would both have a richer body of evidence to draw on and be able use this evidence to assess the value of integration policies.

As the proportion of immigrants and refugees in societies has grown, demand for evidence specific to these groups has risen.

Cost-benefit analysis has long been an important tool for policymakers. In the United States, there is a tradition going back to the 1970s of using evaluation evidence to conduct cost-benefit analyses of vocational training programmes. This literature led to advances in both evaluation methods and considerations about the timeframe of benefits in the policy. A similar approach is increasingly being used to evaluate government interventions in a wide range of sectors in the United States.³⁶ In more recent years, this method of analysis has been adopted by other countries as well, including by the United Kingdom as a framework for assessing the value of employment programmes,³⁷ and in areas such as public health, criminal justice, and environmental policy. Meanwhile, cost-benefit analysis in public health and criminal justice has led to the widespread use of disability-adjusted life years (DALYs) and quality-adjusted life year (QALYs) along with estimates of the statistical value of life to put a valuation on health outcomes.³⁸

Cost-benefit analyses have been employed more sparingly in the area of immigrant and refugee integration. Most studies on the economic benefits of migration make sweeping calculations at a macro level, usually by inferring the likely impact of such migration on GDP relative to the likely spending on immigrants, for example by comparing taxes paid with social service usage over time.³⁹ These studies rarely construct a proper

36 This is exemplified by the Washington State Institute for Public Policy (WSIPP) project on cost-benefit analysis, which uses evaluation evidence to quantify the net value of a wide range of projects. See WSIPP, *Benefit-Cost Technical Documentation* (Olympia, WA: WSIPP, 2017), www.wsipp.wa.gov/TechnicalDocumentation/WSippBenefitCostTechnicalDocumentation.pdf.

37 Daniel Fujiwara, 'The Department for Work and Pensions Social Cost-Benefit Analysis Framework: Methodologies for Estimating and Incorporating the Wider Social and Economic Impacts of Work in Cost-Benefit Analysis of Employment Programmes' (working paper no. 86, UK Department for Work and Pensions, London, 2010), <http://research.dwp.gov.uk/asd/asd5/WP86.pdf>.

38 Disability-adjusted life years (DALYs) is a measure of the years of life lost due to ill health, disability, or early death. It is a variation of quality-adjusted life years (QALYs), which is a measure of individual or group health following a treatment (measured as years of life remaining); the quality of each year is evaluated on a zero-to-one scale, in which one QALY is equivalent to a year of life in perfect health. One of the most comprehensive guides to this kind of work comes from the World Health Organization. See Tessa Tan-Torres Edejer et al., *Making Choices in Health: WHO Guide to Cost-Effectiveness Analysis* (Geneva: World Health Organization, 2003), <http://apps.who.int/iris/handle/10665/42699>.

39 For example, see Philippe Legrain, *Refugees Work: A Humanitarian Investment That Yields Economic Dividends* (New York: Tent Foundation, 2016), www.opennetwork.net/wp-content/uploads/2016/05/Tent-Open-Refugees-Work_V13.pdf. Legrain writes that spending on refugees in advanced economies is typically too small to have a significant macroeconomic impact. For example, the U.S. budget for refugee resettlement is equivalent to roughly 0.003 per cent of the country's GDP. But in some EU countries, spending in 2016 was set to be large enough to affect the economy as a whole (with the Eurozone economy still weak and interest rates near zero). Upon finding employment, refugees often do what Legrain calls the '4D jobs' (dirty, difficult, dangerous, and dull) that host-country workers spurn, freeing these workers to seek higher-skilled jobs. Hence, over time refugees' net contribution to public finances becomes net positive.

comparison of costs and benefits, and many are designed to support a political case for or against migration by suggesting it is either unequivocally good or bad.

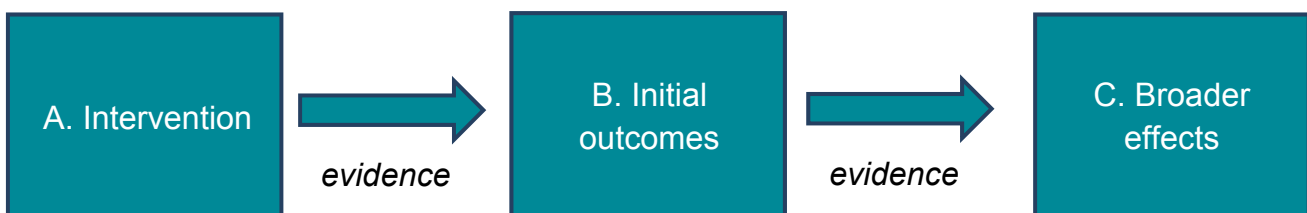
A handful of studies have looked at the costs and benefits of particular programmes. However, these generally adopt a limited understanding of benefits, often failing to consider possible social impacts. For instance, a Swedish study of the likely benefit of an intensive coaching programme considered only likely wages and taxes.⁴⁰ Meanwhile, the only cost-benefit analyses that consider the broader social ramifications of policy decisions relate to the costs and benefits of providing entry or authorisation to immigrants or refugees. For example, a cost-benefit analysis of the impact of regularising unauthorised immigrant parents in the United States explored the likely impact on children by costing out the anxiety, fear, poverty, health and behavioural problems, and educational implications of detention or deportation.⁴¹

In short, cost-benefit analysis is often used in the field of immigration as a political tool to further a certain agenda—from allaying public fears about immigration to shutting down a refugee resettlement programme—rather than a genuine tool to understand where to target investments.

IV. USING COST-BENEFIT ANALYSIS TO IMPROVE INTEGRATION POLICYMAKING

More sophisticated and robust cost-benefit analyses could play an important role at multiple stages of integration policymaking, from planning to evaluation. Effective cost-benefit analyses for integration can be predictive or evaluative.⁴² A predictive model uses economic modelling methods to forecast the net social value of a policy or intervention based on assumptions about its impact. The benefit of a predictive approach is that, even if good evidence about whether an intervention achieves its stated objectives is lacking (how A affects B in Figure 2), it is still possible to predict its possible benefits (how predicted outcome B could affect C).

Figure 2. The building blocks of cost-benefit analysis



An evaluative approach, by contrast, uses the model in Figure 2 to decide what to measure. An evaluation would ideally examine both elements B and C; however, most evaluations focus on B alone. Moreover, there is not always a bright line between these two approaches. Evaluations can be used to test prior predictions, for instance, creating a kind of feedback loop where a predictive model becomes more robust over time by

⁴⁰ Aslund and Johansson, 'Virtues of SIN'.

⁴¹ Sarah Satinsky, Alice Hu, Jonathan Heller, and Lili Farhang, *Family Unity, Family Health: How Family-Focused Immigration Reform Will Mean Better Health for Children and Families* (Oakland, CA: Human Impact Partners, 2013), www.familyunityfamilyhealth.org/uploads/images/FamilyUnityFamilyHealthExecutiveSummaryinEnglish.pdf.

⁴² For further discussion of the differences in the purposes of evaluative and forecasting (predictive) approaches to measuring social value, see SROI Network, *A Guide to Social Return on Investment* (Liverpool: SROI Network, 2012), www.socialvalueuk.org/app/uploads/2016/03/The%20Guide%20to%20Social%20Return%20on%20Investment%202015.pdf.

improving evidence on how A affects B and B affects C (see Box 1).⁴³ It is therefore important to include an estimate of uncertainty in the models used, and to continually revise the model as more empirical evidence arises.

Box 1. Using predictive and evaluative cost-benefit analysis

One of the most systematic examples of how these approaches can be combined is provided by the Millennium Challenge Corporation (MCC), a small U.S. foreign aid agency. Before funding any international development project, the MCC goes through an economic modelling exercise to forecast the economic rate of return of the project—the percentage by which benefits exceed costs. Projects are only funded when they meet a certain threshold. Then, most programmes are subject to an evaluation that estimates the actual rate of return at the project close (usually in a five-year time frame).

This systematic use of predictive and evaluative approaches is intended to tie policy decisions to the social value they provide and uses evaluations to test and validate the modelling decisions used in the initial estimates. This approach to cost-benefit analysis is somewhat unique to international development, and is a valuable example in that it illustrates how predictive and evaluative approaches can be used together.

Source: Millennium Challenge Corporation, ‘Economic Rates of Return’, accessed 7 December 2017, www.mcc.gov/our-impact/err.

The subsections that follow lay out some of the major principles of cost-benefit analysis and how they can be used to improve evaluations and policy-making for integration. The section concludes with an examination of the major choices in a cost-benefit analysis of refugee integration programmes and presents a framework for conducting a predictive cost-benefit analysis.⁴⁴

A. Setting parameters: design choices in cost-benefit analysis

The first step in designing a cost-benefit analysis is to decide which costs and benefits matter. This can be straightforward if the programme has only one or two defined outcomes, each with clear monetary value. But the task becomes considerably more complicated when the programme affects different populations, or where the expected benefits are likely to accrue far in the future. In such cases, analysts will need to focus on two central considerations: how to weigh the interests of different groups and how to value costs and benefits in the future.

⁴³ Even the most rigorous, long-term evaluation evidence suffers from problems of external validity; the results may be dependent on broader contextual factors, and it may not be possible to separate the effects of different components of the intervention.

⁴⁴ Given the relative lack of rigorous evaluation evidence on integration outcomes, this section focuses on using existing evidence to model the costs and benefits of an intervention based on assumptions about its impact. However, the design questions and methods discussed in this section would also be important considerations in an evaluative use of cost-benefit analysis.

1. How to weigh the interests of different groups

At its most straightforward, cost-benefit analysis calculates fiscal impact—the change in taxes paid and benefits received by beneficiaries compared to the cost of the programme.⁴⁵ For instance, such an analysis would calculate the average impact of an intervention, and then cost out the savings to the public purse from individuals having exited unemployment (reduced benefits use) and increased their earnings (increased tax revenue). If governments were exclusively interested in fiscal solvency, this might be a valid approach. However, this approach considers social costs such as crime and economic outcomes such as employment only to the extent that they directly affect the government budget. It ignores other common programmatic goals, such as reducing social exclusion and preserving public safety or community cohesion; the value to society of those factors may outweigh their cost to public services. For instance, society may construe a life lost to crime as a major cost even though it does not necessarily represent any public spending.

The main alternative approach for quantifying social outcomes is to create an aggregate measure of the welfare of the individuals in the country. This approach can include the value from outcomes that lack a monetary value.⁴⁶ There are many ways to formulate this measure. A common approach is to simply add up the value that the programme offers to all groups.⁴⁷ A more flexible approach is to calculate the benefits to different groups and then specify some social welfare function, a formula for aggregating the individual changes in welfare to a measure of social welfare. The rationale for including a social welfare function is that it can specify preferences about how welfare is distributed instead of lumping everyone's preferences together as doing so may not take enough account of individual rights. The process of putting a value on nonmonetary benefits is described later in this section.

Since many refugees in Europe are new arrivals, additional questions should be asked when establishing a framework to measure social welfare. Should calculations of social welfare include the welfare of refugees or just that of the receiving population? And if refugees are included, what of asylum seekers? There is a strong argument for including resettled refugees and asylum seekers whose claims are recognised, since they are now permanent residents. The most pertinent policy questions relate to the services they need, rather than whether to allow them to stay. However, the situation is more complex for asylum seekers with pending applications—including those with a high chance of receiving recognition.⁴⁸ Many will end up staying in the host country, so will pose the same potential costs and benefits to society as persons granted refugee status prior to arrival. Indeed, one of the benefits of using a social welfare function is that it can take account of more than just direct benefits to individuals. For instance, it could incorporate preferences among the host population to avoid refugees or asylum seekers being driven to poverty or social exclusion. One possible solution is there-

45 For an example of this approach, see National Academies of Sciences, Engineering, and Medicine, *The Economic and Fiscal Consequences of Immigration* (Washington, DC: The National Academies Press, 2016), www.nap.edu/catalog/23550/the-economic-and-fiscal-consequences-of-immigration. This report considers this approach alongside other, more inclusive measures of the economic impact of immigrants. The UK Department for Works and Pensions also developed a (unpublished) framework for cost-benefit analysis in 2007 following this approach, but later opted to use a broader measure of social value.

46 The theoretical foundation used in welfare economics assumes that individuals make economic and social decisions as if they are maximising a utility function. A social welfare function can then be constructed to aggregate individual utilities to a single measure of social utility. If researchers make relatively strong assumptions on the form of individuals' utility functions, it is possible to place a monetary value on all social and economic outcomes, enabling an analysis of individual welfare in monetary terms. For a standard treatment of this approach, see Richard E. Just, Darrell L. Hueth, and Andrew Schmitz, *The Welfare Economics of Public Policy: A Practical Approach to Project And Policy Evaluation* (Cheltenham, UK: Edward Elgar Pub, 2005). This approach is also used as the theoretical foundation for Fujiwara, *The Department for Work and Pensions Social Cost-Benefit Analysis Framework*.

47 The theoretical justification for this procedure is the Kaldor-Hicks compensation criterion, which states that a policy is desirable if the winners from the policy would be willing to compensate the losers. This principle is conceptually appealing because it means the policy leads to a potential Pareto improvement—an outcome where everybody is better off if the losers are compensated.

48 For a discussion of the tradeoffs policymakers face in deciding whether to invest in asylum seekers before their claims are adjudicated and they are recognised as refugees, see Desiderio, *Integrating Refugees into Host Country Labor Markets*.

fore to include asylum seekers in the calculation, and to model the risk that expenditures on asylum seekers will not pay off if they are returned to their country of origin or leave voluntarily.

2. How to weigh costs and benefits in the future

Benefits in the future are generally discounted to account for the opportunity costs of the programme. In other words, the money spent on a program could be invested instead, and the returns on that investment distributed to the groups affected by the potential policy. By this logic, a programme is only worthwhile if its benefits are greater than the return that could be obtained by simply investing the money and distributing it to beneficiaries, so this return becomes a discount rate⁴⁹ that must be factored into an assessment of benefits. The challenge is when the benefits accrue far enough in the future that the main beneficiaries are a future generation, since it is not usually feasible to make investments and distribute the returns to future generations.⁵⁰ Instead, trading current costs for future benefits can be treated like an intergenerational transfer.⁵¹

The challenge is when the benefits accrue far enough in the future that the main beneficiaries are a future generation.

The discount rate question applies to labour-market integration programmes because of the powerful intergenerational dynamics at work in integration. Of course, the direct effects of these programmes are on the earnings of refugees and their broader self-esteem and sense of belonging. But the broader goals of integration are more long term, since policymakers hope these policies will encourage intergenerational mobility and social cohesion. While the benefits to refugees will have to materialise during their working life, benefits for their descendants can emerge over a much longer period.

Decisions about whether to calculate only those benefits that accrue to direct recipients or to also include those that accrue to their descendent family members is especially important given the large earnings disparities between first, second, and third generations. For a refugee who arrives midway through a career—the time in a person’s life when they pay the most taxes and receive the fewest benefits—the potential gains in earnings from a successful labour-market integration programme would have to outweigh its costs over a relatively short period of time.

B. The building blocks of a cost-benefit analysis

Predictive cost-benefit analysis draws on existing evidence on the relationships between socioeconomic outcomes such as employment of parents and education of children, and between other short- and long-term outcomes, to forecast the total social costs and benefits of a programme. The goal is to separate the effect of an intervention into initial socioeconomic outcomes and total socioeconomic impact. Initial outcomes are the

49 Discount rates are an established tool for measuring benefits to future generations. They determine the potential value of an investment (e.g., in a programme, asset, or organisation) based on the principle that one could always invest public money directly instead of using it to fund programmes. Savings that accrue further in the future attract a higher discount rate because investments would have earned more interest in this period.

50 Mark A. Moore et al., “Just Give Me a Number!” Practical Values for the Social Discount Rate’, *Journal of Policy Analysis and Management* 23, no. 4 (1 September 2004): 789–812, <https://doi.org/10.1002/pam.20047>.

51 There is considerable debate on what discount rate to use in these situations. However, there is a general consensus that a rate of around 3 per cent for outcomes that occur within 50 years and an increasingly smaller discount rate for outcomes that occur further in the future. See *ibid.*

short-term effects that could plausibly be attributed to a labour-market integration programme, such as time in unemployment or language proficiency. The total socioeconomic impact is a measure of long-term outcomes such as lifetime earnings, health and wellbeing, and use of government services. As will be described in subsection 3 below, economic welfare analysis allows researchers to assess the monetary value of these impacts on society and compare them to the costs of the programmes to calculate a social rate of return.⁵²

This method allows for the separate treatment of the two sets of causal questions: the intervention's impact on initial outcomes and the impact of these initial outcomes on secondary outcomes. Given the current dearth of rigorous evaluation evidence from refugee integration programmes, most of the work in this model is focused on the second question. The model can then be used to compare the social value of a programme under a range of assumptions about the effect of programmes on initial outcomes. The three main steps are decided in the subsections that follow.

1. Determining what initial outcomes could be attributed to a programme

Labour-market integration programmes typically do not last long, so their direct impact will largely consist of short-term outcomes—for instance, improvements in skill level or depth of professional networks at the end of the programme. While evaluations ordinarily focus on one outcome, such as employment rate, a predictive model would ideally include a range of initial outcomes that could be attributed to certain programmes.

In an ideal world, researchers would have access to robust evidence on how integration programmes cause a range of initial outcomes, including those that look beyond employment rate alone. Even though evidence on this broader set of outcomes is currently lacking, identifying the initial outcomes that could be attributed to an intervention is nonetheless worthwhile. It allows researchers to test a range of assumptions about the impact of the programme. Then, as better evaluation data are gained, researchers may revise the assumptions as needed.

The initial outcomes in the model—whether based on assumptions or evidence—should therefore be as concrete as possible and broken into different steps. For example, full-time employment may be the ultimate goal of many programmes, but some may emphasise interim objectives such as intensive language learning, and others may focus on matching participants to employers. Initial outcomes to consider for the beneficiaries and their families could include:

- Skills and knowledge gained from training
 - Host-country language skills
 - Social and cultural skills
 - Knowledge of how to apply for local jobs and prepare for job interviews
 - Qualifications gained that are recognised on the local labour market
- Measures of early employment outcomes
 - Time between arrival and employment
 - Duration of time actively seeking first employment
 - Skill level of first employment (including as compared to beneficiaries' skills)
 - Occupational level of first employment (including as compared to last employment before migration)
 - Other measures of first employment quality, such as number of hours worked

⁵² Compared to a private rate of return, which considers the direct benefits and costs of an investment, the social rate of return includes any costs and benefits (externalities) accrued to the wider economy.

These outcomes should be considered over a short enough timeframe that the intervention could plausibly have had this direct effect. All effects should be considered against the baseline of no intervention. For example, in the case of language acquisition, even in the absence of government language training, new arrivals would still learn the host-country language to some extent. The programme's impact is, then, the increased speed with which the language skills are acquired by programme participants as compared to nonparticipants.

2. Modelling the causal connection between initial outcomes and long-term socioeconomic outcomes

After establishing the initial outcomes that could be attributed to a programme, the most important part of a predictive model is to determine the effects of initial outcomes on long-term socioeconomic outcomes. This step involves synthesising evidence from many areas of research, including existing models. Specifically, this process entails:

- **Estimating secondary effects.**⁵³ Even for a simple economic outcome, such as time in unemployment, the direct value of unemployment payments and lost wages may be small compared to the lifetime costs of wage scarring (lasting negative effects of unemployment on earnings). A model should therefore estimate the broader economic effects from an outcome, over a long period of time. A cost-benefit analysis should also consider other secondary effects on social outcomes such as the education of refugees' children, mental health of the family, criminal activity, and use of government services. A meta-analysis of existing empirical research on these linkages will form the backbone of the economic model.
- **Modelling the total effects.** Most available empirical research looks at relationships between two social outcomes. This is problematic for an economic model, as there is a risk of double-counting—counting a benefit that results from initial outcomes twice.⁵⁴ On the other hand, an economic model can also find it difficult to account for multiplier effects.⁵⁵ As a result, an economic model should map all the factors that directly or indirectly affect social outcomes, and attribute the correct relative weight to each of these factors, so not to over- or underestimate their overall impact.⁵⁶

53 WSIPP discusses an approach to estimating the 'linked effects' of programmes through a meta-analysis of empirical research. Where appropriate, the institute's estimates of these effects can be used as a starting point for this model. See WSIPP, *Benefit-Cost Technical Documentation*.

54 For example, improved language skills might directly reduce social exclusion and improve mental health by helping refugees create a social network. But if language training also helps the refugee find employment, employment could have a secondary effect on social exclusion and mental health. If the model counts both effects, it may overestimate the total effect.

55 A multiplier effect is an often-unintended positive side-effect of an investment or a chain reaction of positive effects, which indirectly support its original goals. Such effects are unlikely to be picked up by initial measures of success. For instance, when social exclusion and unemployment are reduced simultaneously, there could be a positive feedback effect between the two outcomes, with greater improvements on both dimensions than there would have been otherwise.

56 Attempts to model these dynamics are sometimes described as modelling the 'general equilibrium' outcome. Cost-benefit analyses have dealt with this in different ways. For instance, the WSIPP methodology treats this problem in an ad hoc way, establishing 'trumping rules' that are not grounded in theory. See WSIPP, *Benefit-Cost Technical Documentation*. The methodology developed by the UK Department for Work and Pensions attempts to model the general equilibrium effects on different markets. See Fujiwara, *The Department for Work and Pensions Social Cost-Benefit Analysis Framework*.

Estimating the long-term effects of initial outcomes relies heavily on the available empirical research, and thus will be more difficult if the evidence is lacking or mixed. For example, there is a relatively strong body of empirical evidence showing a positive effect of host-country language skills on lifetime earnings.⁵⁷ Making assumptions about the effect of a programme in boosting a refugee’s knowledge of the host-country language could therefore allow analysts to predict the effect on lifetime earnings. However, in other areas, including those where the effects are potentially large, the empirical evidence is more mixed. For example, adult employment could affect the education of their children. But while some studies suggest that unstable employment impairs a child’s development, others suggest that the children of immigrants often outperform expectations based on their parental employment status—the so-called immigrant paradox. With these findings pushing in opposite directions, estimates of this effect would have to be more cautious or based on bolder modelling assumptions.⁵⁸

There is an inherent tradeoff between capturing all the indirect effects of an intervention and using credible methods to attribute impacts to the intervention. An integration programme could help unlock innovation or fill critical labour shortages, leading to overall improvements to the economy that have deep positive impacts far beyond the short-term impacts. On the other hand, such programmes could lead to an increase in immigrant employment and change perceptions in a way that leads to a damaging backlash against immigrants. These impacts could be significant but very hard to attribute credibly to an integration programme. While it is true that a major success in retraining displaced workers could have multiplier effects on the economy, these broader macroeconomic effects would be small compared to individual effects, such as changes in trainees’ income levels. This report therefore recommends leaving out macroeconomic effects of changes as a separate question. It also explores the evidence on several different causal mechanisms by which initial outcomes could result in long-term socioeconomic outcomes in Section V.

3. Establishing the social value of long-term socioeconomic outcomes

The final step in this process is to calculate the monetary value of the total socioeconomic impact. This is straightforward for some outcomes, such as wages. But for others, such as skill or education levels, researchers will need to use a model of human capital to estimate the additional earning potential that could be attributed to the skills or education. For outcomes that affect wellbeing, such as criminal activity or mental health, outcomes need to be converted into QALYs and then given a value on that basis. The benefits and costs of different outcomes extend beyond the group of direct beneficiaries, and many of these effects will occur in the future, so a social welfare function and discounting factor will be used to aggregate the total change to social welfare.

The standard approach in cost-benefit analysis is to consider a narrower set of factors that contribute to individual welfare, and to focus on a thorough analysis of the different pathways that affect these factors. The main factors of individual welfare typically considered in a cost-benefit analysis are:

- **Earnings.** Change in earnings can be used to quantify a large range of social outcomes. While increased earnings may be one of many stated objectives of an integration programme, many other social outcomes that stem from these programmes may also affect lifetime earnings. Improving education, language proficiency, cultural understanding, or internal mobility could all affect future earnings. Researchers can also decide to include the impact of potential earnings to nonparticipants, for instance the unintended consequences of increased competition among refugees and native-born individuals for jobs.
- **Government spending.** Integration programmes cost money directly, but the government also spends money on services and social safety net programmes for refugees and their families throughout their

⁵⁷ See, for example, Daniel Auer, ‘Language Roulette – the Effect of Random Placement on Refugees’ Labour Market Integration’, *Journal of Ethnic and Migration Studies* 44, no. 3 (22 March 2017): 341–62.

⁵⁸ Some literature suggests that the ‘immigrant paradox’ is partly the result of parenting behaviours that place especially strong expectations on academic performance. This report describes how this could inform an economic model in Section V.

lives. Researchers can also decide whether to consider the impact of spending on other social outcomes that flow from labour-market integration programmes, such as a reduction in crime, which reduces costs to the criminal justice service, for instance.⁵⁹

- **Health/wellbeing.** Health outcomes are the only type of non-market outcomes that are typically included in a social cost-benefit analysis. Health outcomes may affect earnings through their impact on human capital and on government spending, but researchers can also decide to include a value of individuals' health directly, which can capture broader societal impacts. For example, violent crime costs the government money to prosecute and may prevent the victim from working, but researchers can also put a value on the loss of life and injuries caused by such crimes directly. Using the framework of QALYs and the statistical value of life, researchers can place a value on a wide range of changes in wellbeing, ranging from early death to mental health.

These three pillars thus offer a basic framework for converting a host of social benefits and challenges into monetary value that can be more easily compared and analysed.

V. IMPROVING THE EVIDENCE BASE

As outlined above, cost-benefit analysis synthesises the evidence on the likely social effects caused by the initial outcomes of a programme. This task is time and resource intensive, and may require making non-ideal assumptions, such as assuming that evidence on other disadvantaged groups also applies to refugees and their children. Efforts to measure the social returns on labour-market integration will therefore require an extensive literature review, both to understand the main causal mechanisms and identify the main gaps in understanding, alongside an effort to improve the evidence.

This section first discusses some established empirical effects that have relevance to integration, which could be used as the basis for an economic model, and analyses where the evidence is strongest and where there are gaps.⁶⁰ It then outlines opportunities for natural experiments that could plug some gaps in the evidence. These experiments could generate evidence on both the short-term effectiveness of integration programmes and how they relate to successful integration.

A. Predicting the total effects: key considerations for understanding broader social impact

An economic model is based on causal mechanisms—relationships between initial outcomes and broader social effects. While there is a lack of evidence on how most of these dynamics function for refugees or immigrants, researchers can estimate effects for the broader population or for other disadvantaged groups, and then estimate how likely the same relationships are to apply to immigrants or refugees. Another important factor is the strength of the evidence. Estimates of total effects through these mechanisms should be presented with a clear measure of their uncertainty and subjected to sensitivity analysis (a statistical technique that assesses how changing the assumptions changes the outcomes).

⁵⁹ The costs of these government services can be considered as a net loss of social welfare. If researchers use a typical social welfare function that values all individuals' preferences equally, then transfers in utility between one individual and another are not considered an overall loss of utility, but the costs associated with administering social safety net programmes are considered net losses to social welfare. There is also a 'deadweight' loss from taxation because it may distort individual incentives.

⁶⁰ The goal is to outline the basis of an economic model and the main dynamics that should be explored to guide policymakers looking to commission such economic modelling, rather than to give a fully-fledged literature synthesis.

Table 1 and this subsection more broadly set out some of the main areas of evidence that could help form the building blocks of the causal mechanisms in the economic model.

Table 1. Overview of mechanisms for measuring social returns

Beneficiary	Key mechanisms to model	Existing literature	Research gaps	Metric for translating into cost saving
Individual asylum seeker or refugee	Building human capital and reducing labour-market frictions	How language skills affect employment; some evidence on how market failures lead to immigrants working below their skill level	Unclear how skills development can affect entry into employment over a long period of time	Lifetime earnings of beneficiaries
	Building social networks	Size and types of social networks	Difficult to disaggregate impact of network from language	Lifetime earnings of beneficiaries
	Avoiding wage scarring	The ‘sticking’ effect of early unemployment for new labour-market entrants	Unclear whether newcomers are subject to the same effects of delayed unemployment	Lifetime earnings of beneficiaries
Children of asylum seekers or refugees	Involving parents in education	Impact of home-literacy environment on literacy skills; some evidence on parental investments in education on skill development; limited evidence on how types of work affects structured time with children	Unclear whether loss of structured parental care as parents enter work is compensated by early childhood education and care for immigrant families	Lifetime earnings of children of beneficiaries
	Reducing anxiety associated with poverty and unemployment	Effects of poverty and low socioeconomic status on parental stress and how this affects future earnings of children	Unclear whether refugees are starting from different baseline due to trauma; unclear effects of competing demands on refugees’ time	Lifetime earnings of children
Communities	Reducing crime associated with unemployment and low earnings	How wages reduce crime; some evidence on how parental status affects propensity to crime among second-generation immigrants	Unclear how restrictions on labour-market entry of asylum seekers affect propensity to crime	Quality-adjusted life year (QALYs) of residents
	Improving health outcomes of families through increased education and employment	Some evidence of improved health of children as a result of parental employment and earnings	Would need to further test limited evidence that first earner improves health, but second does not	QALYs of children
	Reducing negative effects of neighbourhood segregation	Ethnic enclaves help newcomers get (low-skilled) work, but children may be negatively affected; high-skilled work, language proficiency, and networks could reduce residential concentration	Unclear whether ethnic enclaves are persistent (i.e. whether even if people gain the skills and opportunities to move, the ethnic and socioeconomic concentration will remain)	QALYs of residents of segregated neighbourhoods

1. Returns on investment to adult refugees: modelling total effects on lifetime earnings

In theory, modelling the relationship between initial outcomes of labour-market integration programmes and lifetime earnings provides a tool for measuring whether this employment is sustainable and of a high quality—for instance, whether it pays a family-sustaining wage.⁶¹ But the relationship between short-term employment outcomes and lifetime earnings can be complicated. In some cases, it may be better for refugees to train intensively when they arrive, resulting in a slow transition to employment but better outcomes later; in others, it may be better enter work more quickly.⁶² A model of the impact of integration programmes on lifetime earnings, then, should not extrapolate directly from early employment outcomes to forecast lifetime earnings. Instead, it must be able to forecast both how the programme helps immigrants build valuable skills and how it mitigates the risks of falling into the traps of unemployment and underemployment.

One additional challenge is that social integration—defined narrowly here as the forming of a social network—can also have an important impact on labour-market outcomes. Integration programmes designed to build skills may also help refugees to make contacts. Ideally, a model would separate these causal mechanisms.

The subsections that follow provide an overview of the theory and empirical evidence available to model these mechanisms.

a. Building skills and knowledge

The most straightforward goal of an integration programme is to help refugees build the skills necessary to succeed in the labour market. These skills can include language proficiency, vocational competence, knowledge of the host-country culture and institutions, and job search skills. Integration programmes can also directly help refugees transfer and adapt their existing skills to better suit the host-country labour market. In either case, the new skills and knowledge (i.e., host-country human capital) can help immigrants both find work and command higher wages.

For integration programmes that provide direct training to beneficiaries, a model should synthesise the literature on how investments in building host-country human capital influence wages and employment. The evidence is strongest on the effects of language skills on wages and employment.⁶³ However, estimates of the effect are not very precise because they are sensitive to the methodology used and vary across countries. Furthermore, most studies are based on blunt measures of language ability (an individual is either proficient or not proficient),⁶⁴ so there is little evidence on the value of intermediate levels of language. Finally, there is little research on the returns to other closely related skills, such as knowledge of the host country's culture and institutions, so it would be difficult to use this evidence to compare programmes that focus on different kinds

61 A measure of employment or earnings at a specific point in time, by contrast, is susceptible to the criticism that such employment could be subsequently lost or have a short tenure.

62 Newly arrived refugees are in a period of transition when they arrive. Because skills are rarely perfectly transferrable between countries, newcomers often need to update their skills, fill gaps, and build new skills. At the same time, there is an established literature on the persistent effects of unemployment or low-wage work on future labour-market outcomes. Newcomers who are out of the labour market for a long initial period or are underemployed may never reach the same level of wages or employment that they would have if they had entered the labour market earlier and at their potential skill level. See Oskar Nordstrom Skans, 'Scarring Effects of the First Labor Market Experience' (IZA discussion paper No. 5565, Institute of Labour Economics, Bonn, March 2011), <http://ftp.iza.org/dp5565.pdf>.

63 For an overview of the evidence, see Barry R. Chiswick and Paul W. Miller, 'International Migration and the Economics of Language', in *Handbook of the Economics of International Migration*, vol. 1 (Oxford, UK: Elsevier, 2015), 211–69. Numerous studies across multiple countries have found a positive association between language skills and wages and employment. For an example of a study using a natural experiment to study the impact of language skills on employment, see Auer, 'Language Roulette'.

64 See Chiswick and Miller, 'International Migration and the Economics of Language'. Many studies are based on census data, which often only provide a binary measure: whether an individual is fluent in the language or not.

of skills. Putting aside these objections, however, this body of research does provide robust evidence of a positive effect of language learning on earnings, and a range of estimates that could be used to model the return to this kind of human capital.

To model the effect of an integration programme on job-related skills, the question is how integration programmes affect immigrants in the process of transferring skills and building new skills compared those who receive no intervention at all. Immigrants will take measures on their own to transfer skills and build new ones for their career. For example, in some professions, learning on the job may be the best way—or the only way—to learn how things are done in the host country. An integration programme could potentially accelerate this process by subsidising work or partnering with employees, or it could delay progress by creating requirements that prevent newcomers from getting into the labour market. One way to approach the effects of integration programmes on this process is with economic models of immigrants’ occupational assimilation and human-capital investment. These models predict how newly arrived immigrants will invest in their skills and knowledge and what effect this will have on their career trajectories. While the exact shape of the trajectory depends on individual characteristics, the models typically predict an initial drop in immigrants’ occupational levels upon arrival, followed by a recovery over time.⁶⁵

Research does provide robust evidence of a positive effect of language learning on earnings, and a range of estimates that could be used to model the return to this kind of human capital.

To forecast the impact of an integration programme on this kind of skill development, it is important to understand how the programme affects immigrants’ investment behaviour. For instance, a programme could increase investments if it helps alleviate friction and market failures that prevent refugees from making optimal investments. Types of friction that an integration programme could help to alleviate include:

- **Financial constraints.** Newly arrived refugees are likely to have few resources and little access to credit to help finance initial investments. In this case, an integration programme could allow them to make optimal investments by providing services directly or providing financial support.
- **Essential skills and knowledge.** Some skills and knowledge may be necessary before a refugee can make further investments in their own human capital. A public integration programme may be well suited to make these initial investments.
- **Institutional rigidities.** Institutional features of the labour market can make it difficult for immigrants to use or adapt their skills. For example, in countries with rigid apprenticeship systems or job-credential systems, the labour market may not function well for immigrants coming in with some well-developed skills but without the same training background. An integration programme can help create alternative institutional arrangements to alleviate these problems.

65 A number of studies have found empirical support for this hypothesis across countries. For one example, see Aslan Zorlu, ‘Occupational Adjustment of Immigrants in The Netherlands’, *Journal of International Migration and Integration* 14, no. 4 (November 2013): 711–31. This work builds on an existing literature on earnings assimilation, which predicts that immigrants’ earnings will start below that of native-born individuals and catch up over time. Looking at occupational level provides the advantage of being able to test the theory that assimilation in earnings is a result of immigrants transferring their skills. Micro-level models of immigrants’ investment behaviour make more detailed predictions about how the personal characteristics of immigrants, such as the transferability of their skills, their education levels, and the permanence of their move will affect their investment behaviour. For an example of a micro-investment model, see Harriet Orcutt Duleep and Mark C. Regets, ‘Immigrants and Human-Capital Investment’, *The American Economic Review* 89, no. 2 (1999): 186–191. This model makes the prediction that immigrants’ earnings will catch up with those of native-born individuals over time. A similar model is described in George J. Borjas, ‘The Economic Progress of Immigrants’, in *Issues in the Economics of Immigration* (Chicago: University of Chicago Press, 2000), www.nber.org/chapters/c6052.pdf.

- **Short-term mentality.** Given their circumstances, some refugees may not be disposed to think about long-term decisions, which leads them to underinvest in skills. An integration programme that creates incentives to make more investments could help correct this.

An augmented model of immigrants' human-capital investments, building on what has already been established in the literature, would predict how addressing these types of friction could improve employment rates or wages. While there are no existing models to study these dynamics, several studies have documented the prevalence and cost of immigrants working in occupations below their skill level.⁶⁶ However, it is unclear whether such overqualification is the result of employer discrimination, administrative inefficiencies (e.g., when equivalent qualifications from foreign institutions are not recognised), or gaps in skills when qualifications are not perfectly equivalent.

Another important limitation of current economic models of human capital that should be addressed in future research is the assumption that people can sell their skills on the labour market. Unemployment is notably lacking from these models, but for many refugees in European countries, finding work at all can be a challenge.⁶⁷ One recent study extended a standard model of job search and found the rate at which immigrants to Canada receive job offers starts lower than that of native-born workers and only catches up after 13 years on average.⁶⁸ However, no research to date has developed a model for how the process of acquiring skills affects the rate at which immigrants receive job offers. This is a fertile area for new research.

One important part of the equation for labour-force participation and employment is the generosity of the welfare system and how this shapes the incentives for refugees to find work. But taking this outside option as a given, improving job-related skills can increase the rate of transitions into employment. In a simple model of employment search, job seekers will only accept a match if is better than continuing to receive benefits, but employers will be more likely to make a wage offer above that threshold if the job seeker has skills that are more valuable.⁶⁹ In this model, the impact of building human capital would show up in the transition rate to employment rather than the observed wages.

Finally, skills training could affect the rate of transition into work in several other ways. Many integration programmes teach job-search skills to refugees. Evidence in other settings suggest that this training can improve the chances of finding work. Second, there is often a lock-in effect, where trainings and requirements divert time and energy from the job search.

66 See Susumu Imai, Derek Stacey, and Casey Warman, 'From Engineer to Taxi Driver? Language Proficiency and the Occupational Skills of Immigrants' (working paper no. 40, Ryerson University, Department of Economics, July 2017), <https://ideas.repec.org/p/rye/wpaper/wp040.html>; Gustave Goldmann, Arthur Sweetman, and Casey Warman, 'The Portability of New Immigrants' Human Capital: Language, Education and Occupational Matching' (IZA discussion paper no. 5851, Institute of Labour Economics, Bonn, July 2011, www.iza.org/publications/dp/5851/the-portability-of-new-immigrants-human-capital-language-education-and-occupational-matching).

67 In Europe, a small minority of refugees enter employment within their first two years in the country, but their employment rates gradually increase over the next ten to 20 years until they reach the same level as native-born workers. See Regina Kohnle-Seidl and Georg Bolits, *Labour Market Integration of Refugees: Strategies and Good Practices* (Brussels: European Parliament Directorate-General for Internal Policies, 2016), [www.europarl.europa.eu/RegData/etudes/STUD/2016/578956/IPOL_STU\(2016\)578956_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/578956/IPOL_STU(2016)578956_EN.pdf).

68 Audra J. Bowlus, Masashi Miyairi, and Chris Robinson, 'Immigrant Job Search Assimilation in Canada' (CIBC Working Paper 2013-6, Western University, Centre for Human Capital and Productivity, London, Ontario, November 2013), <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1095&context=economicscibc>.

69 For an overview of search models of unemployment, see Richard Rogerson, Robert Shimer, and Randall Wright, 'Search-Theoretic Models of the Labor Market: A Survey', *Journal of Economic Literature* 43, no. 4 (2005): 959-88.

b. Building a social network

Labour-market programmes also typically aim to help immigrants build social networks. An growing body of evidence suggests that the size and type of social network can have an important impact on refugees' ability to find work and on the quality of their employment.⁷⁰ The best established theory to explain this phenomenon proposes that informal information and referrals—passed through social networks—can help people find work.⁷¹ These theories make quantifiable predictions about employment and wages based on the size of a social network and the employment status of its members. Precise estimates of these effects are, however, difficult to make as detailed data on social contacts are not usually available. As a result, empirical evidence typically relies on proxy measures of social connections, such as ethnicity or geographical proximity, and broadly supports the theory that social networks are an important part of finding employment.

These theories make quantifiable predictions about employment and wages based on the size of a social network and the employment status of its members.

From a practical standpoint, it can be difficult to separate the effects of skills from those of networks. For example, it would be difficult to identify whether speaking the host-country language helps immigrants find employment because that skill is valued by employers or because speaking the language helps them make contacts who then help them find work. However, since this could have implications for the design of integration programmes, it is worthwhile to try to separate these effects and forecast their impact separately. For example, if a large part of the benefit of language training comes from the indirect effect of helping with social integration, then integration policies should focus more on mentoring or sponsoring. More research is thus needed to better identify the effect of labour-market integration interventions on the development of social networks.

c. Addressing the persistence of early labour-market outcomes

The two mechanisms discussed above examine the resources that an integration programme can directly provide or help refugees develop. But refugees are a particularly vulnerable population and may face risks that are not fully addressed by providing additional resources. One potential risk is long-term unemployment. There is relatively strong evidence that unemployment persists; that is, the longer you are unemployed, the more likely you are to be unemployed in the future.⁷²

It is important to understand this phenomenon to model the value of getting beneficiaries into employment early. If an integration programme helps avoid early unemployment, it could have an impact on earnings by reducing the incidence of unemployment over the beneficiary's entire career. But because many refugees are also building fundamental skills when they arrive, they are different from other unemployed adults. The process of building valuable skills could account for the slow transition rate into employment. But it is also possible that the long transition is in part a result of persistence in unemployment that could be avoided with programmes designed to make job searches more effective early in the employment seeking process.

70 For an overview of this literature, see Matthew O. Jackson, 'An Overview of Social Networks and Economic Applications', in *The Handbook of Social Economics*, vol. 1, eds. Jess Benhabib, Alberto Bisin, and Matthew O. Jackson (Oxford, UK: Elsevier, 2010), 511–85.

71 Giorgio Topa, 'Labor Markets and Referrals', in *The Handbook of Social Economics*, vol. 1, eds. Jess Benhabib, Alberto Bisin, and Matthew O. Jackson (Oxford, UK: Elsevier, 2010), 1193–221.

72 This effect remains even when studies use quasi-experimental methods to control for unobserved differences between individuals' employability.

To disaggregate these effects, it is important to understand the causes of persistent unemployment. Several explanations have been offered in the literature, including:⁷³

- **Loss of skills during unemployment.** Unemployed people are not practicing their skills or learning from work, so they lose skills over time, making it harder for them to find work.
- **Weakening social networks.** People out of work have fewer contacts with employed people who know about opportunities.
- **Signal to employers.** Employers may interpret unemployment as a signal of poor quality.
- **Quantity of job opportunities.** Newly unemployed people have a large stock of job opportunities they can apply for, but after they have applied to those they can only apply for new opportunities as they arise.
- **Discouragement.** The psychological impact of repeated failure to find work leads job seekers to devote less time to searching or perform worse in their job search.

If the atrophy of skills is an important factor in unemployment persistence, then this could affect all unemployed individuals. While an integration programme helps train immigrants in some skills, they may be losing other job-specific skills if the programme prevents them from working. This suggests that another element to consider in modelling the impact of a programme on skills is the depreciation of human capital.

On the other hand, if the latter three mechanisms are more important causes of unemployment persistence, the implications could be different. It could mean, for example, that an important contribution of an integration programme is to make sure that refugees are fully prepared before they enter the job market to avoid wasting the initial searching period.

A similar phenomenon has been observed for low-wage work: people who enter the job market in low-wage work tend to have lower wages over their whole career compared to similar people who entered the labour market at a higher wage. The same explanations could account for this phenomenon. This points to another set of potential tradeoffs in the design of labour-market integration programmes: how do the long-term effects of remaining out of work compare to taking lower-wage work?

2. Returns on investment to future generations: modelling impact on lifetime earnings of children

As described in Section IV, integration policies have an important intergenerational dimension. At a basic level, there is a correlation between the earnings of parents and their children, so improving the earnings of refugees would be expected to lead to improvements for their children.⁷⁴ However, in some countries there is more upward mobility from the first to second generation of immigrants than in the general population, while in others there is less. First-generation immigrants often sacrifice their own occupational success for their children, which can lead to greater upward mobility. On the other hand, children who grow up in families facing social exclusion and psychological distress, or whose parents are absent, tend to have poorer educational outcomes. If these problems are especially acute among refugee families, this could lead to lower than average upward mobility.

73 This list follows the explanations given in Kory Kroft, Fabian Lange, Matthew J. Notowidigdo, and Lawrence F. Katz, 'Long-Term Unemployment and the Great Recession: The Role of Composition, Duration Dependence, and Non-Participation' (working paper no. 20273, National Bureau of Economic Research, Cambridge, MA, July 2014), www.nber.org/papers/w20273.

74 For an overview of estimates of these correlations, see Gary Solon, 'Intergenerational Mobility in the Labor Market', in *Handbook of Labor Economics*, vol. 3, eds. Orley Ashenfelter and David Card (Oxford, UK: Elsevier, 1999), 1761–800.

One potential model would consider how labour-market integration programmes affect the early childhood development and educational achievement of refugees' children. Well-established literature on the returns on investments of education can then be used to forecast the increase in refugees' children's lifetime earnings that results from improving their educational achievement.⁷⁵ Similarly, a growing body of literature has modelled and estimated the returns of improving the development of cognitive and noncognitive skills in early childhood.⁷⁶ This literature was not specifically developed in the context of refugee or immigrant populations, but examines the impact of policies on disadvantaged groups. Because the children of refugees grow up and are educated in the host country, it is reasonable to assume that the effects of these educational and developmental outcomes on lifetime earnings are similar to native-born populations.

The more challenging modelling task is to forecast how integration programmes will affect the education outcomes of refugees' children. The literature on social mobility offers numerous theories of how the socio-economic status of a family affects the educational outcomes of its children.⁷⁷ The two main areas of study are parental investments in their children's development and education, and the psychological impacts of stress, trauma, and instability in the household.⁷⁸ Labour-market integration programmes could influence child development through both of these mechanisms.

a. Refugee parents' investments in their children's education

Labour-market integration programmes help refugees build skills that they then transfer to their children. This is especially important for language proficiency. The effect of the home literacy environment during early childhood on the literacy skills of children has been well established.⁷⁹ While this model was developed to study how children learn their primary language, work in this area suggests that the home literacy environment also affects second-language learning.⁸⁰ This research tends to be based on small sample sizes and focuses on the parental activities and home resources that particularly affect literacy. At the macro level,

- 75 For an overview of this literature and estimates of the returns to education, see David Card, 'The Causal Effect of Education on Earnings', in *Handbook of Labor Economics*, vol. 3, eds. Orley Ashenfelter and David Card (Oxford, UK: Elsevier, 1999), 1801–63; James J. Heckman, Lance J. Lochner, and Petra E. Todd, 'Chapter 7. Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond', in *Handbook of the Economics of Education*, vol. 1, eds. Eric A. Hanushek and Finis Welch (Oxford, UK: Elsevier, 2006), 307–458. For a more recent approach, see James J. Heckman, John Eric Humphries, and Gregory Veramendi, 'Returns to Education: The Causal Effects of Education on Earnings, Health and Smoking' (working paper no. 22291, National Bureau of Economic Research, Cambridge, MA, May 2016), www.nber.org/papers/w22291.
- 76 For an influential model on this topic, see Flavio Cunha and James Heckman, 'The Technology of Skill Formation' (working paper no. 12840, National Bureau of Economic Research, Cambridge, MA, January 2007), www.nber.org/papers/w12840. This model treats development of multiple skills as a multistage process with critical periods and complementarities between skills at different stages of development.
- 77 For a recent review of work in this area see, James J. Heckman and Stefano Mosso, 'The Economics of Human Development and Social Mobility', *Annual Review of Economics* 6, no. 1 (August 2014): 689–733. For examples in the field of psychology, see Greg J. Duncan, Katherine Magnuson, and Elizabeth Votruba-Drzal, 'Moving Beyond Correlations in Assessing the Consequences of Poverty', *Annual Review of Psychology* 68, no. 1 (3 January 2017): 413–34.
- 78 These two overarching mechanisms have been proposed elsewhere as the primary explanations for the intergenerational transmission of socioeconomic status. For example, see Kerris Cooper and Kitty Stewart, *Does Money Affect Children's Outcomes?* (London: London School of Economics and Political Science, Centre for Analysis of Social Exclusion, 2013), <http://eprints.lse.ac.uk/54435>.
- 79 The home-literacy model was developed and tested in Monique Sénéchal, 'Testing the Home Literacy Model: Parent Involvement in Kindergarten Is Differentially Related to Grade 4 Reading Comprehension, Fluency, Spelling, and Reading for Pleasure', *Scientific Studies of Reading* 10, no. 1 (2006): 59–87. Sénéchal distinguishes the effects of different parental activities in early childhood on subsequent literacy skill development. This literature focuses largely on the types of activities that improve reading skills, and the possibility of replacing home interactions with preschool or child care, including work studying immigrant children specifically.
- 80 See Li Feng, Yunwei Gai, and Xiaoning Chen, 'Family Learning Environment and Early Literacy: A Comparison of Bilingual and Monolingual Children', *Economics of Education Review* 39 (April 2014): 110–30, <https://doi.org/10.1016/j.econedurev.2013.12.005>; Oliver Klein, Nicole Biedinger, and Birgit Becker, 'The Effect of Reading Aloud Daily—Differential Effects of Reading to Native-Born German and Turkish-Origin Immigrant Children', *Research in Social Stratification and Mobility* 38 (December 2014): 43–56, <https://doi.org/10.1016/j.rssm.2014.06.001>.

research also confirms that the host-country language skills of immigrants affect the host-country language skills of their children, which in turn has an impact on the educational outcomes of these children.⁸¹

A key limitation of much of the evidence is that it uses the number of years parents have resided in the country as a proxy for their host-country language skills. Other factors associated with the integration process may therefore be at play.⁸² Still, analysts could use this research to estimate the impact of language training on the language skills of immigrants' children. Like the evidence on the effect of language skills for adult refugees, this evidence is not precise enough to separate the effects of closely related variables such as language proficiency and knowledge of host-country institutions and culture.

Labour-market integration programmes may also have indirect effects on parents' investments in their children's education. One kind of investment is parental involvement in a child's formal education. A large body of evidence finds that parental involvement has a significant impact on academic achievement.⁸³ While much of this evidence from the United States, one key finding is that parental involvement affects the outcomes of children across all ethnicities. Notably, parental involvement is sometimes defined as the expectations parents have for their children. Of the different definitions used, parental expectation is the strongest predictor of a child's academic performance, whereas standalone actions such as checking or assisting with homework are weaker predictors.⁸⁴

Labour-market integration programmes may also have indirect effects on parents' investments in their children's education.

Another important parental investment is the quantity and quality of time spent with their children in early childhood. It is also well known that structured educational time spent with a child in early childhood has an important impact on the development of cognitive and noncognitive skills. The amount and quality of time parents spend with their children as well as investments in educational materials and high-quality education have important impacts on skill development. Evidence from the United States has shown that structured educational time spent with a child in early childhood is an important determinant for the child's skill development. Highly educated mothers are typically able to avoid reducing structured educational time when they work by instead reducing the amount of unstructured time they spend with their child. By contrast, for less-educated mothers, entering work tends to lead to a reduction in the amount of both structured and unstructured time spent with a child.⁸⁵ These studies assume that mothers are the primary caretakers, rather than fathers, which is a clear limitation.

81 For one of the seminal works on this topic, see Hoyt Bleakley and Aimee Chin, 'What Holds Back the Second Generation? The Intergenerational Transmission of Language Human Capital among Immigrants', *Journal of Human Resources* 43, no. 2 (2008): 267–98.

82 Ibid. See also Christopher D. Smith, Jonas Helgertz, and Kirk Scott, 'Parents' Years in Sweden and Children's Educational Performance', *IZA Journal of Migration* 5, no. 1 (December 2016), <https://izajodm.springeropen.com/articles/10.1186/s40176-016-0054-2>. The study found that the length of parental residence in the country affects the reading scores of their children but not their math scores. The authors suggest that parents' linguistic skills are a causal factor in this.

83 Sandra Wilder, 'Effects of Parental Involvement on Academic Achievement: A Meta-Synthesis', *Educational Review* 66, no. 3 (3 July 2014): 377–97.

84 This can help to explain the finding that some immigrant children in the United States and similar countries perform better than native-born children from families with the same socioeconomic status. If parents' expectations are based on their aspirations, they may be setting their expectations based on the relative socioeconomic status they had before immigration. See Cynthia Feliciano and Yader R. Lanuza, 'An Immigrant Paradox? Contextual Attainment and Intergenerational Educational Mobility', *American Sociological Review* 82, no. 1 (2017): 211–41. If this is correct, it implies that parental expectations may not be responsive to current occupational status, so labour-market outcomes may not have a strong impact on this behaviour. On the other hand, even if the activities that constitute effective parental involvement are still something of a black box, host-country language skills and understanding of the school system and other local institutions undoubtedly improve parents' ability to engage in the ways they see fit.

85 Amy Hsin and Christina Felfe, 'When Does Time Matter? Maternal Employment, Children's Time with Parents, and Child Development', *Demography* 51, no. 5 (October 2014): 1867–94.

For refugee families in which parents have limited education, taking poorly paid work could have a negative effect on child development by reducing structured time spent with young children. However, the total effect depends on whether families can substitute other investments, such as high-quality care or preschool, for the missed time. Integration programmes could increase use of these services, either if they are free or low cost or if the additional financial resources from working help parents afford them.

Evidence suggests preschool improves school performance for immigrant populations and other disadvantaged groups.⁸⁶ However, recent research on preschool participation among immigrant families has suggested that not all parental time can be replaced with formal care. During one experiment, children participated in a preschool programme with extended evening hours.⁸⁷ The study found that full-time daycare prepared children for school, but had a negative impact on social and emotional development, especially for immigrant children. The authors interpreted these results to mean that formal care cannot fully substitute for parental time in the development of noncognitive skills, but that preschool has an important effect for immigrant children in learning the local language.

Based on this somewhat limited evidence, the impact on early childhood development could be modelled by making assumptions about how the programme affects both parental time spent with children and use of services, and how these two factors affect cognitive and noncognitive skills.

b. The impact of family stress on child education

Another way a household's employment situation can affect child development is through instability and household stress. There is an established body of literature in psychology known as the Family Stress Model (FSM), which has synthesised evidence on the link between economic instability and parental stress.⁸⁸ While this model was developed in the context of non-immigrant families in the United States, it has been tested in many settings, including among refugee families in the Netherlands.⁸⁹ The model tests both the effects of poverty or low economic status and the impact of losing a job on parental stress. A lot of the literature finds evidence to support this causal relationship and documents the magnitude of its effects. However, it is important to take into consideration the emerging evidence on the psychological effects of trauma common in refugee populations, which may create a different baseline.

Researchers seeking to model these dynamics more robustly would benefit from greater evidence on how integration programmes affect parental involvement in their children's education. The time constraints refugees often face on arrival could result in limited parental involvement, as parents participate in integration programmes and/or accept low-skill jobs. Where such jobs have long or inflexible hours, research has shown negative effects on children's academic performance and an increase in behavioural problems.⁹⁰

Another important consideration is how the process of adapting to the host-country culture could affect parenting behaviours. Adopting host-country norms may promote certain beneficial behaviours, such as reading to children.

86 See Nina Drange and Kjetil Telle, 'Preschool and School Performance of Children from Immigrant Families', *Empirical Economics* 52, no. 2 (March 2017): 825–67. In major studies of U.S. preschool programmes, girls were the primary beneficiaries of early childhood education and care.

87 Christina Felfe and Larissa Zierow, 'From Dawn till Dusk: Implications of Full-Day Care for Children's Development' (CESifo working paper no. 6490, Centre for Economic Studies, Munich, May 2017), www.cesifo-group.de/ifoHome/publications/docbase/DocBase_Content/WP/WP-CESifo_Working_Papers/wp-cesifo-2017/wp-cesifo-2017-05/12012017006490.html.

88 April S. Masarik and Rand D. Conger, 'Stress and Child Development: A Review of the Family Stress Model', *Current Opinion in Psychology* 13 (February 2017): 85–90.

89 Rosanneke A. G. Emmen et al., 'Socioeconomic Status and Parenting in Ethnic Minority Families: Testing a Minority Family Stress Model', *Journal of Family Psychology* 27, no. 6 (2013): 896–904.

90 Replacement child care, such as a strong preschool programme, can often mitigate this effect. See Carolyn J. Heinrich, 'Parents' Employment and Children's Wellbeing', *The Future of Children* 24, no. 1 (2014): 121–46.

3. Returns on investment to communities: modelling societal impacts

Broader social benefits and costs to communities are of considerable interest, given public anxiety about the long-term effects of inflows of refugees and asylum seekers. The classic method for examining the impact of immigration on host communities is to consider the impact on the labour market. For instance, many studies have found that immigration has a small positive impact on GDP and no impact on wages overall, except a small downward pull on wages at the bottom end of the labour market in some cases. A large-scale OECD study, for instance, concluded that in the long run, immigration ‘is neither a major burden nor a major panacea for the public purse’.⁹¹ Impact varies according to whether immigration is skilled; the arrival of newcomers who are generally high skilled tends to raise per capita income in a country.⁹²

Few studies have looked at the impact of migrants who arrive through humanitarian channels. Since refugees and asylum seekers are often located where there are few job opportunities in the local labour market, examining their impact against other immigration streams is not comparing like with like. Moreover, most integration policymakers are trying to get the best out of newcomers who are already in the country, rather than deciding who to admit. Traditional studies that try to examine broader social impacts in this area focus on immigration rather than integration and hold little utility for policymakers wishing to decide where to target investments in their current refugee and asylum population. An additional limitation is that models based on national economic impacts may obscure considerable local variation and the fact that the benefits and costs of immigration may be very unevenly distributed.

An alternative approach for modelling the broader social impact of integration policies, rather than admission policies, is to consider the broader social impact on health and wellbeing of residents and communities. The advantage of this approach is that it accounts for concentrated local and spatial impacts. For instance, using evidence on the formation and impact of ethnic enclaves can help policymakers understand why and under what conditions segregation can be costly for neighbourhood residents. There are three mechanisms that could be modelled: the effect of integration on 1) crime committed by refugees and their children, 2) the health outcomes of the second generation, and 3) ethnic concentration of neighbourhoods, which may create spillover effects for people connected to refugees who live in these areas.

a. Effect of employment and earnings on crime

In theory, delayed access to work and broader social and economic disadvantages among the first and second generation could put communities that immigrants settle in at greater risk of crime and other negative social effects. Crime can be easily included in a cost-benefit model through the health outcomes (i.e., QALYs) of those affected by the crime.

According to the most basic economic theory of crime, individuals commit crime if the utility they receive from a criminal act outweighs what they would receive from alternative acts. In other words, the opportunity costs of crime deter would-be criminals. This model predicts a negative correlation

91 OECD, *International Migration Outlook 2013* (Paris: OECD Publishing, 2013), www.oecd-ilibrary.org/content/book/migr_outlook-2013-en.

92 Uri Dadush and Mona Niebuhr, *The Economic Impact of Forced Migration* (Rabat: OCP Policy Center, 2016), www.ocppc.ma/publications/economic-impact-forced-migration.

between participation in work or education and crime.⁹³ Any intervention that gets newcomers into work in the long run could therefore reduce crime. However, more sophisticated models have shown that it is wages, rather than employment, that reduces crime, by increasing the opportunity costs.⁹⁴ This model would predict that integration programmes designed to build human capital would have an effect in reducing crime especially for the time period during training, but would do so in the long run only if they were associated with a credible chance of employment. Evidence from the United States suggests that immigrants are underrepresented in criminal activities.⁹⁵

Another important angle is the intergenerational dynamics of immigration and crime. A wealth of evidence indicates that children of parents with limited resources are at higher risk of crime. Limited evidence is available on immigrant populations and crime, but a U.S. study suggests that incarceration rates are lowest among immigrant men, even among the least educated of them, but they increase sharply by the second generation, especially among the least educated.⁹⁶ A slightly different picture emerges from Sweden, where a study followed young people who were either the children of immigrants or immigrants themselves from ages 15 to 30. Higher rates of suspected offences and incarceration were largely explained by parental earnings and neighbourhood segregation.⁹⁷ To model the effect of integration programmes on reducing crime among the second generation, researchers would have to know how much of the increased propensity to crime among the second generation was accounted for by parental earnings.

Finally, it is worth noting that the effect of being barred from working is also associated with crime, which could be included in a model that seeks to examine the implications of expanding labour-market access to asylum seekers. A study comparing crime rates after two different waves of immigration to the United Kingdom found that an influx of asylum seekers in the 1990s and early 2000s (who were restricted from working) led to an increase of 0.7 per cent in property crime. By contrast, the large increase in immigrants from EU accession countries from 2004 onwards had no impact.⁹⁸ An economic model calculating the effect of integration programmes on asylum seekers may be complicated by such labour-market restrictions.

93 Gary S. Becker and William M. Landes, eds., *Essays in the Economics of Crime and Punishment* (New York: Columbia University Press, 1974).

94 For a summary, see Lance Lochner, 'Education, Work, and Crime: A Human Capital Approach', *International Economic Review* 45, no. 3 (2004): 811–43. An analysis of U.S. labour data has found that the criminal participation of young men is negatively related to wages, and that the effect of wages on crime is larger than the effect of unemployment on crime. See Jeff Grogger, 'Market Wages and Youth Crime', *Journal of Labor Economics* 16, no. 4 (1 October 1998): 756–91. Education also increases patience and risk aversion, making individuals value future returns over the short-term benefits of crime. See Stephen Machin and Costas Meghir, 'Crime and Economic Incentives', *The Journal of Human Resources* 39, no. 4 (2004): 958–79.

95 Robert Adelman et al., 'Urban Crime Rates and the Changing Face of Immigration: Evidence across Four Decades', *Journal of Ethnicity in Criminal Justice* 15, no. 1 (2017): 52–77, <https://doi.org/10.1080/15377938.2016.1261057>; Nazgol Ghandnoosh and Josh Rovner, *Immigration and Public Safety* (Washington, DC: Sentencing Project, 2017), www.sentencingproject.org/publications/immigration-public-safety/; Walter Ewing, Daniel E. Martínez, and Rubén G. Rumbaut, *The Criminalization of Immigration in the United States* (Washington, DC: American Immigration Council, 2015), <http://immigrationpolicy.org/research/criminalization-immigration-united-states>.

96 Rubén G. Rumbaut, 'Turning Points in the Transition to Adulthood: Determinants of Educational Attainment, Incarceration, and Early Childbearing among Children of Immigrants', *Ethnic and Racial Studies* 28, no. 6 (November 2005): 1041–86.

97 National Academies of Sciences, Engineering, and Medicine, *The Integration of Immigrants into American Society* (Washington, DC: National Academies Press, 2015), www.nap.edu/catalog/21746/the-integration-of-immigrants-into-american-society.

98 Brian Bell, Stephen Machin, and Francesco Fasani, 'Crime and Immigration: Evidence from Large Immigrant Waves', *The Review of Economics and Statistics* 95, no. 4 (2013): 1278–90.

b. Effect of employment on health outcomes

The relationship between employment and health outcomes is similarly complex. Workers who have lost their jobs are at greater risk of poor health outcomes,⁹⁹ and job displacement can lead to an increase in unhealthy behaviour, such as smoking.¹⁰⁰ However, education is more strongly correlated with health than income, perhaps due to the compounded effect of education on both wages and behaviour.¹⁰¹ Studies analysing these factors have found that income and cognitive ability explain 30 to 50 per cent of the relationship between education and health in the United States, and 70 per cent in the United Kingdom.¹⁰²

The difficulties with disentangling the role of employment and education on health complicate the process of modelling the effect of parental employment on the health of their children. While parental employment provides greater financial resources for improving the health of children, employment is also likely to reduce parent-child contact time, which may have an adverse effect on the child health. A study of large-scale layoffs in Chinese state-owned enterprises found that while paternal job loss had a significant negative effect on the health of their children, maternal job loss did not have a significant effect, perhaps because maternal income is on average smaller or because maternal unemployment resulted in more time devoted to child care.¹⁰³ Other studies based on U.S. data did not find this distinction, suggesting it may be country specific.¹⁰⁴

Modelling the impact of integration programmes on health would thus depend on knowing how they affect employment and earnings of all household members. For instance, entry into work of the primary breadwinner is likely to have a greater effect on the health outcomes of children, but programmes may suffer from diminishing returns if the entry of a second worker into employment reduces parental time with children. To more robustly model the impact of parental employment on the health of the children of refugees, it would be important to know whether the evidence on employment and earnings applies to European countries.

c. Effects of ethnic enclaves on employment

One special concern of integration policy is to avoid ethnic enclaves characterised by persistently poor labour-market outcomes and other social problems. The discussion above of the effects of a refugee's social network focuses on their own labour-market outcomes. But their labour-market outcomes also affect those of the people in their social network. If many refugees are clustered together in the same neighbourhoods or are

99 For instance, the Robert Wood Johnson Foundation used Gallup data from 2010 and found that laid-off workers are '54 per cent more likely than those continuously employed to have fair or poor health, and 83 per cent more likely to develop a stress-related condition'. See Robert Wood Johnson Foundation, *How Does Employment—or Unemployment—Affect Health?* (Washington, DC: Robert Wood Johnson Foundation, 2013), www.rwjf.org/en/library/research/2012/12/how-does-employment--or-unemployment--affect-health.html.

100 Sandra E. Black, Paul J. Devereux, and Kjell G. Salvanes, 'Losing Heart? The Effect of Job Displacement on Health', *ILR Review* 68, no. 4 (2015): 833–61.

101 Michael Grossman, 'Education and Nonmarket Outcomes', in *Handbook of the Economics of Education*, vol. 1, eds. Eric A. Hanushek and Finis Welch (Oxford, UK: Elsevier, 2006), 577–633. While education is found to increase wages, and therefore one's ability to pay for health treatment and insurance, afford housing in healthier locations, and choose a safer occupation, education can also increase one's ability to process health information or follow complicated treatments. See Lance Lochner, 'Non-Production Benefits of Education: Crime, Health, and Good Citizenship' (working paper no. 16722, National Bureau of Economic Research, Cambridge, MA, January 2011), www.nber.org/papers/w16722.

102 David M. Cutler and Adriana Lleras-Muney, 'Education and Health: Evaluating Theories and Evidence' (working paper no. 12352, National Bureau of Economic Research, Cambridge, MA, July 2006), www.nber.org/papers/w12352.

103 Hong Liu and Zhong Zhao, 'Parental Job Loss and Children's Health: Ten Years after the Massive Layoff of the SOEs' Workers in China' (IZA discussion paper no. 5846, Institute of Labour Economics, Bonn, July 2011), www.iza.org/publications/dp/5846/parental-job-loss-and-childrens-health-ten-years-after-the-massive-layoff-of-the-soes-workers-in-china. If both parents lose their jobs, the negative impact on child health was almost twice as large as when only the father loses his job. Income levels also matter. Parental job loss is negatively significant for poor households (income below the 30th percentile) compared to rich households (income above the 30th percentile), where the effect is still negative but statistically insignificant.

104 Christopher J. Ruhm, 'Maternal Employment and Adolescent Development' (working paper no. 10691, National Bureau of Economic Research, Cambridge, MA, revised March 2006), www.nber.org/papers/w10691.

part of the same networks, then the effects of integration programmes may be amplified throughout the networks. These multiplier effects can be modelled using the same models of job search through social networks discussed in Section V.A.1.2.

Integration programmes may also affect the residential and social concentration of ethnic groups. The skills and knowledge refugees gain through a programme could expand their options for where to live and who to associate with. Refugees who do not speak the host-country language may find it necessary to live in a neighbourhood with a high concentration of people who can speak their native language. Similarly, knowledge of the host-country culture and institutions could be important for navigating the housing market. Refugees without other resources may also be reliant on these social networks to find work. To the extent that integration programmes help refugees match with employers, this residential social network may be less important for the job market.

The effect of a labour-market integration programme on ethnic concentration is complicated by the fact that refugees may prefer to live with people from their country of origin. Recent evidence has found that immigrants seeking low-skilled work tend to choose to live in ethnic enclaves and this leads to better labour-market outcomes.¹⁰⁵ If, as this research suggests, these ethnic enclaves play an important role in helping immigrants in low-skill work, integration programmes could have a complex effect on the concentration of ethnic groups. Such programmes could help refugees find higher-skilled work but, as a result, they may be less likely to live in ethnic enclaves. This could lead to lower levels of concentration, but it could also mean that ethnic enclaves will self-select to have lower average education levels despite integration programmes.

The skills and knowledge refugees gain through a programme could expand their options for where to live and who to associate with.

Beyond the effects on adult refugees' labour-market outcomes, the formation of ethnic enclaves could also affect the second generation. While immigrants looking for low-skilled work may do better by living in highly concentrated neighbourhoods, living in neighbourhoods with low levels of education and occupational status could have a negative effect on the education of children. These kinds of neighbourhood effects in ethnic enclaves were first studied to explain persistence in poverty across generations among ethnic groups, and evidence for this negative effect has been found in several settings,¹⁰⁶ though not consistently across all settings.¹⁰⁷

Another important consideration is how labour-market programmes interact with social housing policy. During the period when refugees have not yet entered the labour market and are dependent on social services, their choice of where to live may be highly dependent on the host country's social housing policy. To the extent that an integration programme affects the rate of exit from unemployment and use of social housing, this

105 See Olof Åslund, Per-Anders Edin, and Peter Fredriksson, *Ethnic Enclaves and the Economic Success of Immigrants: Evidence from a Natural Experiment* (Stockholm: Nationalekonomiska institutionen, 2000), www.diva-portal.org/smash/record.jsf?pid=diva2:128766; Anna Piil Damm, *Ethnic Enclaves and Immigrant Labour Market Outcomes: Quasi-Experimental Evidence* (London: University College London, Centre for Research and Analysis of Migration, 2006), <http://cream-migration.org/files/enclaveff16.pdf>.

106 For seminal works in this area, see George J. Borjas, 'Ethnic Capital and Intergenerational Mobility', *The Quarterly Journal of Economics* 107, no. 1 (1992): 123–50; George J. Borjas, 'Ethnicity, Neighborhoods, and Human Capital Externalities' (working paper no. 4912, National Bureau of Economic Research, Cambridge, MA, November 1994), www.nber.org/papers/w4912.

107 For evidence from Germany where this negative neighbourhood effect was not found, see Damm, *Ethnic Enclaves and Immigrant Labour Market Outcomes*.

could influence ethnic concentration. But the final effect depends entirely on the social housing system.¹⁰⁸ If social housing is isolated and concentrated, then getting people out of social housing could help reduce ethnic concentration. Social network theory would predict that a concentration in an isolated area of people who are struggling in the labour market would have the most negative effects on the next generation.

B. Opportunities for natural experiments

As discussed above, more rigorous evaluations of integration programmes could help understand the causal effect of programmes on short-term outcomes, an important element in both evaluative and predictive cost-benefit analysis. At the same time, evaluations with long-term follow-ups—five, ten, or 15 years into the future—could also provide valuable information about how the initial outcomes affect long-term outcomes.

However, there are important limitations to these kinds of evaluations. They can only study a narrow range of variables. For example, an evaluation can test the effectiveness of different combinations of trainings, but it will not be able to randomly assign families to have different social networks. Because of this, there are many important factors in the integration process that evaluations are unable to assess. Evaluations are also typically small scale and cannot address systemic changes that a large intervention would bring about. In the case of refugee resettlement, these are important issues. The large scale of inflows in certain countries mean that the success of integration programmes could have systemic effects. And an important question in integration programmes is to better understand the interplay between labour-market outcomes and the larger process of integration.

Some of these natural experiments may enable researchers to study not just the short-term effectiveness of integration programmes, but also the factors that contribute to successful integration.

One alternative source of evidence that policymakers do not frequently use comes from natural experiments, when groups of people are subject to different conditions as a result of forces outside the control of researchers. In many ways, asylum flows and refugee resettlement lend themselves very well to natural experiments. For instance, the dispersion of refugees and asylum seekers enables researchers to draw causal inference from geographical, temporal, and administrative variation. Moreover, policy reforms of recent years, alongside changes in the demographic characteristics of arrivals that resulted from the migration crisis, have created fertile ground for innovative evaluation. Some of these natural experiments may enable researchers to study not just the short-term effectiveness of integration programmes, but also the factors that contribute to successful integration, and how government intervention can help. Natural experiments to improve the evidence base fall into the four categories described below.

¹⁰⁸ European countries have a wide range of social housing policies which can have radically different implications for how use of social housing affects the segregation of minorities. For an overview, see Deborah Phillips, 'Minority Ethnic Segregation, Integration and Citizenship: A European Perspective', *Journal of Ethnic and Migration Studies* 36, no. 2 (February 2010): 209–25.

1. Geographical variation

Previous studies have made use of differing refugee placement policies to understand the impact of variation in local policies or conditions.¹⁰⁹ Because the spatial distribution of refugees is often governed by administrative rules, there are numerous opportunities to utilise either the randomness or pattern of their settlement to assess the impact of different interventions.¹¹⁰ If refugees are randomly assigned to particular regions, and there is regional variation in the type of services provided or the way they are implemented, this creates a de facto control group. Alternatively, if refugees are selected to be sent to particular regions on the basis of their personal characteristics, it may be possible to control for these confounding variables.

Some examples of the conditions for possible natural experiments in this vein include:

- **Random allocation to different regions.** In Sweden, allocation has been random in practice since the onset of the migration crisis despite efforts on paper to assign refugees to places where they have the best job prospects.¹¹¹
- **Partial random allocation.** In Germany, for instance, regions often initially fulfil quotas through people who choose to claim asylum there, before being allocated their remaining allotment randomly.¹¹² Since many asylum seekers head to the places where they have friends or family, Länder with smaller populations of refugees are likely to receive most newcomers through transfers.
- **Self-selection.** Alternatively, if it was possible to isolate the reasons asylum seekers choose to go to particular locations, researchers could control for these characteristics—provided it is not the variation in labour-market services that shapes asylum seekers and refugees’ choices but different factors.¹¹³

109 See Åslund, Edin, and Fredriksson, *Ethnic Enclaves and the Economic Success of Immigrants*.

110 A U.S. study, for instance, utilises the data from the International Rescue Committee, which assigned refugees without family contacts randomly across U.S. cities between 2001 and 2005. See Lori A. Beaman, ‘Social Networks and the Dynamics of Labour Market Outcomes: Evidence from Refugees Resettled in the U.S.’, *The Review of Economic Studies* 79, no. 1 (1 January 2012): 128–61. Another well-examined case is Sweden in the late 1980s, when refugees were assigned to municipalities based on observable characteristics (namely, refugees of certain nationalities were more likely to be assigned to certain locations rather than others).

111 In Sweden, refugees were previously assigned to municipalities on the basis of consensual agreements (which gave smaller municipalities greater incentives to participate through financial compensation). A new law directs municipalities to accept a quota of refugees. The Public Employment Service works with refugees, identifying municipalities where they are likely to find jobs. However, the sheer volume of new arrivals since the onset of the migration crisis has meant that refugees are in practice allocated randomly. See Susan Fratzke, *Weathering Crisis, Forging Ahead: Swedish Asylum and Integration Policy* (Washington, DC: Migration Policy Institute, 2017), www.migrationpolicy.org/research/weathering-crisis-forging-ahead-swedish-asylum-and-integration-policy. Important to note, a natural experiment should not include asylum seekers who have chosen their own housing but rather only those given a random geographic placement through assisted housing programmes.

112 For instance, in Germany, the *Länder* are assigned an admission quota based on the Königstein key, which calculates a fair distribution based on the income and population of the different *Länder*. See Government of Germany, *Asylum Act*, last amended by Article 2 of the *Act of 11 March 2016* (Federal Law Gazette I): 394, www.gesetze-im-internet.de/englisch_asylvfg/englisch_asylvfg.html.

113 Bonin and Rinne, *Machbarkeitsstudie zur Durchführung einer Evaluation der arbeitsmarktpolitischen Integrationsmaßnahmen für Flüchtlinge*. The authors of this study argue that this is not the case in Germany, as even when refugees do move to a different region, their choices are not driven by regional differences in services. The study suggests that the effects of interventions could be identified by comparing regions with similar socioeconomic characteristics, but strong differences in the intensity of treatment. The report suggests that focusing on select regions allows deeper qualitative analysis of the local context, alongside potentially relevant contextual factors (including other integration support measures outside the remit of the labour ministry).

Even subtle regional variations—for instance, if an introduction programme for new arrivals is accompanied by mentoring in one region, but not in another—could reveal a great deal about the impact of different labour-market integration programmes. Prior to the centralisation of the introduction programme in Sweden, municipalities were responsible for designing and delivering their own provisions; in fact, the programme was centralised precisely to reduce the lottery effect that this created. Since municipalities now complain that the programme is too standardised, this may create the conditions for a natural experiment on small variations.¹¹⁴ Meanwhile, some pilot programmes that aim to dovetail and streamline the labour-market integration of refugees take place only in select localities. The 2014–15 Early Intervention pilot project in Germany, for example, took place in just ten cities.¹¹⁵

2. Changes over time

Integration policy has seen extensive reform and innovation in recent years, to the point that some researchers have highlighted the difficulties of evaluation because conditions are changing so quickly.¹¹⁶ But some of the big shifts may lend themselves to time-series methods that estimate the relative effectiveness of the approaches before and after the policy changes.

One potentially suitable case for study could be Sweden’s 2012 decision to shift responsibility for the country’s introduction programme from the municipalities to the centralised Public Employment Service. The change also tied the programme much more closely to labour-market integration. For this experiment to work, researchers would need to examine a specific municipality—for instance, one where the introduction programme did not have a labour-market focus—and ensure that the demographic inflow into that area remained constant before and after the change.

Some of the big shifts may lend themselves to time-series methods that estimate the relative effectiveness of the approaches before and after the policy changes.

As the change in the Swedish introduction programme happened prior to the increase in arrivals during the 2015–16 migration crisis, it may be possible to identify before and after groups of refugees that have the same composition, with the before group acting as the control. Refugees who house themselves can choose which municipality they move to, so to avoid selection bias, it will be important to focus on refugees allocated through assisted housing.

Other changes have been relatively small scale. For instance, Germany and Austria recently opened labour-market integration services to some groups of asylum seekers, creating a before-and-after effect that could be examined, as will be discussed in the next section.

114 For instance, municipalities retain responsibility for designing the cultural components of the introduction programme and provide their own adult education. There therefore may be subtle differences in the ancillary services that supplement the introduction programme.

115 Public Employment Service staff visited reception facilities to identify asylum seekers with a high likelihood of receiving protection and with professional skills. The staff then worked with the identified individuals to start the process of language learning, qualifications recognition, and job search at an early stage in the application process. The project only provided a qualitative evaluation.

116 See, for instance, Victoria Rietig, *Moving Beyond Crisis: Germany’s New Approaches to Integrating Refugees into the Labor Market* (Washington, DC: Migration Policy Institute, 2016), www.migrationpolicy.org/research/moving-beyond-crisis-germany-new-approaches-integrating-refugees-labor-market.

3. Variation in individual-level treatment among refugees

Another approach is to identify a control group of nonparticipants. This can then be used for a differences-in-differences approach to see how the progress of participants compares with nonparticipants.

- **Different treatment because of status.** Asylum seekers whose applications are denied but who cannot be returned home will not have benefitted from integration programmes in countries where they are available only to people recognised as refugees. Nonetheless, they may receive the right to work, and thereby act as a control group. Meanwhile, asylum seekers with a high likelihood of receiving protection enjoy better access to integration services in some European countries, while those from designated ‘safe’ countries have been barred from them as well as from accessing the labour market. For instance, in Germany, introduction programmes (language courses with a civic component) have been offered to ‘tolerated persons’ and asylum seekers with a high likelihood of receiving asylum since 2015. Asylum seekers from safe countries were able to access the ESF-BAMF vocational language programme only from 2012 to 2015.¹¹⁷
- **Different treatment because of nationality.** Several countries have begun making integration services available to asylum seekers, particularly those from countries with high recognition rates as refugees. This could create experimental conditions between these asylum seekers and their less fortunate counterparts who must wait until their applications are processed to access services. For example, Syrians are granted prima facie recognition in Sweden, and Germany and Austria allow early access to language and education services for asylum seekers with a higher recognition rate.¹¹⁸
- **Delayed access to services.** The large and unanticipated number of new arrivals in many countries in Europe during the migration crisis resulted in delayed access to many services. In Germany, many newcomers were unable to access language training even after asylum seekers from countries with a high recognition rate were declared eligible. In Sweden, bottlenecks in the provision of assisted housing meant that the waiting period for refugees to access an introduction programme increased dramatically over a number of months.

4. Staggered cohort studies

One of the challenges with the differences-in-differences approach for refugees is selecting a control group. Researchers must decide between selecting a control group of non-refugees or one made up of refugees and asylum seekers. The former is less than optimal since they are likely to differ on important characteristics. The latter is also undesirable since other refugees and asylum seekers are unlikely not to have received any interventions at all, even if they have not received a positive decision on their asylum application.

A recent German study proposed using refugees who had entered an integration programme within a certain timeframe as an initial treatment group, and those with delayed access as the initial control group. Later, when both the treatment and control groups are likely to have participated in other measures, the results of the interventions can be compared. The results are derived from the average effect of one treatment compared with any other treatment the participant could have undergone.¹¹⁹

¹¹⁷ Walter et al., *Evaluation ESF-BAMF-Programm*.

¹¹⁸ Some federal states, such as Berlin and Baden-Württemberg, offered language courses to asylum seekers even before this policy change; other states did not. See Saskia Koppenberg, ‘Support Structures for Refugee Integration in Austria’ (presentation, European Migration Network, Nagoya, Japan, 26 October 2016), www.iomvienna.at/sites/default/files/Refugee%20Integration%20in%20Austria_KOPPENBERG.pdf.

¹¹⁹ Bonin and Rinne, *Machbarkeitsstudie zur Durchführung einer Evaluation der arbeitsmarktpolitischen Integrationsmaßnahmen für Flüchtlinge*. The authors of this study point out that the large number of chains of measures, due to multiple combinations, could reduce the case numbers for each individual one to a minimum.

VI. NEXT STEPS

The analysis above sets out the building blocks of a cost-benefit approach to assessing labour-market integration policies. While it is possible to design a predictive model to assess the broader social returns on investments using the elements described above, it would be extremely labour intensive. As such, the strategies that may best suit different actors fall on a spectrum of possible investments.

This section sets out the options for governments interested in improving the quality of their decision-making by reviewing likely returns on investment. It also suggests ways ahead for academics seeking to improve the evidence base and for foundations and funding bodies looking to consolidate and improve their efforts in this area.

A. Improving evidence-based decision-making

Before commissioning or designing a cost-benefit analysis, policymakers may wish to ask themselves what questions they want the analysis to answer. These priorities are likely to be highly context specific. While some countries may be most interested in training newcomers to meet pressing skills needs, others may be more concerned with improving the employment rate of the children of immigrants, particularly as it affects the future viability of welfare systems. Having a sense of the order of priorities can guide everything from cost-benefit models to evaluation designs to decisions about spending allocations. For instance, certain programmes might be better at delivering long-term—even intergenerational—outcomes, while others might help policymakers achieve short-term economic goals. While programmes are often evaluated using short-term indicators, such as employment rates, broader social and economic goals are rarely defined, and evaluations rarely consider how programmes achieve these goals. Having a clearer framework for the priorities of integration policy could thus guide all future evaluation and research work.

A more ambitious economic model that builds in the social returns to communities will require a greater investment of resources than one that assesses only the benefits to direct participants.

Once these goals have been put in order, policymakers may wish to consider commissioning an economic model that employs some—or all—of the causal mechanisms outlined in Section V. Clarity on the purpose of this exercise can help appropriately manage the relationship between contracted researchers. A more ambitious economic model that builds in the social returns to communities will require a greater investment of resources than one that assesses only the benefits to direct participants. A simpler model could be useful in certain context, for instance if countries are most worried about fiscal stability.

B. Improving programme evaluation

Any cost-benefit analysis should be carried out in conjunction with efforts to improve the policy and programme evaluation process. Yet more evaluation, in and of itself, should not be the aim; not every new intervention requires a randomised controlled trial.

Governments can improve programme evaluation by:

- ***Improving the evaluation of future programmes.*** Instead of evaluating more programmes with narrow indicators, it would be more helpful for policymakers to invest in deeper evaluation of a few programmes. These targeted evaluations should be informed by an economic model and theory that sets out the way in which each programme could achieve its integration goals and then test metrics along these lines. For example, instead of making it government policy that every new initiative be evaluated with a control group, governments could invest in a long-term evaluation of how a particular programme helps beneficiaries develop skills and institutional knowledge over time. Key questions could include: How does it help people build language and vocational skills over time? How much did they move in and out of work? How quickly were they able to reach the occupational level they held before migration?
- ***Commissioning a series of natural experiments.*** As described above, the European migration crisis created several opportunities to evaluate policies where policy decisions, dispersal practices, and random events have inadvertently created a natural control group. For policymakers interested in the integration policies at work during the migration crisis, there is an opportunity now to commission academics and researchers to make use of some of these natural experiments. Not all governments will have the money to fund additional research, but at a minimum they could work to make their administrative data more readily accessible to others in the research space.

C. Improving the quality and depth of research in this area

A side effect of the migration crisis has been a proliferation of research into labour-market integration, as well as a considerable growth in academic interest and research projects. However, without efforts to join up projects and initiatives with real policy questions and administrative data, there is a risk that the focus of academic studies will be guided by what data are available, instead of what the most critical research gaps are. Greater coordination and strategic guidance could help new researchers and other experts interested in engaging with this field.

Think tanks, funding bodies, and civil-society organisations could consider:

- ***Guiding and supporting academics to conduct more high-quality research in this field.*** Numerous forms of support could be used to help guide academics who wish to study labour-market integration, such as holding a symposium to bring together academic partners with the aim of determining key research questions and agreeing to a division of labour. Another option is to encourage promising junior researchers and PhD students to move into this area by offering bursaries or traineeships. Finally, a funder could set up a virtual platform to encourage dialogue among junior researchers.
- ***Commissioning specific research on key policy questions.*** Some of the main research gaps that this approach could seek to plug concern intergenerational mobility and how integration programmes affect the second generation. Another is whether periods of unemployment among newly arrived refugees hurt their job prospects and whether they suffer from wage scarring like other labour-market entrants. Research could also analyse the period of transition after refugees arrive in a host country and during which they are building skills—does being out of the labour market hurt their job prospects or is it necessary for retraining?
- ***Hold an open-data challenge prize.*** Open-data and data science challenge prizes such as Kaggle, which offers datasets and cash prizes for innovative uses of data, have encouraged researchers and

data scientists to explore trends and dynamics that may not be immediately obvious. In many ways, it is the opposite of the first two approaches as it encourages exploratory rather than guided use of data. However, it would complement those approaches by encouraging a wider constituency with a varied set of skills to engage with integration issues, potentially revealing less obvious patterns in the process. Of course, in any such challenge, it is imperative that data shared with participants are anonymised, randomised, and packaged at a sufficient level of generality so that subjects cannot be identified.

In sum, cost-benefit analysis should not be a back-of-the-envelope exercise. Many different factions—from nongovernmental organisations to anti-immigration campaigners, researchers to governments—have an interest in placing a value on the returns a society gets from investing in refugees. But to fully understand the broader social impact of interventions, a cost-benefit analysis must be an in-depth exercise led by experts, and it is likely to demand a large investment. There is no off-the-shelf solution that can be easily applied to different countries, and policymakers should treat with caution any definitive values placed on returns on investment in integration that are not based on in-depth economic modelling.

It is time for integration policy to catch up with other fields ... through an analytical revolution that paves the way for grounded, evidence-based policy-making.

Nonetheless, there are clear steps that policymakers and partners can take to improve both the way that decisions are made and the immediate evidence on how policies work. Ideally, these two exercises should be complementary and mutually reinforcing. Decision-making in integration policy is too often based on political pressure, the desire to 'do something', or a change of administration, rather than solid evidence of what works best for refugees and the societies in which they live. It is time for integration policy to catch up with other fields—from health to criminal justice to education—through an analytical revolution that paves the way for grounded, evidence-based policy-making.

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