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Immigration and social assistance: Evidence from the Norwegian welfare state

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Abstract

In Norway, immigrants receive higher levels of social assistance than natives. How can we explain this difference? After controlling for differences in take-up rates through a two-step Heckman procedure, we attempt to answer this question by exploiting rich data from administrative registers. We operationalise social assistance in the Norwegian context by employing a composite variable that includes: (a) financial assistance, (b) housing allowance and (c) qualification benefit. We quantitatively analyze the difference in benefit levels of social assistance between the first and second generations of immigrants and the benchmark levels of the non-immigrant population through a Kitagawa-Oaxaca-Blinder (KOB) decomposition exercise. The results of the analysis indicate that a significant portion of the gap in benefit reception between immigrant groups and natives is due to observable characteristics (42% for immigrants and 69% for their descendants), with unobservable cultural and behavioural factors explaining the remaining portion of the gap.

KEYWORDS
administrative registers, immigration, Norway, social assistance

1 | INTRODUCTION

Immigrants receive higher levels of social assistance in the Norwegian welfare state than natives do. How does this relationship vary when considering different immigrant groups? Do personal attitudes and behaviour (or welfare dependence) account for a significant portion of the difference in benefit reception? We attempt to answer these questions by focusing on rich administrative data from Norway. Social assistance is commonly designed as a means-tested minimum income scheme intended to support individuals and families who have disposable income that is insufficient to cover basic needs. Social assistance also serves as an important protection mechanism against the most severe consequences of poverty in Europe (Iacono, 2017; Nelson, 2013). In this paper, we apply a broader definition of social assistance that includes financial aid, housing support and qualification benefits. The context of this study, which is the Norwegian welfare state, is characterised by generous welfare benefits (Esping-Andersen, 1990; Iacono, 2018; Lorentzen and Dahl, 2021), even when compared with neighbouring Nordic countries (Iacono, 2019). As we will show in this article, immigrants are overrepresented with regard to receiving social assistance in Norway. This pattern has also been shown to be the case in most European welfare states (Boeri, 2010). Though constituting less than one-fifth of the total population, nearly 40% of all social assistance recipients are immigrants. Recipients with an immigrant background also tend to receive substantially higher amounts of social assistance than native recipients. How much of this gap between immigrants and natives can be explained by observable characteristics and how much is due to personal behaviour, attitudes, or discrimination?

The proportion of social assistance given to immigrants has received considerable attention in the social policy literature (notably, Galloway & Aaberge, 2005: Hansen, 2009; Heggebø et al., 2020). Overrepresentation of immigrant groups has not, however, been a key feature of these studies. Several scholars have highlighted the intergenerational transmission of economic status (Borjas, 1993; Hyggen, 2006; Stenberg, 2000; Wagmiller Jr et al., 2006), and thereby the transmission of social assistance recipient status to some extent, as descendants of immigrants have been shown to be overrepresented in the overall accounting statistics of social assistance (Carpentier et al., 2017). To the best of our knowledge, there has been no previous study that explains differences in social assistance recipiency between immigrant groups and the native population by employing a Kitagawa-Oaxaca-Blinder (KOB) decomposition (Blinder, 1973; Kitagawa, 1955; Oaxaca, 1973), thereby focusing on quantifying the role of unobservable versus observable explanatory variables in explaining group differences. We argue that this approach to fully understanding the dynamics behind differences in social assistance reception is fruitful for both empirical and theoretical reasons. We build on the approach of Huber and Oberdabernig (2016), who conducted a cross-country analysis focusing on the overall immigrant population. By focusing on rich administrative data from a single country, we can contribute to a more detailed pairwise comparison between three different groups of the population (first-generation immigrants, second-generation immigrants and natives). Note that we employ the standard procedure of controlling for potential selection bias related to take-up rates using a two-step Heckman selection model (Heckman, 1979). The results of the analysis indicate that a significant portion of the gap in benefit levels between immigrant groups and natives is due to observable characteristics (42% for immigrants and 69% for descendants) with unobservable cultural and behavioural factors explaining the remaining portion of the gap.

1.1 | Theoretical framework and previous literature

The scholarly debate regarding differences in social assistance recipiency relates mainly to dependency theory and the role of structural and cultural factors, or objective and subjective factors in other words (Bane & Ellwood, 1994; Duncan et al., 1988; Hansen, 2009; Mead, 1989; Stenberg, 2000). This is the most applied theoretical framework to explain the dynamics of social assistance recipiency and is applied frequently in quantitative studies (Hansen, 2009; Stenberg, 2000). Regarding terminology used, the different factors are here operationalised into two *dimensions*.

On the one hand, we refer to institutional and structural differences that are linked to individual characteristics observable in the data as *the structural-economic dimension* for analytical purposes. This dimension relates to social, economic and demographic variables. Mead (1989) identified two main 'contexts' related to welfare dependence. The first is the *economic* and *social context*, implying that poverty is caused by barriers to jobs, assuming that poor adults would be willing to work if they had access to jobs. More specifically, these barriers are related to skills and education valued by the labour market and the general level of employment. The social context refers to how social differences are related to gender, family structures and ethnicity in each society (Mead, 1989, p. 158). These factors have shown both theoretical and empirical relevance to explaining social assistance recipiency in large parts of the literature (Galloway & Aaberge, 2005; Hansen, 2009; Ilmakunnas & Moisio, 2019; Immervoll et al., 2015; Lorentzen et al., 2012).

The other dimension can be referred to as the *cultural-behavioural dimension* of welfare dependence. This dimension refers to subjective factors, suggesting that individual attitudes such as '*expectations*', '*culture*' and '*rational choice*' play a crucial role in explaining the recipiency of social assistance (Bane & Ellwood, 1994). This dimension also suggests that individual background affects attitudes and psychological preferences, which also influence social status (Mead, 1989, p. 161). Differences between immigrants and natives have also been attributed to cultural aspects (Brochmann & Kjeldstadli, 2008; Hansen, 2009).

The rules and regulations for monetary transfers in the Norwegian welfare state, also referred to as policy-related factors, are also crucial in explaining the dynamics of recipiency (Stenberg, 2000). This partially relates to the social rights and institutional determinants regarding immigrants' access to the welfare state (Hooijer & Picot, 2015). For example, due to short residency times and employment history, immigrants can be overrepresented among recipients of social assistance due to ineligibility for other benefits, such as unemployment benefits or sickness related benefits. In empirical studies, a two-step Heckman procedure (Heckman, 1979) is commonly applied to control for selection bias, capturing the effect of the most important policy factor, namely, systematic differences in eligibility (Huber & Oberdabernig, 2016). It is worth noting that other policy factors that are indirectly related to differences in social assistance may remain unexplained.

Portes and Zhou (1993) apply the concept of '*modes of incorporation*' to understand immigrant and descendant integration into the labour market. They argue that the societal context in which immigrants enter the labour market plays a decisive role in immigrants' life cycle. The societal context is connected to structural conditions, especially social mobility ladders, such as opportunities for investing in human capital and access to work for immigrants and their children in the host country (Portes & Zhou, 1993, p. 83). Opportunities to invest in human capital refers to the availability of education and other measures to strengthen individuals' position in the labour market. We refer to this as structural or institutional determinants of social assistance recipiency because mechanisms in the labour market favour human capital in terms of both employment and higher wages and thus reduce the probability of receiving social assistance (Hyggen, 2006, p. 494). These trends are also supported empirically. As education and periods of unemployment seem to be among the driving forces of social assistance recipiency (Hyggen, 2006, p. 506).

Higher benefit levels for immigrants have been observed in relation to low-skilled migrants (Boeri, 2010, p. 673). Other authors find that demographic variables, such as family composition, gender, immigration status, and age, are all factors that characterise short- and long-term recipients of social assistance (Immervoll et al., 2015, p. 48). Single persons and families with minor children generally have been documented to have higher assistance rates than do married people and individuals with no or few children (Korpi, 1975, p. 135). In most Western countries, there is a concentrated group of poor individuals in metropolitan areas, which often consists of immigrants and ethnic minorities (Åslund & Fredriksson, 2009; Korpi, 1975; Portes & Zhou, 1993). At the same time, living costs, especially housing prices, are significantly higher in these areas, potentially further affecting benefit levels.

In regard to the *cultural-behavioural* dimension, it mainly refers to how sociological and psychological factors affect groups and individuals. The number of relevant factors can possibly be innumerable, but the literature has mainly focused on how values and attitudes affect both recipients and their children (Bäckan & Bergmark, 2011; Bane & Ellwood, 1994; Brochmann & Kjeldstadli, 2008; Duncan et al., 1988; Hansen, 2009; Hyggen, 2006;

Stenberg, 2000). The argument that cultural factors explain the differences in social assistance recipiency between immigrants and natives is sometimes explained by the proposition that immigrants do not have a cultural unease related to receiving benefits because they, in many instances, do not have any previous familiarity with public transfer systems (Brochmann & Kjeldstadli, 2008, p. 224). In the behavioural part of this dimension, some will argue that theories of labour supply suggest that welfare benefits reduce work effort (Duncan et al., 1988, p. 239). Individual aspects can also relate to how some individuals respond to a lack of opportunity experienced in the labour market, resulting in individuals withdrawing themselves from the labour market for different reasons. One example is that they shift their focus to be more family-oriented (Mead, 1989). Cultural-behavioural factors are not measured explicitly in our approach and thus end up as a part of the unexplained component of KOB decomposition. Based on the literature surveyed in this section, we initially hypothesized that structural factors are significant predictors of differences in social assistance recipiency between immigrant groups and natives. The next sections present the empirical results validating our working hypothesis.

2 | DATA AND VARIABLES

The data employed in this study were retrieved from Norwegian administrative registers. They are analysed utilising *microdata.no*, a statistical interface administered by Statistics Norway.[1] Compared with other data sources, these data are more representative of the entire population, offer a wider range of economic variables and are more effective at minimising misreporting and non-response. Our baseline data consist of the adult population of residents in Norway aged 18–65 as of 1 January 2018, which amounts to 3,335,022 individuals who represent approximately 63% of the total population. This population consists of 51% men and 49% women. The immigration status of the baseline population is summarised in Table 1.

For simplicity, we focus only on Norwegian-born descendants of immigrants with one or both foreign parents; thus, we exclude individuals in the categories given by 'E' (*Born abroad with one Norwegian-born parent*) and 'G' (*Born abroad with both Norwegian-born parents*) from the study. Therefore, this study focuses on individuals in the categories labelled 'A' (*Natives*), 'B' (Immigrants, more precisely *first-generation immigrants*), and 'C + F' (Norwegian-born with *at least* one foreign-born parent, more precisely *descendants of immigrants*). In addition, we remove observations with missing values on one or more of the variables described below. In total, this results in a sample of 3,078,170 observations that represent 92% of the total population aged 18–65 years.

In the following section, we present the variables that constitute the bulk of our analysis. Our dependent variable is *Social Assistance* (SA), measured as the sum (in thousands Norwegian kroner - NOK) of three components of means-tested assistance: (i) *Financial Assistance*, (ii) *Housing Allowance* and (iii) *Qualification Benefit*[2] within 1 year. The total amount received, is the sum of monthly amounts multiplied by the number of months received. The scope for creating the composite variable SA is explained as follows: all of the components of social

TABLE 1 Population aged 18–65 by immigrant status (numbers in thousands)

Immigrant status	N	%
A—Norwegian-born to Norwegian parents	2476	74
B—Immigrants	630	19
C—Norwegian-born to immigrant parents	45	1
E—Born abroad with one Norwegian-born parent	23	1
F—Norwegian-born with one foreign parent	131	4
G—Born abroad with both Norwegian-born parents	30	1
Total	3335	100

assistance are means-tested forms of economic assistance intended to aid individuals with weak labour market attachment. Since *Financial Assistance* is proportionally reduced in magnitude when individuals receive *Housing Allowance* and/or *Qualification Benefit*, we construct a dependent variable summarising the total level of SA benefits received by the individuals.

In the Norwegian welfare state, *Financial Assistance* (*økonomisk sosialhjelp* in Norwegian) corresponds to a pecuniary safety net granted to individuals exclusively if all other sources of income have been exhausted.[3] *Financial Assistance* is means-tested and is intended to cover transitory losses of income so that individuals and families can receive support in times of economic distress. In other words, this benefit is intended to be short-term, and the average period of reception is slightly above 5 months (Statistics Norway, 2020). *Financial Assistance* can be awarded to individuals who do not have access to other income-generating social insurance such as unemployment benefits or work assessment allowances (AAP - *arbeidsavklaringspenger* in Norwegian).

Housing Allowance (*bostøtte* in Norwegian) is a state financial support scheme administered by the Norwegian Housing Bank and municipalities. The benefit level is determined by the relationship between the household's housing expenses and its total income.

Finally, the *Qualification Benefit* (*kvalifiseringsstønad* in Norwegian) is part of the broader *Qualification Programme*, which provides the opportunity to receive follow-up and vocational training. The object of the programme is to provide the follow-up needed to gain work or engage in other meaningful activities. While participating in the programme, individuals also receive a *Qualification Benefit* to sustain basic living costs.

Our main *independent variable* is immigrant status. As explained above, we concentrate our attention only on the following three groups: 'A—*Natives*', 'B—*First immigrant generation*' and 'C+F—*Descendants of immigrants*'. Conditional on SA usage, the distribution of immigrant status in the population aged 18–65 is shown in Table 2. The total number of SA recipients was 147,356 individuals. They represent the total population aged 18–65 who received SA in 2018. On average, they received ∼52,586 NOK in 2018. Native residents represent 57% of recipients, whereas the share of immigrant and descendant groups is 37% and 6%, respectively.

The average values of SA and its three components by immigrant status are offered in Table 3.

TABLE 2   Immigrant status in the population aged 18–65 examined in this study

Immigrant status	N	%
Natives	84,047	57
Immigrants	55,089	37
Descendants	8220	6
Total	147,356	100

TABLE 3   Average values (in thousands NOK) of SA and its three components by immigrant status

	Immigrant status					
Components of SA	**Natives**	**%**	**Immigrants**	**%**	**Descendants**	**%**
Financial assistance	27	68	44	63	30	66
Housing allowance	10	25	18	26	12	27
Qualification benefit	3	7	8	11	3	7
Total						
Social assistance	40	100	70	100	44	100

Note: Amounts are registered yearly. Average recipient period in 2018 is 5,4 months (Statistics Norway, 2020). Average monthly amount is 9506 NOK.

As shown in Table 3, *Financial Assistance* accounts for the highest proportion of the average amount of SA of each group. In addition, both immigrants and descendants receive *higher* mean benefit levels than do native recipients, but this gap is much *lower* for descendants. In 2018, on average, immigrants received approximately 70,000 NOK in SA, while descendants received ∼44,000 NOK. Among the three groups, natives received the lowest level of SA at an average of ∼40,000 NOK.

How much of these pairwise differences (immigrants vs. natives and descendants vs. natives) can be explained by observable characteristics and how much is left as unexplained? These questions will guide the empirical analysis in Section 3. We also use a range of socioeconomic and demographic variables in our analysis. The socioeconomic variables are gross individual wealth, income and reception of other health-related benefits (measured by whether an individual received a work assessment allowance in 2018 and/or in 2017). The demographic variables are age, marital status, gender, presence of children, level of education and area of residence. Table A in Data S1 includes a detailed description of all these variables.

3 | METHODOLOGY: KOB DECOMPOSITION

KOB decomposition (Blinder, 1973; Kitagawa, 1955; Oaxaca, 1973) is a technique that is employed to explain how much of the differences in the mean outcome of a continuous variable *y* across two groups is due to group differences in observable characteristics (the 'explained' or 'endowment' component) and how much is due to differences in the evaluation of these characteristics (the 'unexplained' component). KOB decomposition may also be applied to pairwise comparisons of groups, ignoring groups excluded from a particular comparison.

In particular, we use threefold KOB decomposition (Jann, 2008), which provides a more consistent interpretation with respect to the group chosen as the reference group. This threefold decomposition is, therefore, more suitable in our study because we investigate the magnitude of the gap in SA recipiency between the two groups of immigrants previously defined (henceforth immigrants and descendants) against the benchmark group of natives.

The threefold decomposition separates the difference of the mean outcome across groups into three components: (1) the contribution of differences in explanatory variables across groups; (2) the part that is due to group differences in the coefficients; (3) the interaction term that accounts for the fact that cross-group differences in explanatory variables and coefficients can occur at the same time (see, for instance, Daymont & Andrisani, 1984).

In addition, in this study, selectivity bias is corrected by employing the Heckman selection model (Heckman, 1979), which was applied previously to the decomposition analysis. This approach is also used by Huber and Oberdabernig (2016)). More specifically, this implementation considers the possible sample selection bias arising from the fact that both take-up and benefit levels of SA are means-tested and thus only reflect outcomes for a subset of the population meeting certain conditions. The selection effect also implies that take-up of social assistance can be different for the three groups. This can come from systematic differences in eligibility or legal access to benefits between immigrants and natives (Huber & Oberdabernig, 2016, p. 88), but in the Norwegian context, the allocation of SA is also highly dependent on case-worker evaluation.

For this purpose, a probit model (take-up or selection equation) is estimated to capture the probability of being selected into benefit take-up. In our analysis, the dependent variable ($SA_{RECEIPT}$) in the probit model is a dummy variable indicating whether the individual receives Social Assistance (see Table A in Data S1). The model is specified as follows:

$$P(SA_{RECEIPT} = 1|Z) = \Phi(Z\gamma) \tag{1}$$

where Z is a vector of explanatory variables, γ is a vector of unknown parameters, and Φ is the cumulative distribution function of the standard normal distribution. In the selection equation, in addition to controlling for observable characteristics that influence benefit usage, we also control for employment status in the previous year (see Table A

for variable description and Table B for the results of probit estimates in Data S1). We argue that that employment status in 2017 (the year before the period examined in our analysis) affects the selection process (i.e., the probability of receiving social assistance) but not the substantive equation of interest (i.e., amount of benefit levels in 2018).

This is because employment status in the previous year does not directly influence the means-tested evaluation done by the case-worker when deciding on the amount of social assistance to be allocated to the recipient in the subsequent year. We are aware that this choice is not free of criticism, but that the data we used for our analysis does not include any other variable that could serve as a better instrument in our selection equation.

Subsequently, we compute the inverse Mill's ratio (IMR) $\widehat{x_K}$, defined as $\varphi(Z\hat{\gamma})/\Phi(Z\hat{\gamma})$, where φ is the standard normal probability density function, and add it to the SA equation as an additional regressor. This factor measures the sample selection effect due to the lack of observations on the SA variable from those who do not receive SA. Thus, its inclusion as an additional regressor results in the consistent estimation of the remaining coefficients of the SA equation. In the second step, the outcome variable, that is, the amount of *SA*, is estimated separately for the three groups: Natives (A), Immigrants (B), and Descendants (C) using a standard OLS specification:

$$SA_{gi} = \beta_{g0} + \sum_{k=1}^{K-1} X_{gik}\beta_{gk} + \beta_{gK}\widehat{x_{Kgi}} + \varepsilon_{gi}, \ \text{ with } g = A, B, C \tag{2}$$

where X is the vector of individual characteristics including age and its square, income and wealth and their square, educational level, gender, marital status, presence of children, the area of residence, the work assessment allowance in 2018 and 2017, ε_{gi} is the error term with zero mean and constant variance, $\widehat{x_K}$ is the IMR and (β) is a vector of parameters to be estimated.

Subsequently, we apply the KOB threefold decomposition. We carry out pairwise comparisons between the Natives (the reference or 'control' group A) and each of the other two groups, immigrants (B) and descendants (C). Positive (negative) values indicate that immigrants and descendants obtain higher (lower) levels of SA.

Using the OLS estimation results, the estimated difference in mean outcomes $(\overline{SA}_B - \overline{SA}_A)$ and $(\overline{SA}_C - \overline{SA}_A)$ can be formulated as follows:

$$\overline{SA}_B - \overline{SA}_A = = \sum_{k=1}^{K} (\overline{X}_{Bk} - \overline{X}_{Ak})\widehat{\beta}_{Ak} + \left[(\widehat{\beta}_{B0} - \widehat{\beta}_{A0}) + \sum_{k=1}^{K} \overline{X}_{Ak}(\widehat{\beta}_{Bk} - \widehat{\beta}_{Ak}) \right] + \sum_{k=1}^{K} (\overline{X}_{Bk} - \overline{X}_{Ak})(\widehat{\beta}_{Bk} - \widehat{\beta}_{Ak}) \tag{3}$$

$$\overline{SA}_C - \overline{SA}_A = = \sum_{k=1}^{K} (\overline{X}_{Ck} - \overline{X}_{Ak})\widehat{\beta}_{Ak} + \left[(\widehat{\beta}_{C0} - \widehat{\beta}_{A0}) + \sum_{k=1}^{K} \overline{X}_{Ak}(\widehat{\beta}_{Ck} - \widehat{\beta}_{Ak}) \right] + \sum_{k=1}^{K} (\overline{X}_{Ck} - \overline{X}_{Ak})(\widehat{\beta}_{Ck} - \widehat{\beta}_{Ak}) \tag{4}$$

where $\widehat{\beta}_{g0}$, $\widehat{\beta}_{gk}$ and $\overline{X}_{gk}$ ($k = 1... K$) are the OLS intercept, OLS slope coefficients (which also include the estimated coefficient of the inverse Mills ratio, i.e., $\widehat{\beta}_{Kg}$), and sample mean (which also include the mean of inverse Mill's ratio) for each Group $g = A, B, C$, respectively. In Equations (3), (4), the first term represents the '*explained or endowment*' effect (i.e., explained by differences in covariates), the second term measures the contribution of differences in the coefficients (including differences in the intercept), and the third term is an interaction term accounting for the fact that differences in endowments and coefficients exist simultaneously between the two groups. In other words, the interaction term is the proportion of the gap that remains after controlling for the endowment and coefficient proportion (i.e., after controlling for the all-else-equal terms). In this threefold version, the endowment and coefficient terms state, respectively, how the mean SA of the native group would change if natives had the mean characteristics or coefficients of the non-reference groups (i.e., immigrants in Equation (2) and descendants in Equation (3)). The sum of the second and third terms constitutes the 'unexplained' component that represents the portion of the gap due to differences (B vs. A and C vs. A) in the regression coefficients.

4 | RESULTS

The estimation of benefit differentials between immigrants and natives and between descendants and natives is studied through KOB decomposition, as discussed in the previous section. Using the OLS estimates of the econometric model in Equation (2), the amount benefit differentials are then decomposed according to the KOB Equations (3) and (4). Table 4 reports OLS regression results for each of the three groups.

The OLS estimates show that most of the variables contribute significantly to explaining the amount of benefits levels received by each group. More specifically, receiving the Work Assessment Allowance in 2018 (AAP in Norwegian) significantly reduced benefit levels of SA. Meanwhile, there was a positive association with AAP in 2017 for natives and descendants, indicating that some individuals moved onto SA from other benefits. As expected, the absence of children in the household is associated with lower levels of SA benefits, at least for the natives and immigrant groups. This can be explained by the fact that SA legislation in Norway prescribes that the welfare administration can arbitrarily reduce benefit levels when other means of subsistence can be exploited. Individuals with children may also receive child allowances and qualify for cash-for-care benefits, transitional benefits, and supplemental benefits. Finally, wealth exhibits a U-shape in each group, whereas the effect of income changes among groups. The relationship is U-shaped for natives and an inverted U-shaped for immigrants while higher levels of income appear to be associated with lower levels of SA for descendants. We now turn to the KOB decompositions. As shown in Table 5, the observed gap between the immigrant group and natives is substantially higher than the observed gap between descendants and natives. This pattern is not surprising as we can confirm that descendants are significantly less

TABLE 4 OLS regression results by immigrant status

Variables	Natives Estimates	SE	Immigrants Estimates	SE	Descendants Estimates	SE
Income	−9.902***	0.252	1.147***	0.409	−1.929*	1.125
Income squared	0.349***	0.029	−0.188***	0.046	−0.352*	0.185
Wealth	−1.202***	0.064	−4.966***	0.167	−2.008***	0.228
Wealth squared	0.009***	0.001	0.072***	0.004	0.011***	0.002
Age	6.789***	0.226	17.296***	0.426	7.424***	0.813
Age squared	−7.748***	0.181	−6.421***	0.331	−8.430***	0.714
Male	2.774***	0.358	−7.652***	0.622	−0.848	1.219
Married	−1.189	0.957	9.080***	1.006	−0.001	3.012
Children	−5.754***	0.418	−14.932***	0.688	−1.192	1.379
Education	−3.382***	0.627	−7.877***	0.829	−13.934***	2.087
Oslo	12.059***	0.602	18.862***	0.688	11.822***	1.378
Bergen	5.970***	0.724	2.043*	1.236	7.636***	2.248
Stavanger	6.989***	1.088	7.762***	1.663	7.044**	2.879
AAP18	−26.279***	0.671	−42.785***	1.530	−28.693***	2.363
AAP17	7.252***	0.602	−2.755*	1.433	5.783***	2.187
Inverse mill's ratio	28.290***	1.872	28.305***	2.366	20.507***	6.709
Intercept	70.388	0.867	75.049***	1.758	63.985***	3.041
Adjusted R^2	0.10		0.12		0.10	
N	84,047		55,089		8220	

Note: standard errors in parentheses.
***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

TABLE 5 KOB aggregate decomposition estimates

		Immigrant vs. natives		Descendant vs. natives	
		Gap	% of total gap	Gap	% of total gap
Explained	Endowment	12.50	42%	2.96	69%
Unexplained	Coefficients	5.49	18%	3.16	74%
	Interaction	11.94	40%	−1.85	−43%
Overall SA gap		29.93	100%	4.27	100%

TABLE 6 Decomposition of the explained effect

	Immigrant vs. native		Descendants vs. native	
Covariates	Gap	% of gap	Gap	% of gap
AAP2018	−0.957	−7.65%	−0.173	−5.84%
AAP2017	3.725	29.80%	0.359	12.13%
Age	2.008	16.06%	−2.530	−85.52%
Higher education	−0.289	−2.31%	−0.031	−1.04%
Income	0.082	0.65%	2.897	97.94%
Male	0.092	0.74%	0.096	3.24%
Married	−0.341	−2.73%	−0.010	−0.34%
Children	1.114	8.91%	0.030	1.02%
Oslo	1.892	15.13%	1.803	60.94%
Bergen	0.000	0.00%	0.084	2.84%
Stavanger	0.043	0.35%	0.121	4.09%
Wealth	0.711	5.69%	0.392	13.24%
IMR	4.422	35.37%	−0.080	−2.69%
Total	12.50	100%	2.96	100%

'*dependent*' on SA than the first generation of immigrants, although both groups still display a positive gap when compared with the benchmark natives' group.

As shown in Table 5, the explained component accounts for 42% of the total gap for the immigrant-natives comparison. This means that natives are expected to receive 42% less in SA than immigrants according to their average characteristics. The proportion corresponding to the coefficients is much smaller, accounting for ∼18% of the raw gap. The interaction portion in this decomposition explains ∼40% of the raw gap. The unexplained part, therefore, sums up to 58%. This implies that both the explained (structural dimension) and unexplained part (cultural and behavioural dimension) of the decomposition contribute to explaining disparities in social assistance recipiency for this comparison. When considering the descendant-native comparison, the explained portion of the gap is rather large at 69% of the total. These findings suggest that differences in social assistance benefit levels between descendants and natives in Norway are largely explained by observable sociodemographic characteristics (the structural-economic dimension).

Regarding methodology, we stress here that one of the main advantages of KOB decomposition is that it allows us to identify the contributions of individual variables to the explained and unexplained portion of the raw gap. We are mainly interested in explaining the breakdown of the explained component because it more explicitly shows the portion of differences in SA benefits attributable to variations in characteristics between each pairwise comparison of groups.

As shown in Table 6, the findings suggest the great importance of the selection effect for explaining benefit levels, especially in the comparison between immigrants and natives. Indeed, IMR explains ∼35.37% of the total explained effect. Disparities between places of residence (represented by the Oslo dummy variable), the presence of children, reception of AAP, and income levels contribute the most to the overall endowment portion of the gap in both decompositions.

5 | DISCUSSION

The results from the analysis in the previous sections enable us to quantitatively investigate the magnitude of the disparities in SA recipiency within each group and, more importantly, between the native population and the two immigrant groups. The OLS results from Table 4 are, to a large extent, in line with expected outcomes. More interestingly, the results from the KOB decomposition from Table 5 indeed support our working hypothesis (namely, that the observable characteristics explain a significant portion of the group differences in the dependent variable) but to a lesser degree than expected for the case of immigrants versus natives, in which the explained part is ∼42%. Observable characteristics instead explain most of the difference in social assistance recipiency between natives and descendants (69%). However, this gap is small compared to the large difference in social assistance recipiency between natives and immigrants. Theoretically, some of the unexplained part is attributed to the behavioural and attitudinal differences suggested by dependency theory on how individuals can be discouraged by their position as outsiders in the labour market. Some of the unexplained part can also be due to differences in application, caused by lack of information, language difficulties, or the fear of stigmatisation, although some of this can be captured by the selection effect (Huber & Oberdabernig, 2016).

The KOB decomposition also provides detailed information about the contribution of each covariate to the explained portion of the gap (Table 6). Not surprisingly, the selection effect is the strongest predictor of the explained gap between the immigrant group and the native population (35% of the raw gap between immigrants and natives). This indicates that ineligibility for other benefits contributes to higher levels of SA benefits for immigrant groups. This can also be seen through the negative contribution of AAP to the gap in 2018.

Looking beyond the selection effect, sociodemographic variables explain a considerable amount of the differences between the groups under analysis. As a main example, the models include a variable to control for geographic differences related to whether an individual lives in Oslo. This is significantly associated with higher SA benefits within all groups (Table 6). The Oslo dummy variable is also a leading explanatory variable when decomposing the explained effect by explaining most of the difference in levels of SA benefits between natives and descendants (60.94% of the raw gap). As stated in the introduction, the effect of Oslo is likely related to the concentrated group of poor in metropolitan areas, which often consists of immigrants and ethnic minorities (Korpi, 1975; Portes & Zhou, 1993; Åslund & Fredriksson, 2009, p. 798). Living costs, especially housing prices, are significantly higher in Oslo. At the same time, living in Bergen and Stavanger, which are other urban areas in Norway, does not explain much of the gap but is significantly related to higher benefits within each group.

The relationship between age and social assistance recipiency between immigrants and natives is an especially interesting comparison. In the OLS specification of Table 4, the coefficient for age is quite large compared to the other groups. The squared term also indicates that the slope sinks earlier and flattens to a lesser degree for the native population. The decomposition also emphasises age differences as an important factor between immigrants and natives. This can be related to difficulties in labour market integration for older immigrants compared to that of older natives.

The results from Table 4 regarding family composition are only somewhat in line with the literature, which has shown that single persons and families with minor children generally receive higher levels of SA benefits than do married people and individuals with no children (Korpi, 1975, p. 135). At first glance, this is not necessarily supported by our findings, which show that SA recipients with children generally receive lower levels of benefits. This does not necessarily mean that having children automatically reduces one's social challenges or the need for economic

support, but rather that having children qualifies oneself for other benefits intended to aid families with children, such as child allowance and cash-for-care benefits, that might reduce the need for SA benefits. Interestingly, having no children explains a significant share (10%) of the gap in benefit levels between natives and immigrants.

Focusing on the descendants of immigrants, several scholars have focused on the role of an intergenerational transmission of welfare reception, meaning that parents receiving SA increases their children's probability of becoming recipients (Hyggen, 2006, p. 505; Lorentzen et al., 2012, McGuire, 1950; Esping-Andersen, 2015). Descendants of immigrants generally receive significantly less SA than do the first generation, although they still receive higher levels of SA benefits compared to the native population (Table 3). Unlike first-generation immigrants and natives, descendants show a much stronger relationship between higher education and lower SA levels in the regression (Table 4), which supports the argument by Portes and Zhou (1993) that the ability to invest in human capital is especially important for the integration of descendants. In the decomposition, the largest share of explained difference in SA recipiency between descendants and natives is explained by the fact that descendants more frequently live in Oslo, the most urbanised area of Norway.

The KOB decomposition identifies the main explained difference between the first immigrant generation and natives to be the selection effect, which is measured by the inverse Mill's ratio (Table 6). This leads us to assume that descendants instead qualify and are selected for benefits other than SA in times of economic distress.

The single cause explaining most of the gap between descendants and natives is that descendants are more likely to live in urban areas, where the cost of living is a pressing issue. That descendants receive lower levels of SA benefits is explained by assimilation into the general population on most of the observable socioeconomic characteristics remains to be explored.

Overall, our findings suggest that observable factors explain a significant part of the differences in benefit levels across immigrant groups, which is in line with findings from the literature (Huber & Oberdabernig, 2016). The fact that the unexplained portion of the gap is also substantial (especially for the immigrant-natives comparison) indicates that cultural and structural factors cannot be excluded as determinants of the disparities in welfare recipiency between groups. On this basis, our results are in line with previous studies, confirming that it is challenging to totally disregard one of the two dimensions (Stenberg, 2000).

6 | CONCLUDING REMARKS

The main purpose of this article was to investigate and shed light on the determinants of differences in SA recipiency between immigrant groups and the native population in Norway, with 2018 as the base year. The academic literature on this relationship highlights structural and cultural factors, where attitudinal and behavioural characteristics represent the latter dimension. We attempt to empirically test the relationship between the arguments and to identify the main structural determinants of receiving higher levels of SA benefits in the immigrant population. We investigate the differences in group reception of SA through the KOB decomposition methodology by estimating the fraction of the differences in levels of SA benefits that can be attributed to observable (the structural-economic dimension) and unobservable characteristics (potentially cultural and attitudinal characteristics). The results of the analysis indicate that a significant portion of the gap in benefit levels between immigrant groups and natives is due to observable characteristics (42% for immigrants and 69% for descendants), with unobservable cultural and behavioural factors explaining the remaining portion of the gap. This analysis provides additional empirical support to the argument that both structural and cultural differences jointly explain individual disparities in social assistance recipiency.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the interface microdata.no, with the permission of Statistics Norway. The service is operated and being further developed by NSD and Statistics Norway, and provides researchers and students at approved research institutions with access to register data from Statistics Norway.

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ENDNOTES

[1] The technology to access the data remotely, Microdata.no, was developed in a collaboration between the Norwegian Centre for Research Data (i) and Statistics Norway as part of the infrastructure project RAIRD, funded by the Research Council of Norway. The code utilised to run the analysis can be obtained from the authors upon request.

[2] It is important to stress that, in order to control for possible outliers, we trim the data above the 99th percentile of the distribution of our dependent variable SA.

[3] We consider only the contributed component of Financial Assistance, excluding the loan component.

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