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A Statistical Decomposition of Nativity Gaps in Criminal Convictions Using Full Population Data from Five Developed Democracies

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Abstract

Migration and its consequences are among the most prominent campaign issues for politicians in both the US and the EU, as well as other developed democracies, with the perceived consequences of migration for crime and public safety being particularly contested. We use population-wide administrative data from five developed democracies (Denmark, the Netherlands, New Zealand, Norway, and Sweden) to statistically decompose the correlation between nonwestern immigrant background status (both migrants and their children separately) and criminal conviction across as many as 30 years. The results show that differences in conviction rates between immigrants and their children and the majority populations of these countries are mostly attributable to gaps between the groups in education, labor market status, and income, and in the intergenerational consequences of these gaps. Country differences in the results reflect differences in immigration histories. The conclusions imply that correlations between immigrant status and criminal convictions reflect both the type of migration and the host country's response to it, thereby highlighting promising points of intervention in case countries wish to close the gaps in convictions.

Significance

Electoral campaigns often focus on crimes committed by immigrants. We used data from five countries—Denmark, the Netherlands, New Zealand, Norway, and Sweden—covering almost 20 years to show that crime rates differ across the majority populations, immigrants, and their children. The results highlight promising areas for intervention to decrease the conviction gaps, emphasizing investments in labor-market status and education, as well as the circumstances under which children grow. The results for New Zealand consistently opposed those for Europe, with lower crime rates among immigrants and their children in New Zealand, which we attribute to selectivity in the types of people likely to migrate to New Zealand relative to Europe.

Introduction

Politicians and citizens in both the US and Europe heatedly debate migration and its consequences, and this debate has thus made it to the forefront of almost all political electoral campaigns and discussions. This was particularly the case during the immigration crisis at the US/Mexican border, which peaked at around 250,000 apprehensions and migrant encounters in the month of December 2023, as well as the surge in Syrian refugees seeking protection in and around the EU in 2015–2016. The debate has only increased in significance since and the political rhetoric has become increasingly harsh. For example, in his 2015 presidential campaign announcement, President Trump claimed that “when Mexico sends its people, they’re not sending their best. [...] They’re sending people that have lots of problems, and they’re bringing those problems with them. They’re bringing drugs. They’re bringing crime. They’re rapists. And some, I assume, are good people” (1). The debates intensified as the US pandemic-era public health restriction on immigration, *Title 42*, expired in late spring of 2023, effectively reopening US borders, and continued to predominate throughout the 2024 presidential campaigns, during which Haitian immigrants in Springfield, Ohio, were rumored to steal and eat pets, highlighting the intense anti-migration rhetoric (2).

Similar debates have been raised by right-wing politicians in Europe¹ (3–5) as well as Australia.² In the French 2017 presidential election, for example, Marine Le Pen suggested suspending all legal immigration to France “[...] to stop this frenzy, this uncontrolled situation that is dragging us down” (7). The recent general election in Germany also revolved around the theme of migration and its consequences, although Germany has long been considered immigration friendly. Concerns generally center around the social and economic

¹ Denmark, Pernille Vermund, *Nye Borgerlige*: “Our disastrous immigration policy [...] has demolished feelings of safety. Women are being raped, Jewish people are being harassed, artists and politicians endure threats to their lives, men are being stabbed in the streets, homosexuals are being harassed, and our general welfare deteriorates, and feelings of unsafety increase.” (authors’ translation of (3) from Danish).

The Netherlands, Geert Wilders, *Partij voor de Vrijheid*: “The Moroccan scum in Holland . . . once again not all are scum . . . but there is a lot of Moroccan scum in Holland who make the streets unsafe, mostly young people . . . and that should change.” (4).

Sweden, Ulf Kristersson *Moderaterna*: “A very large proportion of the most serious crimes right now are linked to very, very poor integration into Sweden.” (authors’ translation of (5) from Swedish)

² Pauline Hanson, *One Nation Party*: “Muslims are imprisoned at almost three times the average rate. The rate of unemployed and public dependency is two to three times greater than the national average. Muslims are prominent in organized crime with associated violence and drug dealing. [...] Anti-social behavior is rampant, fueled by hyper-masculine and misogynist culture. Multiple social surveys find that neighbors of Muslim settlements are suffering from collapsing social cohesion and fear of crime” (6).

integration of immigrants into the host countries, and crime and public safety are particularly contested correlates of immigration (8–10).

Despite political rhetoric, studies focusing on aggregate-level and spatial data from the US have typically found null or (weak) negative associations between immigration and crime (10,11). That is, immigration does not affect crime, and if it were to do so, it would lower crime rates. Three theoretical explanations expound this finding. First, according to the healthy migrant hypothesis, those who succeed in migrating to another country tend to be healthy and industrious, features that are negatively correlated with crime rates. Second, because immigrants possess skills developed in another context, they may introduce new skills and entrepreneurship to the host country, whereby immigration diversifies and strengthens the local labor market and community. Third, immigration may revitalize communities and norms by, for example, introducing more social control carried forth by, for example, a higher share of two-parent households.

However, in Europe, the immigration-crime association reverses, whereby immigrants to the EU have higher conviction rates than natives, at least immigrants of nonwestern descent (e.g., 12), although broader reviews also document likely null effects (e.g., 8).³ There are four theoretical explanations for this. First, immigrants and their children tend to be younger than majority populations, and these differences in age structure imply that overall crime rates can differ substantially because young people make up a larger share of the group, even if immigrants and their children are not, on average, more criminally active than the same-age people in the majority population. Second, immigration may increase crime rates due to immigration's economic consequences. This is because immigrants are new to the local labor market and thus increase job competition. Furthermore, immigrants often do not possess wealth to help them through resettlement and the

³ The few studies that use European data and research designs suitable for measuring the causal effect of immigration on crime tend to find no (or little) causal relationship between immigration and crime (e.g., Bianchi, Bounanno, and Pinotti (13) in Italy), as was indicated by Kubrin and Ousey's review (10) of the US literature. One recent exception is the results presented in Couttenier et al. (14), which showed that exposure to conflict in the origin country, such as civil war or mass killings in childhood, could be significant in the immigration/crime link. Such exposure leads to up to 35% higher rates of violent crimes among immigrants in Switzerland, per their study. They further relied on variation in policies across provinces in Switzerland to document that promoting immigrants' labor market access is most effective in reducing this violence.

process of integrating into the new community. Third, immigration may disrupt local life circumstances by challenging the normative foundation of communities, as immigrants often come from various backgrounds that may not be directly integrated into the local commune. Finally, immigrants may introduce new criminal network ties into a community, by having, for example, criminal associates in the country of origin or other countries. Immigrants may thus establish new criminal “trade routes” via the geographic dispersion of their associates, as is the case in drug trafficking, which requires presence in multiple contexts.

The difference between the results for the US and the EU could be attributable to at least two things. First, the “treatment” of immigration to an area is often low dosage: The number of immigrants that arrive to a spatial unit at any given point is low relative to the population size in that area. Immigrants would therefore have to be extraordinarily active in the criminal market to drive up aggregate crime rates.⁴ Second, the modal type of immigrant who attracts research attention in the US and the EU differs. In contrast to the US, European focus is rarely on migrants who arrive actively searching for employment and who possess skills that are transferable to the new labor market. Instead, the focus tends to be given to migrants of nonwestern backgrounds, typically refugees.⁵ This type of migrant constitutes a special group who were, for example, unwilfully displaced (i.e., they are not migrating in active search for employment but to flee war, persecution, and terror) and may have experienced horrible events, such as war or the drowning of family members. Once in the host country, these migrants typically do not possess documentable skills, including language skills, to obtain employment (15). Further, demand for the type of skills they possess is often limited, so their dependence on social welfare is high (16). Refugees and similar migrants of nonwestern backgrounds thus face strong structural barriers that may promote crime risks (17, 18). Add to these barriers the tendency that these immigrants are young—and more often male, at least for the first migrant in a family

⁴ For illustration, let 10% and 90% of the population be immigrants and majority. Then let immigrants have far higher conviction rates than majority: .2 and .1, respectively. The total conviction rate is then $[(.2 \times .1) + (.1 \times .9)] = .11$. To increase the total conviction rate by just 1 percentage point, to .12, the share of immigrants (assuming constant conviction rates within groups) would have to increase by 10 percentage points (i.e., double): $[(.2 \times .2) + (.1 \times .8)] = .12$.

⁵ People from nonwestern countries are not necessarily refugees and could also apply for work or study permits in all comparison countries, which is common for immigrants of Chinese backgrounds, for example. It was not, however, possible to obtain information on legal ground for residence in all comparison countries, whereby we were forced to focus on the cruder western/nonwestern categorization.

(other family members will often apply for family reunification after the successful reallocation of the male migrant). Being young (male) is one of the most important risk factors for crime (19).

Common to both the US and the EU is the observation that children of immigrants, often born in the host country, tend to have *higher* crime rates when they reach late adolescence and young adulthood than their peers (10). This observation counters anticipation, as children of immigrants have grown up in the host country and have been shaped by the country's institutions, whereby they in theory should be better assimilated or integrated (in the sense that they should, on average, resemble the majority population more also in terms of criminal behavior). However, the difference in crime rates likely reflects the strength of the structural barriers faced by children of immigrants, including experiences of discriminatory treatment in, for example, schools and the labor market (20, 21). Barriers such as the clustering of ethnic groups in neighborhoods also shape these "enclaves" and homes in which the second generation grows up, which have been shown to directly impact life risks, including (gang) crime risks for boys (22–24). Moreover, having grown up in the host country, many children of immigrants have not yet aged out of the high crime-risk ages, which again may cause higher crime rates in this group.

Differences in sociodemographic features and age distributions between immigrants of nonwestern backgrounds, their children, and the majority populations nearly inevitably lead to higher crime conviction rates among immigrants and their children in European countries. How important these different features are, and how much their importance varies by country must yet be explored. This exploration should specifically include a context with more immigrants from nonwestern backgrounds immigrating in active search of employment. We aim to answer these questions in this study.

To address these questions, we accessed full population data from five developed democracies: Denmark (DNK), the Netherlands (NLD), New Zealand (NZL), Norway (NOR), and Sweden (SWE). These countries are all in the OECD top 20 for gross domestic product (GDP) per capita (25),⁶ the majority populations are predominantly Caucasian, life expectancy at birth is high and similar across the countries

⁶ NOR nr. 3, DNK nr. 6, NLD nr. 7, SWE nr. 10, and NZL nr. 18, all in 2021

(80+ years in 2021), as is the age compositions in these countries (26). These similarities imply that we focused on rich and ethnically homogenous countries with high levels of population health.⁷

We also focused on these five countries because they provided us with access to administrative microdata on the entire population that can be linked accurately to criminal convictions and comparable indicators of sociodemographic backgrounds—a requirement for conducting this type of study. Applying statistical decomposition models to these data allowed us to explain (a) how much conviction rates differ between majority populations, immigrants, and the children of immigrants in these five countries over the past 20 years (up to 30 years for some countries); (b) what the implications would be for the conviction rate differences between majority populations, immigrants, and the children of immigrants in these five countries in the counterfactual situation in which there is no difference between the groups in terms of the included sociodemographic variables and their respective protective role for criminal conviction risks; and (c) how strong the bivariate correlations between the various sociodemographic characteristics and conviction risks are. We explored these factors to determine which of these characteristics would likely yield better results in terms of closing the immigrant/majority gap in conviction risks if subject to intervention. We focused on people of nonwestern backgrounds because of the discussions outlined above.

Since we centered our study on ages 15–30, we refer to “children of immigrants” as “second generation” to avoid semantically conflating childhood with young adulthood. We refer to “majority population” as people born in the country who also have at least one parent born in the country, in compliance with the Scandinavian tradition (e.g., 27). This definition of majority population thus covers great diversity within the countries but effectively excludes immigrants from other Western countries, as well as their children, from analysis.

⁷ Obviously, NZL is geographically distant from the European countries in this study and is colonized land, which could imply low comparability. However, because of its colonial history and despite its geographic distance to Europe, NZL has a commonwealth heritage, and the majority population is of European descent. The NZL welfare state is thus fundamentally forged on European principles.

Comparison Countries

The comparison countries in our study represent different institutional types (see the detailed country profiles available in the online supplementary material). The Scandinavian cluster represents social democratic welfare states with universal access to state-guaranteed assistance of a generally high standard that is covered through taxation. NZL represents the liberal welfare state regime, the regime that is more comparable to the US, emphasizing market efficiency and therefore providing only modest universal social assistance and only to uphold a subsistence minimum. Instead, social insurance plans prevail; there is a stronger focus on individual initiatives and private institutions. The NLD can be best described as a hybrid welfare state that combines elements of both liberal and social-democratic welfare regimes to strike a balance between market-oriented principles and social protection. Despite these fundamental differences in how welfare is approached in the comparison countries, one study documented that in both NZL and DNK a small segment of the population accounts for a high share of service use across various welfare sectors, such as healthcare, social assistance, and the criminal justice system (28).

Immigration history also differs across the comparison countries, although many similarities exist (again, for detailed country profiles, see the online supplementary material). Guest workers from Southern Europe, Asia, and especially from Turkey migrated to DNK, NLD, NOR, and SWE in the 1960s because of excess demand for unskilled workers. This trend halted with the economic downturn in the 1970s, most notably in NOR, which simply banned this type of immigration in 1975 (the ban itself was lifted in 1976, but due to new legislation remained effectively in place until the 1990s) (29). For people originating in nonwestern countries, up until the late 1990s, DNK and SWE had similar liberal immigration laws and were among the European countries that accepted the highest number of immigrants per capita (30). However, these countries diverged in the late 1990s for people outside of the EU/EEA, and access to DNK is now much more restricted than to SWE (although SWE has recently taken steps in the Danish direction and is tightening immigration laws). NOR has received refugees from the same regions and countries as DNK and SWE, yet its intake was comparatively low throughout the data period. The NLD's immigration history was long characterized by immigration from former colonies, such as Surinam in the late 1970s, but during the

1990s, this type of immigration (now especially driven by family migration) was supplemented by asylum seekers from the same regions and for similar reasons as the other European countries in the study.⁸ NZL differs in the sense that immigrants of nonwestern backgrounds in NZL are mainly of Asian (especially Southeast Asian) and Pacific descent, whereby they differ from immigrants of nonwestern backgrounds in Europe who are mostly from the MENAPT countries.

The comparison countries aim to integrate immigrants of nonwestern backgrounds similarly.⁹ Available services cover language training and active labor market training, and mandatory courses in the host country's history and cultural traditions are common. Immigrants are entitled to social welfare benefits like the majority population, although in some cases at lower rates (e.g., in DNK, where refugees arriving during 2002–2011 and again after 2015 are entitled to only about 40% of standard social assistance (see 31, 16, and 18 for analyses of some of the consequences hereof for refugees in DNK), and in all instances only under adherence to active job searches and participation in available services.

Research Design

The national statistical agencies of DNK, NLD, NZL, NOR, and SWE separately provided access to de-identified full population administrative data suitable for our analyses (see details under “Data Sources”). All data were based on official records, such as information from official population records and official court rulings. We strove for high comparability across countries in all variable content to minimize the risk that the results would be driven by measurement differences across the countries (see “Data Sources” and data comparability matrix in the online supplementary material, which describes the variable content and any deviations herein across comparison countries). To minimize the skewness that could arise from comparing

⁸ DNK, SWE, NOR, and NLD all experienced growth in labor migrants from within the EU/EEA over the period, especially following the expansion of the EU in 2005 to include more Eastern European countries. This type of immigration is irrelevant to our study, though, as our focus is on immigrants of nonwestern backgrounds.

⁹ For people immigrating to seek employment, typically from western countries (such as from other EU countries not included in our study), residence permit is typically given for the duration of the employment and an additional 3 months, or for a maximum of 3 months if the migrant does not hold employment, as per EU regulations. These types of immigrants are not entitled to welfare benefits or integration programs unless via unemployment insurance funds entertained through employment.

immigrants and their children to the full age range of majority populations, we focused on ages 15–30. As women in general have much lower crime rates than men, we focused only on men.

As the outcome variable, we used *criminal conviction*, which indicated whether a person had been convicted of a violation of the penal code within a given year (1 = “Yes,” 0 = “No”). There is, of course, variability across the countries in which acts fall under the penal code and therefore enter the dependent variable. For example, no drug-related crimes are included in the penal code in SWE, whereas sales and trafficking of drugs are included in DNK. NZL does not even have a penal code, so we sought comparability through offense categories. Such country differences in the definition of a criminal conviction will likely matter for cross country differences in the *level* of convictions. But they will not matter for the comparison of population groups *within* countries, which is our main comparison objective.

To provide descriptive overview of the comparison countries, we first plotted, per comparison country, the annual share scoring 1 on the dependent variable in the majority population, in the population of immigrants from nonwestern countries, and among the second generation with a nonwestern background. To focus specifically on gaps in criminal conviction rates across the majority populations, immigrants from nonwestern countries, and the second generation with a nonwestern background, we then plotted the relative difference between the groups’ conviction rates within each country, which we defined as the *gap in criminal convictions*. For immigrants from nonwestern countries, we calculated the gap as $\frac{100 * \Pr(\text{conviction} | \text{immigrant}) - \Pr(\text{conviction} | \text{majority})}{\Pr(\text{conviction} | \text{majority})}$, where a score of 0 implied identical conviction rates among the comparison groups, a score of 100 implied a two-fold conviction rate among immigrants than among the majority population. For the second generation with a nonwestern background, simply replace “immigrant” with “second generation”.

We then proceeded to focus on compositional differences across the population groups on sociodemographic features known to affect crime conviction risks. We first compared means of these features across the groups in the first and last data years within comparison countries to document trends in compositional differences between the comparison groups. Due to the large dimensionality of this

comparison (almost 1,200 table cells), we present the results in the online supplementary material and simply summarize the findings under the Results section.

Because the sociodemographic features are strongly correlated and correlated with conviction risks, we then formally decomposed the differences in conviction rates among immigrants of nonwestern backgrounds, their children (second generation), and the majority populations in DNK, NLD, NOR, NZL, and SWE using the demographic method of Blinder-Oaxaca decomposition (32, see details under “Materials and Methods”). The logic behind this method is that differences in outcomes across comparison groups may arise from two sources. The first is differences in the groups’ levels on variables known to affect the outcome (i.e., compositional differences). The second source is differences across comparison groups in terms of the strength of the correlation between variables and the outcome, such as if education reduces crime conviction risks more for some groups than others.

In the Results section, we report two sets of findings from decomposition analyses. We first show the implication for nativity gaps in convictions in the counterfactual situation if all groups were identically composed (within country) on the variables included in the model and all groups experienced the same correlation between the variables and the outcome. That is, results represent the counterfactual situation in which the only average difference between the groups is on ethnic minority background status. Any changes to the uncontrolled nativity gaps from the first analytical steps imply the consequences of differential immigration (in terms of the included sociodemographic features) for group differences in conviction rates. A remaining nativity gap in convictions after the decomposition implies excess conviction gaps that cannot be attributed to compositional differences in the included variables alone, such as “discriminatory” differences in the protective benefits of the included variables and features that remain unobserved in our data (we speculate what such differences might be in the Discussion section).

We then show the effects of each of the compositional features in the model on nativity gaps in convictions in the comparison countries. To do so, we repeated the decomposition analysis while only including one group of sociodemographic features at a time. We designed the statistical analysis in this way to show how much the nativity gaps in conviction would change if governments were to intervene in just one

group of sociodemographic features, given that group's correlation with other features. To maximize stability in estimates, the data were pooled across all available years (per country), and the estimates were generated from one decomposition model per sociodemographic feature by country (a total of 18 decompositions for immigrants and 28 for the second generation).

We grouped the explanatory variables for ease of interpretation: *age* (because age, as explained, is important for crime risks), *basic composition* (whether a person has children and is married/cohabiting), *education* (level of completed education and an indicator for missing educational credentials), and *labor market status and income* (employed, self-employed, unemployed, or outside labor force; an indicator for missing primary labor market status; log composition adjusted household disposable [i.e., post-tax] income). For the second generation, we also added two sets of proxies for the home environment in which the children grew up: *parents' education and labor market status* (father and mother's level of education; dummy for missing parental education; father's and mother's labor market status; and an indicator for missing parental labor market status), and *parents' social influence* (parents were married; parents convicted within the previous 5 years; and parents deceased). For country-specific availability of the variables mentioned in parentheses, please see the data comparability matrix in the online supplementary material; all clusters of variables were represented in each country, and most variables were available in all countries, except NZL, for which fewer variables could be included.

For data security reasons, we were not allowed to pool data for comparison countries. We therefore defined and ran identical decomposition models separately on the data for each country, whereby we get formal comparisons between population groups *within* countries but are forced to infer comparisons of these results *across* countries from the country profiles rather than formally testing the cross-country differences.

Results

Trends in Conviction Rates

Figure 1 shows the conviction rates of the comparison groups for each of the five countries. We observed declining conviction rates over the data period, mirroring the international crime decline seen across many developed democracies (33). There are stark differences in the conviction rates across countries, with rates generally being higher in NZL and DNK than elsewhere. As already discussed, this may have arisen from differences across countries in terms of which offenses are included in the penal code. NLD and SWE had the lowest conviction rates (generally below 5% convicted per year). In 2018, the last available data year, conviction rates were below 3% for all groups in the European countries, except for second-generation men of nonwestern backgrounds in DNK (5%). For men of majority backgrounds, criminal conviction became rare toward the end of the period. In NZL, rates remained somewhat higher (but declined steeply after 2009), and conviction rates of immigrants and the second generation were consistently lower than for the majority population.

[Insert Figure 1 about here]

To compare groups while accounting for the level differences across countries (and considering that the reference group, i.e., the majority population, also experienced declining conviction rates), Figure 2 shows the nativity gaps in convictions as defined in the section Study Design.

[Insert Figure 2 about here]

Panel A of Figure 2 shows the results for immigrants. The findings regarding the Scandinavian countries (DNK, NOR, and SWE) were similar in structure, showing an increasing nativity gap up until around 2000, then decreasing up until 2007. Then, the gap stabilized at a level of about 70 for NOR and 130 for DNK. For SWE, however, there was an increasing trend in the post-2010 period. NLD had a higher gap in conviction rates between immigrants and the majority population throughout the data period. The gap exceeded 200, almost reaching 300 in 2015, implying that the conviction rate of nonwestern immigrants to NLD was nearly four times higher than among natives— which may, of course, have been exaggerated by very low conviction rates for the majority population, as observed in Figure 1 above. In NZL, the gap was consistently below zero, implying that the conviction rate of nonwestern immigrants was lower than that of

the majority population. The gap in NZL, which was around -50 , was stable across the data period, indicating that nonwestern immigrants had about half as high conviction rates as the majority population.

Panel B of Figure 2 shows the results for the second generation. The findings generally resembled those for immigrants, yet with more volatility and a few key exceptions. First, the results for NOR and SWE were very similar to the results for the immigrants, with the exception that the increasing conviction gap found for immigrants in SWE post-2010 was not mirrored for the second generation. The trend in results for the second generation in DNK was generally similar to those for immigrants in Panel A, but the size of the gap was much larger for the second generation in Panel B. The gap neared 400 in the mid-1990s, then decreased to 200 in 2006, and then—in contrast to the stability observed for immigrants—rose to around 300 more recently. For NLD, the gap for the second generation was between 300 and 400 over all years of the period, but the trend was similar to that of immigrants. Even for NZL, the second generation seemed to have higher conviction rates than first-generation immigrants—albeit still lower than the majority population, at between -41 and -18 .

Nativity Gaps in Sociodemographic Backgrounds

We then examined how much of the gaps depicted in Figure 2 were attributable to compositional differences between immigrants, their children (second generation), and the majority populations. To do so, we compared the means of sociodemographic background variables across the groups in the first and last available data years in each of the countries (see the online supplementary material). The results (Table A1) showed large differences between the comparison groups within all countries, although the results for the European countries and NZL differed substantially.

In Europe, immigrants of nonwestern backgrounds tend to be older than the majority population, whereas those in the second generation tend to be younger. This pattern was generally more pronounced in the early than late data years. Considering other basic compositional features, immigrants to Europe are more likely to have children and be married than the majority; the opposite is true for the second generation,

although this gap has decreased somewhat across the data windows. These results likely reflect both differences in age structure and the fact that immigrants of nonwestern backgrounds often originate from countries where modal marriage and child-rearing ages have not increased to the same degree as in most western countries (34). The nativity gaps in education levels, labor market status, and income were stark, suggesting that these features could be important for the observed differences in conviction rates. Last, our proxies for home environment (parental education and labor market status and parents' social influence, such as whether the parents are alive) were also unequally distributed across the groups, with the second generation of nonwestern backgrounds consistently being disadvantaged. For these proxies, there are no systematic developments toward closing the gap between the majority population and the nonwestern second generation across the data windows.

As was expected, most of these correlations reversed for NZL, and immigrants of nonwestern backgrounds and their children in NZL generally scored higher on the background variables than their majority population counterparts. In terms of age distribution, the same pattern was observed for NZL as for the European countries, suggesting that the reversal of sociodemographic backgrounds across nativity relative to the European countries was likely driven not by the age-timing of immigration and the second generation "aging through" the age window under observation, but rather because NZL received a very different type of immigrants than the other countries.

Counterfactually removing compositional differences

Figure 3 shows the results from the Blinder-Oaxaca decomposition models fitted to the data by country. Solid lines represent what the nativity gap in convictions would be in the counterfactual situation in which the comparison groups (within country) were composed identically on the variables included in the decomposition, and the comparison groups (within country) experienced identical returns to the included variables. Dashed lines represent the uncontrolled gaps (corresponding to results shown in Figure 2) to indicate how much these gaps change with the decomposition.

[Insert Figure 3 about here]

Panel A shows the results for the immigrants. In all European countries, the nativity gaps in convictions would have been more than halved if the comparison groups were identically composed. For NOR, the gap would have disappeared. For DNK, the gap would be greatly reduced and even closed in the early and later periods of the data window, despite a still-substantial gap around 2000. During the past 10 years, the counterfactual gap has been relatively stable at an average of +20. Although DNK and SWE had similar “raw” conviction gaps for immigrants of nonwestern backgrounds during the first half of the data period (dashed lines), controlling for compositional features reduced the gap more in DNK than in SWE pre 2007 (solid lines). After 2007, results for DNK and SWE align. The NLD represents the strongest reduction in conviction gap in the counterfactual scenario with identical compositions: The gap would close by as much as 150 percentage points, from about 250 in the uncontrolled results to about 100 in the counterfactual situation. The overrepresentation in NLD would still exceed results from the other countries, but in the counterfactual scenario, NLD is no longer an outlier. Concerning NZL, the gap, which is still reversed in sign, would close slightly in the counterfactual scenario, showing that immigrants to NZL are positively selected.

Panel B shows results for the second generation and presents two main patterns. First, the results for the second generation in NOR, SWE, and NZL were similar to those found for the first generation: In the counterfactual scenario, the conviction gap would narrow substantively in NOR and would also be greatly reduced in SWE and, to a lesser extent (and in the other direction), in NZL. Second, even in the scenario with identical composition and identical returns to the included variables, the second generation in DNK and NLD would show large conviction gaps, implying that compositional features explain far less of the raw nativity gaps here than in the other comparison countries. In both DNK and NLD, the conviction gaps for the second generation were substantial in the raw results (dashed lines), but only about one-third of these gaps in Figure 3 seems attributable to differences in composition (in the situation when these groups had returns equal to the majority populations).

The importance of each compositional feature

Figure 4 shows point estimates of the change to the nativity gap in convictions within countries that would arise from comparison groups being identically composed (and having identical returns) on each sociodemographic feature individually.

[Insert Figure 4 about here]

Panel A shows results for immigrants and Panel B for the second generation, and horizontal clusters show the results by country within sociodemographic features. The top cluster concerns age and alludes to two points that have already been discussed: People tend to migrate in their late twenties, and the second generation is still, as a group, aging through the most conviction-prone ages during our analysis window. These points imply that counterfactually enforcing identical age structures and identical correlations between age and conviction risk between immigrants and majority populations would, in most comparison countries, increase conviction gaps (younger and hence more conviction prone immigrants than observed; red dots for immigrants). However, for the second generation, they would reduce the conviction gap (older and hence less conviction-prone second generation than observed, blue dots).

The second cluster concerns “basic composition,” which refers to marital status and having children. The results for NLD and DNK were virtually null, implying that counterfactually switching the composition of both immigrants and their children to resemble the majority populations of the countries on these two factors would not affect the nativity gap in convictions to any discernable degree. In NOR and SWE, however, doing so would increase the gaps substantively, which—assuming a negative correlation between family formation and crime as documented in extensive research and that such correlation was identical across groups (35, 36)—suggests that the majority population have fewer family ties than immigrants and the second generation, although the latter groups have higher conviction rates. For NZL, the results suggested that enforcing the same composition on and returns to basic features would reduce the size of the nativity gap in convictions considerably for both immigrants and the second generation. Because the direction of the

nativity gap is reversed in NZL relative to the European countries, a reduction for NZL implies a higher conviction rate for immigrants and the second generation.

For education in the third cluster, we only had data for the Scandinavian countries. Here, as we would expect from the earlier comparison of sociodemographic features across the groups, we found that education can serve as an effective pathway to close nativity gaps in convictions for immigrants and, although to a much lesser degree, for the second generation. Of course, this requires the returns to education to be identical across comparison groups.

A key finding from our decomposition analysis arose from the cluster on labor market outcomes and income. For immigrants, this cluster had by far the largest potential for closing nativity gaps in convictions in the European countries, exceeding -50 in all cases. For the second generation, the estimates were also large, but not consistently the largest. For NZL, the results were the opposite; identical situation on labor market status and income would imply a small increase to the nativity gap in convictions for immigrants and a larger increase for the second generation.

Regarding the second generation, Figure 4 also shows estimates for our proxies of the home environment. The results indicated that differences between the majority populations and the second generation on parental education and labor market status were significant for understanding gaps in convictions, with this cluster generally representing the largest estimates for the second generation. Thus, closing the gaps in this cluster across comparison groups in the European countries would greatly reduce conviction gaps. For NZL, it would increase the gap by 14.3, reflecting that immigrants of nonwestern backgrounds and their children in NZL fare better on labor market status and education than the majority population (contrary to the European countries where immigrants of nonwestern backgrounds consistently fare worse on these features). Last, the bottom row of Figure 4 presents results for the parents' social influence, including parental marital status, recent parental criminal conviction, and parental death. The results for this cluster were less pronounced.

Discussion

Our study of nativity gaps in criminal conviction risks in five developed democracies supports two overarching conclusions. First, concerning differences in conviction risks across majority populations, immigrants of nonwestern descent, and their children, the differential *selection* of specific types of immigrants a country receives must be considered. Second, *compositional* differences between the majority population and the immigrant population must be extricated, especially in terms of labor market status and income. We show that between-group differences in these outcomes drive a substantial part of the observed conviction gaps—not only for people who have migrated, but also for the children of immigrants whose home environments are shaped by their parents' socioeconomic integration.

To arrive at these conclusions, we used full population register data covering a long period in DNK, NLD, NZL, NOR, and SWE to employ statistical decomposition models. Advantages of using full population register data include statistical power, accurate nativity information, accurate links between people (also across generations) and the universe of criminal convictions, and high comparability in control variables across countries. Advantages of comparing results across five countries include cross-validation and the ability to focus on the importance of selective migration.

The results for the European countries were remarkably consistent, reflecting that Europe has received a specific type of immigration from nonwestern countries, namely refugees and their family members. As most refugees possess limited transferable skills, such as language or vocational skills that are directly transferable to the receiving county, nonwestern immigrants to Europe are generally disadvantaged, with low employment and high conviction rates. While migration and its consequences are among the most debated issues for politicians and citizens in these countries, and likely in other developed democracies, concerns seem justified. However, per our results for the European countries, closing nativity gaps in labor market status and income would indeed yield the most significant narrowing of the conviction gap between immigrants of nonwestern backgrounds and the majority populations, which suggests that successful integration policy might enable countries to receive refugees without seeing crime rates skyrocket.

The results for New Zealand contrasted those of the European countries. Here, immigration from countries listed as “nonwestern” predominantly constitutes labor migrants, especially from the Southeast Asian region and the Pacific Islands. These migrants travel to New Zealand in active search for employment, so their baseline crime propensities are lower than among the majority population. Again, differences in employment rates explain most of the lower conviction rates among immigrants of nonwestern backgrounds in NZL. However, the reasons why nonwestern immigrants come to NZL are fundamentally similar to the reason behind immigration to the European cluster in the 1960s and 1970s: search for employment. The difference in results across Europe and NZL might thus be found in the compatibility of origin and destination in terms of culture, skills, and acceptance of migrants (17).

Turning to the results for the second generation, our results consistently implied that differences in *parental* labor market status and income significantly explain conviction gaps between children of nonwestern immigrants and children of the majority populations in all comparison countries. This means that in Europe, the selective migration of low-skilled parents with poor labor market prospects results in social disadvantage that transmits intergenerationally to manifest in conviction gaps between their children and the children of the majority populations. In NZL, these results again were the opposite, and the positive selection of labor migration implies that immigrant children in the country benefit from the intergenerational transmission of advantage that follows parental labor market attachment. In all, these results imply that the home environment is particularly important for understanding differences in conviction risks for children of nonwestern immigrants and their majority population counterparts, and that the successful integration of immigrants might trickle down through generations and close some of the recent increase in conviction gaps for the second generations in some countries.

In sum, comparison of conviction rates across nativity status showed that immigrants of nonwestern backgrounds and their children had higher conviction rates than the majority populations in the respective comparison countries, except for in NZL, where they have consistently lower rates. In a statistical sense, the null hypothesis of this study was that, once controlled for compositional features, we would observe no conviction gaps between groups in the data; that is, that conviction gaps would be driven by differences in

sociodemographic features that are conducive to crime and that they may differ in how conducive to crime across comparison groups. Such a finding would imply that the conviction gaps could be closed by closing the gaps on sociodemographic parameters (and their returns) between immigrants of nonwestern background, their children, and the majority population. This hypothesis was rejected by the data in all comparison countries but Norway. Even in the fully controlled statistical decomposition models, we still observed substantially sized residual conviction gaps between majority populations and immigrants of nonwestern backgrounds and the majority and children of nonwestern backgrounds (“second generation”). This finding implies that despite our flexible statistical decomposition strategy that considered composition and potentially differential returns to the observed variables across the comparison groups, residual conviction gaps exist. The residual gaps in conviction rates may arise from differential correlation between the included control variables and crime conviction risk across groups (such as if education is less of a protective factor for some groups). But residual gaps may also arise from challenges experienced by the immigrant groups that are not correlated with the included control variables, such as discriminatory factors. Last, the residual gaps may also arise from features that are inherent to immigrants and their children, are correlated with criminal conviction risks, and are unobserved in the data, such as specific culturally patterned ways of life. Distinguishing empirically between these potential explanations with our data is not possible, and future research into this topic is welcome.

The results of our study have broad implications for potential interventions if countries want to close nativity gaps in criminal convictions. The differences between groups in labor market attachment, income, and education were particularly impactful on the size of the conviction gaps, implying that investment in these indicators of human capital could be effective. The intergenerational correlation of this human capital and the second generation’s conviction risk emphasize this point, as improvement to the human capital level (what we here call the ‘home environment’) among the parental immigrant generation of nonwestern backgrounds is among the most significant factors for closing the conviction gap between their children and their majority population peers. This finding corroborates a recent systematic review of meta-analyses of

developmental predictors of offending and persistence in crime, which also found family dimensions to be most important for the risk of developing criminal propensities (37).

We arrived at our conclusions by comparing results for five developed countries. This examination was not without limitations, as securing comparability is difficult. We strove for comparability in the included variables and largely succeeded, as illustrated in the low level of discrepancies in variable availability and content across time and comparison countries. Nevertheless, the many institutional differences between European countries and NZL, for example, challenged our ability to firmly conclude that differences in results for these countries were driven by selective migration only. It is difficult to think of institutional features that would directly reverse the results for NZL relative to the European countries were it not for selective migration, but we nonetheless encourage future research to focus on this and related questions.

Comparability challenges also exist across countries within our global regions, as was especially visible in differences in the levels of the outcome variable across countries. We argue that such differences reflect variations in what is included in the penal code of each country, and that they will consequently matter for the within-country level of criminal conviction rates, not for relative differences across the majority populations, immigrants of nonwestern backgrounds, and their children *within* countries. With the available data, this assumption could not be formally tested, however.

A final limitation concerns the observation that criminal convictions reflect only one measure of crime, namely crimes that are reported, solved, and have led to formal conviction. In a sense, conviction is as much the product of a judicial process as of actual behavior, and other measures of crime might more closely correspond with actual crime behavior than what our administrative data can do. Analyses of self-reported crime or crime reports, for example, would likely give better behavioral cues (10). It was not possible to link crime reports to perpetrators in the data behind this study, and self-reported crime is not a flawless measure, either (38). Obtaining self-reported crime from the entire populations in the five comparison countries would also be impractical. Our main contribution to the literature is, therefore, to present systematic analyses on individual-level data on the universe of criminal convictions in all comparison countries.

In closing, migration and its consequences are among the most prominent campaign issues for politicians in both the US and EU and in other developed democracies, and the topic is often discussed using direct and sometimes harsh rhetoric. The results from our study highlight two important margins of the issue. First, we show that the type of migrants a country receives—what we call selective migration—is indeed important for how immigrant-majority gaps in criminal convictions materialize, such as when low-skilled refugees and their children end up with comparatively high conviction rates in one host country, or when migrants in active search of employment have comparatively low conviction rates in another. Second, we show that the correlation between immigration and crime is one of differences in human capital—features that welfare states can invest in if they strive to close these gaps. In other words, correlations between immigrant status and criminal convictions reflect both the type of migration and the host country’s response to it.

Materials and Methods

Our data sources were the national statistical agencies of our comparison countries: *Danmarks Statistik* (DNK), *Centraal Bureau voor de Statistiek* (NLD), *Statistisk Sentralbyrå* (NOR), *Statistiska Centralbyrån* (SWE), and the *Integrated Data Infrastructure* available through *Statistics New Zealand* (NZL). The data represent full population records that are accurately linkable across administrative registers, using unique individual identifiers. These data are pseudo-anonymized, and access is restricted and only allowed following approval by the national data protection agencies and only via approved research institutions (for the relevant legislation and data access in the comparison countries, see links in notes to the data comparability matrix presented in the online supplementary material, Table A2).

We strove to maximize comparability in variable content across the comparison countries by *a priori* defining variables, including their level of measurement. A data comparability matrix in the online supplementary material summarizes the resulting variable content, including the few differences across countries that we were unable to weed out. Out of 48 variables measured in five countries (240 variables in

total), we only encountered 30 issues in comparability, most of which were minor. Eight of the issues were because information was simply not available in some countries for specific variables.

For our study, we focused on the 1991–2017 period subject to country-specific data availability. Data for DNK and SWE covered the entire window on all variables. Data from NOR were available during 1995–2017. For NLD and NZL, coverage was less complete, and although some variables were observed in earlier years, most were observed only since 2006, wherefore we restricted analyses for these countries to the 2006–2017 window. Note also that we weighed the individuals in our data by how much of the year under analysis they were recorded as being in the country and not having deceased.

To statistically decompose how much of differences in conviction rates between groups is attributable to the observed explanatory variables, we estimated the following Blinder-Oaxaca decomposition model (32) on the data for each country separately:

$$\underbrace{E(y|m) - E(y|i)}_{\text{Difference in outcome}} = \underbrace{\{E(X|m) - E(X|i)\}\beta_m}_{\text{Differences in composition}} + \underbrace{E(X|i)(\beta_m - \beta_i)}_{\text{Differences in correlations}} \quad (1)$$

Where $E(\cdot)$ is the expectation operator, $y = 1$ is criminal conviction, i is immigrants/second generation, m is majority population, X is the control variables, and β is regression coefficients from a standard regression model estimated using ordinary least squares estimation.

The model states that there can be two sources of difference in the average conviction rates of immigrants/second generation and the majority population. The first source arises from differences in the groups' composition on background characteristics that are included in X . Assuming that the correlations between the elements of X and y are identical for i and m (i.e., $\beta_i = \beta_m$), level differences in the background characteristics can then explain some of the difference in their conviction rates. The rationale here is that a group with a higher share of more at-risk individuals will have higher conviction rates; the “differences in composition” part of Equation 1 quantifies how much this rationale matters. The second source of difference in the average conviction rates arises if the correlations between the elements of X and the outcome y differs for i and m (i.e., $\beta_i \neq \beta_m$). This can be considered differences across the groups in the returns to background

characteristics, such as if education were less/more protective for crime risks for immigrants/second generation than for the majority population. The “differences in correlations” part of Equation 1 quantifies how much this rationale matters.

In this study, we report the results from the differences in composition part of Equation 1. This is because the analytical exercise we perform is to observe how much convictions gaps would close if the groups were composed identically on the included background variables and if the groups experience identical returns to these variables (i.e., only difference between the groups on included variables is in terms of ethnic background). One may think of this as the counterfactual scenario in which we have intervened in society to align the composition of the groups on the included variables and to ensure that there are no discriminatory practices in place (the groups experience identical returns to education, for example). If conviction gaps between the groups do not close under this counterfactual scenario, it signals that part of the gaps arise from differences in correlations (“discrimination”) and from differences in composition on variables that are not included in the model (i.e., unobserved variables, which could be PTSD-diagnoses, culturally patterns way of life, etc.).

Conveniently, the results from the Blinder-Oaxaca decomposition models can be expressed as shares of the difference in outcome that are attributable to differences in composition of groups of variables in X under the assumption of identical returns to these variables (we focused, as mentioned, on age, basic composition, education, labor market status and income; for the second generation, we also focused on proxies for home environment, namely parents’ education and labor market status and parents’ social influence). These shares were directly comparable across countries.

Data Availability

Partial restrictions to the data and/or materials apply. Full population administrative data are confidential and may only be accessed following strict approval. Access to the data may be obtained following application to and approval from each of the 5 national statistical agencies that provided data for this study. Information on

how to apply for data access is available in the notes to Table A1 (which describes the data content). Code used for generating the results presented in this study is available as a supplementary file (3 text files).

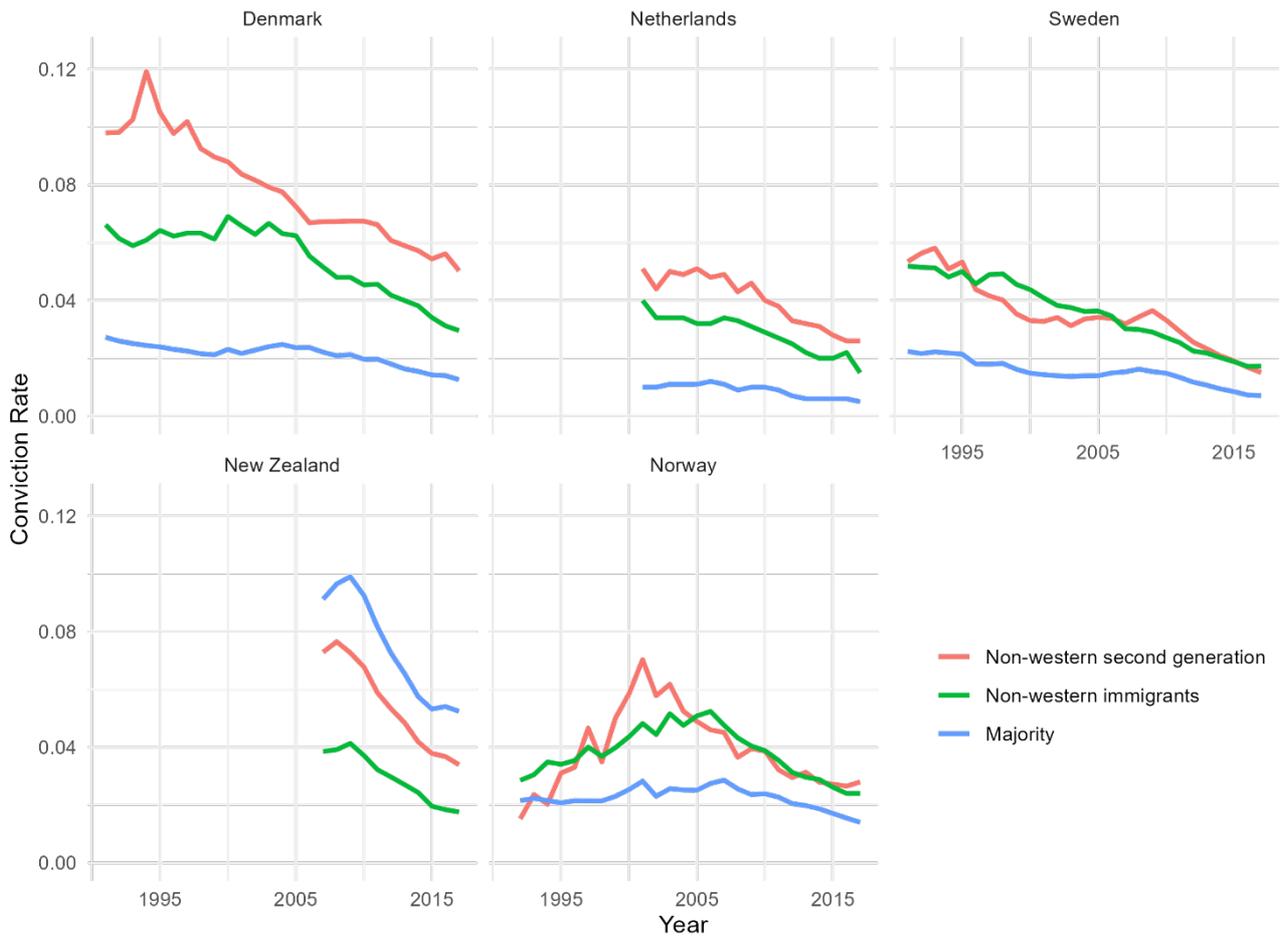
References

1. D. Jackson, *Video: Trump planned to describe some Mexican migrants as 'rapists'*, USA Today. Available at: <https://eu.usatoday.com/story/news/politics/elections/2016/2016/09/30/donald-trump-mexico-restaurant-deposition-washington-dc/91331486/> (2016) (Accessed: 22 June 2023).
2. M. Wendling, *Springfield grapples with false cat-eating rumours - and real problems*, BBC News. Available at: <https://www.bbc.com/news/articles/c114g6g5d97o> (2024) (Accessed: 06 May 2025).
3. P. Vermund, *Kriminelle, dovne og illoyale indvandrere skal stoppes*, Ekstra Bladet. Available at: <https://ekstrabladet.dk/opinionen/pernillevermund/Kriminelle-dovne-og-illoyale-indvandrere-skal-stoppes/6288606> (2016) (Accessed: 22 June 2023).
4. R. McKie, *Far-right leader Geert Wilders calls Moroccan migrants 'scum'*, The Guardian. Available at: <https://www.theguardian.com/world/2017/feb/18/geert-wilders-netherlands-describes-immigrants-scum-holland> (2017) (Accessed: 07 October 2025).
5. U. Kristersson, *Ulf Kristersson i partiledarutfrågning - P1 Morgon*, Sveriges Radio. Available at: <https://sverigesradio.se/artikel/ulf-kristersson-i-partiledarutfragning> (2021) (Accessed: 07 October 2025).
6. K. Murphy, *Pauline Hanson calls for immigration ban: 'go back to where you came from'*, The Guardian. Available at: <https://www.theguardian.com/australia-news/2016/sep/14/pauline-hanson-first-speech-senate-calls-for-immigration-ban> (2016) (Accessed: 22 June 2023).
7. BBC, *French election: Le Pen pledges to suspend immigration*, BBC News. Available at <https://www.bbc.com/news/world-europe-39625509> (2017) (Accessed: 22 June 2023).
8. F. Fasani, M. Giovanni, E.G. Owens, P. Pinotti, *Does Immigration Increase Crime? Migration Policy and the Creation of the Criminal Immigrant*. Cambridge University Press (2019).
9. M. Galbreath, *The Populist Appeal. An Analysis of Donald Trump and Marine Le Pen*. *Harvard International Review* 38(3): 7-9. <https://www.jstor.org/stable/26528673> (2017).
10. C.E. Kubrin, G.C. Ousey, *Immigration and Crime. Taking Stock*. Springer, Springer Briefs in Criminology (2018).
11. C.E. Kubrin, E.J. Alvarado, *Immigration and crime around the globe: key findings across a diverse range of contexts*. CrimRxiv: <https://doi.org/10.21428/cb6ab371.4f71de76> (2025).
12. C. Alonso-Borrego, N. Garoupa, P. Vázquez, *Does Immigration Cause Crime? Evidence from Spain*. *American Law and Economics Review* 14(1): 165-191. <https://www.jstor.org/stable/42705611> (2012).
13. M. Bianchi, P. Bounanno, and P. Pinotti, *Do immigrants cause crime?* *Journal of the European Economic Association* 10(6): 1318-1347. <https://doi.org/10.1111/j.1542-4774.2012.01085.x> (2012).

14. M. Couttenier, V. Petrencu, D. Rohner, M. Thoenig, The Violent Legacy of Conflict: Evidence on Asylum Seekers, Crime, and Public Policy in Switzerland. *American Economic Review* 109(12): 4378-4425. <https://doi.org/10.1257/aer.20170263> (2019).
15. J.N. Arendt, C. Dustmann, H. Ku, Refugee migration and the labor market: lessons from 40 years of post-arrival policies in Denmark. *Oxford Review of Economic Policy* 38(3): 531–556. <https://doi.org/10.1093/oxrep/grac021> (2022).
16. C. Dustmann, R. Landersø, L.H. Andersen, Refugee Benefit Cuts. *American Economic Journal: Economic Policy* 16 (2): 406–41. <https://doi.org/10.1257/pol.20220062> (2024).
17. S.N. Andersen, J. Savolainen, S.F. Messner, Exploring sources of heterogeneity in immigrant crime: Evidence from Norway. *Acta Sociologica*, 65(4), 439-458. <https://doi.org/10.1177/00016993221109704> (2022).
18. C. Dustmann, R. Landersø, L.H. Andersen, Unintended Consequences of Welfare Cuts on Children and Adolescents. *American Economic Journal: Applied Economics* 16 (4): 161–85. <https://doi.org/10.1257/app.20230519> (2024).
19. T.E. Moffitt, A. Caspi, M. Rutter, P.A. Silva, *Sex Differences in Antisocial Behaviour. Conduct Disorder, Delinquency, and Violence in the Dunedin Longitudinal Study*. Cambridge University Press. (2001).
20. S. Hassan, C. Hvidtfeldt, L.H. Andersen, R.O. Udsen, Do refugee children impair the academic performance of native children in the school? Informative null results from Danish Register Data. *European Sociological Review* 39(3): 352–365. <https://doi.org/10.1093/esr/jcac059> (2023).
21. M. Hedegaard, M. Størling, J.-R. Tyran. The Price of Prejudice. *American Economic Journal: Applied Economics* 10 (1): 40–63. <https://doi.org/10.1257/app.20150241> (2018).
22. A.P. Damm, C. Dustmann, Does Growing Up in a High Crime Neighborhood Affect Youth Criminal Behavior? *American Economic Review* 104(6): 1806-1832. <https://doi.org/10.1257/aer.104.6.1806> (2014).
23. C. Dustmann, R. Landersø, Child’s Gender, Young Fathers’ Crime, and Spillover Effects in Criminal Behavior. *Journal of Political Economy* 129(12): 3261-3555. <https://doi.org/10.1086/716562> (2021).
24. C. Dustmann, M. Mertz, A. Okatenko, Neighbourhood Gangs, Crime Spillovers, and Teenage Motherhood. *The Economic Journal* 133(653): 1901–1936, <https://doi.org/10.1093/ej/uead009> (2023).
25. World Bank Group, “GDP per capita, PPP (current international \$) - OECD members”, Available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?end=2024&locations=OE&most_recent_year_desc=false&start=1990&type=shaded&view=map&year=2021 (Accessed: 22 June 2023).
26. Our World in Data, “Population, 1950 to 2023”, Available at: <https://ourworldindata.org/explorers/population-and-demography?facet=none&country=DNK~NOR~SWE~NLD~NZL&Metric=Life+expectancy&Sex=Both+sexes&Age+group=At+birth&Projection+Scenario=None> (Accessed: 22 June 2023).
27. Statistics Denmark, *Indvandrere i Danmark*. Copenhagen: Statistics Denmark (2024).

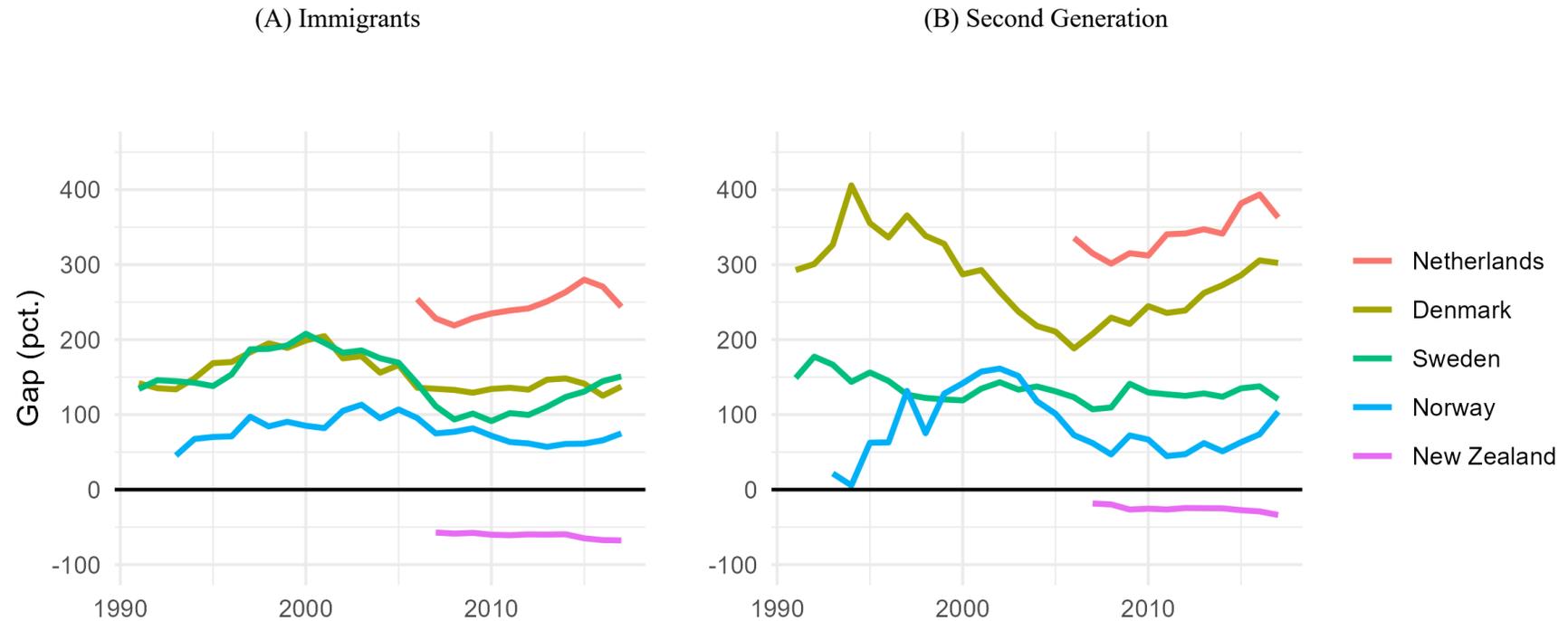
28. L.S. Richmond-Rakerd *et al.*, Clustering of health, crime, and social-welfare inequality in 4 million citizens from two nations. *Nature Human Behavior* 4(3): 255-264. <https://doi.org/10.1038/s41562-019-0810-4> (2020).
29. Justis- og beredskapsdepartementet, *Forskrifter om Forlenget innvandringsstopp*, Lovdata. Available at: <https://lovdata.no/dokument/SFO/forskrift/1975-12-12-9> (1975) (Accessed: 01 September 2025).
30. P.C. Matthiessen, *Immigration to Denmark. An Overview of Research Carried Out from 1999 to 2006 by the ROCKWOOL Foundation Research Unit*. Copenhagen: The ROCKWOOL Foundation Research Unit and University Press of Southern Denmark (2009).
31. J.N. Arendt, Welfare benefit generosity and social integration of refugees. *International Migration Review* 58(2): 706-733. <https://doi.org/10.1177/01979183231160713> (2023).
32. B. Jann, The Blinder-Oaxaca decomposition for linear regression models. *The STATA Journal* 8(4): 453-479. <https://doi.org/10.1177/1536867X0800800401> (2008).
33. G. Farrell, N. Tilley, A. Tseloni, Why the Crime Drop? *Crime and Justice* 43: 421-490. (2014).
34. World Population Review, *Average Age of Having First Child by Country 2025*. Available at <https://worldpopulationreview.com/country-rankings/average-age-of-having-first-child-by-country> (2025) (Accessed: June 19 2025).
35. R.J. Sampson, J.H. Laub, C. Wimer, Does Marriage Reduce Crime? A Counterfactual Approach to Within-Individual Causal Effects. *Criminology* 44(3): 465-508 (2006).
36. J. Savolainen, Work, family and criminal desistance: Adult social bonds in a Nordic welfare state. *British Journal of Criminology* 49(3): 285–304. <https://doi.org/10.1093/bjc/azn084> (2009).
37. M. Basto-Pereira, D.P. Farrington, Developmental predictors of offending and persistence in crime: A systematic review of meta-analyses. *Aggression and Violent Behavior* 65(101761): 101761. <https://doi.org/10.1016/j.avb.2022.101761> (2022).
38. J.L. Payne, A.R. Piquero, The Concordance of Self-Reported and Officially Recorded Criminal Onset: Results From a Sample of Australian Prisoners. *Crime & Delinquency*, 64(4), 448-471. <https://doi.org/10.1177/0011128716682440> (2017).

Fig. 1 Conviction rates for majority populations, immigrants, and second generations of nonwestern backgrounds in the five comparison countries. Men, ages 15–30 years.



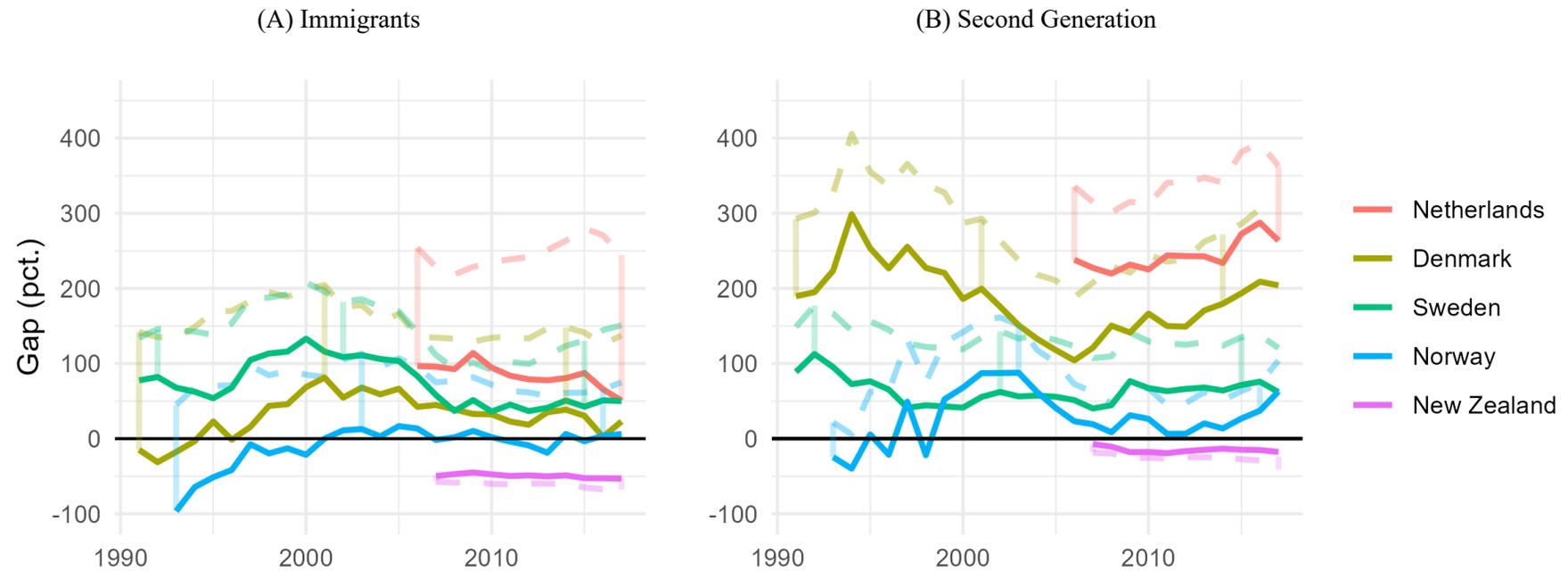
Note: The figure shows the share of 15–30-year-old men who were convicted for violating the penal code each year, by comparison groups and comparison country. Repeated cross-sectional data for each country.

Fig. 2 Conviction gaps in percent deviation between majority populations and immigrants and second generations of nonwestern backgrounds in the five comparison countries. Men, ages 15–30 years.



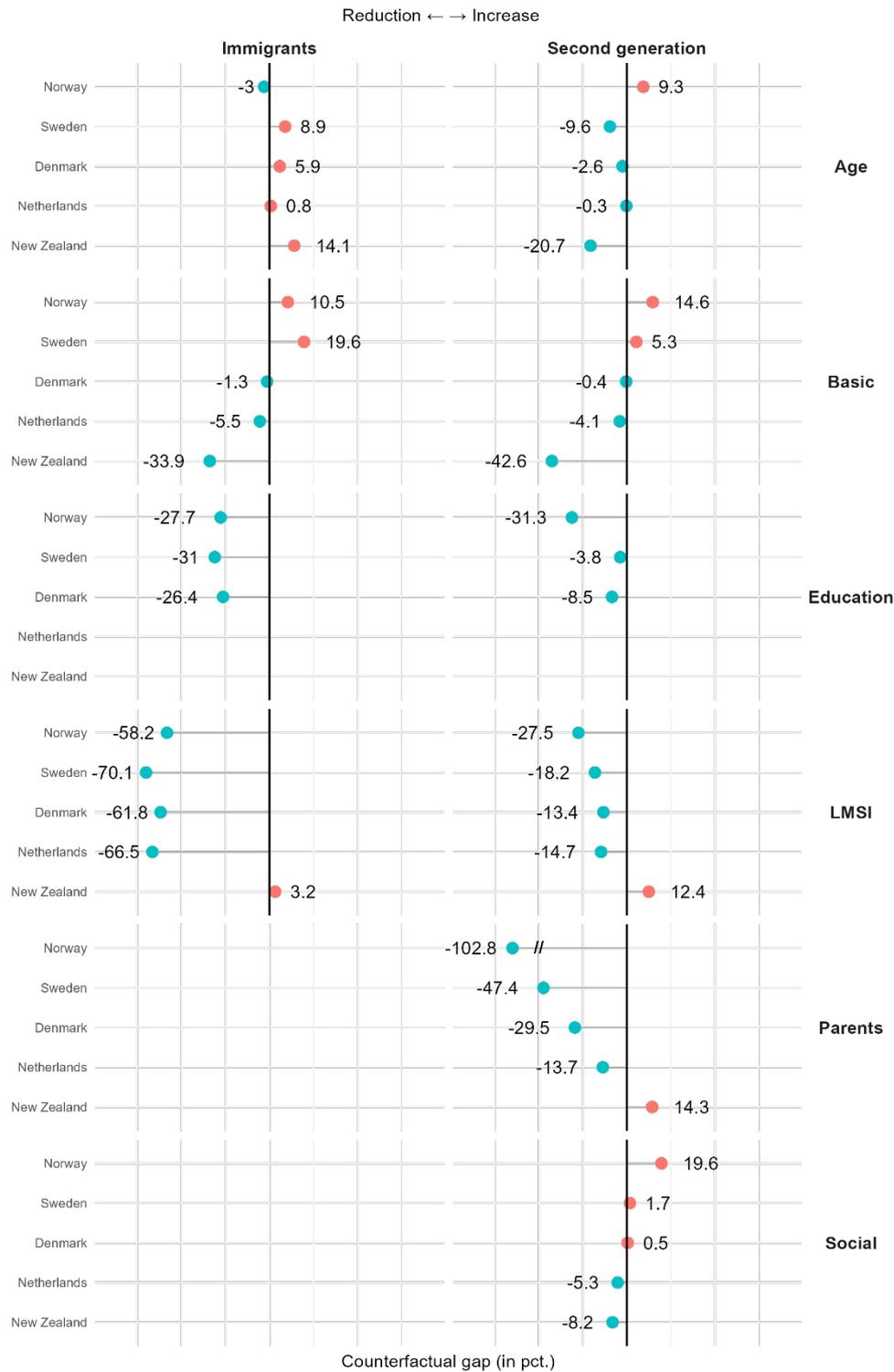
Note: Figure shows the share of 15–30-year-old men who were convicted for violating the penal code each year relative to the same share among the majority population, by comparison country. We calculated the gap/overrepresentation as $\frac{100 \cdot \Pr(\text{conviction}|\text{immigrant}) - \Pr(\text{conviction}|\text{majority})}{\Pr(\text{conviction}|\text{majority})}$, whereby a score of 0 implies identical conviction rates among the comparison groups, a score of 100 implies a two-fold conviction rate among immigrants than among the majority population, and so forth.

Fig. 3 Conviction gaps in percent deviation between majority populations, immigrants, and second generations of nonwestern backgrounds in the five comparison countries net of compositional differences. Men, ages 15–30 years.



Note: The figure shows the share of 15–30-year-old men who were convicted for violating the penal code each year relative to the same share among the majority population, by comparison country, and in the counterfactual situation with no compositional differences between the comparison groups within countries (i.e., residual differences in the fully specified decomposition models). A score of 0 implies that the residual differences in conditional conviction rates among the comparison groups would be identical, a score of 100 implies a two-fold conditional conviction rate among immigrants compared to the majority population with the same composition, and so forth. Dashed lines show uncontrolled results similar to those presented in Figure 2, for reference.

Fig. 4 Conviction gaps in percent deviation between majority populations, immigrants, and second generations of nonwestern backgrounds in the five comparison countries net of compositional differences. Men, ages 15–30 years, data pooled across all years within the country.



Note: The figure shows the results from separate Blinder-Oaxaca decomposition models per variable group and country, and by nonwestern immigrants (left) and their children (right) relative to the majority population. Blue (red) dots imply reduced (increased) counterfactual conviction gaps.

Online supplementary material for to

**A Statistical Decomposition of Nativity Gaps in Criminal Convictions
Using Full Population Data from Five Developed Democracies**

Country Profiles

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The Netherlands, p. 6

New Zealand, p. 9

Norway, p. 15

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Denmark

Welfare state

Denmark has had a universal social security net for decades, rooting back to a large social reform in 1933 (although welfare policies existed further back in time; the 1933 reform is broadly recognized as the most important one). All citizens over the age of 18 are entitled to a tax funded income subsidy in case of a social event, such as unemployment. Members of UI funds receive higher subsidies, yet social assistance, which is the subsidy for uninsured people, suffices to uphold a certain standard of living while searching for employment. And even though the level of this social assistance and the additional requirements for receiving it have been debated (and changed) over the years, the Danish social assistance system is one of the world's most generous welfare systems (Hansen and Schultz-Nielsen 2015).

Beginning in 1999, Denmark has broken away from its universalism in social assistance to immigrants of non-Western backgrounds. Not in coverage (anyone adhering to requirements for receiving social assistance are eligible) but in eligible amount of social assistance. In a brief period following reform in 1999, basic social assistance to newly arrived refugees was reduced by about 50 percent during their first three years in Denmark (see Foged et al. 2022 for details). That policy was soon repealed, only to be reinstated in the 2002-2012 period (see Dustmann, Landersø, and Andersen 2024a for details). In 2015, the policy was again reinstated, but now also extends to all immigrants of non-Western backgrounds who at the point of receiving social assistance have not resided legally in Denmark for 7 out of the last 8 years, not only those receiving residency after the reform (as was the case in both 1999 and 2002; for details see Arendt 2023).

Immigration policy

Denmark's first immigration policy was formulated in 1983 (prior laws were written under other areas), which by international comparison was very liberal and stated that anyone in need of protection was welcome to seek asylum in Denmark. From the 1970s to 2001, the number of resident foreign citizens of

non-Western backgrounds increased from 40,000 to around 180,000, many of whom arrived via family reunification (Matthiessen, 2009). Reform to the immigration law in 1998 therefore restricted access to family reunification by requiring refugees in Denmark to cover all costs associated with having their family reunified to Denmark and by setting new standards for when a marriage was to be considered pro forma and thus invalid for family reunification. The first set of integration laws were introduced in 1999 (which introduced mandatory language courses, a mandatory course in Danish society and culture, and a requirement to accept suitable employment if offered such). In 2002, again to restrict the number of family reunifications to Denmark (and to battle pre-arranged marriages), family reunification only became possible if both spouses were at least 24 years of age.

Denmark is a signatory of the United Nations High Commissioner for Refugees' (UNHCR) resettlement program. Denmark accepts 500 refugees annually through the resettlement program and refugees under this program need not formally apply for residency. Most other asylum seekers in Denmark apply for asylum at a police station after having crossed a Danish border. As Denmark is a signatory of the Dublin Convention, eligibility to apply for asylum in Denmark follows the convention's rules (for an overview of Denmark's immigration policies for refugees since the 1950s, see Arendt, Dustmann, and Ku 2022).

When a refugee is granted residency, he or she is assigned to a municipality which is required to offer an "introduction program" (language courses, labor market training, etc.) to the refugee. The refugee is mandated to follow the introduction program to receive social assistance (whereby the program pauses during employment periods). The municipality is also charged with finding suitable (i.e., affordable) housing.

Criminal Justice

Denmark is known for its short prison sentences and strong focus on rehabilitative measures and non-custodial alternatives to imprisonment; features which have been widely studied (e.g., Andersen 2018, Goldman et al. 2019; almost 60% of prison sentences in Denmark in 2024 were 4 months or shorter; about

11% exceeded 2 years; the shortest prison sentences in Denmark are just 7 days, cf. Danish Prison and Probation Service 2025). Denmark's incarceration rate was between 60 and 72 incarcerated persons per 100,000 inhabitants throughout the 2000-2020 period (World Prison Brief¹⁰). Non-custodial alternatives to imprisonment include probation, home confinement under electronic monitoring, and community service, and reforms have expanded the use of these alternatives especially for short prison sentences (< 1 year) and especially over the last two decades (Andersen 2025). The official rate of criminal recidivism in Denmark as of 2024 (persons convicted or released in 2022) was 20 percent reconvicted within two years. The rate ranges 12 percent among persons released from community service to 30 percent among persons released after having served a prison sentence shorter than two years (Danish Prison and Probation Service 2025).

Offenses are governed by the Penal Code and several "special" laws. In general, offenses against the Penal Code are the more serious ones, including any offense against the person. Offenses against the special laws may also invoke sanctions, typically fines. For example, serious drug offenses, such as illicit drug sales typically sanctioned by imprisonment, are governed by the Penal Code, whereas minor drug offenses, such as the possession of illicit drugs for own use typically sanctioned by a fine, fall under the Special Law on Illicit Drugs. In 2023, offenses (not including traffic law violations) were 25 percent property crimes, 11 percent violent crimes, 58 percent various special laws, and a residual 6 percent "Other Penal Code" (Statistics Denmark 2024).

Prior studies of the immigration / crime link

Since 2005, Statistics Denmark has published annual statistics of conviction rates across immigrant status in both raw rates and adjusted for age composition and socioeconomic composition (e.g., Statistics Denmark 2007). Here, both immigrants of non-Western backgrounds and their children born in Denmark have higher conviction rates than the majority population. In the most recent statistic (Statistics Denmark 2024), for example, immigrants of non-Western backgrounds have a conviction index of 124 (majority = 93), and their

¹⁰ <https://www.prisonstudies.org/country/denmark>, retrieved on July 7, 2023

children born in Denmark have index 214; both numbers adjusted for age structure and family income. Indexes that do not consider socioeconomic backgrounds are higher. Statistics Denmark applies the method of age-standardization, but their results are generally confirmed by studies that rely on regression techniques (e.g., Andersen and Jensen 2023).

Focusing on welfare policies, immigration, and crime, studies have shown that the 2002 and 2015 reforms lowering social assistance levels to newly arrived refugees led to short term employment benefits but also to increasing deprivation and increases in crime (Arendt *forthcoming*, Dustmann, Landersø, and Andersen *forthcoming*). Dustmann, Landersø, and Andersen (*forthcoming*) also found the opposite results when looking at the repeal of the 2002 reform in 2012. And focusing on housing policies, studies that exploit the quasi-random dispersal of refugees across Danish municipalities find that when refugee boys grow up in high-crime neighborhoods, their own crime risks increase (Damm and Dustmann 2014), which is largely driven by group crimes (Dustmann, Mertz, and Okatenko 2023). Girls do not respond criminally to growing up in a high crime neighborhood, yet their risk of teenage pregnancy – most often with men who engage in group crime – increases (Dustmann, Mertz, and Okatenko 2023).

The Netherlands

Welfare state

The Netherlands can be best described as a hybrid welfare state that combines elements of both liberal and social-democratic welfare regimes. This unique approach seeks to strike a balance between market-oriented principles and social protection. On the one hand, the Dutch welfare state encourages active labor force participation, by reducing unemployment benefits and introducing more stringent activation requirements for welfare recipients. On the other hand, the Netherlands invests in social services like healthcare and education, promoting equal access and quality (Wildeboer Schut et al. 2000).

Social assistance for immigrants in the Netherlands is linked to their lawful residence. Immigrants can apply for social assistance after an uninterrupted and valid residence of five years. Other benefits are accessible earlier in case of a lawful residence. For example, public healthcare is directly accessible to lawful immigrants. For unemployment benefits, like Dutch citizens without a migration background, one must have worked in the Netherlands before being eligible (Lubbers et al. 2019).

Immigration policy

Since 1970, the Netherlands has undergone a series of shifts in its immigration policy (Jennissen et al. 2023). Until the late 1970s, immigrant integration policy was largely absent due to the belief that the ‘guest workers’ arriving in the Netherlands would only stay for a limited period. As it became apparent in the early 1980s that many ‘guest workers’ were settling permanently, the first official immigrant integration policy in the Netherlands was developed. This Ethnic Minorities Policy stressed the ‘integration with retention of identity’, to accomplish multicultural richness (Scholten 2013). By the 1990s, due to disadvantages and poor outcomes for migrant groups, government initiatives started targeting education, housing, and employment among immigrants (Entzinger 2006), to encourage active citizenship (Scholten 2013).

The 2000s marked a shift in integration policy in the Netherlands, with attention being focused on the social and cultural distance between immigrants and Dutch society. Immigrants were now obligated to follow civic integration programs after their arrival in the Netherlands (Scholten 2013). During the 2010s, the Netherlands continued to refine its integration policies, by requiring most non-EU immigrants to pass a civic integration exam under the Integration Act (Peters et al. 2023).

Criminal Justice

In the Netherlands, the criminal justice system places a strong emphasis on rehabilitation and reintegration. As a result, the Netherlands often employs short sentences (with an average imprisonment length of 3.8 months, Aebi & Tiago 2020) or alternatives to imprisonment. The Dutch incarceration rate gradually decreased from 2010 to 2016, dropping from its peak of 70.8 incarcerated persons per 100,00 inhabitants in 2010 to its lowest point of 51.4 in 2016. Throughout the 2018-2020 period, between 53.8 and 58.5 individuals per 100,000 inhabitants have experienced spells of incarceration per year (Aebi & Tiago 2020; Statista¹¹). Alternatives to imprisonment include electronic monitoring, community service, fines, probation, and suspended sentences. For adult offenders in 2017, most cases resulted in a monetary fine as the most severe imposed penalty (40%). Community service (22%), dismissals (16%), and imprisonment (10%) were the next most frequently imposed sentences. Recidivism prevalence is particularly high among individuals subjected to short-term imprisonment (60% in a three-year period for those convicted in 2015) compared to other types of sentences (40% after community service, and just over 20% for those who paid a fine, Verweij et al. 2021; Wermink et al. 2022).

Although the general Criminal Code contains many definitions of core crimes and infractions, it does not define all criminal offences. Numerous separate acts, statutes and by-laws were created throughout the years. The main examples are the 1950 Economic Offences Act; the 1994 Road Traffic Act; the 1928 Narcotic Drug Offences Act and the 1989 Arms and Munitions Act (Tak 2008). In 2017, property offenses

¹¹ <https://www.statista.com/statistics/1277694/incarceration-rate-netherlands/>, retrieved on December 19th, 2023

without violence (30%), traffic offenses (23%), and violent crimes (17%) were the most common types of crime (Verweij et al. 2021).

Prior studies of the immigration / crime link

Prior work has consistently revealed that immigrants of non-Western backgrounds have higher arrest and conviction rates than the native Dutch population (Gijsberts & Dagevos 2009; Statistics Netherlands 2018, 2020). For example, in 2017 4.2% of non-Western males was a crime suspect, compared to 1.1% of the male Dutch population. Arrest rates among immigrants are lower than those of their children born in the Netherlands. This difference is however partially due to the lower average age of children with two foreign-born parents (Statistics Netherlands 2018).

Research in the Netherlands has also focused on the relationship between crime rates across migrant groups and their socioeconomic characteristics. For example, native Dutch individuals as well as immigrants of non-Western origin are at increased risk of being registered as a crime suspect if they reside in urban areas in the Netherlands. This association between area of residence and crime was less pronounced among immigrants of Western origin (Statistics Netherlands 2020). Furthermore, it has been shown that a substantial share (50-70%) of differences in arrest risk between non-Western immigrants and native Dutch citizens can be explained by differences in their socioeconomic characteristics (Blom & Jennissen 2014; Statistics Netherlands 2020) The overrepresentation of persons of foreign heritage becomes increasingly smaller, as more socioeconomic characteristics are added to the models (Blom & Jennissen 2014). For example, differences in age and relationship status have been found to contribute to differences in crime suspect rates between children of foreign-born parents and the native Dutch population (Huijnk & Kessels 2016).

New Zealand

Welfare state

New Zealand's benefit system takes on a social welfare *assistance* approach that provides a safety net to those in need while also reducing benefit dependency and encouraging work and self-reliance (Welfare Working Group 2011; Kia Piki Ake n.d.; Ministry of Social Development n.d.). There are 61 different types of welfare benefits available to New Zealanders. Main benefits include income support for job seekers, sole parents, youth and young parents, and retirees; supplementary benefits include assistance with housing, childcare and child benefits, winter energy payments, disabilities, and hardship (Kia Piki Ake 2022). All the working-age main benefits are income-tested (Community Law n.d.). Welfare benefits are usually only available to New Zealand citizens or residents, although a new emergency benefit has been created for temporary visa holders who cannot return home and who are in financial hardship (New Zealand Beehive 2020).

New Zealand's welfare system hasn't always been centred around reduced long-term benefit dependency. In the wake of the Great Depression, New Zealand's modern welfare state was formalised in 1938 with the Social Security Act in which the government aimed to ensure every New Zealand family had "at least a minimum standard of living" (Maxim Institute 2010). Over the next decade, the government expanded its provision of wellbeing through wider use of benefit payments and new income support programs, including universal superannuation and sickness and invalid's benefits (New Zealand Treasury 2012). Across the 1940s and 1950s, the government continued to expand the welfare state provisions. By 1960, New Zealand had the highest rate of welfare spending (36% of government expenditure) in the world (Maxim Institute 2010).

In the late 1960s, New Zealand hit a recession which, in combination with changing family structures and social and cultural norms, led to a radical change of the social welfare system in the early 1970s where individuals' rights were put above the collective community (Maxim Institute 2010). Two major welfare initiatives were introduced: the Dependent Purposes Benefit in 1973 provided income support for sole

parents, and the Accident Compensation Commission (ACC) in 1974 introduced a no-fault principle for providing insurance for all personal injury (New Zealand History 1974).

High government expenditure and unemployment caused concern in the 1980s. Efforts were made throughout the 1980s and 1990s to encourage self-sufficiency and privatise welfare, recognising that beneficiaries need stronger incentives to get off welfare and return to work (Maxim Institute 2010; Kia Piki Ake n.d.). These themes continued in welfare reforms in the 2000s and 2010s, including a 2006 Social Security Amendment Act which created three programme streams for integrating beneficiaries into the community, and the large-scale Welfare Reform Package of 2012/13.

Immigration policy

After the signing of the Treaty of Waitangi in 1840, New Zealand's immigration policy officially allowed anyone to freely enter New Zealand, although this had a strong 'white-only' sentiment as non-British people were seen as 'aliens' (Te Ara 2004). Immigration policies in the 1880s made it difficult for Asians, particularly the Chinese, to immigrate as the New Zealand government was concerned Asiatic immigration would take jobs away from New Zealanders (Te Ara 2004). The Immigration Restriction Amendment Act 1920 reaffirmed the principle of free entry for the British and Irish, and people of other nationalities were only allowed entry to New Zealand at the discretion of the Minister of Customs (New Zealand Parliament, 2008), resulting in country-specific discrimination, particularly against Asians.

Up until the 1980s, a large majority of immigrants to New Zealand were British or Irish (Ministry for Culture and Heritage, 2014). It was not until the late twentieth century that New Zealand's immigration policy shifted away from selection based on nationality¹² and instead toward a skills-based criteria (New Zealand Parliament 2008; Te Ara 2004). Immigrants could now apply to enter New Zealand as part of a business group, family residence group, or a skilled residence group. The skills-based criterion for the latter

¹² Although people born in Australia, Cook Islands, Niue, Tokelau, and Western Samoa retain special, if not free, access to New Zealand (Te Ara 2004).

category was initially based on an occupational priority list, before being replaced by a skills points system in 1991 (New Zealand Parliament 2008; Te Ara 2004).

The skills- and points-based system led to increased and diverse immigration in New Zealand (New Zealand Productivity Commission 2022; New Zealand Parliament 2008). The number of foreign-born residents increased substantially in the last decades of the twentieth century and into the twenty-first century (Te Ara 2015). In 1990, 15% (518,047 people) of New Zealand's population were immigrants, over half of which came from the United Kingdom or Australia. By 2015, 23% (1,039,763 people) of New Zealand's population were immigrants, with 25% being from the United Kingdom or Australia, and another 25% being from China, India, South Africa, or the Philippines (New Zealand Productivity Commission 2022; MacroTrends n.d.). Looking at long-term migrants from Asian countries, the number of immigrants arriving in New Zealand from Asia in 1980 was about 5,000, which grew substantially to about 45,000 by 2015 (New Zealand Productivity Commission 2021).

New Zealand is part of the UNHCR refugee settlement programme. In 1987, the New Zealand government established an official annual refugee quota of 800 people, which has both increased and decreased over time, currently sitting at 1,500. Refugees who arrived in New Zealand under the quota programme are granted permanent residency in New Zealand (New Zealand Immigration n.d.).

Criminal Justice

New Zealand is known for having a very high prison population rate compared to other OECD countries (Crown Law, 2022). From 2000 to 2018, the number of prisoners per 100,000 population increased significantly from 148 to 214 (World Prison Brief, n.d.), resulting in New Zealand having the 8th highest prison rate out of 34 OECD countries (Crown Law, 2022).¹³

¹³ New Zealand's prison rate has since declined to 186 per 100,000 population in 2020 (Crown Law, 2022).

New Zealand's prisons are mostly comprised of serious violent and sexual offenders (Crown Law, 2022, Corrections NZ, 2018). In 2021, 54% of prisoners were serving time for violent or sexual offences, while less than 10% were serving time for drug offending (Crown Law, 2022). Across the period 2017-2022, for offenders sentenced to short terms of imprisonment (two years or less), the average sentence length is about 300 days (Crown Law, 2022). As of 2023, 56.5% of convicted offenders in New Zealand are reconvicted within two years following release from prison and 35.8% are re-imprisoned after two years following release from prison (Ministry of Justice, 2023).

In 2007, New Zealand underwent a sentencing reform with the goal of combatting the rising prison population rates. This reform enacted three new non-custodial sentences: home detention (electronic monitoring), community detention, and intensive supervision. However, evidence suggests these sentences led to a net-widening, whereby the use of non-custodial sentences increased alongside continued growth in the prison population (Crown Law, 2022).

Victims' rights are at the centre of New Zealand's criminal justice system. This can be seen right from the early 2000s when New Zealand became a global leader in restorative justice (Mansil, 2013; Pfander, 2020), a practice where victims can face their offender, as part of the offender's rehabilitation requirements, in the hope the offender can repair some of the harm caused. Victims' rights were further emphasised in New Zealand's jurisdiction after a 2014 victims of crime reform, which widened the rights of victims of serious crime, provided more opportunities for victims to be involved in criminal justice processes, and ensured victims were better informed of their rights (Ministry of Justice, 2021).

New Zealand's offences are classified by the Australia and New Zealand Standard Offense Classification codes (ANZSOC codes¹⁴). There are 14 1-digit offence categories, which can be disaggregated, in order of seriousness, down to a 4-digit offence code. The Sentencing Act 2002¹⁵ outlines the legislation that governs what types of offences qualify for each sentencing outcome. New Zealand does not have an explicit penal code

¹⁴ <https://www.abs.gov.au/statistics/classifications/australian-and-new-zealand-standard-offense-classification-anzsoc/latest-release>

¹⁵ <https://www.legislation.govt.nz/act/public/2002/0009/latest/whole.html>

or misdemeanour/felony classification for the consequences of committing certain offences. In fact, New Zealand is one of a few countries that recognises cultural influences and circumstances as mitigating factors when sentencing offenders (Crown Law, 2022).

Prior studies of the immigration / crime link

There is scarce readily available information on the relationship between immigration and crime in New Zealand. Statistics New Zealand publishes key facts about annual migration over time in New Zealand, however these tend to be at the aggregate level and no disaggregation by country of origin.¹⁶ Statistics New Zealand also publishes adult conviction rates by sentence type across five ethnic groups (European, Māori, Pacific Peoples, Asian and Other)¹⁷, but not by immigration status.

To the best of our knowledge, there are no published academic journal articles that explore crime and immigration in New Zealand. There are a few published papers that explore crime and immigration issues separately. For example, Dasgupta et al. (2022) use Statistics New Zealand's population-wide linked register data to explore the effect of sons on fathers' criminal behaviour and labour market activities; Gibson and McKenzie (2011) assesses the extend of emigration and return migration among academically talented individuals in New Zealand; and Majavu (2015) investigates the social and institutional roles available to black Africans living in Australia and New Zealand and how they affect the lived experiences black Africans from a refugee background.

¹⁶ Seem, for example: <https://www.stats.govt.nz/information-releases/international-migration-july-2022/>

¹⁷ See here:

https://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7373&_ga=2.159715579.755723442.1693184924-255602765.1685628060#

Disclaimer: Statistics New Zealand

Access to the data for New Zealand used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers.

The results within this research are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ.

For more information about the IDI please visit <https://www.stats.govt.nz/integrated-data/integrated-data-infrastructure/>.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes and is not related to the data's ability to support Inland Revenues core operational requirements.

Norway

Welfare State

Norway is a social democratic welfare state that, starting with a comprehensive social welfare reform in 1964, has been characterized by generous and universal policies aimed at limiting income differences, gender inequality and income insecurity (Esping-Andersen 1990; Kjølørød 2022). More specific reforms have increased both the level and quality of mandatory, free education (1969, 1994 and 1997), increased the length and flexibility of the paid parental leave system (1993, 2006), implemented a national coverage of publicly subsidized daycare for kids between ages 1 and 6 (2009), and expanded the health care system (Kjølørød 2022). These and other reforms and investments are covered through relatively high levels of (primarily direct) taxation and the surplus revenues of the Norwegian petroleum sector, which has been managed by the Government Pension Fund of Norway (or "the Oil Fund") since 1990 and currently contributes sizably to the annual national budget (The Norwegian Government 2024).

Access to the Norwegian welfare system is typically granted to *residents*, i.e. people who are either born in Norway or have been granted a residence permit and live in the country for a certain number of days each year (The Population Register Act, 2025¹⁸). This means that there is always a group of people who are physically present in the country without falling within the eligibility criteria for these policies, including (but not limited to) tourists, newly arrived immigrants and incarcerated people from other nationalities. Questions about welfare (in)eligibility remain high on the political agenda, especially with regards to immigration flows, the perceived attractiveness of Norway as a destination country, and the sustainability of the existing welfare system (see, e.g., Magnus 2025¹⁹; Sivam 2025²⁰).

¹⁸ https://lovdata.no/dokument/NL/lov/2016-12-09-88/KAPITTEL_4#%C2%A74-4 , Retrieved on September 1, 2025

¹⁹ <https://www.aftenposten.no/meninger/debatt/i/kwkomj/er-norsk-velferd-truet-av-innvandring-fra-muslimske-klansamfunn>, Retrieved on September 1, 2025

²⁰ <https://www.aftenposten.no/meninger/debatt/i/nydRQo/samfunnsøkonom-nei-det-er-ikke-innvandring-som-truer-velferden>, Retrieved on September 1, 2025

Immigration policy

Norway has a relatively recent immigration history, but since the turn of the millennium, immigration has increased markedly – especially from non-OECD countries. As of January 1, 2025, more than 950,000 immigrants and 230,000 Norwegian-born individuals with two immigrant parents lived in Norway, constituting roughly 17 and 4 percent of the population, respectively (Statistics Norway 2025a²¹).

Immigration trends typically follow global patterns of social and political change and unrest; for instance, after the European Union enlargement in 2004, a substantial number of labor migrants from the new eastern member states arrived in the country (Statistics Norway 2025a). Residence in Norway is granted based on four main reasons: work, education, family (including family formation and family reunification) and refuge (incl. asylum).

Norwegian immigration policy has primarily been driven by goals of integration and multiculturalism, and the state has taken an active role to prevent social and economic marginalization of immigrant groups (Brochmann 2022). One illustrative example is the Norwegian settlement policy for refugees, whereby newly arrived refugees get assigned to one of Norway's more than 400 municipalities to enroll in an introductory program set up to give people fundamental skills in Norwegian language, culture and relevant job qualifications. Take up is encouraged through an economic stipend of around EUR 22,000 per year, and the policy has, since its introduction in the 1990's, aimed to limit the concentration of refugees in metropolitan areas, spread the fiscal burden of integration between municipalities, and accelerate integration (Tønnessen and Andersen 2019; Hernes et al. 2020; Søholt et al. 2020).

While generally focused on integration, questions around immigration and the potential downsides of having a well-known generous welfare state continues to be high on the political agenda, and recent governments have taken several steps to reduce the inflow of immigrants. For instance, after a record high number of asylum seekers in 2015 (Statistics Norway 2025a), Norway increased the level of security at the overland borders to Finland, Russia, Sweden and Denmark and used social media to discourage people from

²¹ <https://www.ssb.no/innvandring-og-innvandrerer/faktaside/innvandring>, Retrieved on September 1, 2025

coming to the country – effectively reaching more than 11 million people worldwide (Beyer, Brekke & Thorbjørnsrud 2017²²). More recently, the subsistence rules for family reunification became stricter, making it harder for immigrants to bring family members to Norway (The Ministry of Justice and Public Security 2025²³). The current headline for the Government’s website on immigration and integration is that they work to ”reduce the number of asylum seekers without the need for protection, faster settlements of persons who receive residence, and faster return of persons without legal residence in Norway”. Questions about the future of immigration in Norway divide the political parties in the ongoing election (NRK 2025²⁴).

Criminal Justice

The Norwegian criminal justice system forms part of the public sector, and the Norwegian police and other criminal justice actors enjoy a strong foundation of legitimacy and trust among the Norwegian public (OECD 2024²⁵). Crime rates are comparatively low, especially for violent crimes (Pratt 2008; Lappi-Seppälä and Tonry 2011), although the overall downwards trend seems to have stabilized or even reversed somewhat for the younger age groups in the capital of Oslo (The Norwegian Police 2024²⁶). International scholars typically describe the system as lenient, with short custodial sentences, relatively humane conditions of confinement and widespread use of non-custodial sentencing options (cf. Lappi-Seppälä and Tonry 2011; Pratt 2008; but see Ugelvik and Dullum 2011). In 2024 the prison population was just over 3,000 people, equaling a prison population rate of 54 per 100,000. About 30 percent of this population are pre-trial detainees, about 5 percent are women, and about 0.4 percent are minors (i.e. under the age of 18) (World Prison Brief, 2025²⁷).

²² https://samfunnsforskning.brage.unit.no/samfunnsforskning-xmloi/bitstream/handle/11250/2452544/Rapport_4_17_Communicating%2bBorders_web.pdf?sequence=1&isAllowed=y

²³ <https://www.regjeringen.no/en/aktuelt/stricter-subsistence-rules-for-family-immigration/id3082542/>

²⁴ <https://www.nrk.no/valg/2025/partiguide/nb/politikken/innvandring> Retrieved on September 11, 2025

²⁵ https://www.oecd.org/en/publications/oecd-survey-on-drivers-of-trust-in-public-institutions-2024-results-country-notes_a8004759-en/norway_d9a67b9b-en.html Retrieved on September 1, 2025

²⁶ <https://www.politiet.no/globalassets/dokumenter-strategier-og-horinger/oslo/rapporter/barne--og-ungdomskriminalitet/barne--og-ungdomskriminaliteten-i-oslo-2024.pdf> Retrieved on September 11, 2025

²⁷ <https://www.prisonstudies.org/country/denmark> Retrieved on August 29, 2025

In contrast to the other Nordic countries, there is more limited evidence of a recent "punitive turn" in Norway (but see Shammas, 2016). The prison population has remained relatively stable in recent years, and the use of non-custodial sentences, and especially the use of electronic monitoring, continues to increase (The Directorate of The Norwegian Correctional Service 2022²⁸). At the same time, high staff turnover and a series of political reforms have led to noticeable budget cuts, and many therefore speak loudly of a prison system "in crisis" (see, e.g., Estenstad and Hansen 2025²⁹; Kristiansen et al. 2025³⁰; Skulstad 2025³¹). Except for young offenders, who have become the focal point of several "tough on crime" debates and policies (see, e.g., The Courts of Norway 2025³²), there are few signs that the Norwegian criminal justice system responds to this crises with increased punitiveness.

Prior studies of the immigration / crime link

Statistics Norway publish annual statistics on individuals involved in the criminal justice system split by citizenship (see e.g. Statistics Norway, 2025b³³), but not by immigrant background. However, a standalone statistical report from 2024 (Statistics Norway, 2024³⁴) shows patterns similar to those described in several previous reports using register data: people with an immigrant background are overrepresented in official crime statistics. This pattern applies to both first- and second-generation immigrants, and holds for both police recorded charges, convictions and imprisonments (cf. Andersen, Holtmark and Mohn 2017; Skardhamar, Thorsen & Henriksen, 2011). Two studies have shown that there are large differences by

²⁸ <https://kommunikasjon.ntb.no/pressemelding/17929601/flere-enn-noen-gang-tar-straffen-med-fotlenke?publisherId=17847130> Retrieved September 1, 2025

²⁹ https://www.realclearworld.com/articles/2025/03/01/americans_should_learn_from_norways_model_prisons_and_why_they_are_failing_1094778.html Retrieved on September 1, 2025

³⁰ <https://www.budstikka.no/fengselsbetjenter-slutter-i-rekordfart/o/5-55-1930379> Retrieved on September 1, 2025

³¹ <https://frifagbevegelse.no/debatt/fengselsbetjenter-rommer-yrket--og-fa-vil-tilbake-6.490.1144883.3e1bb2984e> Retrieved on September 1, 2025

³² <https://www.domstol.no/contentassets/0182638b29734da6869dbc82b34ef494/hurtigsporet---fullstendig-beskrivelse.pdf>

³³ 09421: Persons charged, by group of principal offence and citizenship (and category of principal offence -2014). Absolute figures 2002 - 2024. Statbank Norway

³⁴ <https://www.ssb.no/sosiale-forhold-og-kriminalitet/kriminalitet-og-rettsvesen/statistikk/etterforskede-lovbrudd/artikler/siktelses-og-siktede-personer-etter-innvandringsbakgrunn>

country of origin, and that while people from some countries have substantially higher rates of recorded offending than the majority population, there are also some who with lower rates (Andersen, Holtsmark and Mohn 2017; Skardhamar, Thorsen and Henriksen 2011). The same applies to the reason for migrating; while some groups are overrepresented (e.g. refugees and family migrants), others (e.g. education and work migrants) have registered offending rates that are similar to, or lower than, the majority population (Andersen, Holtsmark and Mohn 2017).

Since large scale immigration from nonwestern countries mainly started in the 70's, and peaked in the early 2000's, the immigrant population has a different demographic composition than the majority population in that it is generally younger and comprised of more males. Age differences are even more pronounced for the second generation, in that the group of people who are born in Norway to foreign-born parents are generally too young to be charged with criminal offending – and the group that is, is both young, small and from a select few countries. When adjusting for demographic differences the rates of overrepresentation are substantially reduced, especially for second generation immigrants and immigrant groups with a relatively short time in the country. Adjusting for economic conditions and the place of residence reduce the difference only a bit more (Andersen, Holtsmark and Mohn 2017; Skardhamar, Thorsen and Henriksen 2011).

The immigrant population is changing more over time than the majority population in terms of both ageing and other background characteristics as new groups of immigrant groups settle in the country over time. These compositional trends account for some of the baseline differences between immigrant groups, but it also affects over-representation over time. Andersen, Holtsmark and Mohn (2017) have shown that the rates of over- and underrepresentation in the crime statistics have changed over time, and that the rate of overrepresentation of immigrant groups have been substantially reduced since around year 2000 – especially among the groups that initially had the highest crime rates.

Sweden

Welfare State

Sweden was for long perceived as the archetype of the universal or social-democratic welfare state (Esping-Andersen 1990), characterized by universal income-protecting social insurances, high levels of public service provision, low levels of inequality, and high tax rates (Fritzell et al. 2014). The income protection schemes consist of a basic level and an earnings-related part on top of that and cover income losses due to sickness, parenthood, unemployment and old age. The earnings-related parts are by definition dependent on previous earnings, and eligibility in the unemployment insurance is based on previous employment also for the basic part.

When households are unable to support themselves, they are entitled to means-tested social assistance benefits. However, as opposed to the social insurance schemes, eligibility to this last-tier safety net is conditioned on having exhausted all other assets and means. The benefit follows a national minimum standard of living (Kahlmeter et al. 2017). The social assistance benefit follows the principle of universalism. However, the benefit can be reduced if job search activities are deemed too moderate. Contrary to research showing that generous earnings-related schemes tend to promote generous levels also in means-tested schemes (Nelson 2003), the Swedish means-tested benefits levels have been described as low in a comparative perspective (Hansen and Schultz-Nielsen 2015).

Immigration policy

The nature of immigration to Sweden has shifted over the past five decades. Stated briefly, until the 1970s migration to Sweden was dominated by labour and family-reunification migration from the other Nordic countries and southern Europe. In the 1990s refugees from the civil war in former Yugoslavia came to dominate immigrant flows. From the 1990s, there has been a clear increase in refugee migration from non-

European countries. After the turn of the century important countries of origin among asylum seekers have been Afghanistan, Iraq, Somalia and Syria. (Statistics Sweden 2016).

The Swedish Asylum Act was established as a result of signing the Geneva Convention in 1954. Over the subsequent decades its implementation came to include rights to permanent residence on several grounds beyond those stated in the Convention. However, these measures were merely well-established practice until they were included and formalized in the Aliens Act of 1989 (Vilhelmsson 2002). Swedish immigration policies remained very liberal compared to most other countries until the fall of 2015. At that time the influx of refugees from Syria put Swedish receiving authorities under severe pressure. During the year Sweden received 163,000 asylum seekers, most of them from Syria. This led to decisions on stricter regulation of refugee immigration, as well as a reorientation of the political discourse on the issue. The government curtailed the residence rights of refugees, shifting from permanent to temporary residence for protection beneficiaries. Furthermore, stricter self-sufficiency and maintenance requirements were introduced for those seeking permanent residence or family reunification (Hagelund 2020).

During the whole second immigration phase, people of foreign origin have had a lower labor market participation rates than the majority population. Nevertheless, in 2019 Sweden received the highest score of all countries included in the Migrant Integration Policy Index (MIPEX³⁵).

In 2022, 20.4 per cent of the Swedish population were born abroad.³⁶

Criminal Justice

Sweden, as the other Nordic countries, is known for its short prison sentences, relatively humane prison conditions, focus on rehabilitative measures and non-custodial alternatives to imprisonment.

³⁵ <https://www.mipex.eu/key-findings>, retrieved 16-8-2023

³⁶ <https://www.scb.se/hitta-statistik/statistik-efter-amne/befolkning/befolkningens-sammansattning/befolkningsstatistik/pong/tabell-och-diagram/utrikes-fodda--medborgarskap-och-utlandskvensk-bakgrund/sveriges-befolkning-efter-fodelsland-region-medborgarskap-och-bakgrund-31-december-2022/>

Sweden's incarceration rate was between 60 and 79 incarcerated persons per 100,000 inhabitants throughout the 2000-2020 period (World Prison Brief³⁷).

The official rate of criminal recidivism in Sweden (persons convicted or released in 2016, convictions for offenses that only include fines in the penalty scale excluded) was 34 percent reconvicted within *two* years. The rate ranges depending on type of sentence, the number of previous convictions and sex. The reconviction rate within *three* years for those released from prison was 63 percent, and among persons who received parole 22 percent (Brå 2023).

The Swedish Penal Code contains provisions on many of the acts that are criminal offences in Sweden. Provisions on other offences are found in specific acts and laws. In Sweden, all drug offenses are governed by a specific law, the Narcotics Penalty Act. Sweden has witnessed a steady increase in the control measures focused on drug offences. An important factor behind this trend has been the criminalization of personal drug use in 1988. This is also reflected in Swedish crime statistics. While general offending has followed the international trend of declining crime levels since the early 1990s, the so-called crime-drop, registered drug offences, and minor offences in particular, have instead increased (Estrada, Bäckman, and Nilsson, 2022).

In 2017, 39 percent of convictions referred to penal code offenses, the main categories being property crimes and violent crimes. Narcotics crime accounted for 23 percent, and traffic law violations (mainly driving without a license and drunk driving) 22 percent (National Council for Crime Prevention³⁸).

Prior studies of the immigration / crime link

In Sweden there are no official annual statistics of conviction rates across immigrant status. However, since the mid-1970s, there are several studies that have shown that individuals of foreign background, as a rule including both foreign-born individuals and those with foreign-born parents, are over-represented among those registered for crime (Beckley, Kardell, and Sarnecki 2017). Adjusted for differences in age structure, the risk

³⁷ [Sweden | World Prison Brief \(prisonstudies.org\)](https://www.prisonstudies.org), retrieved on August 8, 2023

³⁸ <https://bra.se/statistik/kriminalstatistik/personer-lagforda-for-brott.html>, retrieved on August 8, 2023

for conviction among persons of foreign background tend to be approximately twice that of individuals born in Sweden to Swedish-born parents. This level of excess risk has remained relatively stable over time, even though the composition of the group of foreign-born individuals has shifted both with regard to country of origin and reason for migration (Bäckman, Estrada, Nilsson, and Sivertsson 2021).

In studies that have also been able to capture between-group differences in levels of resources, the overrepresentation tends to be significantly lower. A study by Hällsten, Szulkin, and Sarnecki (2013) shows that even though the overrepresentation of those of immigrant origin in recorded crime is substantial, most of this can be explained by reference to parental resources and neighborhood segregation (see also Hällsten and Szulkin 2022).

The overrepresentation in crime is significantly smaller in research focused on self-reported offending, which primarily describes involvement in less serious offences among teenagers. In Swedish self-report studies from more recent years, for example, youths of foreign background do not generally appear to be more involved in offending (Vasiljevic, Svensson, and Shannon 2020).

References

- Aebi, M. F., & Tiago, M. M. (2020). *SPACE I - Council of Europe Annual Penal Statistics: Prison populations*. Strasbourg: Council of Europe.
- Andersen, L. H. (2018). Danish register data: flexible administrative data and their relevance for studies of intergenerational transmission. In: Eichelsheim, V. I. and van den Weijer, S. G. A. (eds.): *Intergenerational continuity of criminal and antisocial behavior: an international overview of studies*. Routledge.
- Andersen, L. H. (2025). Thirty years of prison alternatives in Denmark: Policy efficiency and inequality before the law. *Nordic Journal of Criminology* 26(1): 1-21. <https://doi.org/10.18261/njc.26.1.6>.
- Andersen, L. H., & Jensen, B. (2023). *Hvad vi ved om de dømte og deres kriminalitet*. Copenhagen: Gyldendal and the ROCKWOOL Foundation Research Unit.
- Andersen, S. N., B. Holtsmark, & S. B. Mohn (2017). Crime amongst immigrants, children of immigrants and the remaining population. An Analysis of register data 1992-2015 [Kriminalitet blant innvandrere, norskfødte med innvandrerforeldre og øvrig befolkning. En analyse av registerdata for perioden 1992-2015]. Reports 2017/36. Oslo Statistics Norway.
- Arendt, J. N. (2023). Welfare benefit generosity and social integration of refugees. *International Migration Review* 58(2): 706-733. <https://doi.org/10.1177/01979183231160713>.
- Arendt, J. N., Dustmann, C., & Ku, H. (2022). Refugee migration and the labour market: lessons from 40 years of post-arrival policies in Denmark. *Oxford Review of Economic Policy* 38(3): 531–556, <https://doi.org/10.1093/oxrep/grac021>
- Bäckman, O., Estrada, F., Nilsson, A., & Sivertsson, F. (2021). Criminal convictions and immigrant background 1973–2017 in Sweden – have differences increased or declined? *Nordic Journal of Criminology*, 22(2), 149-168.
- Beckley, A. L., Kardell, J., & Sarnecki, J. (2017). “Immigration and crime in Sweden”. I *The Routledge Handbook on Crime and International Migration* (pp. 71–84). Routledge.
- Blom, M., & Jennissen, R. (2014). The involvement of different ethnic groups in various types of crime in the Netherlands. *European Journal on Criminal Policy and Research*, 20(1), 51-72.
- Blom, M., Oudhof, J., Bijl, R. V., & Bakker, B. F. M. (2005). *Verdacht van criminaliteit. Allochtonen en autochtonen nader bekeken*. Den Haag: WODC en CBS.
- Brå (2023). 2016. *Återfall i brott. Slutlig statistik*. Brottsförebyggande rådet.
- Corrections NZ (2018). Where New Zealand standards internationally: A comparison of offence profiles and recidivism rates. Retrieved from https://www.corrections.govt.nz/resources/research/journal/volume_6_issue_1_july_2018/where_new_zealand_stands_internationally_a_comparison_of_offence_profiles_and_recidivism_rates
- Crown Law (2022). Justice sector: Focus on imprisonment in New Zealand. Retrieved from https://www.crownlaw.govt.nz/assets/Uploads/Publications/LTIB_Report_extended_Web.pdf

- Damm, A. P., & Dustmann, C. (2014). Does Growing Up in a High Crime Neighborhood Affect Youth Criminal Behavior?. *American Economic Review* 104(6): 1806-1832. doi: 10.1257/aer.104.6.1806
- Danish Prison and Probation Service (2015). *Statistik 2024*. Danish Ministry of Justice.
- Dasgupta, K., Diegmann, A., Kirchmaier, T., & Plum, A. (2022). The gender reveal: The effect of sons on young fathers' criminal behaviour and labor market activities. *Labour Economics*, 78. <https://doi.org/10.1016/j.labeco.2022.102224>
- Dustmann, C., Landersø, R., & Andersen, L. H. (2024). Refugee Benefit Cuts. *American Economic Journal: Economic Policy* 16(2): 406-41. DOI: 10.1257/pol.20220062.
- Dustmann, C., Mertz, M., & Okatenko, A. (2023). Neighbourhood Gangs, Crime Spillovers and Teenage Motherhood. *The Economic Journal* 133(653): 1901–1936. doi: 10.1093/ej/uead009
- Entzinger, H. (2006). Changing the rules while the game is on: From multiculturalism to assimilation in the Netherlands. In M. Bodemann & G. Yurdakul (Eds), *Migration, citizenship, ethnos: Incorporation regimes in Germany, Western Europe and North America* (pp. 121-144). New York: Palgrave MacMillan.
- Esping-Andersen, G. (1990). *Three Worlds of Welfare Capitalism*, Princeton: Princeton University Press.
- Estrada, F., Bäckman, O., & Nilsson, A. (2022). Biased enforcement expansion? Sociodemographic differences in police drug testing for suspected narcotics use 1993–2015. *The British Journal of Criminology*, 62(5), 1213-1232.
- Falcke, P. F., Falcke, S., & Vink, M. (2023). Becoming Dutch at what cost? Increasing application fees and naturalization rates of EU immigrants in the Netherlands. In R. Barbulescu, S. W. Goodman, & L. Pedroza (Eds.), *Revising the integration-citizenship nexus in Europe: Sites, Policies, and Bureaucracies of belonging* (pp. 37-53). Springer.
- Foged, M., Hasager, L., Peri, G., Arendt, J. N., & Bolvig, I. (2022). Language Training and Refugees' Integration. *The Review of Economics and Statistics*. doi: https://doi.org/10.1162/rest_a_01216
- Fritzell, J., Bacchus Hertzman, J., Bäckman, O., Borg, I., Ferrarini, T., & Nelson, K. (2014). 'Sweden: Increasing Income Inequalities and Changing Social Relations', in Nolan, B., Salverda, W., Checchi, D., Marx, I., McKnight, A., Tóth, I. G., & van de Werfhorst, H. G. (Eds.). (2014). *Changing inequalities and societal impacts in rich countries: thirty countries' experiences*. Oxford: Oxford University Press.
- Gibson, J., & McKenzie, D. (2011). The microeconomic determinants of emigration and return migration of the best and brightest: Evidence from the Pacific. *Journal of Development Economics*, 95, 18-29.
- Gijsberts, M., & Dagevos, J. (2009). *Jaarrapport integratie 2009*. Den Haag: Sociaal en Cultureel Planbureau.
- Goldman, A. Andersen, L. H., Andersen, S. H., & Wildeman, C. (2019). Can Alternatives to Incarceration Enhance Child Well-Being?. In: Eddy, J. M. and Poehlmann-Tynan, J. (eds.): *Handbook on Children with Incarcerated Parents: Research, Policy, and Practice*. Springer.
- Hagelund, A. (2020). After the refugee crisis: public discourse and policy change in Denmark, Norway and Sweden. *Comparative Migration Studies*, 8(1), 1-17.

- Hansen, H., & Schultz-Nielsen, M. L. (2015). *Kontanthjælpen gennem 25 år. Modtagere, regler, incitament og levevilkår fra 1987 til 2012*. Gyldendal and the ROCKWOOL Foundation Research Unit.
- Hansen, H., & Schultz-Nielsen, M. L. (2015). *Social Assistance in Five Countries in North-Western Europe*, IZA Discussion Paper No. 9547, Bonn: IZA.
- Hällsten, M., Szulkin, R., & Sarnecki, J. (2013). Crime as a price of inequality? The gap in registered crime between childhood immigrants, children of immigrants and children of native Swedes. *British Journal of Criminology*, 53(3), 456–481.
- Hällsten, M., & Szulkin, R. (2022). Is the “SES hypothesis” plausible to explain the over-representation of immigrants in crime statistics?” In Andersson, Robert, and Paula Wahlgren (eds.) *A Life in Criminology. Festschrift to Jerzy Sarnecki*. Iustus.
- Hernes, V., Arendt, J., Joonas, P. A., & Tronstad, K. (2020). Rapid or long-term employment? A Scandinavian comparative study of refugee integration policies and employment outcomes. *Journal of European Public Policy*, 29(2), 238–258.
- Huijnk, W., & Kessels, R. (2016). Criminaliteit. In W. Huijnk & I. Andriessen (Eds.), *Integratie in zicht? De integratie van migranten in Nederland op acht terreinen nader bekeken* (pp. 146–184). Den Haag: Sociaal en Cultureel Planbureau.
- Jennissen, R., Bovens, M., Engbersen, G., & Bokhorst, M. (2023). *Migration diversity and social cohesion: Reassessing the Dutch policy agenda*. The Hague: Springer.
- Kahlmeter, A., Bäckman, O., & Brännström, L. (2018). 'Housing evictions and economic hardship. A prospective study', *European Sociological Review*, 34(1): 106-119.
- Kia Piki Ake (n.d.). History of the New Zealand Welfare System. Retrieved from <https://www.weag.govt.nz/background/history-welfare-system/>, on 28 August 2023.
- Kia Piki Ake (2022). Welfare system: statistics. Retrieved from <https://www.weag.govt.nz/background/welfare-system-statistics/>, on 28 August 2023.
- Kjølørød, L. (2022). Velferdsstaten – et system av delegert og kontrollert autonomi. I Frønes, I. & Kjølørød, L. (Red.). *Det norske samfunn 3* (8.utg., s. 15-35). Gyldendal Akademisk.
- Lappi-Seppälä, T., & Tonry, M. (2011). Crime, Criminal Justice and Criminology in the Nordic Countries. *Crime and Justice*, 40: 1–32.
- Lubbers, M., & Renema, J. (2019). Immigranten en hun kennis van de Nederlandse verzorgingsstaat. *Demos: Bulletin over bevolking en samenleving*, 35(2), 4-7.
- MacroTrends (n.d.). New Zealand immigration statistics 1960-2023. Retrieved from <https://www.macrotrends.net/countries/NZL/new-zealand/immigration-statistics>, on 28 August 2023.
- Majavu, M. (2015). The fact of the ‘uncommodified blackness’ image: The lived experience of black Africans from a refugee background in Australia and New Zealand (Doctoral dissertation, University of Auckland, Auckland, New Zealand). Retrieved from <https://researchspace.auckland.ac.nz/bitstream/handle/2292/29104/whole.pdf?sequence=2>

- Mansil, D. B. (2013). *Community empowerment or institutional capture and control? The development of restorative justice in New Zealand's adult systems of social regulation, control and punishment* [Doctoral Thesis, Auckland University of Technology].
<https://openrepository.aut.ac.nz/handle/10292/7373>
- Matthiessen, P. C. (2009). *Immigration to Denmark. An Overview of Research Carried Out from 1999 to 2006 by the ROCKWOOL Foundation Research Unit*. Copenhagen: The ROCKWOOL Foundation Research Unit and University Press of Southern Denmark.
- Maxim Institute (2010). Looking back to look forward: A history of how welfare in New Zealand has evolved. Retrieved from <https://www.maxim.org.nz/article/history-welfare-new-zealand/>, on 28 August 2023.
- Ministry for Culture and Heritage (2014). British and Irish immigration 1840-1941. Retrieved from <https://nzhistory.govt.nz/culture/home-away-from-home>, on 2 July 2025.
- Ministry of Justice (2023). Hāpaitia te Oranga Tangata. Retrieved from <https://www.justice.govt.nz/justice-sector-policy/key-initiatives/key-initiatives-archive/hapaitia-te-oranga-tangata/>, on 16 August 2023.
- Ministry of Justice (2021). History of victim's rights in Aotearoa. Retrieved from <https://chiefvictimsadvisor.justice.govt.nz/rights-and-system/history/>, on 16 August 2023.
- Ministry of Social Development (n.d.). More people into work and out of welfare dependency. Retrieved from <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/corporate/annual-report/2012-2013/more-people-into-work-and-out-of-welfare-dependency.html>, on 28 August 2023.
- Nelson, K. (2003), *Fighting Poverty. Comparative Studies on Social Insurance, Means-Tested Benefits and Income Redistribution*, Swedish Institute for Social Research Dissertation Series no. 60. Stockholm: Stockholm University.
- New Zealand Beehive (2020). Emergency benefit to help temporary visa holders. Retrieved from <https://www.beehive.govt.nz/release/emergency-benefit-help-temporary-visa-holders>, on 28 August 2023.
- New Zealand History (1974). ACC comes into operation. Retrieved from <https://nzhistory.govt.nz/page/accident-compensation-corporation-comes-existence>, on 28 August 2023.
- New Zealand Immigration (n.d.). New Zealand Refugee Quota Programme. Retrieved from <https://www.immigration.govt.nz/about-us/what-we-do/our-strategies-and-projects/supporting-refugees-and-asylum-seekers/refugee-and-protection-unit/new-zealand-refugee-quota-programme>, on 28 August 2023.
- New Zealand Parliament (2008). Immigration chronology: Selected events 1840-2008. Retrieved from <https://www.parliament.nz/en/pb/research-papers/document/00PLSocRP08011/immigration-chronology-selected-events-1840-2008>, on 28 August 2023.
- New Zealand Productivity Commission (2022). Immigration by the numbers. Retrieved from <https://www.productivity.govt.nz/assets/Inquiries/immigration-settings/Immigration-by-the-numbers.pdf>, on 28 August 2023.
- New Zealand Productivity Commission (2021). International migration to New Zealand: Historical themes and trends (Working Paper 2021/04). Retrieved from

https://www.productivity.govt.nz/assets/Documents/International-migration-to-NZ_historical-themes-and-trends.pdf, on 28 August 2023.

New Zealand Treasury (2012). Summary: history of the welfare state in New Zealand. Retrieved from <https://www.treasury.govt.nz/sites/default/files/2012-10/ltfep-s2-03.pdf>, on 28 August 2023.

Norwegian Government (2024). The State Budget 2025 [Statsbudsjettet 2025: Statens inntekter og utgifter]. Retrieved from: <https://www.regjeringen.no/no/statsbudsjett/2025/statsbudsjettet-2025-statens-inntekter-og-utgifter/id3055676/> Retrieved on September 1, 2025.

Pfander, S. M. (2020). Evaluating New Zealand's restorative promise: The impact of legislative design on the practice of restorative justice. *Kōtuitui: New Zealand Journal of Social Sciences*, 15(1), 175–185.

Pratt, J. (2008). Scandinavian Exceptionalism in an Era of Penal Excess. Part I: The Nature and Roots of Scandinavian Exceptionalism. *British Journal of Criminology*, 48: 119–37.

Scholten, P. (2013). The Dutch multicultural myth. In R. Taras (Eds.), *Challenging multiculturalism: European models of diversity* (pp. 97-119). Edinburgh: Edinburgh University Press.

Shammas, V. (2016). The rise of a more punitive state: On the attenuation of Norwegian penal exceptionalism in an era of welfare state transformation. *Critical Criminology*, 24(1), pp. 57- 74

Skarøhamar, T., Thorsen, L. R., & Henriksen, K. (2011). Crime and Punishment among Immigrants and the General Population [Kriminalitet og straff blant innvandrere og øvrig befolkning : korrigert versjon 12.09.11.]. Reports 2011/21. Oslo: Statistics Norway

Statistics Denmark (2007). *Indvandrere i Danmark 2007*.

Statistics Denmark (2024). *Kriminalitet 2023*.

Statistics Denmark (2024). *Indvandrere i Danmark 2024*.

Statistics Netherlands (2018). *Jaarrapport integratie 2018*. Den Haag: Centraal Bureau voor de Statistiek.

Statistics Netherlands (2020). *Jaarrapport integratie 2020*. Den Haag: Centraal Bureau voor de Statistiek.

Statistics Sweden (2016). *Från Finland till Afghanistan – invandring och utvandring för födda i olika länder sedan 1970*, Demografiska rapporter 2016:1, Stockholm: Statistics Sweden.

Søholt, S., Astrup, K., Holm, A., & Skrede, J. (2020). Settlement of refugees in five larger Norwegian cities. *NIBR Rapport 2020:2*.

Tak, P. J. (2008). *The Dutch criminal justice system*. Nijmegen: Wolf Legal Publishers.

Te Ara (2004). Story: Immigration regulation. Retrieved from <https://teara.govt.nz/en/immigration-regulation>, on 28 August 2023.

Te Ara (2015). Story: History of immigration. Retrieved from <https://teara.govt.nz/en/history-of-immigration>, on 28 August 2023.

Tønnessen, M., & Andersen, S. N. (2019). Municipality of settlement and integration of adult refugees [Bosettingskommune og integrering blant voksne flyktninger]. Reports 2019/13. Oslo: Statistics Norway.

- Ugelvik, T., & Dullum, J. (2011). *Penal Exceptionalism? Nordic Prison Policy and Practice*. Routledge.
- Vasiljevic, Z., Svensson, R., & Shannon, D. (2020). Immigration and crime: a time-trend analysis of self-reported crime in Sweden, 1999–2017. *Nordic Journal of Criminology*, 21(1), 1-10.
- Verweij, S., Tollenaar, N., Teerlink, M., & Weijters, G. (2021). *Recidive onder justitiabelen in Nederland. Verslag over de periode 2008-2020*. Den Haag: WODC.
- Vilhelmsson, R. (2002). *Wages and Unemployment of Immigrants and Natives in Sweden*, Swedish Institute for Social Research, Dissertation series no. 56, Stockholm: Stockholm University.
- Wermink, H., Blokland, A., Tollenaar, N., Been, J., Schuyt, P., & Apel, R. (2022). Een oude vraag opnieuw onderzocht: Effecten van korte gevangenisstraffen ten opzichte van niet-vrijheidsbenemende straffen op recidive op basis van een instrumentele variabele benadering. *Tijdschrift voor Criminologie*, 64(2), 147-169.
- Welfare Working Group (2011). Reducing long-term benefit dependency: Recommendations. Retrieved from <https://media.nzherald.co.nz/webcontent/document/pdf/20119/Bluestar%20WWG%20Recommendations%20Report%20180211.pdf>, on 28 August 2023.
- Wildeboer Schut, J. M., Vrooman, J. C., & de Beer, P. T. (2000). *De maat van de verzorgingsstaat: Inrichting en werking van het sociaal-economisch bestel in elf westerse landen*. Den Haag: Sociaal en Cultureel Planbureau.
- World Prison Brief (n.d.). New Zealand. Retrieved from <https://www.prisonstudies.org/country/new-zealand>, on 16 August 2023.