



EUROPEAN SOCIAL INCLUSION INITIATIVE

Review Paper

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Introduction to the European Social Inclusion Initiative

Many Europeans still experience poverty, severe material deprivation, or difficulty in accessing regular work. The number of people at risk of poverty, after social transfers, in the EU has risen by more than five million since 2010 to close to 87 million people (Eurostat 2016).¹ Social exclusion concerns all ages, but children and young adults are disproportionately affected, with approximately 27 percent of all children in Europe growing up in poverty; these rates climb to above 40 percent in some European countries, such as Bulgaria and Romania. Moreover, social exclusion is often transmitted from one generation to the next, perpetuating the cycle of disadvantage. With rising child poverty, high youth unemployment, and the recent influx of new immigrants, it is particularly important to evaluate the effectiveness of existing social programs and to develop a more comprehensive understanding of what measures can successfully lift people out of disadvantage.

Rigorous impact evaluations are needed in order to ensure that public and private resources are spent on interventions proven to be effective. Evaluations can also be used to develop and test new approaches to solving such structural problems in Europe, and to transfer and adapt programs that have been successful in other parts of the world. These three factors—education, employment, and migrant integration programs—are among the leading important levers for social inclusion. There is a large body of evidence demonstrating that education increases earnings, improves health, and reduces crime. Jobs provide young workers with a steady income and a means of developing a social network and can act as a deterrent to criminal behavior. Immigrants and refugees face specific and higher barriers to integration—including linguistic, cultural and administrative barriers—and might require targeted programs designed to meet their needs.

Having identified these three levers as key to improving social inclusion, this literature review aims to survey the most effective and scalable initiatives within these three fields that can be implemented in Europe. More importantly, we also emphasize the major gaps and policy-relevant questions that remain unanswered to this date. To that effect, we reviewed a large body of literature in these three fields focusing particularly on experimental and quasi-experimental studies. To identify the most effective programs and policies, we systematically reviewed the top academic journals in economics as well as research institutes and other literature reviews on similar topics, mainly for the years 2000 until 2017 as well as earlier hallmark studies. In order to capture the most recent work not yet published, we also reviewed databases of ongoing research, including the J-PAL website, the AEA RCT registry, as well as relevant sources for working papers, such as the NBER and IZA among others.

In identifying which studies to include in this review, this paper focused on rigorous evaluations of policies and programs designed to improve inclusion through education, youth employment, and migrant-related initiatives. The paper highlights studies from EU countries, but also draws on evidence from non-European OECD countries, in particular the United States, since they have had a major impact on the debate in these field and they form the bulk of available evidence for some pertinent questions.

In terms of the methodologies included, we placed emphasis on randomized evaluations as the source of the most rigorous evidence. Other well-identified quasi-experimental studies are also included, particularly in research areas lacking experimental evidence. The following box gives a general definition of key research methods we focused on in the review.

¹ Eurostat Glossary: At risk of poverty or social exclusion (AROPE), [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:At_risk_of_poverty_or_social_exclusion_\(AROPE\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:At_risk_of_poverty_or_social_exclusion_(AROPE))

Key research methods

- *Statistical Matching* use statistical techniques to construct a comparison group by matching each of the participants with one similar nonparticipant using a set of observable characteristics. This method relies on the untestable assumption that it is possible to observe and account for all background characteristics of the treatment and comparison group that are correlated with the outcome of interest.
- *Instrumental Variables (IV)*: is a quasi-experimental method used when participation can be predicted by an almost random factor that has no other effect on the outcome of interest. The comparison group becomes those who, because of this “instrumental” factor, are predicted not to participate and (possibly as a result) did not participate. The method relies on the strong assumption that the instrument affects the outcomes only through increased participation in the program.
- *Difference-in-Differences (DID)*: is a quasi-experimental technique that measures the before-and-after change in outcomes for program participants, then subtracts the before-and-after change in outcomes of non-participants to find the *relative* change in outcomes for program participants. As with other quasi-experimental methods, DID seeks to address the issue of selection bias, but it relies on the assumption that the treatment and control group would have followed the same trend in the absence of program, an assumption that can only be indirectly tested and requires careful discussion.
- *Regression Discontinuity Design (RDD)* is another quasi-experimental technique used to estimate causal effects when there is a measurable cutoff or threshold above or below which an intervention is assigned. By comparing observations lying closely on either side of the cutoff, it is possible to estimate the average treatment effect for the affected group of individuals in environments in which randomization is unfeasible.
- *Randomization and randomized controlled trials (RCTs)*: RCTs, or randomized evaluations, use random assignment of potential participants to treatment and comparison groups in order to minimize differences between both groups, so that we can interpret the resulting difference in outcomes to be a causal result of the intervention. Because randomization creates treatment and comparison groups that are equal (in expectation) across observable and unobservable characteristics, this method helps most comprehensively address the issue of selection bias.

In the first chapter, we review programs and policies in the field of education that aim to help poor children and youth exit the cycle of disadvantage. We identified six major areas of research within education including: early childhood interventions, home environment and parental support, motivation, peer effects, crime as well as school systems and the supply of education. There are many impactful contributions in the area of early childhood strongly affecting policy, though the majority of studies are coming out of the US and developing countries. These studies have shown that early investment into education pays off in the long term. In Europe, where daycare and early schooling are more widespread, it remains unclear which policies have the highest return for disadvantaged children. Apart from an effective initiative on parental involvement in France, there is very little evidence on how the home environment influences a disadvantaged child.

Even in European countries, conditional cash transfers tied to school attendance have the potential to reduce dropout rates and increase attendance. However, effects of financial rewards are mixed for children from lower economic backgrounds, as there appears to be a tradeoff between intrinsic and extrinsic motivation. Although some literature shows that motivation and perseverance play important roles in student achievement, there remains little evidence in Europe on whether providing information about schooling opportunities and performance feedback influence academic success. In terms of crime-related programs, the Becoming a Man (BAM) initiative, also implemented in the US, has gained momentum by successfully training and mentoring at-risk young men in school to prevent violent and criminal behavior. The evidence on how best to manage dynamics around peer effects in the educational system is still mixed: more research could provide insight into how to leverage desirable peer effects. New questions, such as the role of schools in developing a sense of civic engagement and reducing the risk of radicalization especially among students from underprivileged backgrounds, have not been addressed rigorously within this literature.

The second chapter reviews initiatives that can help disadvantaged youth smoothly transition from school into the labor market. We have identified four major areas of research: school-based initiatives including vocational training, apprenticeships and summer jobs as well as mentoring and counseling, “second chance” initiatives, and entrepreneurship training. Despite the importance and urgency of these questions, the literature in this field is broad and remains in many cases inconclusive. This is in part due to the fact that experimental studies available on labor market entry and persistence remain very rare. The difference between the structures of labor market entry programs in different countries also make it difficult to make conclusions about potential opportunities to scale up elsewhere.

Two successful labor market entry programs in the US appear to offer potentially relevant models. The Job Corps program—one of the largest publicly funded job training programs in the US—provided youth aged 16-24 with intensive vocational training and academic education as well as a wide range of other services, including counseling, social skills training and health education, offered in a residential setting. This program has shown to have large, positive effects on labor market outcomes in the US, but no similar program has yet been evaluated in Europe. Career academies in the US, which seek to tailor the final years of secondary education towards skills demanded by local employers and provide career counseling, have also had a major positive impact on employment and earnings, but similar European programs have so far delivered poor results. It remains unclear whether these diverging results are due to structurally different environments or a weakness in the European counseling programs as compared to career academies.

The review’s final chapter focuses on the question of migrant inclusion. We identify studies in four major areas: citizenship, residency and work permits, programs facilitating social integration through language and education, initiatives enhancing labor force participation, as well as aid and transfer programs. Given the urgency in the current policy debate, however, the existing literature still shows major gaps.

Not surprisingly, studies show that providing clear pathways to full citizenship has positive effects, offering the potential to reduce birth rates, to improve child health and educational attainment, and to improve opportunities for labor market integration. Existing research provides some initial insights into how some policies designed to have a wide reach—such as active labor market policies—may affect migrants and native-born individuals in different ways. More research on the reasons for these heterogeneous impacts is needed, but it is also clear that many policies could be better tailored to migrant communities. Taking note of the

importance of peer effects in designing inclusion policies, as well as the value of bilingual education, are two areas where some European countries have already seen success in improving inclusion. There remain important gaps in our understanding regarding how to help migrants enter and remain in the labor force, to fight discrimination and to provide targeted access to information about social assistance and transfer programs to increase take-up.

Chapter 1:

Improving Outcomes for Disadvantaged Children through Education

Table of Contents

1. Introduction	8
2. Early Childhood Interventions.....	9
2.1. <i>The effect of childcare subsidies.....</i>	<i>10</i>
2.2. <i>Early childhood interventions</i>	<i>11</i>
3. Home Environment and Parental Support.....	12
3.1. <i>Financial incentives.....</i>	<i>13</i>
3.2. <i>Home support interventions</i>	<i>15</i>
4. Motivation	16
4.1. <i>Perseverance in school and college.....</i>	<i>17</i>
4.2. <i>Information interventions.....</i>	<i>17</i>
4.3. <i>Performance feedback</i>	<i>18</i>
5. Peer Effects.....	20
5.1. <i>Dynamics of peer effects</i>	<i>20</i>
5.2. <i>Tracking.....</i>	<i>21</i>
5.3. <i>Gifted education and elite school interventions</i>	<i>22</i>
6. Crime.....	23
6.1. <i>Schooling and criminal behavior</i>	<i>23</i>
6.2. <i>Mediation and behavioral programs</i>	<i>25</i>
7. School Systems and Supply of Education.....	25
7.1. <i>Resources</i>	<i>26</i>
7.2. <i>General school readiness.....</i>	<i>27</i>
7.3. <i>Remediation programs.....</i>	<i>28</i>
7.4. <i>Effects of grade retention.....</i>	<i>31</i>
7.5. <i>Class size interventions.....</i>	<i>31</i>
7.6. <i>School governance.....</i>	<i>312</i>
7.7. <i>Free school choice.....</i>	<i>33</i>
7.8. <i>Interventions in charter schools</i>	<i>33</i>
7.9. <i>Interventions in other schools</i>	<i>33</i>
7.10. <i>Effective school management</i>	<i>34</i>
References	36

1. Introduction

This literature review aims to shed light on potential solutions to cycles of disadvantage affecting European youth. An important driving factor behind these cycles is the intergenerational transmission of educational success. A child's household environment plays a substantial role in the preexisting potential that a child is endowed with, and research has shown that family income is a key determinant of student performance. Households with few financial resources have less available to spend on curricular and extracurricular activities, creating barriers to school achievement.

Several quasi-experimental studies from the US confirm this assumption, arguing that a sizeable increase in family income directly translates into higher test scores in reading and mathematics (Dahl and Lochner 2012). Particularly, low-income children are largely affected by these changes. Applying a difference-in-difference (DID) approach, Akee et al. (2010) confirm the same linkage between household disposable income and children's educational attainment and also conclude that criminal activity is lower for children with greater financial support from home. Following a similar hypothesis and also a DID study design, Hilger (2016) shows that among U.S. families job loss experienced by fathers of young adults directly decreases family income and also slightly deteriorates college-related outcomes of children, such as enrollment, college quality and early career earnings. Autor et al. (2016) also show using a double-difference approach that boys born into socioeconomically disadvantaged families suffer more from the lack of resources as compared to their sisters exhibiting greater disciplinary issues, lower educational achievement and lower probability of finishing high school.

Apart from family income, other family characteristics such as composition or size as well as parental education can greatly influence which path a child is set up for early in life. Using twin births in Sweden as a source for external variation in a quasi-experimental setting, Åslund and Grönqvist (2010) show that there is an albeit small but negative and significant effect of a larger family size on student's test grades in compulsory and secondary school, with effects being stronger for children from families with a low educational background. Another Swedish study using an instrumental variables (IV) approach confirms the prevalent hypothesis that mother education, at least partially, predetermines the children's educational outcomes (Lundborg, Nilsson and Rooth 2014).

Extending the amount and type of education struggling children receive is a crucial way of disrupting the replicative pattern of inherent disadvantage and setting them up for a successful future. Overall, the gains from increasing the length of schooling have proven to be quite substantial (Carlsson et al. 2015). Several quasi-experimental studies of reforms of compulsory schooling, although not uncontested (Pischke and von Wachter 2008), suggest that longer exposure to schooling, on average, benefits students affected by such reforms (Oreopoulos 2007). A German quasi-randomized experiment on the length of the school year shows that a shorter school year raises grade repetition and reduces the number of students attending higher secondary school tracks (Pischke 2007). Using a regression discontinuity design (RDD), Zimmerman (2014) shows that higher education through college increases later earnings in the U.S. by an amount that outweighs the costs incurred from attending higher education.

Although not easily studied in an experimental setting, policy changes invariably affect the way students learn and advance in their skills. Classroom composition can be notably affected by tracking students according to their educational ability, which were introduced in several

industrialized countries in a long process of reevaluation of educational systems over the last century. According to several quasi-experimental studies, reducing tracking proved to raise test scores for students from socioeconomically challenged environments (Pekkarinen and Uusitalo 2013) and pushed more students into higher academic tracks (Hall 2012; Guyon, Maurin, and McNally 2012).

Randomized interventions and quasi-experiments in education can therefore help us understand the dynamics that underlie the many factors contributing to a student's academic performance and establish what the best strategies are to influence these factors in a way that is most beneficial and cost-effective.

Measuring Learning Outcomes: Standard Deviations

In this chapter, we often describe the effect size of different programs or policies on test scores in standard deviations. Standard deviations provide one way to compare test scores across different contexts and testing methodologies. An intuitive way to think about a standard deviation is the expected difference between the score of a randomly chosen individual in a student population and the average score in that population. Impacts of effective programs can typically range from 0.1 to 0.5 standard deviations over one academic year. An effect size of at least 0.25 standard deviations is considered as important.

2. Early Childhood Interventions

Development of cognitive and non-cognitive skills begins early in life. Therefore, it is crucial for policymakers to understand how to best support children born into disadvantaged families develop the necessary skills at the same rate as other children do. In this section, we explore the impact of programs that mainly target such children and their families with the aim of improving children's future educational achievement by making early investments.

Key messages

- Early childhood investments pay off in the long term, especially for children from disadvantaged backgrounds.
- Increasing access to affordable childcare programs improves educational outcomes later in life.
- Guaranteeing quality control at daycare centers is key to improving children's education and ensuring that daycare centers offer an attractive alternative to childcare at home.

Open areas for research

- Most research on early childhood is from the US. In Europe, where early schooling is more widespread, what are the highest-return policies that can be implemented at the

margin: increase access for disadvantaged families (including through subsidies), improve the pedagogical quality?

- More research is needed to understand under what conditions access to early pre-school programs may be more beneficial than either providing childcare through centers or at home; and similarly whether daycare centers should be more favorable to childcare at home.
- How do daycare or preschool interventions affect parental attitudes or behavior and would this be complementary to direct parental interventions?

2.1. The effect of childcare subsidies

What impact can childcare subsidies have on children's learning outcomes? Many countries have introduced subsidized rates for socio-economically challenged families to ensure their children have access to quality childcare, especially as female labor force participation is on the rise. Most of these studies rely on quasi-experimental designs. Using a DID approach, Havnes and Mogstad (2011) evaluate the long-term effects of the introduction of childcare subsidies in Norway in the mid-1970's and find that educational attainment of affected children significantly improved as a consequence of the subsidy. As a result of the subsidy, 17,500 childcare spots were created, which produced an additional 6,200 years of education in total. The probability of dropping out of school for these children decreased by almost 6 percentage points and labor force participation grew. They also, on average, depended less on welfare support later in life.

In a related study, Black et al. (2014) used an RDD to analyze the effects of childcare subsidies in Norway compared to providing cash transfers. They found eligibility for childcare subsidies at age 5 had a positive impact of 0.10-0.30 standard deviations on academic performance in junior high school. They also found that the subsidy did not significantly increase take-up of childcare, suggesting that the lower price of formal childcare only has a very limited impact on utilization. Instead, the researchers suggest that the introduction of the policy acted not only as a one-time positive shock to disposable household income, which increased by 8 percent at the child's age of 5, but also raised average long-term income by approximately 10 percent. It appears that an increase in disposable family income acts as a direct mechanism improving a child's academic achievement rather than the price of childcare.

Sending children to daycare can free up time for parents to work more and earn more money, but there are questions about the potential influence on a child of shifting care provision away from her parents. Using a DID approach, Baker, Gruber, and Milligan (2015) have shown that after the introduction of a childcare subsidy in Quebec, under which the price for daycare was lowered to CAD\$5 per day, children demonstrated lower non-cognitive ability, an effect that persisted up to school ages. Moreover, these children reported worse health, lower life satisfaction, and higher crime rates as young adults.

Contradicting these results, Felfe, Nollenberger, and Rodríguez-Planas (2015) used a DID approach to evaluate the effect of subsidized, high-quality childcare in Spain. They found that the expansion improved reading skills at age 15 among eligible children by 0.15 standard deviations, an effect primarily attributed to girls and disadvantaged students, defined as children with lower-educated parents. These results suggest that childcare provided by formal

daycare centers can improve educational achievement as compared to childcare provision by parents, but only if the quality of childcare centers is controlled and matches the quality of care provided at home.

An ongoing randomized evaluation conducted at daycare centers in Norway will explore the question of how early investments in skill development can influence school readiness and will hopefully provide more insight on what mechanisms work to especially assist children from disadvantaged homes (Rege et al. ongoing).

2.2. Early childhood interventions

Several hallmark studies in early childhood development in the US have shown that preschool programs can have significant positive impacts on children's educational outcomes and that, at least in some cases, these may be greater for children from poorer backgrounds. Despite the prevalence of public preschool programs across Europe, the literature in Europe remains nascent, and has yet to specifically focus on outcomes for disadvantaged children.

Several research studies have focused on the Head Start program, administered by the US Department of Health and Human Services. Head Start includes a package of health, nutrition and parent-involvement support to low-income families and their children. Most importantly, the program also involves a large educational component for eligible children. Analyzing health and educational effects using an RDD, Ludwig and Miller (2007) found that the introduction of the Head Start program appears to have raised educational attainment, measured by high school graduation rates.

Using longitudinal data and controlling for covariates, Deming (2009) provides similar evidence, suggesting that the program is associated with a significant increase in test scores as well as an improvement in an index of outcomes for young adults that included high school graduation, college attendance, and criminal behavior among other indicators. These results are especially pronounced among the most disadvantaged students. The improvements in cognitive skills, however, fade out over a longer period of time (Deming, 2009; Bitler, Hoynes, and Domina 2014).

Another influential randomized evaluation often referenced in the literature is the High/Scope Perry Preschool program (Perry program hereafter). This program in Ypsilanti, Michigan targeted low-ability children aged 3-4 and offered a curriculum that emphasized an approach to learning, in which children were active participants. Participating children demonstrated better social skills and less aggressive behavior (Heckman, Pinto, and Savelyev 2013). Although children did not show an increase in IQ, their overall test scores improved. The authors suggest that the program indirectly influenced grades by building personality skills that, in turn, helped students perform better on tests. In an earlier study, the same researchers found that the impact of the program continued later in life: with less criminal activity among participants, and better labor market outcomes, including observed earnings and employment. They highlighted a positive social rate of return of the program implying that each dollar invested in the program for a child aged 4 yielded a return of US\$60-300 dollars by age 65 (Heckman et al. 2010).

An alternative approach to closing the development gap for children from poor families is the US Infant Health and Development Program (IHDP). The program provided daily childcare

and used a game-based curriculum that emphasized language development for children aged 1-3. In a randomized evaluation, Duncan and Sojourner (2013) show that income-related gaps in the child's early cognitive development was eliminated at age three and could be almost entirely eliminated at the age of eight. IQ scores increased during the program for all children, with larger improvements for children from low-income families. These differential effects between children from low- and high-income backgrounds persisted two years after the end of the program. While the program continued to show positive effects on math and reading scores at the age of eight, this was only true for children from low-income families. These results suggest that early intensive interventions promoting skill development may be particularly promising for improving a disadvantaged child's future trajectory.

An RDD evaluation of making available public pre-elementary school for two-year-old children in France showed that this was beneficial for increasing the mother's labor supply without any detrimental effects on the child's future educational outcomes (Goux and Maurin 2010). These preschool programs expose children to a nationally predefined curriculum of 28 hours of classes per week taught by certified elementary school teachers; as such, these findings may not generalize to settings in which the quality of pre-school programs is not comparable. More research is needed to explore how different forms of preschool availability and starting ages impact cognitive and non-cognitive outcomes.

Few existing early education research projects in Europe focus on children from low-income families. A few ongoing studies analyze potentially beneficial programs, such as the Parler Bambin program in France (Gurgand et al. ongoing), which aims to enhance the development of language skills among disadvantaged children.

3. Home Environment and Parental Support

One potential source of persistent structural disadvantage for children is a lack of financial, supervisory and emotional support at home. Parents are the main actors in creating an environment for their children that prepares them for success in school and beyond. In this section, we focus on two types of interventions that may assist parents in supporting their children: financial incentives for students and their families, and non-financial, qualitative support.

Key messages

- Conditional cash transfers tied to school attendance have the potential to reduce dropout rates and increase attendance. However, cash-induced increases in schooling do not necessarily translate into better achievement.
- Involving parents from lower socioeconomic backgrounds in setting academic goals for their children and in other schooling decisions is an effective measure to reduce dropouts and grade repetition and improve achievement.
- On average, achievement awards for students can positively influence educational achievement and raise enrollment, attendance, and completion of degree programs.
- However, financial rewards affect high- and low-ability students in different ways when made available to both groups. Moreover, when thresholds for achieving rewards are set

too high for low-ability students, the reward structure can discourage low-ability students from increasing their effort in studying.

Open areas for research

- Although home support interventions have been extensively studied in the US (and in developing countries), there are very few studies on home support in Europe to be able to generalize effects.
- The effects of financial rewards conditional on academic performance for low-performing students are not entirely clear, as they may crowd-out intrinsic effort.
- Extending the length of paid maternity leave has had mixed impacts on children's educational performance.

3.1. Financial incentives

The purpose of income-related interventions is to improve the financial situation of low-income families to give them room to invest more into their children's education. In contrast to developing countries, where conditional and unconditional cash transfers have been promoted in order to nudge families to enroll their children in mandatory schooling, this is not a major issue anymore in most European countries. With compulsory and free education prevalent in Europe, low-income children face lower barriers to attending school. Nevertheless, a lack of other resources may present obstacles to school enrolment or attendance. An important question is whether it is effective to use financial incentives to address two separate issues – the lack of motivation and the lack of resources.

Transfers can either be unconditional or they may be tied to benchmarks related to educational achievement, school attendance, or other indicators.

A first set of transfers target low-income families with the goal of providing them with additional resources that can then be directed towards their children's education. One of the most cited interventions using conditional cash transfers is Mexico's Progresa program.² Introduced in rural Mexican communities in 1998, the program aimed to interrupt the intergenerational transmission of poverty and unequal access to opportunities by providing families with cash and in-kind transfers conditional on their children attending school and going for health checkups. Evaluating the short-term effect of the randomized intervention, Dubois, de Janvry, and Sadoulet (2012) found that school continuation in all grades studied throughout primary and secondary school significantly increased in the study period. The impact of the program on performance in school, however, depended on the remaining years of eligibility. Students in primary school, with longer remaining eligibility, demonstrated an improvement in their performance, whereas students in secondary school, especially those towards the end of the eligibility period, performed worse. Students in the last grade of secondary school tended to repeat the last grade to remain eligible for the program rather than pass and lose the transfer. The particular program design might therefore led to adverse results for the students due to graduate and cannot be interpreted along the same lines as the outcomes for earlier grades.

² Later renamed *Oportunidades*.

A follow-up study that drew on the same data as well as some non-experimental indicators confirmed these earlier findings persisted over a longer period of time (Behrmann, Parker, and Todd 2011). In addition to outcomes relating to labor force entry, the study shows that the program significantly raised educational attainment and that the impact increased with longer exposure to the intervention. Cash transfers conditional on school attendance can thus reduce dropout rates for children from disadvantaged households, but can also adversely affect children's performance due to added incentives to remain eligible for the program. An important lesson is therefore to carefully design such interventions in order to avoid introducing adverse schooling incentives.

Similar conditional cash transfer programs have also been implemented in Europe. In the UK, an Education Maintenance Allowance was introduced in 2004 to provide a means-tested transfer to children who remain in school for up to two years after the statutory school-leaving age of 16. Using a quasi-experimental approach, Dearden et al. (2009) found that the policy significantly increased years of education (especially for the lowest-abled adolescents), with rates of completion of two additional years of schooling rising by 6.7 percentage points. In Denmark, Humlum and Veijlin (2013) studied the results of a cash transfer conditional on high school attendance. The program aimed to reduce work outside of school by subsidizing school attendance. Researchers found that an increase in the amount of cash transfer by approximately US\$560 led to a drop in labor market participation for school students of two percentage points, with greater effect sizes for students from low-income households. However, the transfer had no measurable impact on performance in school. This study confirms that financial rewards conditional on attendance can expand schooling for low-income children, but do not necessarily result in better academic performance.

Several studies suggest that financial incentives do not have to be conditional on attendance or performance to be effective. A recent randomized evaluation in Bulgaria by Huillery, de Laat, and Gertler (2017) evaluated the impact of providing free access to kindergarten for children from poor households, especially from Roma and Turkish families. The study showed that attendance increased by about 20 percent among the children affected by the intervention. In addition, parents formed higher aspirations for their children's educational trajectories, a dynamic that was especially pronounced for girls. Additional financial incentives provided conditional on school attendance did not show a clear effect on registration or attendance rates, suggesting that financial barriers to sending a child to kindergarten may play a more significant role in schooling decisions than parents' behavioral changes.

Another randomized evaluation evaluated the effect of "labeled cash transfers" in Morocco. Cash transfers provided to fathers in poor rural communities were not conditional on their children's school attendance, but were instead labeled with the purpose of being used for educational advancement of the children. Results showed that, over two years, dropout rates fell by 76 percent among households receiving the transfer, and the program led to an increase of 82 percent in students who had previously dropped out returning to school. Imposing additional conditions on these transfers did not lead to any change in impacts (Benhassine et al. 2015).

In other cases, conditional cash transfers target students directly by tying payment to a specific improvement in achievement. In a quasi-randomized evaluation of a pay-for-performance program in a poor community in Ohio, students in grades 3 through 6 received

between US\$15 and US\$20 for each standardized test on which they scored proficient or better (Bettinger 2012). On average, math scores for children in the treatment group improved by 0.15 standard deviations.

Using data from the Opening Doors Louisiana (ODLA) program, Barrow et al. (2014) evaluate a similar performance scheme using an RCT, under which students in a US community college were awarded financial payments in exchange for enrolling at least half-time over two semesters and maintaining a grade average of at least a C or better. The program significantly increased enrollment and course completion, raising earned credits by 37 percent, and somewhat improved performance.

Evaluations of the Performance-Based Scholarship Demonstration program, introduced by the US organization MDRC in 2008, showed that low-income youth can significantly benefit from performance-based scholarship programs that tie financial aid for college fees and expenses to performance goals (Mayer et al. 2015). Across six different program variations, college enrollment and completion increased on average and students became less dependent on taking out loans to finance their education.

However, some studies show the potential downside of financial incentives. In a randomized evaluation in a Dutch university, researchers found that financial rewards conditional on achievement directed at both high- and low-performing students had different outcomes for each group. Financial incentives led to higher exam pass-rates for high-performing students, but had the opposite effect on poorly performing students, who lost the intrinsic motivation to study. Authors believe that performance incentives may diminish low-performing students' existing motivation to obtain good grades if they are conditional on a performance threshold that seems unattainable for them (Leuven, Oosterbeek, and van der Klaauw 2010). Further research is necessary to shed light on the efficacy of financial incentives for different sub-groups of students, and whether there is any evidence that these incentives lead to crowd-out of intrinsic effort.

3.2. Home support interventions

Another influential factor in children's educational outcomes is the broader support families provide to their children through help with homework, motivation to perform better, and time spent with their teachers setting shared educational goals. Especially in low-income households, where parents often work long hours or several jobs at a time (Tankersley 2014), parents may lack the capacity or exposure to provide the necessary extra time and care their children need to succeed in school. Various interventions therefore aim to nudge parents into giving more support to their children or to provide assistance for parents in engaging more and better with their children's educational development.

Parental support starts very early by creating a favorable home environment. A recent randomized evaluation of the Preparing for Life (PFL) program in Ireland examined the effect of targeting children from low-income households and preparing them adequately for school entry by promoting better parental behavior and giving social support. While the guidance parents received from the pregnancy period and through the first early years of the child's life had a beneficial impact on the quality of the child's home environment and the level of care the child received, the program had no impact on children's cognitive or non-cognitive development (Doyle et al. 2017). In home visit programs, parents are perceived as the primary lever of change for the child's development. This study's results suggest this lever was indeed

activated since parenting improved after program completion, yet it may take some time before these new parenting skills have a direct impact on children development.

Other home visit programs for the socioeconomically disadvantaged prove to have positive effects on children. In Germany, researchers conducted a randomized evaluation of the Pro Kind program, which lasts from pregnancy until the child turns two and aims to promote beneficial parenting behavior among disadvantaged first-time mothers. Sandner and Jungman (2017) found that the program raised cognitive development by 0.3 standard deviations at six and twelve months of age and by 0.2 standard deviations at twenty-four months, but only for girls. Although the program was the same for boys and girls, families with girls chose to receive more home visits than families with boys, which may partly explain the difference in outcomes by gender. Additional research is needed to understand how early childhood interventions affect parental investments in boys and girls and in which circumstances such investments vary by gender.

Key changes in the structure of the labor market and social policies tied to work-life balance influence how much time parents can spend with their children. One line of quasi-experimental literature focuses on maternity leave as a key lever for influencing the amount of time mothers spend with their children. In Germany, Dustmann and Schönberg (2012) use a mixed RDD/DID design to show that expanding entitlements to new mothers by increasing the time of paid leave did not lead to a statistically significant change in their children's educational outcomes. In fact, there is suggestive evidence that the policy change may have slightly reduced the educational attainment of affected children.

A similar maternity policy change in Norway increased mandatory entitlements for mothers from zero to four months and unpaid leave from three to twelve months. In contrast to the German findings, an RDD study in Norway showed that mothers with access to expanded benefits spent, on average, significantly more time with their children, which in turn reduced their children's high school dropout rates by 2 percentage points (Carneiro, Løken and Salvanes 2015). In addition, long-term outcomes for children, such as earnings, were also positively affected. Researchers point out that these divergent results may be due to the relatively small change in time spent at home in the German case.

Another policy change introduced in Norway in 1998 provided financial incentives for parents with children under the age of three to stay at home. Bettinger, Hægeland, and Rege (2014) use a mixed DID design to study how the introduction of this program affected educational outcomes of older siblings in the family. They find that, on average, older siblings benefited from the program, experiencing a small but significant increase in their grades of 0.03 points. The improvement in their tenth-grade GPAs was mainly driven by lower maternal labor force participation. This outcome suggests that such "cash-for-care" aid can effectively produce better educational results for children. Although this study did not explore the question of differential effects for low-income families, a similar outcome may be possible for families that benefit from additional financial incentives.

A large body of literature focuses on parental engagement and student outcomes. In a low-income educational district in France, Avvisati et al. (2013) conducted a randomized evaluation of providing parents more information on their children's opportunities after completing middle school. Parents who received the information devoted more time to school-related activities, and their children were less likely to skip school or be disciplined for bad behavior. Their children also worked harder and showed improved attitudes toward school. Results from another randomized evaluation in France show that adjusting educational goals at the end of middle school by involving parents of low-achievers in the decision-

making process helped parents and their children make more realistic educational choices reducing both dropout rates one year after the intervention (which fell from 9 percent to 5 percent) and the probability of repeating a grade level (from 13 percent to 9 percent) (Goux, Gurgand, and Maurin 2017a).

In a randomized evaluation in the Charlotte-Mecklenburg schools (CMS), a public school district in Charlotte, North Carolina where parents are free to choose the school their children will attend, Hastings and Weinstein (2008) identified one effective way of getting parents engaged in the schooling decisions of their children. They evaluated the effect of providing parents from low-income households with information regarding their children's academic performance, and found that parents in the treatment group chose better-performing schools for their children to attend. Free choice of public schools can therefore improve academic achievement for disadvantaged children when parents have easy access to information on their children's performance.

4. Motivation

Motivation is a key driver for academic performance. Raising student motivation and expectations for achievement should influence their educational aspirations. There are many ways of providing support for such students to maintain or improve their motivation and to promote aspirations towards future academic development, which we highlight in the following section.

Key messages

- Perseverance plays a key role in educational achievement and, while many recent studies have sought to explore the drivers of perseverance the results are not yet clear.
- Studies from the US show that providing access to information about college entry can increase access to college. Intensive pre-college mentoring seems to be more effective in increasing perseverance in college.
- Performance feedback can improve grades, especially for high-ability students, but academic probation may push some low-ability students entirely out of the educational system.

Open areas for research

- There is more to learn about what factors positively influence students to persevere in their studies.
- Few experimental evaluations of information interventions have been conducted in Europe.
- Although there is lab research, there is little information on performance feedback specifically targeting low-ability students in the day-to-day school environment.

4.1. Perseverance in school and college

An emerging group of studies has begun to focus on interventions designed to promote educational perseverance (continuing in school) among disadvantaged youth, with some limited but promising findings.

Bettinger et al. (2018) present preliminary results from a randomized evaluation in Norway of a program designed to promote a growth mindset among high school students by exposing them to cognitive exercises on the effects of learning. Students who were exposed to these exercises performed better in math, and the effects appeared to be driven by an improvement in performance by students who had limited confidence in their ability to learn.

The Beacon Mentoring program in the US similarly aimed to motivate students at risk of failing in lower-level mathematics courses in college to persevere and stay in college. A randomized evaluation of the program showed that providing information about educational assistance services led by college mentors had no clear impact on perseverance on average, but that it did benefit students who were either enrolled in remedial math courses or attending college part-time (Visher, Butcher, and Cerna 2011). Students in the remedial track were less likely to drop their math classes, earning more credits while part-time students were both less likely to drop and more likely to pass their math courses, and scoring higher on their final exam.

New research is ongoing. Among these, Evans et al. (2017) evaluate a perseverance program known as Stay the Course, which provides incentives for US community college students to remain enrolled and graduate with a diploma. Students could receive a combination of mentoring, coaching, and access to financial assistance, or financial assistance alone. Early results indicate that the comprehensive case management treatment arm significantly increased perseverance and degree completion through six semesters, only for female students. Bertrand (ongoing) also focuses on disadvantaged community college students treated in the One Million Degrees (OMD) program, where they receive coaching and mentoring to stay in college. Finally, researchers in France are evaluating the Exploiter tout son potentiel (“Reaching your full potential”) program, which offers skill development and mentoring workshops to support youth in staying in school (Algan et al., ongoing). These and more such studies are needed to fully understand the forces that influence perseverance of students from lower socioeconomic backgrounds and keep them motivated to advance on their academic goals.

4.2. Information interventions

Another important possible driver of aspirations lies in the information that students receive about their potential for future development and alternatives to their current status.

Socioeconomically disadvantaged students may lack the emotional support or appropriate role models for developing educational aspirations. In a pair of studies, Hoxby and Turner (2013; 2015) show that access to information about college entry and attendance requirements in the US is limited among disadvantaged, low-income youth. In the 2013 randomized evaluation of the Expanding College Opportunities (ECO) program, they show that expanding information about college entry drove low-income high school graduates to submit almost 50 percent more college applications (Hoxby and Turner 2013). Students receiving this information also applied to better-quality colleges that spend more money on their students. In a later study

using the same data, Hoxby and Turner (2015) find that students who participated in the program received more college acceptances and were accepted into higher-ranked schools. Giving low-income students direct access to information on college tuition, entry requirements, and application procedures is an effective intervention for promoting higher education for this group of individuals. However, this program targeted low-income high-achieving students; the impact on average or low performers might be different.

Many interventions that combine an informational component with a cash incentive seem to work in helping struggling students get into college. In a series of recent randomized experiments in the US, Carrell and Sacerdote (2017) find that offering a combined approach of mentoring and coaching students alongside application support (including covering associated fees) as well as giving them a US\$100 cash incentive had a beneficial impact on college attendance and perseverance. However, only intensive coaching programs appear to make a real difference for students. Moreover, either simply providing information or just financial incentives was not enough to keep students in college.

Although there are some ongoing studies addressing more of the questions behind how additional information on college attendance helps disadvantaged students succeed in college (e.g., Dynarski, Libassi, and Michels ongoing), the experimental literature does not yet draw on European examples.

4.3. Performance feedback

Receiving feedback on performance might provide a crucial nudge or motivator towards greater academic effort, but negative feedback may also demotivate poorly performing students. Results from experimental approaches to providing feedback have been mixed.

A randomized evaluation in Mexico found that providing performance feedback to disadvantaged middle school students significantly reduced the gap between students' beliefs of their performance and their actual performance (Bobbia and Frisanchi 2016). Students received feedback on their individual scores in a mock high-school admission exam, as well as the average score in their classroom and of all high-school applicants. Especially higher-achieving students benefited from the intervention as they were assigned to more academically rigorous high school tracks.

A natural experiment in Spain showed even more significant results. As part of a switch in the grade reporting system within a private high school in the Basque region, students received continuous feedback on their performance relative to the student average for one year. Students' grades increased by 5 percent as a result (Azmat and Iriberry 2010). This suggests that relative performance measures can effectively influence the incentives students experience in their learning process.

A more serious form of performance feedback is academic probation, which has been shown to have mixed effects on low-achieving students in the US. Lindo, Sanders, and Oreopoulos (2010) use an RDD to show that while those students who do return to university after being sent on probation experience an improvement in their grade point averages, some are discouraged from returning. Students who just barely meet the criteria (i.e. have relatively high grades but are still placed on probation) appeared to lose the motivation to complete their studies, reflected in lower graduation rates.

5. Peer Effects

A key contributor to academic success is a student's peer group. Considering how much time children spend on average in school, their peer group will significantly influence how well they can meet their academic requirements, but also how and which skills they develop and how they solve problems. The literature on peer effects is broad and extends beyond the scope of this paper, but here we focus on identifying the core mechanisms behind peer effects, with emphasis on disadvantaged children, and present evidence from recent studies.

Key messages

- The mechanisms through which peer effects impact educational outcomes, and the consequences of tracking are not yet well understood, especially for disadvantaged students are not yet well understood, especially for disadvantaged students.
- Although attending an elite school has some positive effects on average for children, evidence regarding the impact on disadvantaged children is still unclear.
- Admission design appears to be crucial in giving underprivileged students the same chance to excel academically at an elite school.

Open areas for research

- More literature is needed to better evaluate the mechanisms at play among peers of heterogeneous backgrounds and anticipate the effectiveness of tracking by ability.
- Studies of gifted education are almost entirely limited to the US setting.

5.1. Dynamics of peer effects

The literature is divided about the optimal classroom composition for helping children from all backgrounds learn. A quasi-experimental study of ninth-grade students in Norway using an IV approach suggests that the proportion of girls in a classroom influences outcomes for girls and boys differently—positively in the former case and negatively in the latter case (Black, Devereux, and Salvanes 2013). Interestingly, mother's average age and education does not matter much in influencing peers, whereas the father's income seems to matter for male students.

An important pertinent assumption is that high-performing peers improve lower-performing peers' educational achievement. In a randomized evaluation at Maastricht University in the Netherlands, Feld and Zölitz (2017) show that, on average, being assigned to a classroom with one standard deviation increase in the average peer GPA increased student's grades by 0.0126 standard deviations. However, it is important to note that the group of low-achieving students in fact experienced a drop in their grades associated with being assigned to a high-achieving classroom.

Moreover, a non-experimental study (with controls for student fixed effects) exploring peer effects in English secondary schools provides suggestive evidence that students with low

ability can have a significant negative effect on the performance of other peers (Lavy, Silva, and Weinhardt 2012). Only students from the bottom 5 percent of the ability distribution had an effect on peers, whereas the presence of higher-ability students did not seem to matter on average. Girls nevertheless seemed to benefit from high-performing peers, while boys didn't. A non-experimental study on third to fifth grade students in the US showed similar trends. Exposure to peers from households that experience domestic violence was associated with lower math and reading test scores of other children in the classroom (Carrell and Hoekstra 2010).

A randomized evaluation in a Dutch university also confirms that low-performing students earned more first-year credits when they were switched from mixed tutorial groups to groups tracked by achievement level (grouping together students from the bottom third of the grade distribution), while high-ability students remained unaffected when grouped with similarly high-achieving students (Booij, Leuven, and Oosterbeek 2017). In a recent randomized experiment of US high school students, Bursztyn, Egorov, and Jensen (Forthcoming) find that peer pressure pushes high-performing students in low-income schools to hide their effort and for low-performing students in high-income schools to hide their lower aptitude.

There is little rigorous experimental evidence on the impact of peers on disadvantaged student outcomes, and existing results are mixed. Most of the studies in this section rely on non-experimental methods, which cannot convincingly isolate peer effects from other factors also influencing students in the same classroom or academic environment. Further experimental research on specific dynamics especially for disadvantaged children in comparison to their peers is needed to be able to draw conclusions for policy making.

5.2. Tracking

Several countries have partially or fully introduced a school system in which students are tracked into separate classrooms or even schools according to their ability. However, the evidence on the effectiveness of streaming students by ability is mixed.

Some quasi-experimental studies evaluate government reforms that introduced or abolished tracking. Meghir, Palme, and Simeonova (2013) show in a DID analysis that the introduction of a comprehensive schooling system in Sweden, which increased compulsory years of schooling and abolished tracking, increased student achievement. The strongest gains accrued to socioeconomically disadvantaged youth with lower ability. In an RDD study on the effects of tracking, Malamud and Pop-Eleches (2011) evaluate the effect of an educational reform in Romania, which postponed the timing of tracking into academic and vocational schools. They find that later tracking is indeed associated with a higher probability of finishing the academic track for disadvantaged youth, which then would enable them to apply for college education. This promising result might indicate a catch-up effect since disadvantaged young adults receive additional time to academically prepare themselves for an academic track. However, this delay in tracking does not translate into higher educational attainment, which might be constrained by the number of open university slots available.

While high-ability minority students seem to benefit from academic tracking according to a study of fourth-grade children in the US, the results for low-income and low-ability students are somewhat mixed based on results from another discontinuity study (Card and Giuliano 2016). High-ability minority students experienced an increase of 0.5 standard deviations in their test scores, whereas the result for average-abled students was unclear. In an experiment

in Chicago Public Schools, Cortes and Goodman (2014) use a DID approach to measure the impact of tracking ninth-grade students into separate algebra classes. Results show that although tracking according to ability led to a 0.22 grade point increase on average from a 4.0 scale, the lowest skilled students benefitted less from the intervention than did somewhat higher skilled students. In addition, high-school graduation rates increased only for higher-performing students. Nevertheless, the researchers suggest the overall improvement in test scores for all students that was derived from tracking may outweigh the negative effect of being exposed to lower-skilled classmates.

5.3. Gifted education and elite school interventions

In order to direct support specifically to gifted students, targeted programs have been introduced in several countries, including in the US. Similar to the tracking approach, these programs identify gifted students based on observable performance measures, such as IQ or other aptitude tests, and place them in separate classrooms or schools.

Bui, Craig, and Imberman (2014) used an RDD to evaluate a gifted and talented (GT) program in a large urban school district in the Southwest United States. Entry to the program was based on an index score generated from scores on various ability tests, grades and recommendations, as well as socioeconomic background. They evaluated the impact of GT programs on academic performance by comparing those just above and just below the eligibility threshold, and found no impact. They separately analyzed the impact of attending magnet schools, which are specialized schools that admit a portion of GT students from across the district, selected through a lottery. Their analysis showed little improvement in achievement compared to those enrolled in the regular GT program, even though magnet schools exposed students to stronger peers and more qualified teachers.

These findings are closely related to another strand of research on the effect of attending elite high schools in Boston and New York. Studies by Dobbie and Fryer (2014) and by Abdulkadiroğlu, Angrist, and Pathak (2014) both used an RDD and found that enrolling in elite schools had no observable impacts for treated students—those scoring just above the admission threshold. A similar quasi-experimental study of elite schools in Romania also using an RDD found positive effects for enrolled children (Pop-Eleches and Urquiola 2013), with students who were just above the school eligibility cutoff scoring 0.02-0.10 standard deviations higher on the Baccalaureate exam as compared to students just below the cutoff grade. However, the study also emphasized the estrangement newly enrolled children experience, as they feel unprepared for the more challenging learning environment.

Drawing on another RDD, in which they use an IQ test cutoff, Card and Giuliano (2014) evaluated how assigning high-skilled students from either non-disadvantaged or disadvantaged backgrounds into special classrooms affected their educational achievement. They found that creating a separate classroom environment for gifted students in the US particularly benefits disadvantaged students when the assessment for separation is made based on past achievement rather than solely IQ tests. In a later paper drawing on a DID design, Card and Giuliano (2015) showed that using a universal screening program, as compared to simply relying on referrals for skill testing, provided a more objective process for identifying gifted children, especially from low-income and minority backgrounds. When considering

gifted education as a tool to reduce disadvantage, a universal program is more effective in identifying outstanding academic aptitude.

While attending an elite school may offer some positive effects on average, the evidence is more mixed among disadvantaged youth. The admission design is key to allowing for socioeconomically underprivileged students to excel academically at an elite school. More specifically, this design has to take into account pre-existing bias when it comes to admissions that are based not only on subjective teacher evaluations but also supposedly objective test scores as these might be influenced by classroom and other dynamics.

6. Crime

Delinquency in schools and among a student's peer group can harm academic performance. A body of quasi-experimental literature continues to explore how length of schooling affects an individual's involvement in crime, while experimental research has examined whether behavioral interventions delivered in schools can help reduce violent or criminal behavior.

Key messages

- Exposure to peer delinquency worsens students' educational outcomes.
- Residential and school segregation supports the creation of criminal networks among at-risk youth.
- Lottery-based admission to a first-choice school decreases criminal activity, implying that educational efforts can help change behavior of high-risk young adults.
- Interventions that draw on the principles of cognitive behavioral therapy have been shown to significantly reduce violent and criminal behavior among youth.
- Non-experimental studies have suggested that there is only a limited link between the level of education and radical behavior.

Open areas for research

- Evidence on the impact of the length of schooling on criminal behavior is still mixed and mechanisms at play are unclear.
- There is very little rigorous research on the dynamics of youth radicalization especially of youth or on interventions designed to prevent it.

6.1. Schooling and criminal behavior

Before evaluating specific interventions aimed at helping at-risk youth, we focus on providing a better understanding of the dynamics that underlie criminal behavior and what role the educational environment plays in this framework.

A recent study using an IV design in the US highlights the relationship between peer delinquency and academic performance (Ahn and Trogdon 2017). Analyzing the behavior of

North Carolina middle school students, the researchers find that peer delinquency (measured as average exposure to major delinquent behavior) has a significant negative effect on students' test scores in mathematics and for any delinquent behavior the effect size is significant. Since the effect on performance is high and negative, the researchers suggest addressing delinquent behavior among peers might be an effective alternative to more costly measures such as tracking or class size reduction.

Cook and Kang (2016) used an RDD to explore how a child's age at school entry in the US can define educational attainment and criminal behavior. They show that children born just after the cutoff date for enrolling into kindergarten, who entered school a year later than their peers born just before the cutoff date, were more likely to drop out of high school before attaining a degree and to commit a felony offense by the age of nineteen. A study from Denmark using a similar RDD nevertheless produced different findings: starting school at a higher age (seven and not six) decreases the chance of criminal behavior at young ages (Landersø, Nielsen, and Simonsen 2017).

In addition to the age of school entry, an individual's total years of schooling can also influence criminal behavior. Using an IV approach, Brugård and Falch (2013) found that students who remained in school after completing the compulsory minimum level of schooling in Norway (that is, up to grade 10), had a notably lower probability of being imprisoned and, on average, spent fewer days in jail by the age of 22. These effects were greatest among low-ability students with less-educated parents. Incentivizing youth to stay in school—particularly disadvantaged students—may reduce criminal behavior among young adults.

In an evaluation of school boundaries, Billings, Deming, and Ross (2016) analyze how criminal networks arise in schools using data from North Carolina in the US.³ Using mixed quasi-experimental methods, they provide suggestive evidence that concentrating disadvantaged youth in the same school catchment area increases total criminal activity. It is notable that young adults of similar backgrounds that live in the same neighborhood and attend the same school are also more likely to become “partners in crime”—to be arrested for involvement in the same crime. Researchers suggest that direct interaction among peers is a key mechanism for magnifying criminal activity. Thus, policies resulting in residential or school segregation should be avoided as they may strengthen criminal networks.

Following a similar strand of literature, Deming (2011) presents evidence from an RCT in the US for an alternative approach to prevent adult crime that is based on free school choice. He estimates the causal effect on criminal behavior of winning a lottery to attend a first-choice (Charlotte Mecklenburg School district) school. Seven years after assignment to their first-choice school, lottery winners had been arrested for fewer serious crimes and spent fewer days in jail. This intervention was particularly beneficial for high-risk youth, who as a result committed 50 percent fewer crimes. Lottery winners gained in peer and teacher quality, which may have in turn have influenced the reduction in criminal behavior.

Thus far a small strand of literature has examined possible links between education, poverty, and radicalization. Krueger and Malečková (2003) was one of the first, albeit non-experimental, studies to address this question. Analyzing several sets of data on hate crimes and violent attacks and participation in terrorist and militant networks in Lebanon, the

³ Charlotte-Mecklenburg Schools is a public school district in Charlotte, North Carolina that has been the site of many experimental studies in education.

researchers found that higher levels of education and a standard of living above the poverty line are positively associated with participation in the militant organization Hezbollah. In addition, they also find that Jewish Israelis involved in attacking Palestinians in the West Bank in the early 1980s held primarily high-paying occupations. These weak tentative findings suggest that radicalization cannot be solely addressed by education or anti-poverty policies since existing preconceptions of political ideas and long-held frustration over one's social setting are stronger predictors of radical behavior.

In their non-experimental analysis of "home-grown" terrorists in the US and UK, Gartenstein-Ross and Grossman (2009) confirm that a general terrorist profile does not exist. However, they find that the individuals identified as terrorists were less likely to be married, of a less affluent background and had lower educational attainment and labor market opportunities. Religious affiliation with Islam, a stringent interpretation of the religion, and a perceived schism between Western social beliefs and Islamic norms are all associated with the formation of radical thinking.

These few studies suggest some clues towards identifying and preventing radicalization behavior. However, there is little experimental evidence on the subject, particularly in Europe. More research needs to focus on identifying mechanisms for preventing radicalization among high-risk youth.

6.2. Mediation and behavioral programs

A new body of research has emerged exploring how mediation programs and other behavioral interventions for youth may improve academic performance and reduce criminal behavior.

One intervention studies is mediation programs administered in or outside of school, which aim to train at-risk individuals to find ways of resolving disputes and to refrain from violence. Algan, Guyon, and Huillery (2015) report results from a randomized evaluation of mediation programs in France. In one version of the program, primary and middle school students were randomly assigned to a professional mediator that helped them resolve conflicts with students and teachers. Mediation did appear more effective when the mediator was older and for students who initially reported higher levels of violent behavior. These results suggest that the programs might have been more effective if they had been better targeted.

In a series of randomized evaluations, researchers have evaluated the effects of a behavior change program in Chicago known as Becoming a Man (BAM), which works with secondary school students and draws on principles from clinical cognitive behavioral therapy to reduce violent behavior. Chicago has a high crime rate; youth either living in or attending school in high-crime neighborhoods are more likely to fall into patterns of criminal behavior. BAM was designed to prevent violent behavior by reducing the almost automatic impulses that many young adults from disadvantaged backgrounds may tend to follow when being challenged or feeling threatened. The program targeted disadvantaged male youth in grades 7 through 10, exposing them to in- and outside-of-school training in non-reactive behavior led by a pro-social adult. A randomized evaluation by Heller et al. (2013) found the intervention to have been highly successful, reducing violent crime rates by 44 percent. In addition, the program benefited the students' academic performance during and even a year after the intervention was over.

A more recent study by the same researchers evaluated three types of interventions, with the first reevaluating the previous findings for the BAM program over an extended period and the second evaluating BAM as implemented in other Chicago public schools. A third intervention targeted high-risk juvenile arrestees at the Cook County Juvenile Temporary Detention Center (JTDC). All three interventions sought to reduce automatic, reactive responses in an effort to reduce violent and criminal activity. Participation in the BAM interventions led to a drop in total arrests of between 28-35 percent and reduced violent crime-related arrests by 45-50 percent (Heller et al. 2017). In schools, these interventions also improved academic engagement and raised graduation rates, while the program administered at the detention center lowered readmission rates by 21 percent. Overall, these studies show that a well-designed behavioral therapy program can help alter a pattern of behavior that leads to violent actions.

Cook et al. (2014) evaluated the cost-effectiveness of these behavioral programs when coupled with interventions trying to improve academic performance. A subsample of ninth and tenth grade students participating in the BAM program were randomly assigned to receive remediation providing intensive support to successfully reach the student's academic goals. The researchers found that the paired intervention significantly raised test scores and grades in mathematics and led to a rise in predicted graduation rates. Comparing the cost of this program with other possible interventions, the researchers conclude that the program is cost-effective with respect to the positive outcomes attained.

Another way of influencing the behavior of youth already involved with the justice system is by treating pre-existing mental health issues. Using RDD, Cuellar and Dave (2016) evaluated such program in the US, under which troubled youth were assigned to mental health interventions of different intensity levels. The goal of treatment was to reduce recidivism and to improve academic performance. Results showed that intensive treatment of mental health problems can lower dropout rates for treated high school students and raise their chances of completing school. Interestingly, treatment has a greater impact on dropout rates of youth that were less academically minded prior to the intervention. The impact on grades, however, was not significant, or slightly negative, possibly because less academically-skilled students were more likely to stay in the program.

New randomized evaluations underway in Chicago are designed to extend existing analysis. They include an evaluation of the the Check & Connect (C&C) mentoring program in Chicago Public Schools, which assigns mentors to regularly check in with and provide guidance for young adults absent from school (Guryan ongoing); and an evaluation of the Choose to Change (C2C) mentoring program for high-risk youth from Chicago's south side, which draws on principles of CBT like those employed by BAM to treat young adults affected by trauma (Abdul-Razzak and Hallberg, ongoing). While the literature on how academic and behavioral interventions can affect crime outcomes continues to grow in the US, few such studies exist in Europe.

7. School Systems and Supply of Education

Disadvantaged youth may suffer from systemic underinvestment in schooling that perpetuates the cycle of disadvantage. This section explores how changes in the management of schooling systems and inputs in the supply of education can influence educational attainment and student performance, especially for students from underprivileged communities.

Key messages

- Additional school resources improve educational achievement when used effectively.
- General programs supporting school readiness prove to be most beneficial when targeted directly at disadvantaged students.
- A broad literature on remediation programs suggests that they can help low-ability students catch up with peers in the most important subjects, like math and reading. However, these programs are only effective for closing gaps rather than producing high-performers.
- Grade retention negatively affects low achievers, driving some students out of the school system.
- Smaller class sizes are beneficial for disadvantaged students.
- Offering children a free choice over what school to attend does not have a clear impact on disadvantaged children's learning outcomes.
- On average, charter schools using lottery-based admission do not show any effect on student achievement as compared to traditional public schools, with effects varying greatly among individual schools.
- Boarding schools benefit high-ability disadvantaged students the most, but only after an acclimatization period of several years.

Open areas for research

- There are very few studies on remediation programs in mathematics in Europe, with two existing studies still ongoing.
- Although many pedagogical programs are proposed in the educational science literature, their implementation in a day-to-day school environment does not always deliver impacts: we need to understand how pedagogies that have been proven effective in a lab setting can be transferred into the classroom.
- More research is needed on the interplay between class size and peer effects as well as class size and teacher practice.
- It is still unclear which charter school practices work and can be translated in the European educational setting.
- There is a lack of literature on school management and effects of school management and autonomy in the school's decision-making are not clear, especially in Europe.

7.1. Resources

The key idea of increasing provision of resources is the assumption that if more resources are placed into low-performing schools and directed at disadvantaged youth, then educational attainment and performance among this group of students will improve. Indeed, Jackson, Johnson, and Persico (2016) show in a quasi-experimental study (IV) that reform-induced increases in per-student spending in the US raised educational attainment and improved labor market outcomes for socioeconomically disadvantaged children. Another recent US study of

school funding (using an RDD) has shown that increasing textbook funding by US\$96.90 per student had positive effects on elementary school student performance, but no detectable impacts on middle and high school students (Holden 2016). These results suggest early provision of resources may be most beneficial.

Of course, not all investments in education will produce positive returns. A program in the Netherlands that provided unconditional transfer to primary schools with a high proportion of disadvantaged children for either hiring extra personnel or purchasing computers and software had negative effects on students learning (RDD) (Leuven et al. 2007). Researchers suggested this impact might be explained by the fact that schools had already a low student-teacher ratio, so they struggled to spend the personnel subsidy in an effective way.

7.2. General school readiness

Several programs attempt to fill educational gaps of disadvantaged youth to make them ready for school or college. Before detailing specific remedial programs targeting particular subgroups of youth and different subjects, which we cover in the next section, we give a brief overview of the most important programs focusing broadly on school readiness and preparing children and youth that might lack skills necessary to advance to the next stage of their educational path.

In the US program Pathways to Education, young teenagers from low-income households about to enter high school received mentoring and daily tutoring as well as career counseling and were incentivized to participate in school. Following from a DID analysis, students who participated in the program had a higher rate of high-school graduation and their enrollment rates for post-secondary education were much higher compared to those in the control group (Oreopoulos, Brown and Lavecchia 2017).

Chaplin and Capizzano (2006) evaluate another randomized US summer learning program, the Building Educated Leaders for Life (BELL), focusing on low-income children in elementary school. The six-week program aimed to increase academic skills and parental engagement as well as improve the students' attitude and expectations of their personal achievement and general social behavior. After completing the summer program, students randomized into the treatment group showed progress in their reading skills and received greater encouragement from their parents to read more. However, researchers could not observe any notable impact on the students' social behavior or academic self-perception.

Ly, Maurin, and Riegert (2015) evaluated a two-year tutoring program in France designed to boost educational achievement and provide better perspective on university choices for self-selected students in underprivileged high school. Students who volunteered to receive tutoring were offered several sessions led by a university student introducing the content of a university curriculum, strategies for studying effectively, as well as other useful information to help prepare to enter selective colleges. The program also included counseling on deciding on a higher education track and study support for entrance exams. While the program had no impact on student achievement overall, it negatively affected students who were enrolled in less selective academic tracks, such as social sciences or literature, while benefiting students in the more selective scientific track. It appears that while the intervention offered encouragement to high-performing students, it may have actually discouraged others. While preparatory programs may be of benefit to underprivileged students, they must carefully select students who will benefit most from such programs.

7.3. Remediation programs

Remediation programs are designed as an intensive measure to help students lagging behind in the most important subjects, such as reading and mathematics, catch up to grade level. While they have shown some success in helping students address learning deficiencies—at least in primary and secondary education—they do not appear to be successful in producing high performers. Because the literature on remedial programs is extensive, here we highlight the most recent literature focusing on disadvantaged children.

In France, Goux, Gurgand, and Maurin (2017b) evaluated a program called *Coup de Pouce Clé*, which exposes low-achieving first graders to reading and speaking exercises after school for roughly half a year. Although children participating in the program did not show an increase in their reading ability after treatment, they did experience greater enjoyment from reading with a 0.17 standard deviation increase in a taste-for-reading index.

Previous experiments have shown more success in improving reading ability. As part of a policy change in the 1990s, a literacy hour was introduced in primary schools in the UK focusing effort in underperforming schools on raising reading and writing standards. Using a DID (coupled with statistical matching methods), Machin and McNally (2008) show that after the policy was introduced, children achieved higher test scores in literacy and overall English skills. However, the policy seems to improve basic literacy rather than producing overachievers.

A similar initiative in the US known as Success for All focused on raising basic reading skills among underachieving elementary-school children to ensure that they could advance to the next levels of education. Quint et al. (2015) evaluated the results from scaling up the program as part of a RCT. The initiative successfully raised literacy skills for children who had entered kindergarten at the lower half of the skill distribution. On average, all participating students benefited from the intervention when considering improvements in phonics, but effects for reading fluency and comprehension were insignificant.

Similarly, Somers et al. (2010) have shown that the Enhanced Reading Opportunities introduced by the US Department of Education for ninth-grade students (whose reading skills were at least two years below grade level) improved not only reading comprehension but also raised overall test scores in core subjects such as English and mathematics. Nevertheless, over three-quarters of students assigned to treatment classes stayed at two or more years below their grade level standard in terms of reading skills. In addition, reading behavior did not change as a result of the intervention and the positive effects faded already a year after program introduction.

Jacob et al. (2014) evaluate an alternative approach to improving reading proficiency through tutoring using an RCT. The successful Reading Partners program in the US targets low-income schools and assigns volunteer tutors to children (6 months to 2.5 years below grade level) in kindergarten through fifth grade for one-on-one lessons at a reading center. The program raised literacy in all benchmark measures including reading comprehension, sight-word efficiency and fluency, resulting in an additional 1.5-2 months of growth in reading proficiency. In contrast to other programs, the effect of the Reading Partners intervention appears to be evenly distributed among all grades studied and across all baseline performance levels.

There are several recent and ongoing RCTs in the US and in France that offer the potential to reveal more insights about how and which kind of remediation programs can help disadvantaged youth catch up in reading proficiency. Among these, Kim (ongoing) evaluates the introduction of the Model of Reading Engagement (MORE) at economically challenged Charlotte Mecklenburg School district schools. As part of this program, teachers of first, second, and fourth grades are randomly assigned to deliver one of two different instruction techniques. A test evaluating knowledge of text concepts will be used to assess impact on children in treated classrooms. Similar to the summer program evaluated in Capizzano and Chaplin (2006), Kim et al. (Forthcoming) also analyzed the effect of Reading Enhances Achievement During Summer (READS), an extensive, low-cost summer reading program in the U.S. providing lessons and encouraging home-based reading for second and third grade students. Researchers found that the program improved reading performance by 0.04 standard deviations overall, with a higher impact of 0.05 standard deviations in high-poverty schools. In an intervention in France, Bianco et al. (ongoing) evaluate the effectiveness of reading enhancement programs through implementing reading workshops for sixth grade children. They aim to assess the direct impact of workshops on tested reading ability, but also evaluate indirect peer effects that might be underlying the learning process.

Other studies of remediation programs focused on math skills have been conducted in the US and Scandinavia. Taylor (2014) evaluated a school policy in Miami-Dade County Public Schools using an RDD. Each year students starting sixth grade and scoring just below the math test cutoff score, were assigned to a remediation consisting of a double-dosage of mathematics throughout the school year, while those scoring just above received regular instruction in mathematics. The lower-performing students chosen for the intervention did show improvements in math performance, but this effect began to fade out a year after returning to standard math instruction. Two years after exposure to the program, only one-third of the treatment effect remained. In addition, a downside to the program appears to be in a crowding out effect of other, elective subjects as more time in the school day was allotted to math instruction.

In a similar intervention also using an RDD, Cortes, Goodman, and Nomi (2015) evaluated the effect of “double-dosing” algebra classes for students just below a grade cutoff in Chicago Public Schools. These students received 90 minutes of math class every day for a whole school year and were exposed to a different peer group by being shifted into classes comprised of those who did not meet the benchmark grade. The researchers show an increase in algebra test scores raising grades by more than 0.4 points on a US four-point scale GPA, which can mainly be attributed to low achievers who score 0.6 grade points higher. In addition, students receiving this extra dosage of algebra successfully completed more courses (earning more course credits) and had higher graduation and college enrollment rates.

Clotfelter, Ladd, and Vigdor (2015) studied a policy change regarding the timing of courses in mathematics in two districts of North Carolina, US using a DID approach. They found that accelerated entry into algebra classes may have benefitted higher-performing students, but had a negative effect on performance in algebra and a subsequent math course for low performers, who appeared underprepared for the more rigorous coursework. In a similar study, Dougherty et al. (2017) explored accelerated mathematics courses in North Carolina middle schools (using an RDD), but only for students with sufficient preparation who were expected to succeed in managing the more challenging workload. By examining the difference between treatment and comparison groups of students who were just above or below the grade threshold, respectively, they observed that acceleration to a math course did not have a significant short-term effect on test scores. Similar to some remediation programs

in reading introduced in higher grades, these accelerated students did pass the math course but did not become high achievers, usually earning a below-average grade. Acceleration only led to persistent higher performance in math for students from higher-income backgrounds; for low-income youth, acceleration did not impact future progress in math.

Several ongoing randomized interventions in Europe are also intended to explore what type of remedial math courses can best help prepare disadvantaged students for the future. Basse and Rosholm (ongoing) evaluate an intervention in Denmark that targets low-achieving elementary school students and assigns them to a dialogue-based mathematics program to improve their understanding of and motivation for mathematics. Another similar experiment in Norway tests a remediation program in math focusing on eighth- and eleventh-grade students (Kirkebøen ongoing).

7.4. Effects of grade retention

When remediation programs fail, grade retention policies (requiring students to repeat a grade level) are designed to give students time to catch up with grade-level learning goals, but remain controversial. While one study in the US has found positive effects on learning outcomes for students who are held back, there are indications that these policies may drive some older students out of schooling.

Schwerdt, West, and Winters (2017) used an RDD to study Florida's test-based retention policy, in which third-grade students who fail to display basic reading proficiency based on a centrally administered test are held back. They found that retaining failing students in third grade significantly improved their short-term scores in both math and reading. Although these effects faded over five years, students who were held back continued to outperform peers in their same grade, who had on average one year less of schooling.

However, Manacorda (2012) evaluated the effects of an automatic grade retention scheme in junior high schools in Uruguay using an RDD based on a benchmark of absenteeism of 25 days and finds that grade retention led to a sharp rise in dropout rates and a decline in educational achievement, effects that persist over four to five years. Similarly, another study of sixth and eighth grade students in the US using IV shows that retaining low-performing eighth-graders notably increases the likelihood of high school dropout for these students (Jacob and Lefgren 2009).

7.5. Class size interventions

A significant strand of the existing literature on educational advancement has focused on the optimal class size and teacher-student ratios. Here, we evaluate some of the most influential studies in the U.S. and in Europe.

The hallmark randomized evaluation referenced in the discussion about the most effective classroom size is Chetty et al. (2011). In this paper, a group of researchers evaluate the impact of different class sizes on learning as part of the Student/Teacher Achievement Ratio experiment (Project STAR). This project randomized over 11,000 Tennessee students from kindergarten through third grade and their teachers into differently sized classrooms: students and teachers were randomly assigned to either small classes of roughly 15 students or large classes of about 22 students. Chetty et al. (2011) focused on the long-term effects of class size

on achievement by drawing on administrative data from tax records. The study found that smaller class sizes raised college attendance, while a previous study had already found smaller class sizes led to better performance on test scores (Krueger 1999).

Fredriksson, Öckert, and Oosterbeek (2012) found positive impacts from smaller class sizes in Sweden. Using an RDD, they evaluated a policy shift that limited the maximum class size to 30 students and found that primary school students exposed to smaller classes had greater cognitive and non-cognitive skills at age thirteen and performed better academically at age sixteen. Decreasing class sizes also raised school completion rates and increased wages between the ages of 27 and 42.

Another quasi-experimental (DID) study of teacher and classroom environments in France suggests that the positive benefit of smaller class sizes for third-grade students is greatest for low-performing students (Bressoux, Kramarz, and Prost 2009). Children in low-achieving schools experienced an increase of 0.05 standard deviations in their reading and 0.08 standard deviations in their math test scores from studying in a smaller class, whereas the average class size effect is at 0.03 standard deviation.

In Italy, De Giorgi, Pellizzari, and Woolston (2012) studied the effects of classroom size and composition in colleges on student achievement and labor market outcomes using a (natural) randomized experiment and confirm that larger class sizes are associated with lower grades. Raising class size by one standard deviation led to a 0.1 standard deviation deterioration of the average grade. Moreover, an increase in class size of twenty students lowered wages by 6 percent on average. These negative effects were strongest among low-income students.

An important caveat to the evidence cited on the positive impact of reducing class sizes is that these policies may pose challenges in contexts where it is difficult to recruit qualified teachers. A quasi-experimental evaluation of California's large-scale class-size reduction program (introduced in 1996), which reduced average classroom sizes from 30 to 20 students, found that smaller class sizes improved student achievement in mathematics and reading (Jepsen and Rivkin 2009). Some of this positive effect was however offset by the rise in the share of under-qualified teachers, particularly in schools with a larger share of low-income, minority students.

Despite some of these promising results, it remains unclear what precise dynamics contribute to setting up the most effective classroom. In order to be able to draw conclusions from this literature, researchers should focus more research on exploring how these dynamics play out for the disadvantaged and combine these results with other strands of literature, such as on peer effects and other important classroom-related factors.

7.6. School governance

The system under which a school is operating can greatly affect the learning environment. Differently managed schools can provide vastly different quality of education to their students. Better governance in schools, especially through private provision of funding, is assumed to improve educational outcomes also for students from disadvantaged backgrounds. In this section, we evaluate different alternatives for school management and the effects on underprivileged students.

7.7. Free school choice

Allowing school choice may lead schools to improve their governance and quality of teaching in order to compete for students.

While some of the literature suggests that free school choice at least marginally benefits disadvantaged students (Edmark, Frölich, and Wondratschek 2014; Lavy 2010), another strand of literature on school vouchers shows that results are mixed (Hsieh and Urquiola 2006; Böhlmark, Holmlund, and Lindahl 2015; Epple, Romano, and Urquiola 2017). Using a DID approach, Edmark, Frölich, and Wondratschek (2014) evaluate a Swedish school reform introduced in 1992 across students of different socioeconomic backgrounds, which offered free choice of public school enrolment between different municipalities and also allowed for privately run but publicly financed schools to operate in the public schooling system. For children with low-income parents, an additional school within an area of average commuting distance increased ninth-grade achievement by 0.2 percentile points for the most disadvantaged children, while effects for more affluent children ranged from 0.1-0.13 percentile points. Using a combined RDD/ DID design, Lavy (2010) shows that allowing free choice among public schools in Israel reduced dropout rates and improved cognitive development scores. In addition, student behavior toward teachers and other peers improved and the level of violence and disruption in the classroom diminished as a result.

However, Hsieh and Urquiola (2006) evaluate a Chilean school system reform from 1981 in a non-experimental setting using controls, in which students were provided vouchers to attend private school. They suggest that free school choice was not associated with improved schooling outcomes, such as reading and math scores, or lower grade repetition rates. Moreover, the researchers found indications that students from more affluent families migrated from public to private schools, which in turn created a higher concentration of children from low-income, low-educated households in public schools. Also evaluating the Swedish school reform from the 1990s in a non-experimental setting with controls, Böhlmark, Holmlund, and Lindahl (2015) found that free school choice was associated with segregation of immigrant and native-born children.

7.8. Interventions in charter schools

Charter schools have gained a lot of attention in the US for providing a more accessible alternative to highly competitive and costly private schools. Since such schools are operated independently of the state school systems in the U.S. and oftentimes privately owned, they are assumed to produce higher-performing students due to a better management and provision of funding.

The effects on students overall appear to be mixed. Using lottery-based admission to evaluate charter schools, Gleason et al. (2010) show that these schools are neither more nor less effective in improving student achievement than traditional public schools. More importantly, charter schools vary greatly when it comes to achievement with effects on reading scores ranging from -0.43 to +0.33 standard deviations and math scores ranging between -0.78 and +0.65 standard deviations. Researchers have also shown that charter schools can have a crowding-out effect in that they may drain the public school system of resources (Imberman 2011). In fact, children at public schools located near charter schools experienced a small decline in math and language test scores, especially among elementary school students. This decline in test scores may be driven by a reduction in available funding, qualified teachers or

high-performing students in public schools. In a study on school vouchers using a DID approach, Figlio and Hart (2014) contrast these findings showing that a higher degree of competition from nearby located private schools can indeed improve the performance of public school students. These results suggest that while crowding-out dynamics do persist, charter schools also induce some amount of competition and quality adjustment in nearby public schools.

In a quasi-experimental study using IV, Abdulkadiroğlu et al. (2016) compared dynamics behind the introduction of charter schools studying charter takeovers—traditional public schools designated to be restarted as charter schools—in two US cities. Comparing schools before and after takeover, they find that takeover contributes to substantial gains in academic achievement especially among disadvantaged students. Authors suggests these gains cannot be explained by changes in peer composition, but rather by additional resources and changes in school governance. Charter schools benefited of additional federal funds and adopted an increased focus on teacher performance, and a longer school day.

Evaluating best practices from charter schools, Dobbie and Fryer use an IV approach in two separate studies to measure the effectiveness of the *Harlem Children's Zone (HCZ)* project in improving educational outcomes for marginalized students. HCZ is a non-profit initiative that combines community engagement work with charter school practices covering twenty neighborhood and school programs. This approach has been shown to help close the educational gap in mathematics between white and black students (Dobbie and Fryer 2011). As part of a similar intervention also within HCZ, the same researchers evaluate the impact of lottery admission to the Promise Academy, an extended-day charter school affiliated with HCZ. They find that educational achievement increased for lottery winners (Dobbie and Fryer 2015). Fryer (2014) evaluates the effect of drawing on charter school best practices in under-achieving public elementary and secondary schools in Texas, and finds this raised student achievement in math by 0.15-0.18 standard deviations. The intervention did not affect student performance in reading. In a similar study using an IV approach, researchers confirm positive results of charter school attendance for high school students in Boston applying to college. Children in charter schools were more likely to qualify for a public scholarship scheme, get higher scores on standardized tests and are more likely to take an Advanced Placement exam (Angrist et al. 2016). This suggests that providing access to high-quality schools can in certain settings alleviate the educational challenges of disadvantaged students. However, these are very specific settings in schools singled out for the evaluations.

7.9. Interventions in other schools

Outside of the traditional literature on charter schools, there is substantial evidence that other types of schools managed similarly to charter schools can also have large positive effects on struggling students. The Knowledge is Power Program (KIPP) schools, for example, are public charter schools in the United States that focus on preparing students for enrolling and succeeding in college education. Similar to Angrist (2006), Tuttle et al. (2013) evaluate lottery-based randomized admission to KIPP schools and report substantial gains in student achievement in the four subjects tested: reading, math, science, and social studies. Gaining access to a KIPP school increases math scores by 0.15 standard deviations and reading scores by 0.05 standard deviations on average. Interestingly, KIPP schools appear to attract low-achieving and low-income students, suggesting that the impact achieved by enrolling a child into the school is translated into a remedial effort for disadvantaged children.

Attending a boarding school can also significantly improve student outcomes for low-income children (Curto and Fryer 2014; Behaghel, de Chaisemartin, and Gurgand 2017). Similar to school formats like under KIPP and HCZ, researchers evaluated the SEED boarding school program, which are located in urban areas on the US east coast that provide underprivileged children with a five day per week curriculum similar to the charter school model. Offering admission based on a randomized lottery, Curto and Fryer (2014) find that achievement in both math and reading can be improved as a result of attending a SEED school. Similarly, Behaghel, de Chaisemartin, and Gurgand (2017) show in an RCT that a boarding school program for disadvantaged students in France can have similar effects, albeit only two years after entering the schools. An important caveat to note is that students who are academically strong experience greater benefits and only once they have grown accustomed to the new, more challenging environment. Using an IV design, Eyles and Machin (2015) evaluate the introduction of Academy Schools in the UK, which, like US charter schools, are managed independently from the public school system. Most academies were introduced as takeovers of existing state schools by a new management agent. Transforming management of previously low-performing state schools into academies led to a significant increase in quality of the new student intake and also on student performance. It appears that the main drivers for the changes in performance were a change in management structure as well as the replacement of head teachers.

7.10. *Effective school management*

Effective management appears to be a main driver for how well schools can perform and, in turn, what students can achieve academically. In the United States, charter school management organizations (CMOs) have gained momentum as they simultaneously operate several charter schools, thereby achieving a greater scaling effect. A randomized evaluation of CMOs by Furgeson et al. (2012) suggested that, on average, they produce more positive than negative effects on academic outcomes for disadvantaged children. However, individual effects vary, likely a result of differing management practices across CMOs: the researchers showed that variation in performance resulted more from differences between CMOs rather than between schools managed by the same CMO. In a related randomized evaluation of the impact of management standards on student performance in Texas, Fryer (2017) showed that training public school principals in planning curricula, data-driven instruction, and teacher coaching improved educational achievement among students, with effect sizes ranging between 0.1-0.19 standard deviations.

A study from the UK confirmed these positive findings in favor of greater autonomy within school management. In the late 1980's, the British government passed legislation granting schools the right to opt into autonomous management outside of the state school system. Schools seeking autonomy had to propose and win a majority vote among current parents. As a result of the policy, schools that narrowly won the vote and obtained greater autonomy experienced a significant rise in school quality measured in student achievement as compared to the schools that narrowly lost the vote (Clark 2009). Interestingly, the competitive dynamics that played out in the case of charter schools in the United States are not observed here as there are no geographic spillovers from more autonomous to less autonomous schools.

Overall, there are very few experimental studies on the effect of school management on student outcomes and what evidence does exist is drawn from schools in the US. More research based in Europe should analyze the avenues through which school principals

and policymakers can create a learning environment, in which resources are used effectively to improve student outcomes.

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Chapter 2:
Skills to Help Youth Transition into
the Labor Market

Table of contents

1. Initiatives Developing Professional Skills in Schools	48
1.1 Vocational training and apprenticeships	49
1.2 Internships and summer jobs programs	51
1.3 Counseling, mentoring and information in school.....	54
2. Initiatives Developing Professional Skills Outside of Schools.....	58
2.1 'Second chance' interventions	60
2.2 Labor market training programs for youth	62
2.3 Entrepreneurship-training programs	64
References	67

1. Initiatives Developing Professional Skills in Schools

Although initiatives to address professional skill development vary in approach, they can generally be classified into one of the following three categories: i) direct routes from general education to employment, ii) direct routes from vocational education to employment and iii) routes that alternate between hands-on training at firms and general and/or vocational education in school. Schools can create better pathways from high school to further education and the workplace by teaching professional skills in demand by the industry, providing information on employers' requirements and encouraging students to gain relevant work experience. In this section, we review the role played by the educational system in preparing the important transition to work.

Key messages

- Vocational education appears valuable in the short run for developing specific competencies in a short period of time, but there is suggestive evidence that the value of general education may become greater over time
- There is very little evidence on the effects of apprenticeships on employment and earnings compared with other forms of training, such as classroom-based vocational training
- Internship and summer jobs programs can positively impact post-secondary enrollment and employment outcomes, but effects seem to be stronger when these programs are coordinated by the school or college.
- Summer jobs programs can reduce violence among disadvantaged youth, especially when they include a behavioral component.

Open areas for research

- How can we ensure that students in vocational education have the opportunity to pursue tertiary education, if they so choose to? Do students sort themselves into vocational education according to their comparative advantage and how can this process be improved?
- There is a lack of causal analysis on the effects of apprenticeship schemes, which is problematic in view of its widespread implementation in many European countries.
- Research on how to encourage firms to hire apprentices and how to achieve efficient matching is needed.
- What are the optimal schooling levels for apprenticeship schemes?
- What value do apprenticeship schemes provide to youth: technical skills usable in the training firm, in other firms? Or do they provide social skills and networks that can increase employment opportunities?
- How can students make the best use out of summer jobs? Should schools or colleges offer such jobs? Do students benefit from acquiring technical skills, social skills, or social networks? Or is there no evident benefit?

1.1 Vocational training and apprenticeships

There is a long-standing debate around the relative benefits and drawbacks between vocational and general education. General education offers a more theoretical academic curriculum that provides a broader range of learning, whereas vocational training provides more practical skills that are designed for occupation-specific learning. Moreover, vocational training may expedite a student's entry into the workforce, since the skills developed during the course of the training are more specific to industry requirements and thus may be highly valued by employers. In general, it is students who are graduating from high school who face the decision of either enrolling in general education, vocational training, or simply joining the workforce.

In Austria and Germany, students are placed into either general or vocational tracks from an early age. However, due to the nature of vocational training, placing students into this track may restrict their future opportunities to enroll in tertiary education, which in turn could limit their potential future earnings. This is an especially salient issue among students who come from lower socio-economic backgrounds, as they may be placed into vocational tracks for reasons unrelated to their ability or interests. However, it is unclear if removing the barriers to tertiary education would necessarily lead to high enrollment among vocational students.

Indeed, this did not seem to be the case in Sweden. In 1991, an educational reform reduced the curricula differences between vocational and academic tracks by increasing the theoretical content and length of study in the former to match the latter. As a result of the reform, students under vocational training became eligible to enroll in tertiary education. Although the reform appeared to have increased the number of completed years at upper secondary school among vocational students, an IV study by Hall (2012) found suggestive evidence that giving vocational students access to tertiary education did not increase their enrollment rates, nor did it lead to any changes in subsequent earnings. More research is needed to understand the barriers vocational students may face to access tertiary education and the most effective strategies to address them.

On the other hand, placing students into the general education track, when they would be more suited to vocational training, may also limit opportunities for personal development. Goux et al. (2016) used a randomized evaluation to study the impacts of encouraging poor performing ninth-grade students in general education to enroll in vocational training. The intervention successfully shifted students towards vocational training, and grade repetition and dropout rates at the end of middle school were significantly reduced as a result.

However, vocational education may not necessarily lead to positive employment outcomes. Although early enrollment into vocational training could improve student's entry into the economy, the job-specific skills learned may become obsolete at a faster rate. As such, the initial employment advantage of vocational education relative to general education may diminish over time. In Germany, where hands-on training plays an important role in youth education, Hanushek et al. (2017) employed a DID approach and found that employment outcomes for those under general education appeared to have improved with age, compared to those under vocational education. In Austria, blue collar employees are more likely to have undertaken vocational training compared to their white-collar peers. Comparing relative employment rates for recently displaced workers, the same researchers found that younger

blue-collar workers appeared to be more likely to be employed than their white-collar counterparts, but older blue-collar workers seemed less likely to be employed than their white-collar counterparts. This result appears to support the authors' hypothesis that the short-term advantage of vocational training relative to general education diminishes at a later age.

These findings contrast with an earlier study in Romania, which found no impact of increasing the share of graduates in general rather than vocational education on employment or earnings. Using RDD, Malamud and Pop-Eleches (2010) exploited a 1973 reform in Romania and found that increasing the pool of general education graduates did lead to a shift in the types of occupations taken up, but it did not have a significant impact on employment levels nor wages. Overall, more experimental research is needed to understand the relative labor-market benefits and drawbacks between vocational and general education.

Although vocational training is a popular method with which to help students ease into the workforce, apprenticeships can be another effective and more direct way to match students and employers. Whilst vocational training is typically conducted in-class, apprenticeships take place directly in the firm, giving students a more personal hands-on approach to acquiring the relevant technical skills. But do apprenticeships lead to improved labor market outcomes?

In Austria, apprenticeships are a standard practice for students who go through lower secondary school, so called *Hauptschule*. Although *Hauptschule* is considered less academically challenging than the traditional track in secondary school, it is designed to better prepare students for vocational training thereafter. Using an IV approach, Fersterer, Pischke, and Winter-Ebmer (2008) measured the wage returns of time spent in apprenticeships through the *Hauptschule* system. Comparing apprentices with different lengths of experience, they estimate wage returns to apprenticeship schemes of close to four percent per year. The effects were statistically significant, but somewhat below the standard expected returns to general education.⁴

In France, apprenticeship programs are becoming popular. While there are limited causal studies, some non-experimental studies have provided suggestive evidence of their impacts. One apprenticeship program known as *contrat d'apprentissage*, combines general education, theoretical, and practical training courses. Upon completion, participants are awarded a state-certified diploma. Researchers found that the program appeared to be associated with a positive impact on employment, but not necessarily on wages (Abriac, Rathelot and Sanchez 2009; Bonnal, Mendes and Sofer 2003; Simonnet and Ulrich 2000). Further studies on the effectiveness of apprenticeships in France and other countries would be an important addition to the current literature.

Specifically, it is not clear how apprenticeship schemes provide value to students and the underlying mechanism that facilitates this. One possibility is that the beneficial value from such programs results from network effects. The theory is that first contact with employers can help students kick-start their careers through established contacts and relationships built within firms.

⁴ Expected returns to general education range between 5-15 percent (see Card, 1999)

Hensvik and Nordström Skans (2013) test this hypothesis in Sweden, where youth can participate in apprenticeships through a 3-year national vocational program that provides a direct route to employment. *Gymnasieskolans yrkesprogram* (VET) provides classroom training as well as a five-week yearly work requirement with employers. In a non-experimental study, the authors found that students who worked for a firm a year before graduation seemed more likely to find a stable job with the same organization afterwards. Even though there may be other unobservable characteristics that obscure the true effects, the results seem to suggest that networks built during apprenticeships can facilitate the school to work transition.

If network effects are indeed the relevant mechanism in providing value to students, then policymakers should prioritize expanding the range of apprenticeships on offer, rather than focus on in-class development of occupation specific skills. More research is needed to determine if this is the most effective way to improve labor market outcomes for disadvantaged students.

1.2 Internships and summer jobs programs

For students still in school, internships and summer job programs offer an opportunity to gain work experience and develop job-specific skills. However, schools also have an active role to play in helping students with their professional development. Through partnerships with industry, schools can provide young students the opportunity to participate in early work experience that link coursework with practical training. Such programs *a priori* have the advantage of intervening early in a student's career, without imparting the stigma of being associated with subsidized jobs or public employment programs.

Box 1: The School-to-Work Opportunities Act and the European Youth Strategy Initiative

The US School-to-Work Opportunities Act (STWOA), passed in the 1990s, provided US\$1.5 billion to support the development of school-to-work initiatives at state level. This provided seed funding to establish school-to-work transition systems that included formal partnerships between secondary and post-secondary institutions and employers, internship components as well as other career-awareness activities, such as job shadowing. Most evaluations of STWOA-financed initiatives do not employ causal inference methods and only one program, Career Academies, was evaluated by an RCT.

In Europe, the *Youth Strategy 2010-2018* is an initiative that had a similar rationale as the STWOA. This strategy aimed to establish a framework for cooperation between European countries on providing youth specific initiatives and mainstreaming cross-sectorial initiatives. At the time of writing, there are no impact evaluations looking at the effects of the Youth Strategy on disadvantaged youth.

For instance, in the US, the School-to-Work Opportunities Act (STWOA), a large school-to-work initiative uses vocational training and internships to help youth gain work experience. In a multivariate study, Neumark and Rothstein (2006) found that students in schools that implemented work-based learning programs appeared to have higher rates of post-secondary

school attendance. Furthermore, they found that schools with work experience activities such as co-operative education⁵ and internships, were associated with having students of higher rates of employment after graduation from high-school.

The effects observed however were not uniform across characteristics associated with socioeconomic status. Internship and apprenticeship components of the program appeared to have improved employment prospects for minorities, but there did not seem to have an impact for non-minorities. They did appear to have increased college attendance for non-minorities instead (Neumark and Rothstein 2006). In a related non-experimental study, (Neumark and Rothstein 2007) assessed the effects of STWOA for students who were less likely to go to college. Amongst young men who were less likely to pursue further education, work experience components (such as co-op, school enterprise, or internships) appeared to have increased employment and reduced idleness. Specifically, mentoring and co-op programs appeared to have increased their likelihood of enrolling in post-secondary education. Although there was less evidence of the impact of STWOA program on women, results suggested that internship and apprentice programs had a positive impact on their post-secondary enrollment outcomes. Taken as a whole, it appears that school-to-work programs that include work experience components can boost college enrollment and employment, although the effects depend on the individual components of the program. Moreover, the effects differ across racial and gender groups as well as other characteristics associated with socioeconomic status.

There is some evidence on the relative effectiveness of specific components of the STWOA program. In co-op programs pre-dating the STWOA, students with internships lasting at least one semester were required to work together with a supervisor and a teacher to develop a training plan. Although working whilst still in school could be detrimental to academic performance, co-op programs may circumvent this by ensuring that the work experience is complementary to the student's education. Stern et al. (1997) used an IV to identify the impact of co-op programs on test scores for high school students. They found that students who worked without any academic supervision seemed more likely to have lower test scores, but this negative effect was not as strong for students enrolled in co-op programs. This suggests that the co-op programs could have mitigated some of the negative impacts associated with working whilst in school. Although there may have been confounding variables obscuring the true effect, the results were relevant for the later design of STWOA programs, which supported the incorporation of co-op initiatives.

One favored alternative to working during the school year is working during the summer period. Summer job programs are designed to be similar to regular employment, but they take place during the summer vacation period and are typically paid. The programs are primarily, although not exclusively coordinated within the education system, and are not always designed to complement a specific curriculum, nor are they meant to develop a specific set of skills. We review the effects of summer job programs on employment outcomes among the youth.

⁵ In co-op education programs, schools partner with firms to offer students a program that alternates academic education and paid work experience in an industry related students' main field of study. Most co-op programs last for several terms, alternating schools terms with work terms.

In the US, summer job programs typically target youth living in disadvantaged neighborhoods. The aim of these programs is to help these students with their professional skill development, and provide them access to better quality work. Although evaluation of summer programs in general do not capture the quality aspect of employment outcomes, students sometimes demonstrate improved non-cognitive skills and commit fewer violent crimes, which may indirectly impact the quality of employment outcomes. However, there is still some uncertainty over the impacts of summer programs on crime-related behavior, which is closely tied to employment outcomes.

For example, Gelber, Isen and Kessler (2016), studied the US Summer Youth Employment Program (SYEP), which randomly allocates program spots to youth aged between 14 and 21 by lottery. The program provides 17.5 hours of training in job readiness, career exploration, financial literacy, and opportunities to pursue further education. Moreover, participants are placed in entry-level jobs for up to 25 hours a week, in organizations ranging from non-profit, private-sector firms as well as government entities. The authors found that participation in the SYEP led to an increase in average earnings and employability in the year of program participation, but eventually resulted in moderate decrease in average earnings for the three years following the program. Participation did also lead to a decline in incarceration and mortality rates, and had no effects on college enrollment rates. Similarly, Schwartz, Leos-Urbel, and Wiswall (2015) conducted a (natural) randomized evaluation of the SYEP and found that the program had positive effects on the attempted tries and pass rate of exams, as well as larger impacts on average test scores of students who returned to the program.

In a similar vein, Wang, Carling, and Nääs (2006) studied municipalities in Sweden that randomly allocated 200 summer jobs per year since 1995 to high school applicants. They found that participation in the summer job program only slightly improved earnings a year after graduation, and the effects did not persist over time. Taken together these studies suggest summer job programs could provide students with short-term gains, but long-term outcomes remained mixed.

The Summer Chicago Plus (OSC+) is another type of summer job program, which uses a lottery system to place youth from Chicago public schools into six- to eight-week part-time summer positions. Each position is paid the minimum wage at US\$8.25 per hour, and is accompanied with a job mentor who assist and advice students on how to be successful employees. Participants are also encouraged to participate in cognitive behavioral therapy which teaches them how to manage their responses to conflict, and how to set and achieve personal goals. In a randomized evaluation, Davis and Heller (2017) found that while the overall number of arrests remained unchanged, the program reduced violent-crime arrests even after the summer. This reduction persisted without any significant improvement in employment or schooling outcomes on average. Among youths whose employment outcomes were positively affected by program participation, there were more incidences of property crime compared to their peers who were non-participants. The results were unexpected; economic theory posits that improving employment opportunities should increase the opportunity cost of crime, which should reduce its level of incidence.

To better understand these unexpected results, Bertrand and Heller (ongoing) are randomly allocating mentors to participants who have and have not received job offers. Once completed, the study could reveal more insight on the underlying mechanisms behind such programs on employment and crime-related outcomes.

In addition to internships and summer jobs, there are other forms of in-school employment that could take place throughout the year. Here again, the educational system plays a key role. In theory, coordination between schools and students can improve work-related outcomes for participants of such programs, but a lack of coordination can lead to less engagement in school work and subsequently poor academic performance. In France, the educational system does not offer in-school employment coordination opportunities, whereas in the US context, college students can enroll in Federal Work-Study programs (FWS), which provide them with employment on university campus for ten to fifteen hours a week, as well as subsidies that cover up to 75 percent of their wages.

In the French system, Beffy, Fougère, and Maurel (2013) used an IV approach and found that college students working more than sixteen hours per week whilst still in school seemed less likely to graduate. However, in the US context and as part of a non-experimental study, Scott-Clayton and Minaya (2016) found that college students in FWS appeared to be 3.2 percentage points more likely to earn university degrees and 2.4 percentage points more likely to be employed after graduation. The effects were not uniform across all students; among those who would work regardless of the subsidy, participation in FWS appeared to have positive impacts on academic but not employment outcomes. Contrastingly, among those who would not have worked if it wasn't for the subsidy, participation in the FWS seem to have no or negative effects on academic outcomes but positive effects on post-college employment.

Taken as a whole, the results provide supporting evidence to the theory: lack of coordination between schools and students on in-school employment, such as in France, can lead to poor academic performance. However, involving the school administration through employment subsidies for in-school jobs, as is the case in the US, can result in improved academic and employment outcomes. More experimental research is needed to shed light on the impacts of school-to-work initiatives in Europe on student educational and labor market outcomes.

1.3 Counseling, mentoring and information in school

Increasing the availability of information about employers' requirements may be one way of reducing the potential mismatch between the skills required by industry and those acquired by students during their schooling. Reducing informational inefficiencies may help contribute to better social integration and improved socioeconomic welfare of youth. By providing information about how studies and career choices may impact expected labor market outcomes social inclusion over the course of their lives, students may choose to develop skills that ease the transition out of school.

In addition, by connecting students with role models who can give mentoring assistance, counseling, and personalized advice, schools can also guide students to make better decisions and help them prepare more efficiently for the job search.

Key messages

- Little research exists on the impact of mentoring and counseling services in developed countries; existing studies show mixed results.
- Recruiting and motivating effective volunteer mentors can be difficult, even on a relatively small scale.
- There is some evidence showing that schools can be effective bridges to the labor market, by helping students better anticipate the skills they need and by counseling them to apply to sectors where demand for labor is high. However, many of the studies reviewed cannot disentangle the added value of mentoring and counseling from that of other services, such as internships and financial incentives.
- There is suggestive evidence that increasing information to students on future career prospects can impact student choices and improve expected earnings, but information does not always reach those that need it most.

Open areas for research

- Can mentoring improve students' future labor market outcomes? What are effective strategies to recruit and motivate mentors?
- What is the added value of mentoring and career counseling compared to offering financial incentives, internship programs or employer outreach?
- What are effective information delivery strategies to help low-income students choose higher-paying degrees?

1.3.1 Counseling and mentoring in high school

Counseling and mentoring interventions within high schools may help students identify and develop the skills they need to enter the labor market and to plan their post-secondary educational track accordingly. However, career-focused courses and work experiences may negatively affect a student's long-term earning potential by deterring enrollment in post-secondary education.

Evidence from the Career Academies (see Box 3 below) in the US shows that career-related programs delivered in high school can increase employment and earnings without discouraging post-secondary education. Career Academies target high-school students over a two- to three-year period from 9th or 10th grade to 12th grade. The program features small learning communities that follow a rigorous academic and vocational curriculum focused on one field of study, such as health sciences, law, business, finance, or engineering. The learning communities are designed to teach skills demanded from local industries. These academies also offer work-based learning activities established in partnership with local employers.

A randomized evaluation of the program assigned half of students who applied to receive invitations to enroll, while the remainder pursued regular education programs within high schools (Kemple, Poglinco, and Snipes 1999; Kemple 2008). Following up fifteen years later,

Kemple (2008) found that enrolling in a Career Academy led to positive long-term impacts. While the evaluation found no significant impact on high school or university completion rates, Career Academies had sustained positive impacts on students' monthly earnings in the eight years following expected graduation from high school. This impact was mainly concentrated amongst men. Further research is needed to disentangle which of the components of the Career Academy is most effective.

Box 2: What is a career academy?

A Career Academy is a small learning community within a high school, formed with a subset of students and teachers for a two-, three- or four-year span. Students enroll on a voluntary basis, with parental consent. Academies usually have one to three groups of students at each grade level or 100-300 students overall.

Academy classes are taught by regular school teachers from different subjects. They are scheduled during the school day, and students attend them as a group. Students in career academies follow career-oriented and academic courses, focusing on a specific professional field. They must also acquire some work experience, through internships or community service assignments. Students receive college and career counseling during their senior year.

Finally, career academies are developed and implemented in partnership with local employers and post-secondary educational institutions. The career themes are selected together with local industry partners. Partners can also participate in academy activities, such as sending speakers to inform students of industry and career options, participating in mentoring programs or providing internship opportunities for students.

Similarly, another randomized evaluation in the US found that a tutoring, mentoring and financial incentives program in high-school increased both the likelihood of being accepted or attending college as well as labor market outcomes (Rodríguez-Planas, 2012). The program, known as Quantum Opportunity Program (QOP), was a five-year after-school program aimed at improving high-school completion rates, increasing post-secondary education or training and promoting healthy behaviors in the US. QOP provided mentoring by full-time caseworkers, academic tutoring, and life-skills courses to students in ninth-grade up to one year after high-school graduation. To encourage participation, students were offered financial rewards per each hour devoted to program activities while in school. If they obtained a high school degree and enrolled in postsecondary education and training, they would receive an additional lump sum payment. The mentoring services provided were also of high quality. Administrators selected case managers with prior experience and a limited caseload of only fifteen to twenty-five students. The objective was to ensure that the relationships were highly personal and long lasting.

On average, QOP increased high school completion rates and postsecondary education enrollment two years after the end of the program, but had no impact on employment outcomes five years after the end of the program (Rodríguez-Planas, 2012). Results were different depending on gender: while QOP improved both educational and long-term employment outcomes of women, it had no impact on men's educational or employment outcomes. Men who enrolled in QOP also showed increased engagement in risky behavior five years after the end of the program. Again, further research is needed to disentangle

whether these impacts were driven by the mentoring, tutoring, or financial incentive components.

1.3.2. Information on returns to tertiary education

Providing high school students with information on the economic returns to post-secondary education can impact their track choices during their formative years and their future employment outcomes.

Expected earnings may be an important aspect of degree choice and student loan decisions, however students' expectations are not always aligned with reality. For example, a survey of 49,166 high-school graduates applying for a government loan in Chile showed that students planning to enroll in a low-earning degree were more likely to come from a low socioeconomic background, and they overestimated future earnings by 139 percent on average (Hastings, Neilson, and Zimmerman 2017).

Using a randomized evaluation, the authors explored whether providing information on expected earnings had an impact on schooling decisions. Chile's Ministry of National Education asked financial aid applicants to complete a survey. A random subset of these students would receive additional information on expected monthly earnings and loan repayment costs for different degree programs. Results showed that disclosure of expected earnings did not affect whether students enrolled in college but did affect degree program choice and increased the likelihood of enrolling in degrees associated with higher predicted earnings. The impact was higher for students from lower socioeconomic backgrounds and with low admission test scores. However, students from disadvantaged backgrounds were less likely to complete the initial survey, which was necessary to receive the information disclosure. Finding effective strategies to ensure the information reaches those who benefit the most is an open area of research.

In a similar vein, Baker et al. (2018) conducted a randomized evaluation in two community colleges in northern California to measure the impact of providing students with information about salaries and the probability of employment. Researchers randomly assigned information on labor market outcomes, including high and low estimated earnings and likelihood of employment, for a variety of degree programs. Survey data collected before the intervention showed that low-income students made larger errors in estimating the probability of employment of each major than their higher-income peers. In addition, researchers found that after the intervention, students reported they were more likely to choose majors associated with higher salaries and employment prospects. Yet, these findings must be interpreted with caution as they measure students' reported probability of choosing a major in a hypothetical scenario.

Taken together, these results suggest that providing students with information about expected labor market outcomes can affect students' educational choices.

1.3.3. Counseling and mentoring in university

Schools can also provide mentoring and counseling services at a later stage, when students have already enrolled in university. In contrast to counseling and mentoring services in high school, the focus of these programs at a university level is on developing job-search skills rather than planning degree and career choices.

Job-specific mentoring seemed to have limited impact on job search behavior. In a randomized evaluation, Behaghel et al. (2014) evaluated job-related mentoring services for scholarship students in tertiary education in the Parisian region and in Lille, France. The mentoring was conducted by previous students or young professionals, and included collective coaching sessions and student community group activities, from initiatives such as cultural outings and networking events to the creation of an online platform (Viadeo) where mentors and students could interact. Take-up for the program was low, as only 16 percent of eligible students decided to enroll. The intervention had no statistically significant effects on job search behavior, such as time spent on job search, channels used to search for jobs, time spent on internships, or number of jobs applied to. The program also had no effect on students' integration into the job market, including employment rate, type of labor contract, or remuneration. These weak results could be explained by the difficulties in finding appropriate mentors and program applicants.

Mentorship alone may be insufficient to influence job-seeking behavior, and complementary forms of assistance may be necessary. Using a randomized evaluation, Cahuc et al. (2012) tested the effectiveness of a job-search assistance program implemented in 28 French universities. The program targeted youth with weaker academic records, with a majority of participants having dropped out of university. Researchers randomly assigned participants to receive different combinations of job counseling geared towards sectors facing recruitment difficulties, as well as professional mentorship, and job-search contracts⁶. Overall, intensive counseling services increased the number of job interviews youth received. These services were particularly effective when participants were encouraged to look for work in sectors experiencing recruitment difficulties, and when job counseling required them to sign a contract. The combination of the three services also increased the likelihood of finding work and had a positive psychological impact on participants. In contrast, mentorships alone had a negative impact on participants' feelings of wellbeing and on the perceptions of their career prospects.

2. Initiatives Developing Professional Skills Outside of Schools

The high proportion of school dropouts and the large number of individuals identified as neither working nor in education or training (NEETs) calls for interventions out of the traditional schooling system, which can provide them with a second chance.

One key question is whether such interventions should follow a “work first” approach, designed to offer work as an alternative to further schooling, or a “train first” approach, which assumes that a minimum skill level is a prerequisite for success in the labor market. Over the

⁶ Job-search contracts outline a participant's duties and the different services they are entitled to receive. The contract should specify the frequency of meetings with the caseworker and requires the participant actively search for work. If participants did not fulfill these duties, participation in the job search assistance program could be suspended.

past decades, active labor market policies (ALMP) in Europe have shifted toward “work first” approaches, exemplified by the focus on job search assistance and counseling to the unemployed. In a large review of over 200 evaluations on ALMPs for all age groups, Card, Kluge, and Weber (2010, 2017) highlight an important trade-off. Although job search assistance programs that emphasize “work first” generate consistent positive impacts over time, the initial impacts of training are small, or even negative in the short term, but become positive and large in the medium or longer run (two to three years after completion). It is important to understand whether and how this tradeoff applies to disadvantaged youth, including those that drop out of high school. Indeed, the larger gains associated with the “work first” approach must be compared with larger impacts of training after a few years, and potentially over a whole career.

Key messages

- The Job Corps program in the US showed that an intensive and expensive program can have large positive and lasting impacts on the labor market outcomes of low-income youth. In contrast, less intensive federal training programs may have no beneficial impact on low-income youth.
- Non-experimental evidence from Germany suggests that longer training programs may be necessary to generate long-term impacts on employment and earnings.
- There is some evidence that the recent policy shift toward shorter, job-search-oriented training programs were less effective for unskilled youth than for other groups. Short programs starting soon after individuals become unemployed do not seem to improve the likelihood of finding a job.
- Little is known about disadvantaged youth who do not participate in any professional skills development training, and there is little evidence on how best to increase their participation.

Open areas for research

- More experimental research is needed to understand the effectiveness and cost-effectiveness of intensive “second chance” programs in Europe, including long-term effects.
- Where there is evidence of positive impacts, more research is needed to disentangle what components of various packaged interventions are most effective, including by experimental variation of the mix of academic and vocational instruction as well as where training takes places (e.g., between classrooms, simulated workplaces, and firms).
- Alternative delivery modes remain to be tested, such as the effectiveness of different type of vocational training providers and incentives attached to them, as well as the connection between training and placement services.
- More research is needed to understand participation—or lack thereof—of most disadvantaged youth; what could motivate them, how to encourage their persistence in training, and what net benefits can be expected.

2.1. 'Second chance' interventions

Second chance measures aim to re-engage school dropouts in education and training. There are many possible reasons for leaving education early. For example, some youth may have family responsibilities, or may need to work due to their economic situation. Taking this into account, second chance education opportunities can be delivered outside normal study hours, offer distance or blended learning, and in some cases, provide youth with personalized counseling, social skills training, and health education.

The Job Corps program in the US is the main source of evidence on “second chance” programs for disadvantaged youth (see box 4). Developed in the 1960s, the program was the subject of a series of randomized evaluations in the 1990s involving a nationally representative sample of more than 15,000 eligible applicants, aged sixteen to twenty-four, most of whom enrolled without a high school diploma. A follow-up randomized evaluation (Schochet, Burghardt, and McConnell, 2008) found that the program provided participants with the instructional equivalent of one additional year in school and significantly increased the rate at which participants completed high-school equivalency credentials (such as the GED) or vocational certificates. It significantly reduced criminal activities and increased earnings for several years post-program.

These positive effects stand in contrast to other federal and employment training for low-income youth. Randomized evaluations of the Supported Work Demonstration, the National Job Training Partnership Act and JobStart Demonstration all found an insignificant impact on youths' post-program earnings (Bloom et al., 1997). Researchers also studied training programs funded under Title II-A of the Job Training Partnership Act of 1982 (JTPA) using a randomized evaluation. While the study found that these programs had positive effects on earnings for adults, they found no impact on earnings for out-of-school youth (14 to 21 years old).

Such different outcomes may be due to the fact that the Job Corps program is more intensive, but the downside is it is more expensive. The program costs US\$16,500 per participant, compared to less than US\$3,000 per participant for a typical JTPA program. As underscored by Schochet, Burghardt, and McConnell (2008), this cost remains large compared to measured benefits: increased earnings, reduced use of social assistance or educational services, and reduced crime sum up to a gain of only about US\$4,000 over four years. Such an intensive approach may be justified on redistributive grounds—the program had clear private benefits on participants—, even if it was not cost-effective. Alternatively, the program may have had positive effects in the longer run or that were not well captured by tax data. Moreover, cost-effectiveness of the program could also be improved by reducing its length. To that end, Flores et al. (2012) used a matching approach to evaluate the impact of different lengths of exposure to academic and vocational instruction in the Job Corps. They found that total effects on future earnings appear to increase with the length of exposure, but that the marginal returns to additional instruction seemed to decrease over time.

Another important question is the differential impact of Job Corps. The evaluation estimates showed positive effects on most socio-demographic groups, but the effects on earnings in the four years after enrollment were greatest among those who enrolled as older youth (aged 20-

24), than for adolescents (aged 16-19). These effects persisted five to nine years after enrollment for older youth, whereas effects for those aged 16-19 disappeared (Schochet, Burghardt, and McConnell 2008). Similarly, using a randomized evaluation, Eren and Ozbeklik (2014) analyzed impacts across the earnings distribution and identified that the positive impact of Job Corps on earnings were strongly driven by young adults.

The larger earnings effects for young adults compared to adolescents may be due to two dynamics: Job Corps may be more effective in enhancing human capital and thereby the hourly wage of young adults, or it may have a stronger effect on their labor supply behavior and hence the number of hours they work. Blanco, Flores and Flores-Lagunes (2013b) aimed to disentangle these two mechanisms among Job Corps participants. They found that Job Corps was associated with increased potential wages for both young adults and adolescents, thus suggesting significant and similar human capital accumulation for both age groups. The different earnings effects underscore the need to understand the program's impact on labor supply behavior as well.

Higher wage rates may be interpreted as evidence of human capital accumulation, but they may also reflect a pure signaling effect associated with the educational credentials acquired by Job Corps participants. Does the certification of skills by the General Education Development (GED) certificate have a positive impact in itself, counteracting the negative signals associated with dropping out of high school? An extensive literature has studied the impact of GED certification on post-secondary schooling and labor market outcomes of high school dropouts, within and outside the context of Job Corps, with mixed results (Heckman et al. 2012). In particular, using an RDD approach, the GED appears to have had small positive impacts on post-secondary attainment (Jepsen et al. 2017). Using DID, Tyler, Murnane, and Willett (2000) estimated the signaling impact of GEDs. By comparing earnings outcomes for individuals with the same observed levels of human capital in states with different passing standards, they were able to isolate the signaling effect. They found suggestive evidence that signaling effects were positive for test-passers who were white but there appeared to be no signaling impact for minority test-takers.

Box 3: Job Corps

Job Corps is one of the largest federally funded job training programs in the US that followed JOBSTART. It provides intensive vocational training, academic education and a wide range of other services, including counseling, social skills training and health education for low-income youth between sixteen and twenty-four years of age. The program costs US\$1.5 billion and serves 60,000 new participants a year, taking up 60 percent of the annual allotted budget for youth training and employment services. It is defined by its high-cost, intensive training as well as on-the-job practice, and is unique in offering services in a residential environment. In addition, the vocational curriculum is developed through partnerships with business and labor organizations and is specific to competencies necessary to work in each industry. It is administered by lottery for those who apply, allowing researchers to conduct experimental evaluations of the program impact.

Youth who apply to the program are randomly assigned into treatment and comparison groups at each Job Corps service location. The program aims to develop participants' human capital, including reading, math, and writing skills, and to help students attain the GED certificate through a uniform, computer-based curriculum for major academic courses. Most academic and vocational instruction is individualized and self-paced. While the length of the program varies widely, it is on average around eight months and most participants reside at a center while training (Schochet, Burghardt, and McConnell 2008).

Given the importance of Job Corps in the US, both in terms of policy lessons and public investment, it is worth noting that no similar program has been implemented at such a large scale and systematically evaluated in Europe. Such programs are, however, being explored and developed, calling for more research to be undertaken in this field. For example in France, the *Établissement pour l'insertion dans l'emploi (EPIDE)* is a "second chance" program targeting youth aged 18-25. The program provides a small stipend and participants receive orientation and job-search-related training, opportunities to volunteer and to participate in physical sports, and attain a drivers' permit. Another 'second chance' program in France is the *Écoles de la deuxième chance*, which consist of 'second chance' schools providing dropouts with an opportunity to gain a professionally recognized certificate. The initiative includes development of basic skills, such as math, French and general culture among others; internships in companies as well as cultural and physical activities.

Overall the literature shows that second chance interventions in the US can be an effective way to re-engage youth in education and training and to improve their labor-market and crime related outcomes. Additional research is needed to evaluate similar initiatives in Europe, particularly to unpack the impact of the different components, determine the optimal levels of intensity and duration, and understand the long-term impacts on employment.

2.2. Labor market training programs for youth

Labor market training programs are often advocated as a way to improve and better signal the skill qualifications of youth. In Germany, research by Osikominu (2013) compared short-term job-search-oriented programs (lasting a few days to twelve weeks), to long-term human capital-intensive training programs (lasting six months up to three years), some of which

resulted in a new vocational degree. Though the study relies on strong assumptions and does not focus specifically on youth, it described general tradeoffs that apply to young jobseekers aged 24-35. Short-term training reduced the remaining time in unemployment and appeared to have had small positive effects on subsequent job stability, while long-term training initially prolonged unemployment but seem to have increased employment immediately after the end of the program. This subsequently coincided with more stable employment spells and higher earnings. Low skilled workers and foreigners received particularly high gains in earnings from long-term training. This provides suggestive evidence in favor of long-term training as a way facilitate the occupational advancement of disadvantaged youth.

Evaluations of training programs for youth in Europe have found mixed results. A survey of nineteen studies by Caliendo and Schmidl (2016) found that in-class training was associated with either positive or no effects on employment, and may have crowded out formal education. Firm-based training or mixtures of firm-based and classroom training tended to have negative effects on employment, even though the number of studies is limited and two of the four programs evaluated took place in depressed labor markets, in which positive impacts were harder to achieve. None of the evaluations surveyed entailed randomized evaluations, so some selection bias may be present.

Given the potential benefits of labor market training programs, the design and implementation of these programs are critical in ensuring their efficacy. Specifically, we focus on two design questions for the remainder of this subsection: the timing of program interventions and the optimal mix of practice vs. training, and educational content.

In Sweden, Carling and Larsson (2005) explored the importance of the timing of training interventions for youth in a DID study. They evaluated a measure implemented in some municipalities which guaranteed that unemployed individuals aged 20-24 would be assigned to some labor market program within 100 days of unemployment. Most youth were assigned to workplace practice programs, while others were assigned to pure training or a combination of both training and practice. The authors did not find any association between early intervention and labor market outcomes of youth. Similarly, Cockx and Belle (2016) used an RDD to analyze the impact of quickly assigning unemployed youth to interventions involving intensified job search help, counseling and training programs. In the Flemish region of Belgium, they studied school-leavers who were entitled to unemployment benefits and were eligible for intensified counseling and training. Eligibility was determined by the Youth Work Plan (YWP) and if school-leavers were unable to find a job within three months. Early access to intensified counseling and training did not appear to significantly improve job finding, and there was a negative impact on the number of hours worked.

A second question is the appropriate mix of education and practical experience in firms. One of the leading European programs focusing on youth skills in the transition from school to work is the UK's New Deal for Young People. The program starts with an intensive job search stage, after which the participant typically either enters subsidized full-time employment, full-time education or training in one of the work placement programs for a period of six months. The full-time education or training program can last up to one year. Alternatively, youth may combine work and training, in which case employers are obliged to offer education and training at least one day a week ideally leading to a formal qualification. In a matching study, Dorsett (2006) found that participants with mixed training and

employment programs were associated with better outcomes compared to those who solely pursued training services. Interestingly, one other very effective option was to remain in the stage of intensive job search. However, the study covered less than two years after entry into program, while training programs may have had more positive effects in the long run.

Collaborations with the private sector can also lead to improved outcomes for disadvantaged youth as compared to training programs without an on-the-job content. In an early non-experimental paper in France, Bonnal, Fougère, and Sérandon (1997) found that students with lower educational attainment appeared to benefit more from programs with stronger on-the-job training content. In a more recent matching paper, Pessoa e Costa and Robin (2009) estimated the impact of one specific program that mixed training with on-the-job components called qualifying contracts. This initiative targeted youth who had dropped out of school or who had low-qualifications, and offered them a work contract and vocational training. The contract lasted between six and twenty-four months and could be renewed once. The training duration represented at least 25 percent of the duration of the contract and was usually held within a teaching institution. Pessoa e Costa and Robin (2009) found that the program was positively associated with increased monthly wages, income, and employment rates five years after completion of the program.

Taking the results as a whole, labor market training programs seem to have positive effects on employment and earnings of unskilled youth when they are longer and when they combine work experience with more theoretical training. However, randomized evaluations are needed to shed light on what may be the optimal mix of work experience, training and job placement services, as well as to understand the drivers of participation and perseverance of disadvantage youth in such programs.

2.3. Entrepreneurship-training programs

Youth coming from disadvantaged areas often face difficulties in finding employment, either because they lack access to information about job opportunities or because they have not attained a sufficient level of education or experience. A solution to help these youth earn an income and become better off can be to encourage them to become entrepreneurs. However, launching and expanding a business can prove a difficult task for first-time entrepreneurs, who may lack financial management skills or access to credit, or have low self-confidence.

This section focuses on entrepreneurship-training programs that can potentially improve financial management and soft skills important to start and run a successful business.

Key messages

- Overall, there is little evidence on the impact of entrepreneurship-training programs for youth in Europe on employment and earnings.
- Existing evaluations show entrepreneurship-training programs did not trigger increases in business creation among participants.

- Entrepreneurship training did help improve business performance in some cases, but identifying and targeting high-potential youth for these trainings can be difficult.
- Entrepreneurial soft skills can be taught at an early age, but further research is needed to assess whether these skills have long-term impacts on business creation and performance.

Open areas for research

- How can entrepreneurship programs identify youth most likely to benefit from self-employment?
- How can programs be designed to help participants sustain and grow their business? Do incubator programs help youth launch lasting businesses?
- What non-cognitive skills are important for entrepreneurship? When is the right time to develop these skills?
- What are the relative effectiveness of different components of entrepreneurship programs, e.g. business and financial management theory, facilitated access to credit or coaching to develop self-confidence?

Existing evaluations of programs designed to teach entrepreneurship skills generally find that it is difficult and does not lead to increased business ownership, at least in the short term (Fairlie, Karlan, and Zinman 2015). However, these programs have shown some positive impacts on improving desirable financial practices that can indirectly foster social integration of disadvantaged youth.

For example, in the Netherlands, a randomized evaluation of an early entrepreneurship program provided in primary schools demonstrated some promising outcomes (Huber, Sloof, and Van Praag 2014). BizWorld was a program that aimed to develop basic business and entrepreneurship skills at an early age, by providing lessons on the basics of business and entrepreneurship, teamwork and leadership, in the classroom for five days over a two to four-week period. The authors found that BizWorld increased self-reported non-cognitive entrepreneurial skills, such as risk-taking as well as creativity and persistence, suggesting these skills can be developed at an early age. However, it was not clear whether these self-reported skills influenced longer-term outcomes in terms of business creation and performance. More long-term follow-up data on entrepreneurship outcomes following programs like these are needed.

Similarly, Crépon et al. (2014) conducted a randomized evaluation in France of an entrepreneurship program targeted at disadvantaged youth aged eighteen to thirty-two. Some participants were randomly assigned to group courses targeting business development, individual counseling with mentors, and support for securing project financing. This entrepreneurship-training program did not increase youth entrepreneurship and actually delayed business creation. Over two years after the start of the program (28 months), youth who were assigned to receive the training were at a higher risk of being unemployed and obtained lower revenues from their business. Participants who received the treatment were however less likely to report psychological distress. Providing youth information and business

training appeared to be insufficient for encouraging successful business creation. Further research is needed to investigate whether other barriers, such as low self-confidence or a lack of entrepreneurial spirit, may be at play, and how these can be addressed.

An example from the Netherlands suggests that entrepreneurship programs may sometimes actually discourage youth from self-employment. Oosterbeek, van Praag, and Ijsselstein (2010) used a DID approach to evaluate the effects of a large entrepreneurship program in a vocational college. The authors found that entrepreneurship training that involved student-run companies had no significant impact on students' self-assessed entrepreneurial skills and had a negative impact on their intention to become entrepreneurs. It is possible that the program gave students a more realistic view of the effort needed to start and own a business, discouraging them to become entrepreneurs. This study included only one treatment school and did not shed light on the underlying mechanisms explaining the negative impact.

Evidence suggests that business training programs do not directly affect the likelihood of business creation, but may have indirect benefits on other business outcomes. In Bosnia and Herzegovina, Bruhn and Zia (2013) ran a randomized evaluation to test the impact of a business and financial literacy training program for young microcredit borrowers. The training program had no impact on business creation or survival. However, it improved business practices, investments and loan terms for surviving businesses. The intervention was most beneficial for females who entered the program with greater financial literacy; these participants had better business performance and sales after the training program.

While entrepreneurship programs may struggle to stimulate new business creation among youth, there is evidence that they can increase their engagement in paid employment. A randomized evaluation of the *Groupement de Créateurs* program in France (Algan et al., 2016) explored the impact of helping youth develop social and decision-making skills so they could set and achieve their own priorities, rather than telling them how to pursue a chosen project.

Participants took part in group workshops to confirm their desire of carrying out their project and to develop their idea. They also met regularly with an individual counselor to explore their motivations, strengths and weaknesses as well as to develop their initiative and autonomy. Participants could also participate in a six-month academic program hosted at a local university, which also granted them a technical degree in entrepreneurship. The final phase of the program consisted of the creation of the new business or organization, using the skills learned from counseling and training. According to Algan et al (2016), youth assigned to *Groupement de Créateurs* were more likely to participate in training activities and to find a job two years after the start of the program than youth in the comparison group. They also received higher wage earnings, on average, and were less dependent on social benefits. Although this program encouraged more youth to look for salaried employment at the expense of entrepreneurship, it had an overall positive effect on labor market outcomes.

Entrepreneurship training programs in Europe have had mixed outcomes overall. More research is needed to determine conclusively if such programs do have an affect on entrepreneurship or labor market outcomes, and the differential effects across program components.

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Chapter 3:

Migrant Inclusion

Table of Contents

1. Arriving in the Host Country: Citizenship, Residency, and Work Permits	73
1.1. <i>Family planning and health</i>	73
1.2. <i>Educational and labor market outcomes</i>	74
1.3. <i>Criminal behavior.....</i>	74
2. Facilitating Social Integration	75
2.1. <i>Language initiatives.....</i>	76
2.2. <i>Education initiatives</i>	77
2.3. <i>Access to health and family policies</i>	83
3. Interventions Facilitating Labor Force Participation	86
3.1. <i>Job search assistance and counseling</i>	87
3.2. <i>Training programs.....</i>	89
3.3. <i>Subsidized employment and temporary jobs</i>	89
4. Aid and Transfers	90
References	92

1. Arriving in the Host Country: Citizenship, Residency, and Work Permits

Residency and work permits are fundamental aspects of social inclusion for migrants. Evidence suggests that increasing migrant families' access to regular residency and employment rights can improve outcomes such as educational attainment of children and adults, labor market participation, and reduced criminal behavior.

Key messages

- There is suggestive evidence that providing access to full citizenship can reduce immigrant fertility, improve health and educational attainment for youth, and enhance opportunities for labor market integration.
- Legal work permits can also reduce criminal behavior among migrants. Some studies suggest this decline can be linked to better labor market and education prospects.

Open areas for research

- What are the costs and benefits of simplifying administrative processes for migrants and refugees to obtain legal residency?
- What education or labor market interventions could foster migrants' sense of belonging to society? Can citizenship education strategies for newly arrived migrants increase civic engagement?
- Are there effective information or awareness strategies to increase support for migrant legalization policies among the broader population?

1.1. Family planning and health

There is little evidence on the impact of access to citizenship on immigrants' family planning behavior or on the health outcomes for their children. More research in this area could further explain important ways in which access to citizenship affects such families.

However, one study in Germany does shed some light on the relationship between citizenship, fertility decisions, and child health. Using a DID approach, Avitabile, Clots-Figueras, and Masella (2014) measured how the introduction of citizenship rights for children born in Germany to immigrant parents affected family planning and parental investment in health and education. Prior to the reform, citizenship had been granted by descent—which referred to having German ancestry—or through naturalization, marriage, or adoption. The authors compared changes in the health and socioemotional outcomes of children born to foreigners after 2000 (children affected by the reform) to changes in the health and socioemotional outcomes of children born to at least one German parent (children automatically German at birth even before the reform). Their findings suggested that the reform may have led to a decline in parent fertility and improvements in health and socioemotional outcomes for children. More research in this area, especially research that could establish causal

relationships, would help policymakers better understand the ways that citizenship laws affect family planning and health outcomes among immigrants.

1.2. Educational and labor market outcomes

Several studies suggest that regularizing the status of immigrants, or providing legal access to education and the right to work, may result in improvements in welfare for immigrant children and adults alike. Legalization seems to have a positive effect on participation in both education and labor markets across several contexts.

Exploiting an exogenous policy change known as the Immigrant Reform and Control Act (IRCA) that granted amnesty to undocumented immigrants who entered the United States before 1982, Cortes (2013) used a DID approach to measure educational outcomes for children of immigrants. The study compares changes in college enrollment rates before and after IRCA for two immigrant youth groups: refugees with permanent legal status and economic immigrants with undocumented status who became eligible for the amnesty program. The study's findings suggest that youth who were granted amnesty under IRCA may have been more likely to enroll in postsecondary education.

Legal work and residency permits can also improve labor market integration for migrants. In Italy, Devillanova et al. (2014) evaluated the impact of gaining temporary legal work and residency permits on labor market outcomes. Using an RDD approach where a sharp cut-off date of arrival determined eligibility, the authors find that the prospect of legal status significantly increased the employment probability of eligible immigrants as compared to other undocumented immigrants.

Legalization may also positively impact both employment rates and wages. In the US, Orrenius and Zavodny (2015) used a DID approach and found that providing temporary work and residency rights to illegal immigrants may have led to higher employment rates for less-educated women and higher earnings for men. In a study using a combined RDD and DID approach, Barcellos (2010) analyzed the impact of IRCA on employment outcomes and found that legalization had a positive effect on wages and a negative effect on working in illegal occupations.

Finally, access to citizenship may have different effects depending on migrants' levels of qualifications and experience. Using DID, Kaushal (2006) evaluated the outcomes of the 1997 *Nicaraguan Adjustment and Central American Relief Act (NACARA)* and suggested that eligible male immigrants received slightly higher weekly earnings as compared to non-eligible immigrants. Moreover, these impacts were stronger for more educated individuals (those with at least a high school degree).

1.3. Criminal behavior

Legalization can also reduce incentives for undocumented migrants to participate in criminal behavior. In a study on the 1986 IRCA, Baker (2015) used the quasi-random timing of the legalizations as an instrument to measure the impact of IRCA on crime. He found that legalization may have decreased crime by 3 to 5 percent, largely due to fewer property crimes.

The author hypothesizes that the drop in crime rate may have occurred as a result of greater labor market opportunities among IRCA applicants.

Several studies from Italy have also demonstrated the role of providing the right to work on reducing crime. Using an RDD approach, Pinotti (2017) evaluated the impact of obtaining the right to work by exploiting an arbitrary eligibility cut-off for new migrants: comparing those who apply minutes before a deadline to those who apply minutes afterwards. In Italy, most migrants acquire legal status through work-related residence permits sponsored by employers. Illegal migrants often start working without a permit and hope that their employer will eventually sponsor them for a residence permit. However, there are fixed quotas for permits each year. Applications must be submitted online by employers only on specific days and are processed on a first come, first served basis until the quota is exhausted. Pinotti argues that both the rationing of permits and the frequency of applications during the first hours the application is open lead to several thousand applicants being denied legal status because their application was submitted only a few minutes past the cut-off time. The study took advantage of this sharp cut-off to measure the impact of resident permits on crime. Results suggest that obtaining the right to work led to a fall in crime rates of regularized immigrants by more than half, or a reduction of 0.6 percentage points, from a baseline crime rate of 1.1 percent.

A similar finding was reported by Mastrobuoni and Pinotti (2015), who measured the impact of legalization on recidivism in Italy. On January 1, 2007, Bulgaria and Romania joined the European Union, which automatically gave Bulgarian and Romanian nationals the permanent right to work and reside in many EU member states, including Italy. Using a DID design, researchers compared changes in outcomes for former Bulgarian and Romanian inmates in Italy—before and after the EU expansion—to changes in outcomes of a comparison group of former inmates from candidate EU member countries. The authors find that the granting of residency rights may have led to a 50 percent reduction in recidivism among those exiting prison after the change.

Taken together, these studies suggest that a lack of legal residency and authorization to work constitute two of the most conspicuous barriers to migrant inclusion. Regular residency and employment rights can improve migrant children's health and wellbeing, postsecondary education enrolment, labor market integration, and chances of avoiding criminal behavior. Further research could shed light on the costs and benefits of simplifying migrant legalization processes, for example by weighing the costs of improved administrative procedures and shorter waiting times against the benefits in terms of improved migrant wellbeing, health, and labor market participation. In addition, research is needed to better understand which interventions can improve a migrant's sense of civic engagement and belonging to society (beyond legal status), as well as which strategies can most effectively improve the acceptability of regularization policies by the native-born population.

2. Facilitating Social Integration

Introduction and cultural information programs can help guide immigrants toward full participation in their host country. Governments across Europe provide a variety of initiatives to help immigrants integrate into their host countries. These often include orientation courses,

short-term language and civic education, and accelerated access to public employment and other services.

In general, language acquisition initiatives are an important priority for European governments, although evaluations of how to improve these programs are rare. More broadly, education is a vital step in the social integration of immigrant children, with many longterm implications. However, more evidence is needed to understand how schools can address the specific needs of migrant students, who may require more tailored support or more detailed information about educational choices. Moreover, housing policies have a significant effect on educational, employment, behavioral, and welfare outcomes that can encourage or prevent social inclusion. Health policies also have the potential to improve long-term wellbeing among immigrant populations. Lastly, family policies may inflict adverse effects on employment outcomes, particularly among mothers.

2.1. Language initiatives

Language is an integral part of cultural and ethnic identity. While learning the language of the host country is important for integration, there is still little robust evidence on the best methods for improving the efficiency and quality of language acquisition programs.

Key messages

- Early language acquisition is important for educational outcomes of migrant students.
- Pay-for-performance interventions can foster language-learning amongst immigrant adults.

Open areas for research

- The positive impact of young children’s language acquisition on their school performance is intuitive, but we should learn more about the effects of child or adult language acquisition on employment outcomes and social inclusion more generally.
- Can we encourage adults to invest more in language acquisition? Are the constraints that prevent such investment only financial, or can we understand what other constraints exist and how to overcome them?

Language acquisition—from an early age—appears vital to academic and labor market success for immigrant children. Low language skills in primary school may track students into less competitive postsecondary schools, with subsequent long-term employment implications. Using achievement tests administered randomly in English or Spanish to Latino immigrants in the United States, Akresh and Akresh (2011) found that although most foreign-born students scored higher on tests in Spanish, this was not the case when children arrived at an early age. Children who arrived at an early age did not show statistically significant differences in performance on tests administered in either their native or host country language, demonstrating that early language skills can affect educational outcomes.

Another study from the United States links language-skills to longer term outcomes. Bleakley and Chin (2004) used an instrumental variable approach to suggest that early acquisition of host country language skills was positively associated with wages, likely because children with better language skills were more likely to complete a higher number of years of schooling. These two studies emphasize the importance of host country language instruction for immigrant children as early as possible in the life of an immigrant child.

Although many European governments provide language development courses, rigorous evaluations of these courses are rare. In a pilot study by the Swedish government, a group of municipalities that applied to participate were randomly assigned the right to grant cash bonuses to adult migrants who received passing scores in Swedish language courses. Through this RCT, Åslund and Engdahl (2018) found that this pay-for-performance intervention linked with language service delivery had substantial positive effects on average student language achievements in metropolitan areas. The intervention did not seem to affect enrollment in language courses suggesting that although pay-for-performance incentives may increase language learning among migrants, more research must be done to determine how best to encourage take-up of such interventions.

New research is looking at innovative ways to deliver language training to immigrants using online courses in Germany including through a randomized evaluation of the impact of online German language learning platforms on refugee integration (Grote, Klausmann, and Scharfbillig, ongoing). The intervention has not yet been completed, but its findings will hopefully add to the growing understanding of how best to deliver language learning to migrants and refugees.

2.2. Education initiatives

Education not only builds skills but can also promote social integration and mobility, making it a vital component of the life of immigrant children. However, not all immigrants are able to access education in ways that allow them to take advantage of these benefits. Studies examining the effects of reducing barriers to education find that many barriers persist even after interventions that aim to promote accessibility. Furthermore, while bilingual classrooms don't seem to present a barrier to education, tutors and counselors seem to positively affect immigrants' educational outcomes and choices.

Key messages

- Educational policies may have the ability to increase migrant children's educational attainment and their social mobility. There are non-experimental findings in favor of some types of interventions, such as early enrollment, but not others, such as late tracking and school choice.
- Reducing the cost of college is not useful for migrants if they still face substantial fees or if they cannot access legal jobs.
- Bilingual courses for children are not an obstacle to social inclusion.

- Providing targeted tutoring and counseling sessions to high-achieving migrant students can improve their motivation and academic performance, and impact their educational choices.

Open areas for research

- More evidence is needed to understand the specific impact of education policies and institutions on migrants. Only a small number of policies in limited locations have been studied rigorously.
- Migrants are on average poorer and less educated.⁷ More research is needed to understand how migrants' specific situations (including lack of familiarity with culture and language, lack of inclusion, illegal status, and stress) may present obstacles to benefitting from educational interventions.
- How efficient are educational systems that attempt to adapt to migrants' specific needs? There is limited evidence on such attempts, including bilingual education programs. Relatedly, are educational systems discriminatory, and if so, how can this be countered? Are there many unschooled children or early dropouts in these communities, and how can this be prevented?
- How do migrants behave when faced with several educational options? How do their aspirations and anticipated returns affect these choices? Do they make informed school and college choices?

Education is a major instrument for social mobility. As such, it may be particularly important factor in promoting social inclusion of migrant children with less educated parents. In a non-experimental study of policies that could potentially encourage educational mobility in Switzerland, Bauer and Riphahn (2013) found suggestive evidence that early kindergarten enrollment, early primary school enrollment, and late tracking (delaying the use of tracking by ability until later in a child's education) were positively correlated with intergenerational educational mobility. Early kindergarten enrollment appeared to be more important for second-generation migrants than for children born to Swiss parents.

School choice policies may reduce inequalities in countries where private schooling is a desirable alternative to public schools or where students from under-resourced areas desire access to better schools. However, they may also end up concentrating migrants in schools that other members of the community avoid if, for example, access to information is unequal. In Sweden, Edmark, Frölich, and Wondratschek (2014) used a DID to evaluate how poorer students as well as those with at least one immigrant parent may have been impacted by a reform that increased school choice. The 1992 reform that they examine 1) increased school choice for students after grade 6, 2) allowed privately run but publically financed schools to operate alongside public schools, and, two years later, 3) increased public school choice outside of home municipalities. Exploiting variation in the degree of school choice before and after the reform, researchers found that the reform seemed not to have harmed students with at least one immigrant parent and even improved grades slightly for students from low-income

⁷ Eurostat, Migrant Integration Statistics, 2017

or immigrant backgrounds. Overall, however, the authors insist that differences in impact between groups of students were close to zero.

Making schools more accessible can improve educational outcomes for some groups, but if the cost of schooling still remains prohibitive, the impact of such interventions may be reduced. Chingos and Peterson (2015) experimentally evaluated the New York School Choice Scholarships Foundation (SCSF) program, which provided school vouchers by lottery to low-income families in New York City in 1997. The program offered three-year scholarships of up to US\$1,400 annually to up to 1,000 low-income families with children who were entering first grade or entering grades 2-5 in public schools. Recipients could use vouchers to attend any private school in the New York area. One estimate of average tuition costs of high schools found that the voucher paid close to 72 percent of total per pupil costs. Close to 40 percent of students had mothers not born in the United States. On average, the authors found no long-term impacts of providing vouchers to attend private schools. However, when isolating the impact on children born to non-immigrant parents, the voucher appeared to increase both college enrollment and four-year degree attainment. The authors suggest that plausible reasons for this difference may be that non-immigrant families have better information about the quality of schools, and wider access to social and educational networks that enable children to enter higher education.

Other studies also explore the tension between increased accessibility of education and enduring barriers due to cost. Researchers have found that reducing costs to attend university may help increase attendance rates, but other expenses related to attendance may still prove an obstacle. In the US, Chin and Juhn (2011) explored the impact of reduced college tuition fees for undocumented migrants with high school diplomas. Ten states, starting with California and Texas in 2001, passed laws giving undocumented students access to in-state college tuition fees (rather than higher fees charged to non-state residents) at public universities. The authors used a DID approach through state-time variation in the passage of the laws to study the change in outcomes over time for states that passed the law earlier as compared to states that passed the law later (or those that have not passed the law at all). The law led to an average savings in college tuition of approximately by US\$3,326 per year per student in 2003. However, the authors find suggestive evidence of an impact on college attendance rates only for older undocumented men (twenty-two to twenty-four-year-olds) as compared to eighteen to twenty-one-year-old men. There were no changes for undocumented women's probabilities to attend public colleges. The authors suggest that tuition may have remained prohibitive for undocumented migrants even with the 50 percent savings. Furthermore, the law did not change the legal status of these individuals and therefore did not improve their access to legal jobs, reducing the return of investment for students. Lastly, they suggest that too little time has passed for the laws to have had full impact on enrollment and outcomes.

Accessibility of education is not just a question of affordability. Making education accessible to those with varying language skills may help improve educational outcomes for students, although some view language restrictions as facilitating integration. The United Kingdom, Germany, Latvia, and Lithuania are among the EU states that offer bilingual education courses, where migrant students have the opportunity to study partly in the host country language and partly in their mother tongue (Eurydice Network 2009). In the US, an education policy that restricted native language usage may have had a negative impact on social inclusion. Fouka (2016) examines a restriction on bilingual education that took place in the

US between 1917 and 1923 explicitly targeting Germans. This DID study found that the restriction did not seem to encourage assimilation of individuals with two German parents after WWI. Instead, language prohibition was associated with lower volunteerism for WWII, reduced rates of interracial marriage, and increased the likelihood of choosing German names for offspring. These results were stronger in locations where the sense of German identity was stronger. This finding suggests that bans on bilingual education may not increase assimilation, leaving the question of the effects of language policies on educational accessibility open for more research.

Additional research on bilingual education suggests that bilingual courses may not harm educational outcomes for students with limited native language skills. Chin, Daysal, and Imberman (2013) use an RDD framework to evaluate the impact of bilingual courses vs. English as a second language courses. Authors took advantage of a requirement in Texas, where school district with at least 20 students with low English skills had to offer bilingual education. The study finds that bilingual courses had no impact on standardized test scores of primarily Spanish-speaking students. However, bilingual courses did generate positive spillover effects on English-speaking students, who obtained higher math and reading test scores. This study did not extend the analysis to better understand how participating in bilingual courses may impact social inclusion later in life, leaving the question of bilingual education's impact on long-term social inclusion open for more research.

Another educational intervention that may support immigrant students is providing tutoring and career counseling, as these students often lack relevant networks and access to information and have lower aspirations. Carlana et al. (2017) studied the educational choices of immigrant children in Italy, which has a tracked high-school system that separates students into academic, and technical or vocational pathways. Immigrant boys are more likely to choose vocational over more demanding academic or technical tracks relative to native-born children with similar standardized test scores. Using a randomized evaluation, researchers estimated the impact of a tutoring and career counseling program called "Equality of Opportunity for Immigrant Students" (EOP) which targeted immigrant seventh-grade students displaying high academic potential. Results show that EOP encouraged immigrant students to enroll in more demanding academic and technical high schools and improved boys' academic performance, as measured by test scores, grade repetition, and drop-out rates. The intervention had no impact on immigrant girls, likely because they already enrolled at high rates in the more demanding high school tracks. Teachers at EOP schools recommended more immigrant students for academic and technical schools, likely in response to the students' improved aspirations and academic performance. EOP also had positive spillover effects on immigrant classmates who did not participate in the program.

Ensuring access to and effectiveness of education for immigrant students is clearly an important and unresolved issue. Of the educational interventions in this section, tutoring and career counseling for high-achieving immigrant students seems to be an effective method of closing achievement gaps between immigrant and non-immigrant students. However, this is only one of many ways that education may be tailored to best serve immigrant students. More research is needed to shed light on migrants' specific educational needs and the effectiveness of interventions that attempt to address them.

2.3 Location-specific policies

Housing and location strategies can also play a significant role in fostering social inclusion for immigrants. Studies have linked location policies to earnings as well as crime and welfare outcomes. Locations expose new immigrants to the peers and environments that generally form their experiences in host countries. In particular, exposure to unfavorable environments and peers with socially undesirable behaviors may have undesirable effects on outcomes for new immigrants. The peers with whom immigrants attend school can also have an effect on their educational outcomes.

Key messages

- The social environment of new immigrants may play a part in determining their educational, employment, and social outcomes. Living in a community of migrants from the same origin is beneficial for earnings of low-skilled migrants, while living in communities with high rates of dependence on welfare can in turn raise an individual's welfare dependence. Being exposed to crime in early childhood increases crime prevalence.
- Attending school with high-performing peers has a substantial influence on migrants' educational performance.

Open areas for research

- More research is needed to understand what role peer effects (from exposure to both native-born and fellow immigrant communities) play in affecting behavior and outcomes.
- Existing research has focused on the impact of immigrants' social environment and where they settle, but what are the impacts of housing conditions? How can we improve migrants' access to better housing environments and home ownership?
- What role do transportation and public infrastructure play in attenuating the impact of isolated locations or ethnic enclaves?

The environment in which immigrants live can impact earnings by affecting their access to both wage and welfare income.

Edin, Fredriksson, and Åslund (2003) use an IV approach to study the link between housing policies, peer effects, and earnings of refugees following the Swedish national refugee placement policy of 1985-1991. During this period, the immigration board was responsible for assigning refugees to an initial municipality of residence (unless they came for family reunification reasons). Individuals were not free to choose the location. The authors find that living in an immigrant enclave seems to have had a positive impact on earnings for less-skilled immigrants. In addition, members of high-income or high self-employment ethnic groups seem to have gained more from living in ethnic enclaves than members of low-income ethnic groups.

Through an IV approach, Åslund and Fredriksson (2009) also considered the effect of peer groups on welfare outcomes for refugees in Sweden, using the same policy. They found that long-term welfare dependence increased when new immigrants were placed in enclaves with higher rates of welfare dependence. However, the study cannot disentangle whether this impact is caused by specific neighborhood characteristics, or information sharing and influence from peers.

In a follow-up study of the same Swedish national refugee placement policy, Åslund et al. (2011) analyze specifically the influence of peer effects on educational attainment. They find that school performance was positively related to the number of highly educated adults in the community that shared the student's ethnicity. A one standard deviation rise in the fraction of highly educated peers in the assigned neighborhood raised the compulsory school GPA by 0.8 percentile ranks, with larger effects for those who arrived before the age of seven.

Peer effects linked to the quality of schools and communities are important for migrants' educational outcomes. A study in Israel used the quasi-random assignment of members of a large inflow of Ethiopian Jews to Israel in May 1991 to measure the effects of exposure to high-quality early schooling environments on educational outcomes. Gould, Lavy, and Paserman (2004) found that exposure to better quality elementary schools (characterized by high pre-intervention math scores) reduced high school dropout rates among these Ethiopian immigrants by 4 percentage points relative to the average dropout rate of 10 percent. Furthermore, it increased passing rates on the high school matriculation exam by 8.2 percentage points, relative to the average rate of 27 percent. The researchers did not find these effects to hold true for elementary schools with high language scores, but this may have been because the Ethiopian Jews were not native Hebrew speakers.

In a similar study by the same authors, long-run outcomes of those affected by the 1949 Israeli airlift for Jewish Yemenite children called 'Operation Magic Carpet' were found to respond to early childhood environments. Gould, Lavy, and Paserman (2011) used the quasi-random allocation of Yemenites to different Israeli communities to study the role of the environment on individual behavior. They found that in the long-run, those who were in an environment with better sanitation and infrastructure were more likely to be better assimilated into society, be less religious, have a higher education, marry later, have fewer children, and work at the age of 55. The results also suggested that these effects persisted into the next generation, albeit on a smaller scale.

Placing migrants in classes with non-migrant high achievers may also offer positive impacts for migrants without harming the performance of the latter. Li et al. (2014) used an RCT to measure peer effects for inner-country migration in China. In China, children of migrant workers often face discrimination. With more than 150 million rural migrant workers and tightly controlled family-based permanent migration, the children of migrant workers have difficulties in accessing education as compared to other local students. Migrant children typically cannot attend local public schools without paying high fees or facing heavy administrative burdens. If they attend low-cost migrant schools, they are still not allowed to take high school or college entrance exams in Beijing. With little funding and irregular management, migrant schools often resemble those in under-resourced rural areas. Li et al. (2014) randomly assigned schools to either an individual incentives program, or a peer incentive experiment. The individual incentives targeted low achievers and included a pay-

per-grade contract. In the group incentives model low-achieving students were paired with high-achieving students in the same class and could receive compensation based in the group's results. The authors show that pairing students by achievement level (high-level with low-level) improved the achievement test scores of the lower-performing students without harming the high achievers, whereas individual incentives for low-achieving migrants alone had no effects.

Peer effects may also have an effect on crime rates. Examining a refugee allocation policy in Denmark, Damm and Dustmann (2014) use an IV framework and find suggestive evidence on the effect of early childhood environment on later crime rates. From 1986-1998, Danish immigration policy included quasi-random refugee allocation with the primary objective of increasing dispersal of asylum seekers. The authors found that when male children under 15 were exposed to a high-crime environment, their crime conviction rates later in life increased; no such effect was found for female refugees.

To place these results in context, we can evaluate the outcomes of housing policies that target non-immigrants. In the US, the Moving-to-Opportunity (MTO) program offered housing in areas with lower poverty rates for low-income families in a randomized manner. Both short-term and long-term findings are mostly positive for the wellbeing of participants even if there is no measurable impact on education and employment outcomes. Katz, Kling, and Liebman (2001) found that households that were offered MTO reported better safety, improved health among household heads, and fewer behavioral problems among boys, but did not report significant short-term impacts on employment, earnings, or welfare recipient rates. For youth aged between 15 and 25, Kling, Ludwig, and Katz (2005) show that the program reduced violent crime arrests but increased property crime and problematic behavior for men, while reducing both violent and property crime for women. Fifteen years after placement into MTO, Ludwig et al. (2013) found positive effects on adult mental and physical health, but no impact on adult economic self-sufficiency or children's educational outcomes. Importantly, more recent evidence in Chetty, Hendren and Katz (2016) shows that the age when moving to lower poverty neighborhood is critical: they find positive impacts (including on college attendance and earnings) when moving young (before 13), in sharp contrast with the slightly negative impacts when moving as an adolescent.

When looking at location policies as a whole, there is a body of evidence to suggest that the social environment can have an impact on the outcomes of immigrants, in terms of employment, education, and crime rates. The peer effects of such location policies, specifically, seem to have the potential to affect a number of outcomes for immigrants, and must therefore be taken into account when designing policies that will dictate where and with whom immigrants live.

2.3. Access to health and family policies

Health services and family policies in Europe are more advanced in comparison to non-European OECD and non-OECD countries. Entering an institutional environment where health and family services are assured by the state may impact the tradeoffs that migrant families make once establishing themselves in the host country.

Key messages

- Access to health services increases usage, prevents health issues, and improves health-related outcomes for migrants while reducing the use of emergency services.
- Childcare transfers and parental leave policies may create incentives for mothers to remain out of the labor force rather than raising labor force participation.
- Increasing access to childcare services also improves educational outcomes for immigrant children, but does not necessarily improve employment or education outcomes for parents.

Open areas for research

- Further research should look carefully at how health and childcare policies may impact migrant communities in different ways to understand these discrepancies.
- In particular, is the finding that the migrant female labor supply would be affected by access to parental leave or childcare generalizable? Is it connected to lower opportunities in the labor market, for instance due to discrimination?
- Are there awareness issues specific to migrants—potentially due to poor sanitary infrastructure, lack of information in the country of origin, or lack of health insurance—and can targeted policies overcome these?
- Newcomers may not understand the policy system well and may not know their rights. How can take-up of health and childcare services by migrants be increased, and what are the consequences of such efforts?

While the U.S. healthcare system does not closely resemble European healthcare due to its highly privatized nature, evaluations of interventions in the United States that increase access to services may still provide helpful insights for European policymakers, particularly in cases where immigrants do not benefit from the same level of protection as native-born individuals. These services include health insurance, parental leave, and childcare.

In the U.S., Bronchetti (2014) used an IV design and found that an expansion of public insurance for low-income families and children may have had an important impact on usage of preventative and ambulatory care and health outcomes. Using state-year variations, the author studies an expansion of Medicaid and the State Children's Health Insurance Program (SCHIP) for families of the working poor. Relaxing eligibility restrictions for public programs increased immigrants' usage of preventative and ambulatory care and health-related outcomes and decreased emergency care in hospitals, but had no effect on non-immigrants.

Parental leave is a form of family policy that may have different impacts on immigrants depending on work-family balance tradeoffs. Using a DID design, Vikman (2013) found suggestive evidence that access to parental leave with job protection in Sweden may have created incentives for immigrant mothers to stay out of the labor force rather than raising labor force participation. Entry into the labor market was delayed for these mothers, and they were less likely to return to employment up to seven years after gaining their residency permit if they had access to parental leave.

Another family policy that may impact immigrants differently is transfers for childcare, a standard feature of European social policies. In Norway, cash-for-care (CFC) benefits are a tax-free flat monthly payment given to families who do not at all or only partially use publicly subsidized daycare. In August 1998, the CFC was reformed so that the age requirement for the benefit expanded from only one-year-olds to children between twelve and thirty-six months. Hardoy and Schøne (2010) used a DID design to compare results for families before and after the reform was enacted for immigrant and non-immigrant families at different periods of time, using an additional difference estimator for mothers not affected by the reform. Similar to Vikman (2013), the authors find that that addition of the CFC reform may have reduced both native-born and immigrant mothers' labor market participation. However, this effect was twice as large for immigrant mothers.

Increasing access to childcare services, is yet another family policy with potentially significant impacts on immigrant families. Drange and Telle (2015) used a DID design to suggest that the provision of free childcare in Norway may have had a significant impact on outcomes for children but not for parents. In five city districts of Oslo, children aged 4-5 were eligible for twenty hours of free childcare weekly. The rest of the ten districts did not benefit from this policy. The selection criteria for participating in the program were based on the size of the immigrant population (first and second-generation immigrant children) in each district. The authors found that enrollment of children from immigrant families who benefited from the policy increased by 15 percent (from 75% in comparison districts), but the intervention did not seem to have a significant impact on parental employment or education. Children of immigrant families who benefitted from the policy also scored higher on school-entry tests than similar children in comparable districts not affected by the policy.

Researchers have also studied the impacts of childcare policies (as well as school entry age policies) in Germany, and found that such policies may have had different impacts on immigrants. Cornelissen et al. (2018) studied the expansion of publicly provided childcare as well as a heavily subsidized half-day childcare placement for children aged three to school-entry age. Using an IV approach, the authors found that children from immigrant backgrounds were less likely to attend child care early, but that those who did attend experienced higher returns in terms of overall school readiness than native-born children.

Taken together, these studies suggest that health and childcare policies can have varying impacts on immigrant families. Some (mostly quasi-experimental) studies imply that increasing access to healthcare and childcare may have positive impacts on the health and educational outcomes, respectively, of immigrant children. Meanwhile, other social policies—such as parental leave and cash-for-care benefits, may have had negative effects on immigrant participation in the workforce in various settings.

3. Interventions Facilitating Labor Force Participation

In several European countries, governments have launched initiatives to help integrate migrants into the labor force through either the general employment services or through initiatives put in place to specifically address the needs of immigrants. This section reviews the existing literature evaluating both types of intervention: general employment schemes that report on impacts for migrants as well as initiatives that are specifically targeted at migrants. These include language and general education courses, counseling, mentoring, job-search assistance, vocational training, long-term training, job placement assistance, public jobs, or sometimes a combination of multiple interventions.

Key messages

- Active labor market policies, such as job-search assistance, training, or subsidized employment, are particularly effective for immigrants; in most cases, they generate larger employment and wage gains among immigrants than for native-born jobseekers.
- Part of these large gains are obtained in general (rather than immigrant-focused) programs and can be explained by the sociodemographic characteristics of migrants that make them particularly responsive to programs that are not specifically designed for them.
- Additional gains are obtained by designing specific programs for immigrants, such as integration plans put in place with caseworkers dedicated to counseling immigrant jobseekers. Language courses also have large positive effects.
- Most existing studies suffer from two issues. First, in the absence of random program assignment, selection bias may be imperfectly controlled. Second, they rarely analyze long-term impacts, which is problematic when immigrants enroll in training programs known to produce different short- and long-term impacts.

Open areas for research

- Is there a trade-off between quick integration of immigrants into the workforce and long-run access to jobs that match their skills? What policies can reduce the risk that immigrants are trapped in lower quality jobs?
- Are there labor market programs other than language courses specifically designed for immigrants that provide a measurably positive impact, and if so, through what mechanism does this impact occur?
- Are there specific matching frictions between firms and immigrants, such as missing networks or lower quality of information? Can interventions providing stronger intermediation services, through skill certification or other means, mediate such frictions?
- Are there effective policies to fight hiring discrimination against immigrants?

In a study that covers a broad range of labor market interventions in Denmark, Clausen et al. (2009) evaluate the impact of language courses and different policies including training, counseling, public sector employment, and subsidized private sector employment, on newly arrived immigrants. They apply a timing-of-events duration model that assumes randomness in the exact timing of entry into such programs, as long as the immigrant has not found regular employment. Under these assumptions, they find that most programs reduce entry into regular employment during the program, which they call the “lock-in” effect. Two types of interventions, however, stand out for high job-finding rates: language courses and subsidized employment in the private sector.

Most other studies in the literature can be classified into three groups of interventions (that at times overlap): job-search assistance and counseling, training, and subsidized employment. We consider these in turn in the following subsections.

3.1. Job search assistance and counseling

Migrant job seekers may find it particularly difficult to search for employment in an unfamiliar labor market if they lack information and experience regarding how best to approach the process. Many programs attempt to address these difficulties through counseling, coaching, or matching services.

In Sweden, Åslund and Johansson (2011) ran a DID evaluation to test a workplace introduction program targeting immigrants and refugees considered capable of immediate entry into the labor force. The program, called the “Special Introduction” program (or SIN), provided intensive job search, counseling, and integration support, and included follow-ups in twenty municipalities. The authors suggest that the program may have increased rates of transition from unemployment to work experience schemes and the likelihood of obtaining employment.

Joona and Nekby (2012) evaluated the impact of intensive coaching and counseling for immigrants through an RCT. In nine municipalities in Sweden, new immigrants were assigned to a regular introduction program or an intensive program in which caseworkers provided more intensive counseling. Even though the assignment to the program was in principle randomized, local implementation was imperfect, so some selection bias may persist. With this caveat in mind, the results suggest that intensive counseling significantly improved employment probabilities as well as participation in labor market training programs. One year after treatment, individuals were 3.2 percentage points more likely to be employed, 9.6 percentage points more likely to be in training programs, and slightly more likely to be in regular education than their counterparts in introduction-only programs. Following up 22 to 30 months after registration, treated individuals still showed higher employment probabilities than the comparison group, but these effects were only significant for male participants.

Neither of these Swedish studies compared outcomes between immigrants and children born in Sweden because of the immigrant-targeted nature of the interventions. However, in comparison to other programs, Card, Kluve, and Weber (2018)’s meta-analysis of evaluations of job search assistance programs which do not specifically target migrants finds generally

positive but smaller impacts on the probability of employment. This suggests that counseling and job search programs may be more effective for immigrants.

An important question is whether these larger positive impacts of job search assistance and counseling are due to the recent arrival of immigrants, which may make such interventions particularly relevant as they may lack knowledge and connections to the labor market, or whether they can be explained by socioeconomic differences between immigrants and non-immigrants entering similar programs, such as age or education. If the former were true, customization of labor market policies to the specific needs of immigrants would be required; if the latter were true, immigrants should be a priority target for standard policies, without requiring tailored programs.

An RDD study in Finland found evidence that interventions to promote employment are particularly effective when tailored for migrants. Sarvimäki and Hämäläinen (2016) evaluated the ten-year impact of the introduction of integration plans for unemployed immigrants in Finland in which case workers discussed individualized plans for unemployed immigrants, mostly using traditional labor market policies as well as additional language classes, civic courses, and work/life skills programs, among others. Their study took advantage of a discontinuity in the implementation of the scheme, which was introduced in 1999, but only made mandatory for cohorts of migrants who arrived after May 1997. They found that the program increased earnings by 47 percent over a ten-year follow-up period. This impact is measured on those migrants who would not have made integration plans if they had not been mandatory. These migrants had particularly bleak labor market prospects, with average annual earnings around €6,500 between their third and thirteenth years in Finland. The results suggest that reaching the most disadvantaged migrants may have large positive effects. A second important lesson relates to the nature of the intervention: the use of tailored integration plans did not increase the total time participants spent in training, but rather redirected them toward programs specifically designed for immigrants—in particular language courses—at the expense of traditional programs such as job-seeking courses. The strong positive effects of such substitution show that there can be high returns to restructuring labor market intervention for immigrants specifically.

We know little about matching migrant workers and employers. An ongoing RCT of an intervention in Germany provides migrants with a refugee status with a two-step program including assistance in drafting CVs and job matching. Some refugees who attend sessions to receive support in writing CVs are randomly assigned to an additional treatment, which includes matching with employers. The authors will evaluate how job matching in addition to CV drafting impacts refugees' likelihood to land interviews, become employed, and reach other socioeconomic integration indicators (Battisti, Giesing and Laurensyeva ongoing).

More broadly, while numerous correspondence studies demonstrate the hiring discrimination faced by migrants and other minority groups, there is still a lack of consistent evidence on policies to fight hiring discrimination. Sending anonymous resumes has been suggested as a potential tool to fight implicit discrimination. A non-experimental study in Germany among eight large employers found that anonymizing resumes seemed to potentially reduce discrimination against minorities by preventing firms from screening out applicants based on minority status during the initial stage of reviewing applications (Krause et al. 2012). However, an RCT in France found that firms who received anonymous resumes interviewed

and hired fewer minority candidates. This may have been a result of the voluntary nature of the scheme: firms who participated tended to be those more likely to hire minority candidates prior to the intervention. In this case, removing information on minority status prevented these specific firms from favorably considering minority applicants (Behaghel et al. 2015). However, since it is well documented that the average firm in many contexts discriminates, mandatory anonymization may still be a promising solution if such programs capture firms that would not voluntarily anonymize their screening process.

3.2. Training programs

The general consensus on training programs is that short-term training speeds up exit rates to employment but does not positively impact future outcomes, while long-term training programs that develop human capital skills may have immediate negative impacts but generate more sustainable employment. The effects of both short- and long-term training programs specifically on immigrants, however, may be more heterogeneous, since this group has highly varied needs regarding language education, job search assistance, vocational training, and cognitive and non-cognitive skills development.

In Sweden, employment training programs (known by their Swedish acronym, AMU) aim to help unemployed job seekers obtain a job by enhancing skills through vocational training. Richardson and Van den Berg (2013) use a timing-of-events approach to evaluate the impact of AMU. The content of the courses was aimed toward upgrading skills or acquiring skills that were in current or expected short supply. In the 1990s, these included computer, technical, manufacturing, and medical healthcare skills. The study suggests that AMU training programs may have had a large and significantly positive effect on the exit rate from unemployment to work shortly after treatment, with the impact being even stronger for migrants.

Again, it is unclear if such large impacts are due to the specific history of migrants or whether they are in line with the effects on native-born jobseekers of similar socioeconomic backgrounds. In Germany, Thomsen, Walter, and Aldashev (2013) shed light on this question by evaluating four different short-term training programs through a propensity score matching evaluation: 1) aptitude tests up to four weeks in length that assess the suitability of participants for specific occupations, 2) job-search training programs that aim to improve the job seeker's presentation and job-search abilities, 3) practical training that includes up to eight weeks of training for employment and vocational skills, and 4) a combination that mixes two or three of these programs. The authors find that aptitude tests may have worked best for both natives and migrants, while job-search training and combined training programs seemed to be ineffective. Decompositions conducted using matching techniques suggest that effect differences between migrants and non-migrants resulted from sociodemographic composition, predominantly differences in education, age, and family composition.

3.3. Subsidized employment and temporary jobs

Researchers have studied several interventions that focus on ways to move immigrants out of unemployment. Two different approaches may have had positive effects on employment in Denmark: cash benefits and temporary jobs.

In Denmark, Heinesen, Husted, and Rosholm (2013) used a timing-of-events duration model to evaluate the effects of active labor market policies (ALMP) on the exit rate to employment for immigrants receiving social assistance, in the form of cash benefits. Their findings suggest that ALMPs for non-Western immigrants who received social assistance increased the exit rate to regular employment both during and after the program, with larger effects for subsidized employment programs. Similarly, Bolvig, Jensen, and Rosholm (2003) evaluated employment programs for all welfare recipients using duration models in a non-experimental analysis in Denmark. They suggested that employment-targeted active social policies for those on social assistance may have improved the chances of leaving welfare dependence.

Temporary placement through employment agencies may provide immigrants with important stepping stones into regular employment. Jahn and Rosholm (2014) use a timing-of-events approach to analyze if temporary jobs could help immigrants secure regular employment more easily. Having agency work sped up the transition to employment, particularly for immigrants and for individuals considered less employable. These findings suggest that temp agencies may help provide a stepping stone to employment for immigrants, likely because employers could use agency employment primarily to screen potential candidates for regular posts. The effects, however, did not continue if workers left the temporary job before finding a more permanent position, likely because employers perceived them as low quality candidates.

4. Aid and Transfers

Direct social assistance is an important policy for reducing poverty rates and supporting family development. Social aid and transfers are provided in some form in all European countries. They are most often means-tested and serve families and individuals who have difficulties integrating into the social and economic life in their host countries. While there has been considerable research on the effectiveness of these programs in general, very few studies have focused specifically on their impacts on migrants.

Key messages

- Social aid benefits can disincentivize work, but this is not specific to the migrant population.
- Some benefit schemes may be particularly beneficial for migrant populations. There is some evidence showing that for this population, part-time work with supplementary unemployment insurance can work as a stepping stone to regular employment.

Open areas for research

- Is non-take-up of social benefits more pervasive among migrant and refugee populations than the native-born? What are effective strategies to address low take-up? How should these strategies be adapted to better respond to immigrants' specific needs, such as language barriers or lack of familiarity with institutions and procedures?

- What is the impact of social benefits on children’s health, educational and social outcomes?
- What is the impact of social benefits on parents’ civic engagement and sense of belonging to society?

The evidence in this short chapter focuses on the impact of social benefits on the labor supply of migrants specifically. We do not attempt to discuss all of the many impacts of social benefits on other populations, although additional research on this topic does exist. Much more research is needed regarding the effects of social benefits on immigrant populations specifically in order to understand how to increase take-up of benefits and how such programs may affect a wide range of health, educational and social outcomes.

Some existing research focuses on the impacts of social benefits on refugees and immigrants specifically. In Denmark, in 2002, the government enacted a reform known as Start-Aid, under which refugees who were granted residency just before the cutoff date were entitled to the same social assistance benefits as native Danes, while those who obtained residency after 2002 received approximately 35 percent lower benefits. Using this cutoff, Rosholm and Vejlin (2010) used an RDD approach to test the impact of transfers on labor market outcomes. They show that receiving the lower levels of aid had positive impacts on finding jobs two years after treatment. These results are similar to those found for the general population, where transfers have been found to have a small disincentivizing effect on work (for example see Lemieux and Milligan, 2008).

Also in Denmark, Kyrrä et al. (2013) used a timing of events approach to evaluate the effects of working part-time and receiving supplementary unemployment insurance. Authors found the scheme reduced time in unemployment for youth and migrants. They suggest short part-time jobs with additional social transfers can help them develop their work experience and skills, enlarge their network among employed workers, and signal their motivation, which can ultimately improve their employment prospects.

In an ongoing study, Andersen, Dustmann, and Landersø (Ongoing) are measuring the impact of Denmark’s Start-Aid reform on employment outcomes, crime rates, enrollment in daycare and preschools for young children, and education level for older children.

Further research could measure the impact of social benefits on children’s health, educational, and social outcomes, and on parents’ civic engagement and sense of belonging to society. In addition, non-take-up of social benefits is a widespread problem across Europe that warrants additional research. A recent Eurofound study (2015) shows that non-take-up of benefits affected more than 40 percent of the eligible population in sixteen countries. Although there is little data on non-take-up of migrant populations specifically, it is likely that migrants face similar—if not higher—barriers, such as a lack of awareness about the existence of benefits, their entitlement to them, or the necessary application procedures. There is therefore a need to quantify the gap between entitlement and social benefit take-up among migrants, and to explore effective strategies to tackle non-take-up.

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