



# Refugee Migration and the Labor Market: Lessons from 40 Years of Post-arrival Policies in Denmark

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# Refugee Migration and the Labor Market: Lessons from 40 Years of Post-arrival Policies in Denmark<sup>\*</sup>

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**Abstract:** Denmark has accepted refugees from a large variety of countries and for more than four decades. Denmark has also frequently changed policies and regulations concerning integration programs, transfer payments, and conditions for permanent residency. Such policy variation in conjunction with excellent administrative data provides an ideal laboratory to evaluate the effects of different immigration and integration policies on the outcomes of refugee immigrants. In this article, we first describe the Danish experience with refugee immigration over the past four decades. We then review different post-arrival refugee policies and summarize studies that evaluate their effects on the labor market performance of refugees. Lastly, we discuss and contrast these findings in the context of international studies of similar policies and draw conclusions for policy.

**Keywords:** refugee integration, immigration policies, labor supply, employment, language

**JEL codes:** J22, J24, J61

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## 1. Introduction

Refugee immigration, defined as immigration that appeals to the 1951 Geneva Convention, its subsidiary agreements, and extensions of its interpretation, has received much attention over the past years. Many countries have introduced, or are currently discussing, reforms to their asylum procedures, the way they prepare refugees for the labor market, and how they administer transfers and financial support.

In this paper, we investigate the impact that different immigration and integration policies have on refugee immigrants, focusing in particular on their labor market outcomes. The context of our study is Denmark, a country that has experienced refugee immigration over the past 40 years and over this period has implemented many policy changes. This provides, in conjunction with excellent administrative data, a perfect laboratory to evaluate reform effects on refugees and their families, allowing us to study not just the immediate effects of policies, but also how they affect outcomes in the longer run. Specifically, we focus on five types of policies and their effects on the labor market attachment and performance of refugee immigrants: (i) dispersal policies for newly admitted refugees (that expose them to different local conditions initially); (ii) employment support policies; (iii) integration and language programs; (iv) changes in welfare benefit transfers; and (v) policies that set out conditions for permanent residency.

By synthesizing extensive evidence from 40 years of policy experiences and reforms targeting refugees in Denmark, we supplement existing reviews of the literature (see e.g. Brell et al. 2020; Jakubiak 2019; Eggebø and Brekke 2018; Verme and Schuettler 2021). In doing so, we also add to the large literature on immigrant assimilation and refugee integration (see e.g. Chiswick 1978; Edin et al. 2004; Cortes 2004; Dustmann and Görlach 2016; Cadena et al. 2015; Sarvimäki and Hämäläinen 2016; Sarvimäki 2017; Fasani et al. 2021a).

We commence by describing the most relevant policies and policy changes in legislation that regards refugees over the past four decades and portray the key features of refugee immigration to Denmark. We then discuss the findings of studies that evaluate the effect these policy changes have on the labor market performance of refugees and compare and contrast these with evaluations of similar policies from other countries. In the last section of the paper, we draw conclusions for policy based on the combined evidence in these studies.

## **2. Background**

### **2.1 Refugee immigrants**

The United Nations Geneva Convention relating to the Status of Refugees (GCR) is grounded in Article 14 of the 1948 Universal Declaration of Human Rights, which recognizes the right of persons to seek asylum from persecution in other countries. It was adopted in 1951. In its first article, the convention defines a refugee as “*[any person who] owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it*”. Originally being limited to persons fleeing events occurring within Europe and before 1 January 1951, these limitations were removed by the 1967 Protocol and endowed the GCR with universal coverage. By 2015, 145 states have signed the 1951 Convention and 142 have signed both the Convention and the 1967 Protocol (see Dustmann et al. 2017 for more details).

The GCR is based on the concept of individual persecution, and as such does not specifically address issues of civilians who flee wars and conflicts – which is the main source of refugee migration today. The United Nations High Commissioner for Refugees (UNHCR) considers therefore an

expanded definition, stating that “*persons fleeing the civil wars and ethnic, tribal and religious violence and whose country of origin is unwilling or unable to protect them*” should be considered refugees – a demand not all countries agree with. As a result of the lack of a commonly accepted definition of what defines a refugee, countries have developed different arrangements of temporary/subsidiary humanitarian protection, as well as their own procedures for the recognition of refugee status.

Denmark provides protection to persons who fulfil the 1951 Geneva convention and its 1967 protocol. In addition, subsidiary protection rules have been used in Denmark on an ad-hoc basis since the mid-1960s and were finally introduced by law in 1983 (Report no. 968, 1982). From 2002 subsidiary protection has been granted according to article 3 in the European Human Rights Convention stating that “*no one shall be subjected to torture or to inhuman or degrading treatment or punishment*”. Protection has also been given for humanitarian reasons since 1985, to persons who do not qualify for protection under the GRC or for subsidiary status. For instance, this includes persons with life threatening diseases or disabling handicaps that cannot be treated in the home country.

In what follows, we define an “asylum seeker” as an individual who asks for asylum, but whose request is not decided yet. Moreover, we define a “refugee” as an individual whose asylum claim has been approved and who is granted (temporary) protection and residency. In the Danish case, asylum seekers typically request asylum after entering the country, often as undocumented migrants. After the asylum request the applicant is relocated to a central reception center until the formal application process commences. At that point, and while the application is processed by the Danish Immigration Service, the refugee is assigned to a lodging center.

In many countries, asylum seekers whose application is processed are not allowed to participate in the labor market, which has potentially harmful long-term consequences for their

careers (see Marbach et al. 2018; Fasani et al. 2021a). In Denmark, and before 2013, asylum seekers whose applications were processed were not allowed to work at all. From 2013 onwards, working during the assessment period was permitted in cases where the assessment period exceeded 6 months (Act no. 430, 2013). However, only few refugees took advantage of this possibility. According to the Ministry of Foreign Affairs, 3,500 applicants waited more than the 6 months in asylum centres between 2013 to 2016 for a decision on their application, but only 78 were employed after 6 months of waiting, and while the application was still being processed<sup>1</sup>. The low employment take-up is likely due to strong disincentives implied by the rules for employment. To receive a work permit during the assessment period, applicants had to apply to the Ministry of Foreign Affairs and sign a document that they would voluntarily leave Denmark if their case is rejected. Moreover, any income from work is deducted from public transfers, and if work income exceeded transfers, they could be asked to contribute to housing expenses.

Once the asylum application process is concluded the application is either rejected, or refugee status is provided as a temporary residence permit, usually for 2 years, with an option to apply for temporary extensions. Extensions are granted when the reason for protection still holds. After a period of settlement in the country, refugees can apply for permanent residency under specific conditions. Both the required length of stay and conditions for permanent residency have changed over time (see section 2.2).

The measurement of refugee status is often a challenge. Survey data sets sometimes provide self-reported refugee status, which may suffer from non-response and reporting biases (see discussion in Brell et al. 2020). To overcome this challenge, we take advantage of the administrative register data from Denmark, which provide reliable information about refugee status from the Danish Immigration Services for immigrants who received residency from 1997 and onwards. The data

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<sup>1</sup> Reported by the Public National Broadcasting Corporation, DR (in Danish): <https://www.dr.dk/nyheder/indland/radikale-giv-asylansoegere-lov-til-arbejde-fra-dag-et>

include the type of residency that has been granted, including convention status, subsidiary protection and humanitarian protection. For the period prior to 1997, Statistics Denmark imputed refugee status based on the most common refugee sending countries in specific periods (Statistics Denmark, 2008).

## **2.2 The Danish Refugee Policy**

Denmark ratified the Geneva convention in 1952 and accepted the first group of refugees under this jurisdiction in 1956, when 1400 refugees arrived from Hungary. To aid in the reception of this group, the Danish Refugee Council (DRC) was set up as a conglomerate of twelve non-profit organizations. The DRC has been involved in the reception of refugees ever since. In 1979 the first fully public funded integration program for refugees was established, which was operated by the DRC (Strukturkommissionen, 2003). The aftermath saw a number of changes in post-arrival refugee policies, many of which have been evaluated empirically. We summarize the major reforms in Figure 1 and discuss them below.

### **[Figure 1]**

#### *2.2.1 The 1979 integration program*

The objective of the 1979 integration program was “... *to secure the support that is necessary for the refugee to be able to cope on equal terms as natives*”, and “*to initiate a process that can help the refugee to become self-supported*” (the Danish Refugee Council 1996). The program lasted for 18 months and started with a short course on civic understanding, followed by a Danish language course (see *The Ministry for Foreigners and Integration* 1987; *The Ministry of Finance* 1994). Employment support was offered simultaneously with or during interludes of participation in the language course. During the integration program, each refugee was assigned a caseworker who developed employment support measures, such as internships at workplaces, basic job search assistance, basic skills training,

vocational training or formal education (the Danish Refugee Council 1996). Upon completion of the integration program, the responsibility for welfare payments, further language training and employment support was transferred to the municipality where the refugee resided.

### *2.2.2 The 1986 dispersal policy*

Initial settlement of refugees is administered by the DRC. Prior to 1986, refugees had the option to choose their settlement location, resulting in a concentration of refugees in larger cities with better employment opportunities. In 1986 a national dispersal policy was implemented with the aim of distributing refugees more evenly across spatial units so that the costs of integration could be more evenly allocated across municipalities. In a first step, the policy distributed refugees across the 15 Danish counties proportional to the number of inhabitants. In a second step, refugees were allocated to municipalities within counties (there were 278 municipalities in Denmark at the time, with an average population of 20,000), again according to population size, but considering also ethnic networks, access to education and job opportunities as well as availability of suitable housing (The Danish Refugee Council 1996, Report no. 1337 1997). The dispersal policy succeeded in achieving a more dispersed geographical distribution of refugees (see Damm and Dustmann 2014). No restrictions were placed on secondary settlement. Damm and Dustmann (2014) report that after 8 years, one in two households still lived in the area of initial assignment.

### *2.2.3 The 1999 reform*

A major reform of the Danish refugee policy was implemented in 1999. This included a reform of the integration program, described in the first act on integration, that had the objective “*to ensure that refugees could participate in society on equal terms as natives ... and ... to become self-supported*”



*faster*” (author’s translation; see Act no. 474 1998; Act no. 487 1998). To achieve these objectives, the reform aimed at improving the Danish language course. Thus, the reform increased the length of the integration program from 18 to 36 months, allocated additional resources for teacher training and raised the length of the Danish language course from 1370 to 1800 lectures, which corresponded to 1.2 year of full-time studies. Refugees could pause participation in the language course throughout the three-year integration program to accommodate employment or participation in other training. The reform also raised incentives for participation in integration programs by introducing financial sanctions up to 20% of welfare benefits in case of non-participation, and by conditioning permanent residency on participation in the program. In addition, the reform restricted re-settlement during the integration program. If a refugee moved to a new municipality without the new municipality’s consent to pay for part of the costs for the integration program, he/she would lose welfare benefits.

In addition, the 1999 reform also reduced welfare benefits for newly arrived immigrants and altered permanent residency rules. Newly arrived immigrants were entitled to a new type of welfare benefits, “introduction benefits”, which was up to 30% lower than the welfare benefits prior to the reform (Arendt et al. 2020). This measure was repealed after 13 months. Moreover, there were also slight changes in the dispersal policy. Besides the above-mentioned requirement that re-settlement after assignment was restricted, the assignment process itself now foresaw municipal annual quotas without regard to network, access to education or job opportunities (Protocol no. 630 1998; Azlor et al. 2020).

#### *2.2.4 The 2002 and 2007 reforms*

In 2002 the Start Aid program was introduced which replaced Social Assistance for refugees with a new benefit scheme intended to promote their labor market participation (Danish Prime Minister’s Office, 2002) and “*to ensure that refugees and immigrants living in Denmark are better*

*integrated and find employment more quickly, the incentives for finding employment must be strengthened*”<sup>2</sup>. Implemented on July 1, the reform subjected all refugees granted residency after the reform date to the new benefit scheme, whose transfers were approximately 40% lower than Social Assistance payments. This benefit scheme was in effect until its repeal on January 1<sup>st</sup>, 2012 (see Dustmann et al. 2022a for details).

In 2002, the government also tightened the rules governing eligibility for permanent residency. The required length of stay was raised from three to seven years jointly with a new requirement of documented language proficiency corresponding to passing a test at the basic course level (Kilström et al. 2018). A related change took place in 2007, when two new requirements were added, jointly referred to as the “*Integration exam*”. The purpose was to strengthen labor market integration by “*sending a strong signal of the importance of employment and to learn the Danish language*”.<sup>3</sup> In addition to the pre-existing requirement of seven years of residence, 2.5 cumulative years of full-time employment and passing of the language proficiency test at the intermediate level (as opposed to the basic level as previously) were added as prerequisites for permanent residency (Arendt et al. 2021).

#### 2.2.5 The 2015 and 2016 reforms

The Start Aid program was abandoned in 2012 when transfers increased to the pre-2002 level, but transfers for refugees were reduced again with a new benefit scheme called “*integration benefits*” in 2015. The reductions in benefits relative to the pre-2002 level were smaller than under Start Aid and amounted to between 10% and 40% for single persons below age 30 or couples with children (Arendt

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<sup>2</sup> Author’s translation from official remarks: [http://webarkiv.ft.dk/Samling/20012/lovforslag\\_som\\_fremsat/L126.htm](http://webarkiv.ft.dk/Samling/20012/lovforslag_som_fremsat/L126.htm), accessed 03-20-2017

<sup>3</sup> See official remarks (in Danish): <https://www.ft.dk/samling/20061/lovforslag/L93/BEH1-37/forhandling.htm>.

2020). Moreover, the integration program was again reformed in 2016 (Arendt 2022), with the purpose to expedite entry into the labor market. The reform implemented a “*work-first*” policy emphasizing that “*immigrants should be met as being job ready, even if they lack language or computer skills*”, referring to a job readiness assessment of the refugee’s preparedness for the Danish labor market.<sup>4</sup> The idea was to treat all refugees equally and require that they actively search for jobs and participate in on-the-job training within one month upon settlement – requirements of which refugees were exempted before if they were not assessed as job ready, e.g. if they did not speak Danish.

## 2.3 Refugee Migration to Denmark

### 2.3.1 Refugee migrants and their origin

In Figure 2, we illustrate the evolution of refugee migration to Denmark for the period 1984-2019. The dark dashed line indicates the number of registered asylum applications in Denmark, which peaks in 1992-1993 and 2014-2016 following the conflicts in the former Yugoslavia and Syria. There are smaller peaks in the late 1980s with major groups arriving from Palestine and Sri Lanka, and around the millennium change, where conflicts in Iraq and Afghanistan generate massive migrant flows. The number of applications dropped substantially from 2002 and until 2010, when Denmark received less than 2,000 applications annually. A simultaneous drop is also witnessed worldwide (UNHCR, 2011). The solid black line shows the number of persons who were granted asylum during the same period. The two series of applications for asylum and granted refugee status differ for two reasons. First, asylum applications include persons who receive protection via UNHCR quota agreements

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<sup>4</sup> See official remarks (in Danish), p. 20:  
[https://www.ft.dk/ripdf/samling/20151/lovforslag/1189/20151\\_1189\\_som\\_fremsat.pdf](https://www.ft.dk/ripdf/samling/20151/lovforslag/1189/20151_1189_som_fremsat.pdf).

(maximum 500 annually). Second, the two series refer to year of application and year of acceptance respectively, and hence they differ by the waiting time for asylum decisions.<sup>5</sup> Bearing these differences in mind, the two series have similar developments. The number of individuals who were granted protection in relation to Denmark's population was high in comparison to EU15 countries before 2002 and during the Syrian refugee crisis in 2015-16. Today it is among the lowest in the EU.<sup>6</sup> In Figure 2, the peak in the number of granted asylum in 1995 arises because individuals from the former republics of Yugoslavia were granted temporary protection for up to two years in 1992-1993 and most received asylum in 1995. A total of 155,752 persons have been granted protection in Denmark from 1984 to 2019. We do not have access to the number of persons being granted asylum on an annual basis before 1984, but according to the Danish Refugee Council, the number of refugees that were given protection after the ratification of the Geneva Convention in 1952 and up until today totaled 169,517 individuals.<sup>7</sup> This would suggest that 13,765 individuals were granted refugee status from 1952 to 1983, prior to the period considered in Figure 2. Finally, the light grey dashed line plots the acceptance rate for applications for asylum by the year of decision, i.e., the number of persons granted asylum over the total number of decisions in a year. This is only available from 1992-2019. The acceptance rate varies between 10% and 85%, and covaries positively with the number of applicants (the correlation is 0.5).

## [Figure 2]

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<sup>5</sup> Average waiting time for those who were granted protection has varied from 1-2 years prior to 2003 to 1-3.5 years in the years 2003-2008 and was below 1.5 year thereafter (Hvidtfeldt and Schultz-Nielsen 2018).

<sup>6</sup> The number of asylum seekers that were granted protection was about 96 per 100,000 inhabitants in 2000, dropping to 21 in 2005. In comparison, it was 23 and 18 for the same years in EU-15 countries (calculations are the number of individuals granted asylum or complementary protection based on UNHCR numbers divided by population size from Eurostat). During the Syrian refugee crisis in 2015-16, 191 individuals per 100,000 inhabitants were granted protection in Denmark, which compares to 72 in the EU-15. The fraction has subsequently dropped in Denmark to mid-2000s levels but remained as high as 61 in EU-15 countries.

<sup>7</sup> See (in Danish): <https://drc.ngo/da/vores-arbejde/viden-og-fakta/faq-om-flygtninge/hvor-mange-flygtninge-er-der-i-danmark/>, accessed August 2, 2021.

In Table 1, we list the top 5 origin countries for individuals who were granted protection within 5-year periods. The fraction of those who come from the top-5 origin countries constitute more than 70% of the total, with the exception of the period between 2004-2008, which saw overall only few arrivals. The figures indicate that individuals from the Middle East and North Africa dominated arrivals in Denmark throughout the period.

**[Table 1]**

### *2.3.2 Employment*

Figure 3 shows the employment rates for refugee immigrants and compares it to other immigrants and natives. Employment is shown by years since residency for immigrants and by years since age 25 for natives. Refugee status is available from 1997 while it is proxied for 1983-1996 based on country of origin and time of arrival, among others (see Statistics Denmark 2008). Employment is measured as hours worked in full-time equivalents, where a value of one corresponds to full-time employment in a year. The figure shows that employment of refugees starts off at fairly low levels shortly after arrival but increases rapidly during the first five years in the country, to level off again after 4-7 years. This is similar to findings in other countries reported in Brell et al. (2020). There are quite substantial differences in employment levels between refugees and other immigrants and natives, particularly in the first years since residency. Even though the differences narrow after 10 to 20 years, they remain at 10 percentage points of full-time employment relative to other immigrants and about 25 percentage points relative to natives, after 30 years.

**[Figure 3]**

Figure 4 shows the employment rates for refugee migrants by years since residency for different arrival cohorts. We have taken out macro trends and normalized the level relative to the first year since residency. There are quite substantial differences in the evolution of employment for

different arrival cohorts. For instance, panel (a) of the figure shows a remarkably faster employment take-up for refugees arriving in the years 1983-85 when compared to those who arrived in 1986-1988, and who were the first to be affected by the dispersal policy which started in 1986. Similar stark differences are found between cohorts arriving 1997-98 and 1999-2000 in favor of the latter who were affected by the 1999 reform, which brought a major change to the integration program through an extension and improvement of the language courses (Arendt et al. 2020). We also see an increase in employment growth for those who arrived in 2003 and hence experienced Start Aid, relative to earlier cohorts. Panel (b) of Figure 4 shows more recent cohorts and illustrates an employment advantage of cohorts arriving in the second half of 2002-2003 who were subject to Start Aid, relative to earlier cohorts. The panel also displays a substantial increase in the employment growth for cohorts arriving after the benefit reduction and work-first policy in 2015-2016 compared to cohorts arriving before 2015 who were not subjected to the same requirements.

**[Figure 4]**

### 2.3.3 *Permanent residency*

Refugees who wish to remain in Denmark must apply for permanent residency or for extensions of their temporary residency. Asylum extensions are granted if the reason for protection remains valid (cf. section 2.1). Among refugees and their adult family members who arrived in Denmark between 1997 and 2002, 80% are still in the country after 16 years.<sup>8</sup> Figure 5 shows the fraction of refugee migrants who have been granted permanent residency, where the horizontal axis carries the time of residency. The figure shows that around 50% of the cohort who arrived prior to the 2002 reform obtained permanent residency after three years when they became eligible for permanent residency.

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<sup>8</sup> Own calculation based on Danish administrative data.

The fraction rises to 70% after four years and gradually to 85% thereafter. The lenient policy that was in place before 2002 therefore allows a large fraction of the refugees to obtain permanent residency. By contrast, the cohort subject to the 2002 reform could apply for permanent residency after 7 years and was also subjected to tighter regulations (cf. section 2.2.5). Hence, the fraction with permanent residency first starts to rise after 7 years and is on but attains a similar level as the previously arriving cohorts after 11 years. Very few from the cohort who were affected by the 2007 or later reforms received permanent residency 7 years after their arrival. While the fraction increases 8 to 9 years after arrival, it flattens out at around 70% reflecting the tighter requirements of this reform. The fraction living with temporary residency has therefore increased over time when permanent residency rules have been tightened.

**[Figure 5]**

### **3. Evaluation of Refugee Policies**

We now review empirical studies that evaluate the different Danish refugee policies that we discuss in section 2, in particular works that focus on the labor market consequences of a respective policy or intervention (see Table 2). We distinguish between studies that investigate five different policies: (i) dispersal policies; (ii) employment support policies; (iii) integration and language programs; (iv) changes in welfare benefit transfers; and (v) policies that set out conditions for permanent residency. Following each sub-section, we relate the findings from Denmark to international studies that investigate similar policies in other countries (see Table 3).

**[Tables 2 and 3]**

### 3.1 Dispersal Policies

The Danish dispersal policy has been used as quasi-experiment to study the impact of characteristics of the local area to which refugees have been assigned after receiving residency on their labor market performance.

Following earlier work by Borjas (2000) and Edin et al. (2003), Damm (2009) studies the effect of ethnic enclave size on the labor market outcomes of refugees, where “ethnic enclave size” is defined as the number of co-nationals who are living in the municipality of one’s first assignment. On the one hand, a larger ethnic enclave may impede labor market assimilation if it discourages country specific human capital investments and limits interaction with natives (see also Borjas 2000 for a similar argument). On the other hand, ethnic enclaves may help information acquisition and allow access to networks to improve job opportunities. Instrumenting the enclave size in the municipality with the cumulative inflow of refugees from the same origin assigned to that municipality since the start of the dispersal policy in 1986, Damm (2009) finds a significant positive effect of the size of the ethnic enclave at first assignment on labor market earnings seven years after arrival. By contrast, there is no effect of ethnic enclave size on the extensive margin of employment. The study also finds marginally higher earnings elasticities within enclaves of higher average education level. The author conjectures that this finding supports the interpretation that information about good jobs is disseminated within enclaves and that the mechanism works better in higher quality enclaves.

Damm and Rosholm (2010) evaluate the consequences of local characteristics on male refugee’s labor market assimilation, utilizing the same dispersal policy to provide quasi-experimental variation in local area features. In contrast to Damm (2009), who considers the effect of ethnic enclave size after seven years on earnings in that same year, they consider local municipality characteristics in the year and municipality of assignment. They find that the size of the ethnic enclave has no impact



on how fast refugees find jobs. This is consistent with Damm (2009), who found no effect of enclave size on the extensive margin of employment. Damm and Rosholm (2010) also show that refugees who are placed in municipalities with more immigrants, and with more social housing and educational institutions find jobs faster. By contrast, a higher regional unemployment level delays the time to job-entry.

Eckert et al. (2021) also exploit the 1986 dispersal policy and find that being initially placed in a Metropolitan area (the commuting zone of the Capital of Denmark, Copenhagen) has an initial negative (null) effect on earnings (hourly wages), but a positive effect on the earnings return to labor market experience. Therefore, refugees who are placed in the Metropolitan area initially lag behind other refugees in terms of earning levels but catch up and surpass them after 3 years. They explain their findings by a higher degree of sorting towards high-wage, service establishments in occupations and industries in the Metropolitan area. Azlor et al. (2020), taking advantage of the Danish dispersal policy from 1999 onwards, show that being placed in municipalities with a higher employment rate raises employment chances four years after arrival, and decreases unemployment rates. They find no significant differences of the effect of local unemployment or employment rates across refugee's gender or skill level.

The evidence from these studies seems to suggest that local characteristics at the place of settlement affect the immediate, but possibly also longer-term labor market performance of refugees in Denmark, results largely in line with those found in other countries. Edin et al. (2003), based on a design similar to Damm (2009), also establish a positive response of earnings to the size of the ethnic enclave. Likewise, they find that the local unemployment rate reduces individual employment probabilities, a result that is further confirmed in work by Åslund and Rooth (2007) and Godøy (2017) who investigate local economic conditions' effect on outcomes, using the same dispersal policy in Sweden and a Norwegian dispersal policy.

Dispersal policies, by depriving individuals from the possibility to migrate to areas with better economic conditions, may therefore lead to worse outcomes overall. Edin et al. (2004) and Fasani et al. (2021b) come to that same conclusion by using country variation in changes in dispersal policies, focusing on employment rates. Fasani et al. (2021b) investigate dispersal policies where refugees were either allocated according to population size (as in Denmark, the Netherlands and Norway), or according to other non-employment criteria such as social housing opportunities (as in Sweden or the UK). They conclude that dispersal policies or – even worse – policies that allocate refugees according to cost saving considerations (often to deprived areas with low cost housing) denies refugees of opportunity, reducing their employment rate and increasing their welfare dependence. In line with that, Godøy (2016), using simulations that place refugees in the labor market regions in Norway with the highest immigrant employment rates instead of pursuing quasi-random dispersal, estimates that that raises their earnings by 26%. Bansak et al. (2018) find that settlement that focusses on economic opportunity as an objective rather than equal dispersal could lead to employment levels that are 41% and 73% higher in the US and Switzerland.

### **3.2 Employment Support**

Clausen et al. (2009) examine the effect of six different types of employment support that are used in the integration program for refugees arriving after 1999: public direct employment programs, education and training programs, mixed special programs, counselling and upgrading programs, special employment programs in private sector firms, and subsidized employment. They estimate duration models, where the outcome is the duration from receiving residency until the first week off welfare benefits. They find that among the six types of employment support, only subsidized employment significantly reduces this period. Heinesen et al. (2013) consider the effect of three types of employment support, subsidized employment, direct employment programs in the public sector,

and a residual group, in a study that includes all immigrants from non-Western countries who began receiving social benefits between 1997 and 2003. One in three in this group had lived in Denmark for more than 10 years, and half were refugees or family members of individuals who received refugee status. All three types of employment support reduce the duration of welfare benefit spells, compared to non-participation, by 1.5-9 months for women and by 2.6 to 15 months for men. The effect is largest for subsidized employment. These two studies therefore suggest that employment support, particularly in the form of subsidized employment, can be beneficial to refugees.

Arendt (2022) evaluates the effect of the 2016 policy that required refugees who received residency from October 2016 onwards to participate in job search and job-training programs within one month of settlement (cf. section 2.2.6). Job training includes subsidized employment and shorter periods of internships (where the refugee is not paid but continues to receive welfare benefits). Using a discontinuity design, Arendt (2022) finds that the policy increases labor market entry for men, but not for women: After 1 year, the share of men with some employment increased by 10 percentage points (or 33% of the mean in the pre-reform group), and labor income increased by around USD 1500 (64% of the pre-reform mean). Bolvig and Arendt (2020) study the effects of participation in job training in the first year of arrival (both subsidized employment or internships) for up to 4 years after exposure, focusing on refugees and their family members who arrived prior to the 2016 reform. They instrument participation in early job-training by variation in the local propensity to use early job-training for refugees who arrived within the past 20 months, which, together with the 1999 dispersal policy, generates quasi-experimental variation in the likelihood of participating in early job training. The study finds that early job training has a positive effect on employment and labor income, corroborating the short-run results in Arendt (2022), but that the effects fade and become insignificant after two years. Moreover, early job training crowds out time spent in language courses and consequently reduces the test scores in the final language exam by 70% of a standard deviation.

These Danish studies seem to suggest that on-the-job training raises employment of refugees, and that job training administered early on can speed up entry into the labor market. However, there may be potential tradeoffs between job training programs and language programs, where early job training crowds out enrollment in language training and therefore language proficiency. This in turn may have detrimental effects in the longer run.

Evidence for other countries is in line with the findings for Denmark. Two studies for Sweden where some individuals received support from caseworkers that had been assigned a reduced caseload and where individuals were exposed to more intense employment support find large and positive employment effects 1-3 years after arrival (Åslund and Johannesson 2011; Joona et al. 2012). Evaluations of a Swedish integration program where funding of employment support was increased by 25% conclude that this raised employment and annual earnings 1-5 years after residency (Joona et al. 2016; Qi et al. 2021). Similarly, studying job-counselling sessions for refugees and asylum seekers in Germany, Battisti et al. (2019) find that interviewing participants about job preferences, support of writing a CV in German and matching the refugee with vacant jobs improves short-term employment for refugees and asylum seekers.

### **3.3 Language Programs**

Language proficiency is of key importance for the successful labor market integration of immigrants and their economic performance (see early work by Chiswick and Miller 1995; Dustmann 1994; Dustmann and van Soest 2001, 2002; Dustmann and Fabbri 2003; Bleakley and Chin 2004, 2010). A natural conclusion is to facilitate language acquisition for immigrant and refugee populations. However, language support programs are difficult to evaluate as immigrants self-select into participation.

Arendt et al. (2020) address this by examining the long-term consequences of the 1999 reform (see section 2.2.3), which doubled the length of the integration program from 1½ to 3 years with the primary aim to improve language proficiency. The reform also provided funding for teacher training and incentivized participation in the program. Using a discontinuity design around the implementation date of the reform, the study finds that the reform raised annual earnings for refugees in the long term (12-18 years after receiving residency), increased the likelihood of being employed in jobs requiring communication skills and positively affected enrollment into Danish education.

Studies for other countries seem to largely support these conclusions. A reform of the Finnish integration program for immigrants in 1998 raised participation in training specifically designed for immigrants, a large share of which was language training. The reform raised cumulative earnings over a ten-year period by more than €7000 annually (Sarvimaki and Hämäläinen 2016). Likewise, a Swedish policy that provided more intensive language training and employment support than in the official Swedish integration program, raised employment rates from 15% to 30% at program completion (Dahlberg et al. 2020). Finally, Lochmann et al. (2019) find that eligibility for a language course in France increases refugee labor force participation three years after arrival but does not impact immigrants' earnings. The latter is consistent with the Danish and Finnish findings that produced no short-term effects but may also be due to the lower intensity of exposure, as the language course is short compared to those in Scandinavian countries, ranging from 60 to 400 hours only. Thus, the evidence from these works seems to suggest that language training programs substantially improve labor market integration of refugees in the longer run.

### **3.4 Welfare Benefits**

In 2002, Denmark implemented Start Aid that reduced benefit payments to refugees who received residency after July 1<sup>st</sup> by around 40% compared to the previous social assistance levels. One of the

first evaluations of the reform was undertaken by Rosholm and Vejlin (2010) who investigate its effect on unemployment-employment transitions for the first 2 years after residency, estimating duration models. Their study focusses on adult refugees and their spouses who both arrived after the reform date, in comparison to couples where both arrived before the reform date. They find a positive effect on transition rates from unemployment to employment about 6-12 months after individuals obtain residency. Applying a regression discontinuity design, Huynh et al. (2007) and Andersen et al. (2012) find similar results, namely that Start Aid raises the employment level in the first 2-4 years since residency.

Dustmann, Landersø and Andersen (2022a) investigate the Start Aid reform over a longer horizon and add several additional analyses for the affected refugees and their children. They first estimate the immediate and longer-term causal effects of the reform on labor earnings and employment. In line with the earlier studies, they show that the reform increased employment rates from 10% to 19% in the first year after its implementation. They also show that the reform's repeal a decade later had opposite effects on employment. Moreover, the reform doubled average labor earnings. However, effects on both earnings and employment fade away after about five years. Dustmann et al. (2022b) also illustrate that the reform had undesired additional effects: A combination of the means test and a reform design for couples where partners arrived on both sides of the implementation date led to a stark withdrawal of females from the labor force. To understand better the effect labor demand may have on supply side reforms like Start Aid, Dustmann et al. (2022a) combine the reform design with the quasi-random dispersal policy of new refugees that was in place at the time (see section 2.2.3 above). They show that local labor demand for the type of work refugees can supply (i.e. low skilled work) is indeed essential, with employment effects vanishing after one year for refugees allocated to municipalities with low demand but remaining significant until year 5 for those allocated to municipalities with high demand. The reform also led to more

persistent and higher quality employment relationships in high-demand municipalities. The authors point out that, despite the initial employment effects, the reform led nevertheless to a dramatic reduction of household income for the vast majority of refugee households. In Dustmann et al. (2022b) they show that StartAid led to many unintended consequences, such as a sharp increase in crime among adults of both genders, driven by property crimes such as shoplifting. Moreover, it led to a doubling in the crime rate among teenagers whose parents were affected by the reform, driven by both property and violent crime.

Start Aid was abolished in 2012, but welfare benefits to refugees were reduced again in 2015 (cf. section 2.2.5). Arendt (2020) examines the effect of the 2015 reform, which was implemented in September 2015 for newly arriving immigrants, and in July 2016 for all immigrants who had residence in Denmark for less than 7 out of the past 8 years. This design therefore only allows for identification of the effect of the benefit reduction from arrival versus a benefit reduction ten months after residency. Arendt (2020) finds a significant effect on the probability to be employed 10-15 months after arrival for men. The effect then decreases, which is to be expected as the control group experiences the same benefit reduction. The study finds no employment response for women, which is consistent with findings in Dustmann et al. (2022a), but also finds unintended effects of the benefit reduction. The affected women have a higher risk of hospitalization and more contacts with general practice in the first year after arrival.

LoPalo (2019) is one of the few studies that examines the effect of reductions in welfare benefits for refugees outside Denmark. Using cross-state differences in the change in welfare payments to refugees in the US, she shows that refugees experience an increase in annual wages of 5-8%, averaged over 17 years, if they arrive in a state where the welfare benefit level rises by USD 100. She explains her findings by the presence of liquidity constraints and that higher benefits may

help recipients partake in labor market outcome-enhancing investments and aid the transfer of skills to the U.S. labor market.

The studies for Denmark that evaluate reforms that change welfare transfers show a short-term response in employment probabilities, mainly for males. However, effects appear to be short lived, and work by Dustmann et al. (2022a) for the Start Aid reform suggests that conclusions about the policy's effects drawn from short term outcomes do not apply for the evaluation of its overall and longer-term impact. Moreover, the reduction in benefits generates – despite initial positive employment responses – a dramatic reduction in disposable income for affected households, which leads to higher criminal activity of refugees themselves as well as their children. By combining two research designs, Dustmann et al. (2022a) also show that employment effects of reforms that intend to incentivize labor supply depend crucially on local demand conditions, in particular when affected groups have very low levels of skills.

### **3.5 Permanent Residency Regulations**

Kilström, Larsen and Olme (2018) evaluate the effect of the permanent residency reform in 2002, which raised the required length of stay to receive permanent residency in Denmark from 3 to 7 years and demanded the passing of a language test at a basic level. The authors use a regression discontinuity design to find no significant effects of the reform on the probability of ever being employed or on earnings seven years into residency. They find however that the new rules raise the probability of enrolment into general education for women and the low-skilled. They conjecture that this may be due to the reform reducing the probability for obtaining permanent residency more for the low-skilled than the high-skilled.



Arendt, Dustmann, and Ku (2021) examine the reform in 2007 that required individuals to have accumulated at least 2.5 years of full-time employment and to have passed a Danish language test at a higher level than before, in addition to the requirement of residence in Denmark for at least seven years, to obtain permanent residency. The study compares refugees and family members who were and who were not affected by the reform (which affected individuals after at least 2 years into residency), using difference-in-difference and event study estimation. They find that the reform – contrary to its objectives - reduces work hours by 30% in full-time equivalents and has no effect on the share of individuals who pass the required language level test. The authors then split up their sample into high performers and low performers, based on employment and language test outcomes during the first two years after arrival, when both the treated and untreated were not yet affected by the reform. They show that the negative effects on employment are driven by individuals who pre-reform performed badly in terms of employment and language education. Employment of individuals who pre-reform had a high labor market attachment was not affected by the reform while the reform had a positive and significant effect on their probability of passing the language requirement. The authors conclude that too severe requirements may discourage low achieving individuals from responding to incentives as the ones implemented in the studied reform in the way intended and may even have opposite effects on performance for this group.

Some works study variation in eligibility conditions for permanent residency for other countries. Utilizing two reforms that reduced waiting times for naturalization in Germany from 15 to 8 years, Gathmann and Keller (2018) show that shorter waiting times for permanent residency through naturalization had no effects on employment or earnings of male immigrants but increased employment for female immigrants. Blomqvist, Thoursie and Tyrefors (2018) utilize a Swedish reform in 2016 to show that receiving temporary as opposed to permanent residency reduces

participation in Swedish language courses, but has no effect on employment, education or welfare benefit receipt in the first year since residency.

#### **4. Discussion and Conclusions**

Employment and earnings of refugees in many Western countries are lower than those of other immigrant groups. This is well documented in Brell et al. (2020), who also point out that while economic migrants' relocation decision is based on careful consideration of opportunities afforded abroad, refugees forced and often unexpected migration leaves them far less prepared for the labor market of the receiving country, with often lower or non-existing language and job skills. This affects their employability and wages. Programs that mend these shortcoming and measures that support labor market engagement of refugee immigrants are therefore of critical importance. Besides a lack of skills that are productive in the labor market of the country that provides protection, refugees have frequently gone through traumatic experiences, face uncertain futures in the receiving countries, and often stem from culturally diverse backgrounds – all factors that impede their integration into labor markets of receiving countries. All these aspects of refugee migration require therefore policy measures that, besides aiming at promoting refugees' labor market engagement, also carefully adjust policies to the target population's particular needs.

To develop current policies, one can learn from past experiences. This paper brings together evidence from four decades of Danish refugee policies and compares these with similar policies in other countries. Our review commences with dispersal policies, whose primary objective is to spread the burden of accommodating refugee immigrants evenly across the country that provides protection. For the researcher, dispersal policies provide an ideal tool to address the problem of sorting, and to causally identify the impact of local conditions on refugees' labor market performance. From the studies we review in this paper, we learn that refugees benefit from being allocated to municipalities

that provides them with large ethnic networks (Damm 2009; Edin et al. 2003). Moreover, better labor market conditions also favor refugees' employment probabilities (Damm and Rosholm 2009; Azlor, et al. 2020). A specific premium exists in bigger cities, where better options to sort into high-wage industries improves refugee's earnings in the longer run (Eckert et al. 2021). These findings suggest that quasi-random dispersal may however induce inefficiencies, by preventing refugees to settle in areas where their skills are most employable and obtain the highest reward. Indeed, Edin, Fredriksson and Åslund (2004) and Fasani, Frattini and Minale (2021b) conclude that quasi-random allocation stifles employment opportunities. Even worse, policies that allocate according to cheap housing – often correlated with local disadvantage – may lead to long term disadvantage of refugees. In line with that, Godøy (2017) finds that placement in the most favorable labor market regions in Norway could raise refugees' earnings by 26% if compared to quasi-random dispersal. Similarly, Bansak et al.'s (2018) comprehensive analysis shows that, if economic opportunity rather than equal dispersal determines settlement decisions, then this could lead to 41% and 73% higher employment in the US and Switzerland, respectively. These authors conclude that settlement oriented according to economic opportunity is preferable to quasi-random dispersal. Dustmann et al. (2022a) add another aspect to these analyses: they show that settlement according to economic conditions can enhance the efficiency of policies aimed at incentivizing refugees' labor market performance. Combining the Danish random allocation policy with the evaluation of the Start Aid reform (which reduced the level of welfare benefits refugees were entitled to) they illustrate that the effect of the reform on employment and earnings is far larger in municipalities with labor demand conditions that favor refugees. We conclude therefore that settlement policies should ensure that refugees are allocated to local labor markets that offer favorable employment opportunities, if the objective is to maximize their labor market engagement and welfare. As refugees are interested in pursuing their own economic interest, and the interaction of economic opportunity and ethnic networks may be too

complex to enter policy designs, we believe that allowing refugees to choose where to settle is the most efficient allocation mechanisms.

Low initial employment levels may be a direct consequence of refugees' being badly prepared for the receiving country's labor market, due to lack of skills that are needed to perform to the lowest required level of productivity (which could be determined by a minimum wage), or due to missing information about the labor market and lack of networks and information. The Danish studies that we review in this paper evaluate a number of policies that attempt to repair those shortcomings, by offering extensive language programs, as well as on- and off the job training programs. Findings point to on-the-job training raising employment of refugees, with job training programs administered early on being most effective in enhancing labor market entry. Studies also find that language programs enhance employment probabilities, although effects are found to materialize only in the longer run. However, there is some evidence of a tradeoff between job training programs and language programs, where early job training may lead individuals to not acquire language proficiency, which may then have detrimental longer-term consequences by obstructing access to higher level employment opportunities. We thus conclude that programs aimed at enhancing the skills of refugees and adapting existing skill sets to the needs of the labor market are effective and important. However, programs need to be carefully tuned: while measures that support immediate labor market engagement are certainly beneficial in the short run, they need to be combined with measures aimed at improving skills, in particular language proficiency, to help secure long-term labor market success, as highlighted in Arendt et al. (2020) and Bolvig and Arendt (2020).

Many countries have seen a reduction in welfare payments to refugees (OECD 2018; 2020). Such policies are typically stated as incentivizing labor market participation of refugee immigrants. However, they are likely policy responses to electorate's perception that refugees receive too much financial aid. The key question is whether reductions in transfers are effective in improving the labor

market engagement of refugee immigrants. The studies for Denmark that evaluate such reforms show indeed a short-term response in employment probabilities, mainly for males (see Rosholm and Vejlin 2010; Huyhn et al. 2007; Andersen et al. 2012). However, such short-term responses do not carry over into the longer run and cease after five years, as shown by Dustmann et al.'s (2022a) analysis of the Start Aid reform, who thus warn that conclusions for the longer term drawn from short term evaluations are misleading. Moreover, the dramatic reduction in disposable income for affected households has many undesirable side effects. Dustmann et al. (2022b) show that – despite positive initial employment effects – Start Aid reduced household income of affected refugee households by about 40% on average. This dramatic reduction pushed many households below the poverty line and led to higher criminal activity of refugees as well as their children. The authors also show that employment effects of reforms that intend to incentivize labor supply depend crucially on local demand conditions. They conclude that supply side incentives may run into the void if affected groups have very low levels of skills or skills for which there is no demand. This may be a particular problem when wages are bound by regulation, so that productivity of refugees may be below the minimum wage. We conclude from the existing evidence that reductions in transfers are unlikely to achieve the objective of better longer-term integration of refugees into the labor market. Moreover, it seems that such reforms, by reducing quite dramatically the disposable income of households, cause major side effects, with potential large costs for affected individuals and society.

Another important aspect of refugee migration is the permanence of the migration. As pointed out in Dustmann et al. (2017), a primary reason for the poor success in integrating refugees into the host countries' labor markets is the indecisiveness of host nations about duration and permanence of stay, and thus the lack of providing refugees with a clear perspective. Being unclear about the chances of permanence may create disincentives for investment into skills and leading them to perform below their economic potential. In fact, Adda et al. (2022) find strong support for this hypothesis. Many

countries have tightened the rules governing eligibility for permanent residency or citizenship in recent years, often motivated by a desire to provide incentives to integrate. The idea is that the economic benefits of permanence are so large that refugees – if tasked with investments into skills in exchange for permanent residency – will respond accordingly, which leads to stronger labor market integration. However, this may only materialize if the bar for obtaining permanence is not set too high. The study by Arendt et al. (2021) shows that more demanding permanent residency requirement can indeed provide such incentives, but only if individuals believe they can fulfill the new requirements without too large costs. Otherwise, more severe requirements can lead to lower labor market performance. This study provides therefore another example that policies should be carefully crafted and need to take account of heterogeneous responses of individuals.

Many of the policies discussed above share the aim to raise labor market participation, and we can compare their effectiveness in this dimension. As emphasized in several of the studies, this requires understanding not just the short-term effects, but also the long-term response, as well as considering potential unintended consequences. For the five types of refugee policies evaluated in this study, only two produce effects that on average seem to outweigh costs: To allow refugees to choose where to settle, and active labor market programs that raise language skill investments. By contrast, policies that emphasize early job-training and policies that regulate access to welfare benefit or use permanence of residence to incentivize skill investment, while beneficial for some, create disadvantage for others.

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**Table 1.** Top-5 origin countries for persons granted protection

| Year granted protection:                                    |           |             |             |             |             |             |
|---|-----------|-------------|-------------|-------------|-------------|-------------|
| 1984-1988   | 1989-1993 | 1994-1998   | 1999-2003   | 2004-2008   | 2009-2013   | 2014-2017   |
| Poland  | Somalia   | Somalia     | Somalia     | Myanmar     | Somalia     | Somalia     |
| Sri Lanka   | Sri Lanka | Yugoslavia  | Yugoslavia  | Yugoslavia  | Syria       | Syria       |
| Palestine   | Palestine | Afghanistan | Afghanistan | Afghanistan | Afghanistan | Afghanistan |
| Iran  | Iran      | Iran        | Iran        | Iran        | Iran        | Iran        |
| Iraq  | Iraq      | Iraq        | Iraq        | Iraq        | Russia      | Eritrea     |
| Persons from top-5 origin countries as a fraction of total: |           |             |             |             |             |             |
| 76%   | 82%       | 94%         | 83%         | 56%         | 72%         | 92%         |

Notes: Includes protection under the UN convention (incl. quota agreements), subsidiary protection, and protection for other humanitarian reasons.

*Source* : The number of persons granted protection from 1997 is from Statistics Denmark, statistikbanken.dk.

Before 1997, they are from Statistics Denmark (1995, 1997): Annual Yearbook.

**Table 2.** Danish studies on refugee policies and labor market outcomes

|                         |                                     |   | Effects |      |          |
|-------------------------|-------------------------------------|---|---------|------|----------|
| Study                   | Treatment                           | Time horizon (years)                          | LFP     | Emp. | Earnings |
| <i>Dispersal policy</i> |                                     |   |         |      |          |
| 1                       | Damm (2009)                         | Local #co-nationals (t)                       | 7       |      | +        |
| 2                       | Damm and Rosholm (2010)             | Local #co-nationals (initial)                 | 1-12    | NS   |          |
|                         |                                     | Local #immigrants (initial)                   | 1-12    | -    |          |
|                         |                                     | Local unemployment (initial)                  | 1-12    | NS   |          |
|                         |                                     | Local educational institutions (initial)      | 1-12    | +    |          |
|                         |                                     | Local social housing (initial)                | 1-12    | +    |          |
| 3                       | Damm (2014)                         | Socially deprived neighbourhood               | 2-6     | NS   |          |
|                         |                                     | Local education of non-Western immigrants (t) | 2-6     | +    |          |
|                         |                                     | Local employment of co-nationals (t)          | 2-6     |      | +        |
| 4                       | Azlor, Damm, Schultz-Nielsen (2020) | Local employment (initial)                    | 4       | +    |          |
|                         |                                     | Local unemployment (initial)                  | 4       | -    |          |
| 5                       | Eckert, Walsh and Connor (2021)     | Initial placement in Copenhagen area          | 1       | 0    | -        |
|                         |                                     |   | 5       |      | +        |
|                         |                                     |   | 15      |      | +        |

**Table 2.** Danish studies on refugee policies and labor market outcomes (continued)**Employment support**

|                                       |   |                                   |     |    |    |    |
|---------------------------------------|---|-----------------------------------|-----|----|----|----|
| 6                                     | Clausen, Heinesen, Hummelgaard, Husted and Rosholm (2009) | Wage subsidy                      | 1-3 |    | +  |    |
|                                       |   | Other employment support          | 1-3 |    | NS |    |
| 7                                     | Heinesen, Husted and Rosholm (2013)                       | Wage subsidy                      | 1-7 |    | +  |    |
|                                       |   | Direct employment programme       | 1-7 |    | +  |    |
|                                       |   | Other employment support          | 1-7 |    | +  |    |
| 8                                     | Arendt (2020a)  | Early job training                | 1   |    | +  | +  |
| 9                                     | Bolvig and Arendt (2020)                                  | Early job training                | 2   |    | +  | +  |
|                                       |   |                                   | 4   |    | NS | NS |
| <b>Language courses</b>               |   |                                   |     |    |    |    |
| 10                                    | Arendt, Bovig, Foged, Hasager and Peri (2020)             | Integration program               | 18  |    |    | +  |
| <b>Welfare benefit generosity</b>     |   |                                   |     |    |    |    |
| 11                                    | Huyhn, Schultz-Nielsen and Tranæs (2007)                  | Benefit reduction                 | 1   |    | +  |    |
|                                       |   |                                   | 2   |    | NS |    |
| 12                                    | Rosholm and Vejlin (2010)                                 | Benefit reduction                 | 1   | -  | +  |    |
|                                       |   |                                   | 2   | NS | +  |    |
| 13                                    | Andersen, Hansen, Schultz-Nielsen and Tranæs (2012)       | Benefit reduction                 | 4   | -  | +  |    |
| 14                                    | Dustmann, Landersø and Andersen (2022a)                   | Benefit reduction                 | 5   | -  | +  |    |
|                                       |   |                                   | 10  | NS | NS |    |
| 15                                    | Arendt (2020b)  | Early vs. later benefit reduction | 1   |    | +  | NS |
| <b>Permanent residency regulation</b> |   |                                   |     |    |    |    |
| 16                                    | Kilström, Larsen and Olme (2018)                          | Permanent residency regulation    | 12  |    | NS | NS |
| 17                                    | Arendt, Dustmann and Ku (2021)                            | Permanent residency regulation    | 7   |    | -  | NS |

Notes: LFP means labor force participation. "+" "-" denotes the sign of a significant effect of the treatment on the outcome. NS indicates that the effects are not significant at a 5% level. The time horizon is the number of years the outcome is measured after treatment.

**Table 3.** International studies on refugee policies and labor market outcomes

| Study                   | Country                                    | Treatment       | Time horizon (years)                       | Effects |        |      |       |   |
|-------------------------|--|-----------------|--|---------|--------|------|-------|---|
|                         |  |                 |  | LFP     | Unemp. | Emp. | Earn. |   |
| <i>Dispersal policy</i> |  |                 |  |         |        |      |       |   |
| 1                       | Edin, Fredriksson, Åslund (2003)           | Sweden          | Local #co-nationals (t)                    | 7       |        | -    | +     |   |
|                         |  |                 | Local immigrants (t)                       | 7       |        | NS   | NS    |   |
|                         |  |                 | Local unemployment (t)                     | 7       |        | +    | -     |   |
| 2                       | Edin, Fredriksson, Åslund (2004)           | Sweden          | Regional dispersion vs. own choice         | 8       |        | +    | -     |   |
| 3                       | Åslund and Rooth (2007)                    | Sweden          | Local unemployment (t)                     | 5-10    |        | -    | -     |   |
| 4                       | Godøy (2017)                               | Norway          | Regional immigrant employment (initial)    | 6       |        |      | +     |   |
| 5                       | Becker and Borghans (2011)                 | The Netherlands | Neighbourhood # non-Western immigrants (t) | 2-6     |        |      | +     | + |
| 6                       | Fasani, Frattini and Minale (2018)         | Europe          | Regional dispersion policy vs. no policy   | 1-15    | -      |      | -     |   |
| 7                       | Bansak, Ferweda, Hainmueller et al. (2018) | US              | Optimized settlement vs. dispersal policy  | 0.25    |        |      | +     |   |
|                         |  | Switzerland     | Optimized settlement vs. dispersal policy  | 3       |        |      | +     |   |

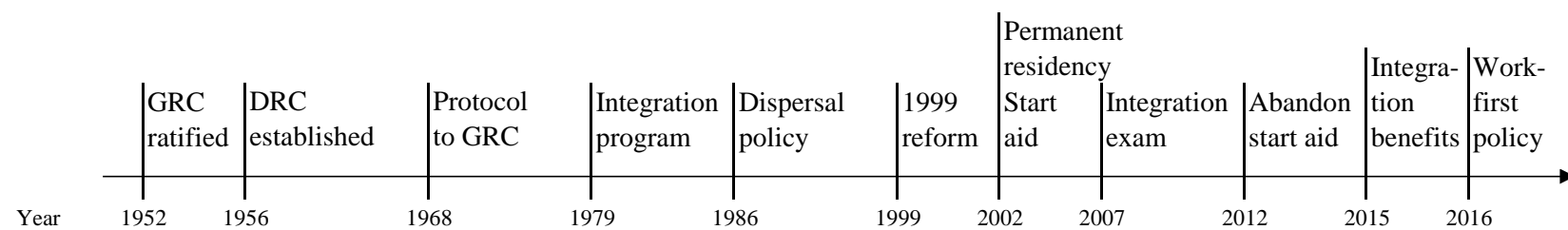


**Table 3.** International studies on refugee policies and labor market outcomes (continued)

|  |   |         |  |      |    |    |
|--|---|---------|--|------|----|----|
| <b><i>Employment support</i></b>             |   |         |  |      |    |    |
| 8  | Joona, Lanninger and Sundström (2016)         | Sweden  | Integration program                      | 3    |    | +  |
| 9  | Qi, Irastorza, Emilsson and Bevelander (2021) | Sweden  | Integration program                      | 4    |    | +  |
| 10   | Åslund and Johansson (2011)                   | Sweden  | Intensified coaching, reduced caseload   | 2    | +  |    |
| 11   | Joona and Nekby (2012)                        | Sweden  | Intensified coaching, reduced caseload   | 2.5  | +  |    |
| 12   | Battisti, Giesin and Laurentsveyeva (2019)    | Germany | Job search assistance                    | 1    | +  |    |
| <b><i>Language courses</i></b>               |   |         |  |      |    |    |
| 13   | Dahlberg, Egebark, Özcan and Vikman (2020)    | Sweden  | Language training, job search assistance | 2    | +  |    |
| 14   | Sarvimaki and Hämäläinen (2016)               | Finland | Integration program                      | 10   |    | +  |
| 15   | Lochmann, Rapoport and Speciale (2019)        | France  | Language course                          | 3    | +  | NS |
| <b><i>Welfare benefit generosity</i></b>     |   |         |  |      |    |    |
| 16   | LoPalo (2019)                                 | US      | Benefit reduction                        | 1-17 | NS | -  |
| <b><i>Permanent residency regulation</i></b> |   |         |  |      |    |    |
| 17   | Gathmann and Keller (2018)                    | Germany | Reduced time to citizenship              | 3-30 | +  | +  |
| 18   | Blomqvist, Thoursie and Tyrefors (2018)       | Sweden  | Temporary vs. Permanent residency        | 1    | NS |    |

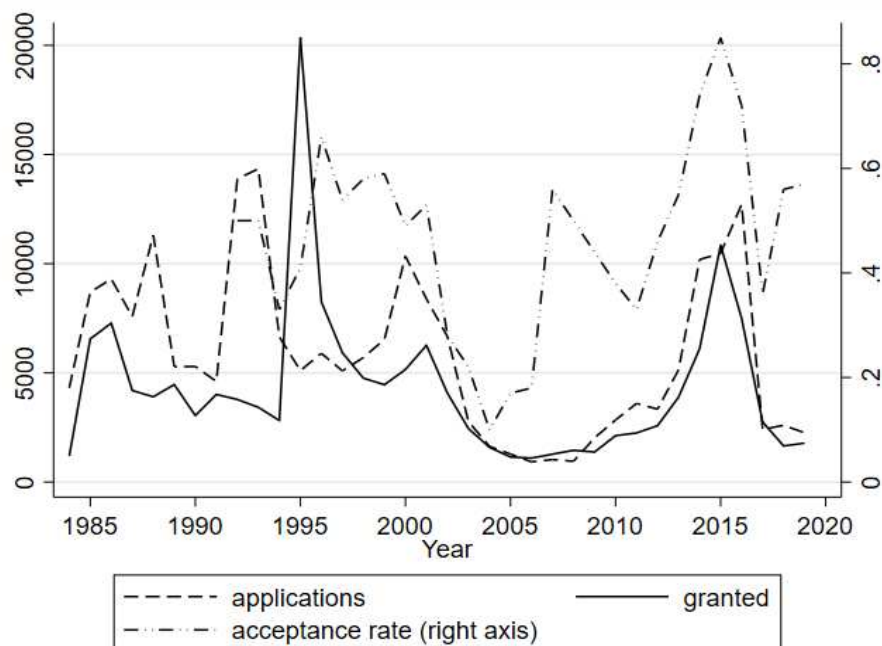
Notes: LFP means labor force participation. "+" "-" denotes the sign of a significant effect of the treatment on the outcome. NS indicates that the effects are not significant at a 5% level. The time horizon is the number of years the outcome is measured after treatment.

**Figure 1.** Danish refugee policies, 1950-2020



Notes: The policies are placed at the year of their implementation. They are described in section 2.2.

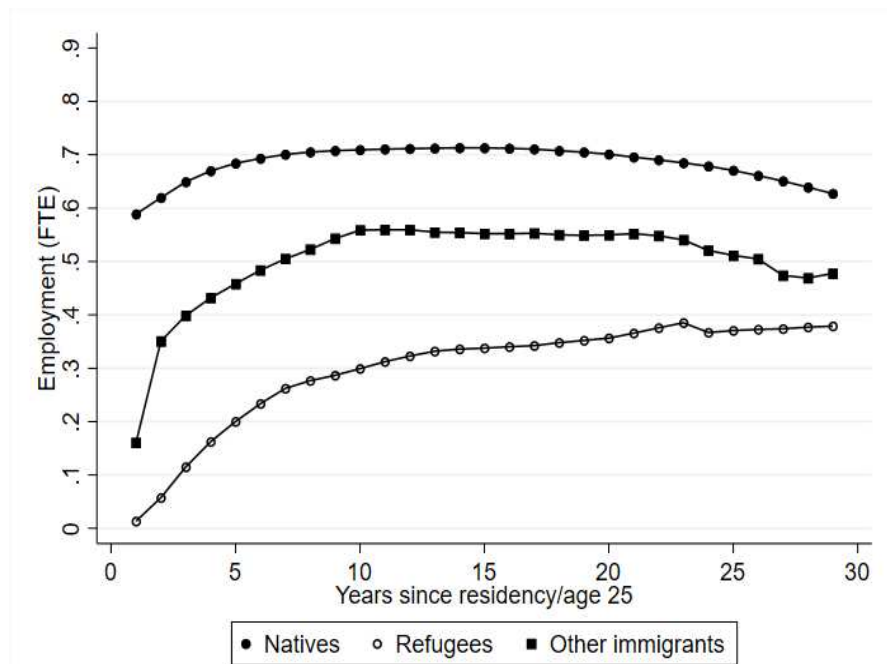
**Figure 2.** The number of asylum applications, granted refugee status and acceptance rate in Denmark, by year



Notes: Asylum applications excludes applications from persons who are sent to other EU-countries (via the Dublin-convention). Granted asylum includes protection under the UN convention (incl. quota agreements), subsidiary protection, and protection for other humanitarian reasons. The acceptance rate is for applications for asylum on Danish territory under the GRC only.

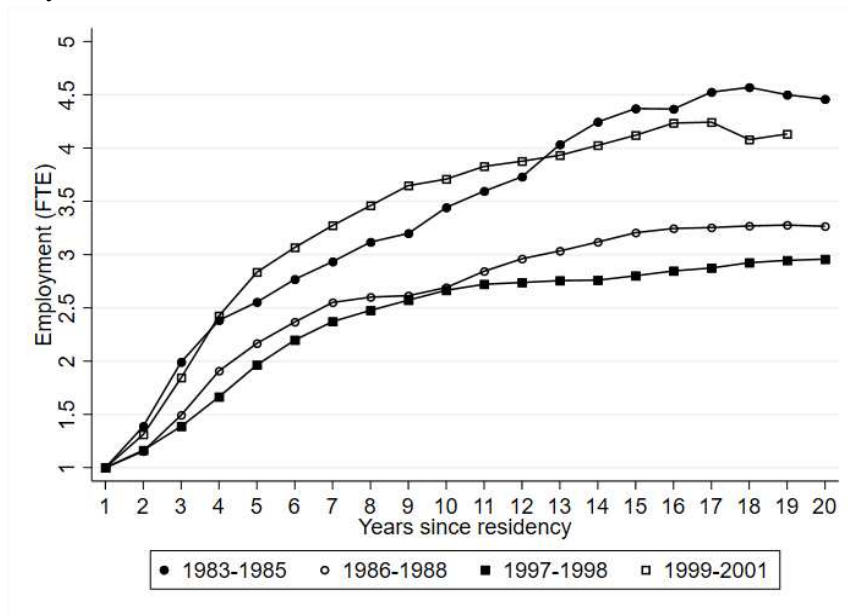
Source: The number of asylum applications (from 1990) and the number of applications being granted (from 1997) are from Statistics Denmark, statistikbanken.dk. The number of asylum applications before 1990 is from UNHCR (2001). The number of applications being granted before 1997 is from Statistics Denmark (1995, 1997), Annual Yearbook. The acceptance rate is from the Danish Immigration Services 2001-2019. [https://www.nyidanmark.dk/en-GB/Numbers/tal\\_fakta](https://www.nyidanmark.dk/en-GB/Numbers/tal_fakta)

**Figure 3.** Employment rate for refugees, other immigrants and natives

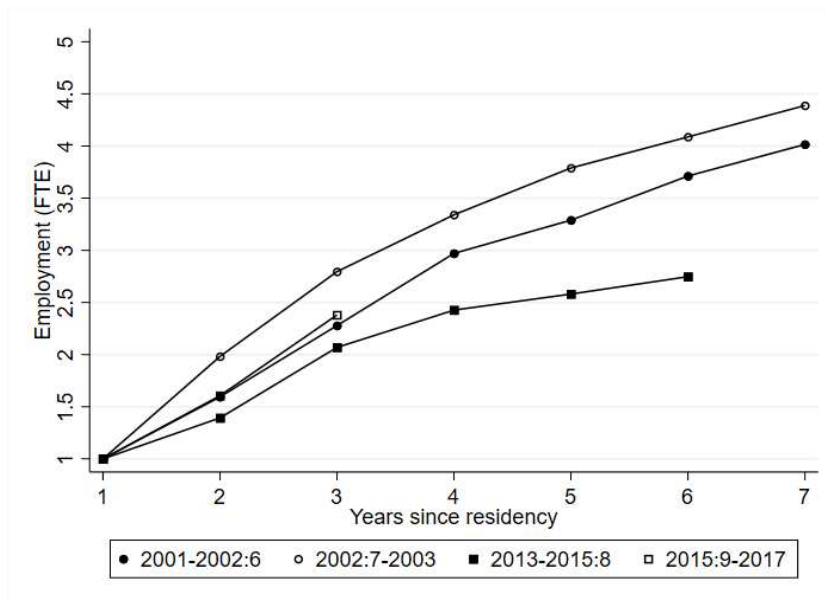


Notes: The employment rate is measured in full-time equivalents. Immigrants aged 18-59 at arrival from 1983-2017, where refugee status prior to 1997 is proximated using country and time of arrival (Statistics Denmark 2008). Refugees include other immigrants living with a refugee. Natives aged 25-59. For natives, the horizontal axis refers to years since age 25 instead of years since residency.

**Figure 4.** Employment rates for refugees, by arrival cohort and years since residency (YSR)



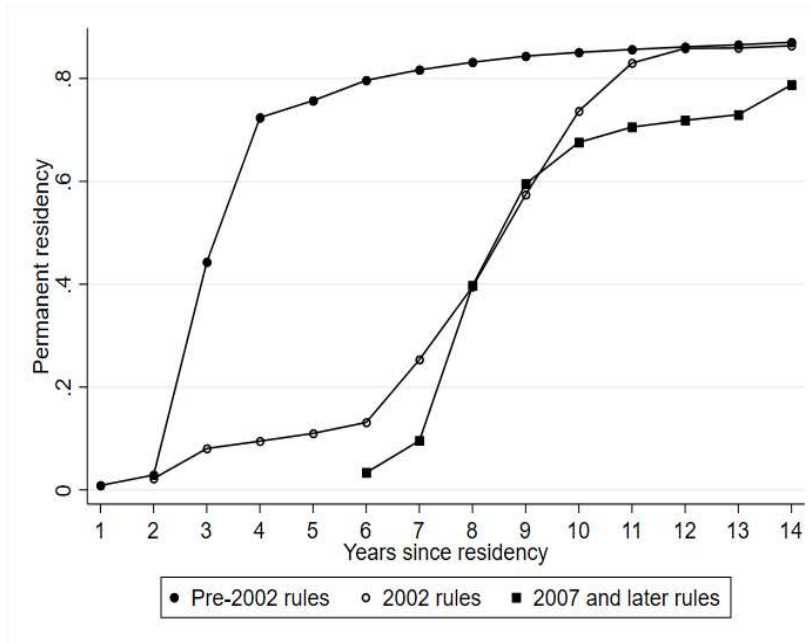
(a) Arrival cohorts 1983-2001



(b) Arrival cohorts 2001-2017

Notes: The employment rate is measured in full-time equivalents and is adjusted for calendar year effects and normalized to the level relative to YSR=1. The legends show the years of arrival. Refugees aged 18-59 at arrival from 1983-2017, where refugee status prior to 1997 is proxied based on country and time of arrival (Statistics Denmark 2008). Refugees include other immigrants living with a refugee.

**Figure 5.** Fraction with permanent residency, by arrival cohort and years since residency



Notes: Permanent residency from the Danish Immigration Services, recorded in the year of issue. The 2002 reform extended the required length of stay from 3 to 7 years and added a language requirement. The 2007 reform added a work requirement and a higher language requirement.