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Decomposing Social Benefits of Migrant and Native Households in Austria: A Microdata Analysis Using EU-SILC

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Abstract

This thesis examines differences in social benefits between five distinct groups of migrant and native households in Austria: EU-14 migrants, other EU migrants, migrants from former Yugoslavia and Turkey, migrants from other regions, and natives. The analysis uses the most recent wave of the European Union Statistics on Income and Living Conditions (EU-SILC), which includes a diverse spectrum of social benefits available in Austria. Decompositions at the mean and at the unconditional distribution suggest significant disparities in the social benefits between migrants and natives, as well as among migrant groups, for both contributory and non-contributory benefits. I predominantly observe that migrants are either less likely to receive any social benefits or receive lower benefits, compared to natives, or they receive at best benefits at an equal likelihood or level. Age accounts for much of the disparities between migrant and native households in the receipt and level of contributory social benefits, whereas for non-contributory social benefits, factors such as the presence of children and household size, alongside unexplained variables, are key factors influencing the differences. Higher dependence on non-contributory social benefits is found only for migrant households originating from other regions, who have in most cases come to Austria more recently, highlighting the need for policies tailored to this population group. Decompositions show that migrants from former Yugoslavia and Turkey, who in a first wave arrived in Austria during the 1970s, do not show any difference from the native population in the reliance on non-contributory social benefits.

Kurzfassung

In dieser Arbeit werden die Unterschiede in den Sozialleistungen zwischen fünf verschiedenen Gruppen von Migranten- und einheimischen Haushalten in Österreich untersucht: Migrantinnen und Migranten aus EU-14 und anderen EU-Ländern, sowie dem ehemaligen Jugoslawien und der Türkei, und aus anderen Regionen. Die Analyse basiert auf der neuesten Welle der Gemeinschaftsstatistiken zu Einkommen und Lebensbedingungen (EU-SILC), die ein breites Spektrum an in Österreich verfügbaren Sozialleistungen umfasst. Oaxaca-Blinder-Zerlegungen und Verteilungsdekompositionen zeigen deutliche Unterschiede bei beitragsabhängigen und beitragsunabhängigen Sozialleistungen zwischen Migrantinnen und Migranten, und Einheimischen, sowie zwischen Migrantengruppen. Ich beobachte vorwiegend, dass Migranten-Haushalte im Vergleich zu Einheimischen entweder mit geringerer, oder dass sie mit gleicher Wahrscheinlichkeit und Höhe Sozialleistungen erhalten. Ein Großteil der Unterschiede bei beitragsabhängigen Sozialleistungen ist auf das Alter zurückzuführen, während bei den beitragsunabhängigen Sozialleistungen Faktoren wie Anzahl der Kinder und die Haushaltsgröße, sowie auch unerklärte Variablen, die wichtigsten Einflussfaktoren sind. Eine höhere Abhängigkeit von beitragsunabhängigen Sozialleistungen ist nur bei Migranten-Haushalten aus anderen Regionen festzustellen, die in den meisten Fällen erst vor kurzem nach Österreich gekommen sind. Dies verdeutlicht die Notwendigkeit von auf diese Bevölkerungsgruppe zugeschnittenen Politikmaßnahmen. Ergebnisse der Zerlegungen zeigen, dass Migrantinnen und Migranten aus dem ehemaligen Jugoslawien und der Türkei, die in einer ersten Welle in den 1970er Jahren nach Österreich kamen, keinen Unterschied zur einheimischen Bevölkerung in der Inanspruchnahme von beitragsunabhängigen Sozialleistungen aufweisen.

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Contents

1 Introduction

Between 2015 and 2020, Europe experienced a notable 16 percent increase in the migrant population, making Europe the primary destination for international migrants. The latest data on the international migrant stock reveals that Europe hosts 87 million migrants, representing 30.9% of the global migrant population (UN DESA, 2020). In comparison, Asia is home to 86 million migrants (30.5%), Northern America to 59 million (20.9%), and Africa to 25 million (9%). Recent studies indicate a prevalent negative perception towards migrants among many Europeans (Hainmueller and Hopkins, 2014; Rustenbach, 2010), with the increase in migration notably bolstering the electoral support for right-wing parties (Halla et al., 2017). Exacerbated by the 2015 European migrant crisis, these negative perceptions increasingly involve concerns of migrants threatening the European lifestyle and placing extensive strain on public funds by receiving excessive welfare benefits (European Commission, 2018; Jacobs et al., 2017). Among the most contentious issues in this discourse are the labour market integration of migrants, their overall net fiscal contribution, and their access and receipt of welfare benefits (European Commission, 2018; OECD, 2021). However, a notable challenge lies in the prevalence of misinformation and the influence of political agendas in shaping this discussion (Suari-Andreu and van Vliet, 2023). To foster this debate, it is crucial to provide accurate empirical evidence. This thesis addresses the dynamics of social benefits among migrant compared to native households in Austria. Austria presents a particularly intriguing case in this context. With 17.5% of the population being non-national, Austria ranks among the EU countries with the highest non-national populations, second only to Luxembourg, Malta, and Cyprus as of 2022. Additionally, approximately half of these non-national residents hold non-EU citizenships (Eurostat, 2023).

The general research question posed in this paper is the following:

'What is the migrant-native social benefits gap in Austria?'

First, I investigate the extent of the migrant-native social benefits gap in Austria, separately for contributory and non-contributory social benefits, and examine whether the social benefits gap varies among different migrant groups. Second, I

explore how much of the social benefits gap can be explained by individual and household characteristics, and how much remains unexplained. Last, I analyse how the social benefits gap changes across the distribution.

To address these research questions, I examine differences in social benefits between five distinct migrant groups and native households in Austria. According to the EU-SILC, social benefits are defined as assistance provided to households to help alleviate various financial risks or necessities (European Commission, 2022, p. 40). Utilizing the latest available EU-SILC data for Austria, I first depict the diverse characteristics of households with different migration statuses and native households. This is followed by an analysis of the differences in the receipt and level of social benefits, distinguishing between contributory and non-contributory social benefits. For the empirical analysis, I estimate various baseline models to gain initial insights into the relevance of the migration status on social benefits. Subsequently, I decompose the migrant-native social benefits gap applying Oaxaca-Blinder decompositions at the mean (Blinder, 1973; Cotton, 1988; Neumark, 1988; Oaxaca, 1973) and decompositions at the unconditional distribution (Chernozhukov et al., 2013). In contrast to existing studies (Huber and Oberdabernig, 2016; Jakubiak, 2020; Smedsvik et al., 2021; Suari-Andreu and van Vliet, 2023), first, I complement decompositions at the mean with decompositions at the unconditional distribution to facilitate an examination across the social benefits distribution. To the best of my knowledge, no previous study has employed unconditional distribution decompositions (Chernozhukov et al., 2013) to elucidate differences in social benefits between migrant and native households. Furthermore, unlike previous research, I explore more detailed migrant categories in Austria, distinguishing between EU-14 migrants, EU-Other migrants, Ex-Yugoslavia & Turkey migrants, and migrants from Other regions.

Among the most important results in this thesis is the finding that the migrant-native social benefits gap varies significantly based on the type of social benefit and the specific migrant group. The analysis reveals that most migrant households receive less likely and less volume of contributory social benefits than natives. These negative gaps are primarily attributed to differences in characteristics,

especially age, between migrants and natives. The results are consistent across different quantiles, as shown by the unconditional distribution decompositions. In contrast, the findings for non-contributory social benefits are more varied across different migrant households and depend on whether the analysis conditions on the receipt of such benefits. The analysis notably highlights a significant positive non-contributory social benefits gap between Other migrant and native households. Additionally, even after controlling for observable characteristics, Other migrants still receive more non-contributory benefits. Unlike contributory benefits, the disparities in non-contributory benefits are significantly influenced by both explained factors, such as household size and number of children, and unexplained factors. The unconditional distribution decompositions indicate that these differences are present exclusively in the upper quantiles of the social benefits function.

The following thesis is structured as follows. Section 2 reviews the most relevant literature, focusing on the welfare magnet hypothesis, the fiscal impact of migration, and the welfare benefits received by migrants. Section 3 offers an overview of the data, presenting detailed summary statistics on the characteristics and social benefits of both migrant and native households. Section 4 outlines the methodological approach used in this thesis. Section 5 presents the results, particularly the findings of the analysis on the social benefits gap between migrant and native households. Finally, Section 6 concludes with a discussion of the results.

2 Related Literature

Within this literature review chapter, I organize the related literature into three distinct categories. Firstly, at the broadest level, I explore the determinants of immigration, focusing on whether the welfare state functions as a significant pull factor for migrants when selecting a destination country. Secondly, directly related to this thesis, the discussion extends to the literature investigating the overall fiscal impact of migrants within the host countries and potential variations in fiscal costs. Lastly, of most relevance to this study, I deal with studies that analyse disparities in welfare benefits between migrant populations and native inhabitants, seeking to explain these differences by considering the distinct characteristics of each group.

This three-fold categorization aims to offer a structured and comprehensive overview of the literature, facilitating a nuanced exploration of the complex dynamics surrounding immigration, fiscal implications, and the utilization of social benefits.

Welfare state as determinant of migration

Borjas (1999) proposes the theoretical concept of the welfare magnet hypothesis. The concept suggests that disparities in welfare benefits between US-states might not significantly influence relocation of natives due to the high costs associated with moving between states. However, immigrants to the United States are already committed to the fixed costs of relocating, making it relatively inexpensive to choose a state with higher welfare benefits. Consequently, newly arrived immigrants are more likely to settle in states offering greater welfare benefits. The author empirically assesses this hypothesis, by investigating Public Use Microdata Samples (PUMS) from the years 1980 and 1990 in the US. The results indicate that immigrants receiving welfare benefits are disproportionately concentrated in states with higher benefit levels compared to immigrants not receiving benefits, as well as native populations. Brücker et al. (2002), De Giorgi and Pellizzari (2009) and Razin and Wahba (2014) conduct similar studies in Europe, examining whether countries with more extensive welfare benefits tend to attract migrants who rely more on welfare compared to native residents. Using data from the European Community household panel survey, Brücker et al. (2002) highlight significant variations in the foreign population across different European countries, including levels of welfare dependency, and socioeconomic characteristics. Findings for Austria suggest that migrants are significantly more dependent on unemployment benefits and family benefits than natives. Although there is some evidence suggesting a connection between the composition of the migrant population and the level of welfare state generosity, Brücker et al. (2002) indicate that observable factors, like education levels, largely explained this relation, a pattern also observed among native residents. Similarly, De Giorgi and Pellizzari (2009) found a significant yet modest influence of the welfare system's generosity on migration decisions. They also emphasize that the impact of these welfare magnets is comparatively minor when contrasted with factors such as unemployment rates and wage levels in the labour market. Razin and Wahba (2014) provide additional insight, suggesting that the welfare magnet hypothesis only holds within

a free-migration regime, even after adjusting for the skill composition of migrants. Contrary to the other studies, Agersnap et al. (2020) employ a quasi-experimental research design to examine the effects of changes in welfare benefits in Denmark on migration. Their study stands out as one of the few to offer causal evidence supporting the welfare magnet hypothesis and reveals that the reform, which entailed a reduction in welfare benefits, resulted in a decrease of 4.2 percent of the non-EU immigrants in Denmark (Agersnap et al., 2020). Overall, the findings support the notion that European countries with more generous welfare systems tend to attract migrants who are more reliant on welfare (Brücker et al., 2002; De Giorgi and Pellizzari, 2009; Agersnap et al., 2020).

Fiscal impact of migration

There are two distinct methods for assessing the overall fiscal effects of migration. The first is a static accounting analysis, which computes the fiscal impact based on a single snapshot of a given year (Boeri, 2010; Borjas, 1994; Christl et al., 2022; Dustmann et al., 2010; Dustmann and Frattini, 2014; Fiorio et al., 2023). While this approach is straightforward and does not require assumptions about the future, it lacks consideration of any dynamic changes over time. The second approach involves a dynamic accounting analysis, which aims to predict the fiscal impact over the migrant's entire lifespan. This method mostly relies on the overlapping generations model (Chojnicki and Ragot, 2015; Lee and Miller, 2000; Mayr, 2005; Storesletten, 2000) and requires forecasting of future incomes and changes in tax and welfare systems. However, the dynamic approach carries a higher degree of risk as it heavily relies on assumptions about the future. See Preston (2014), OECD (2021) and Hennessey and Hagen-Zanker (2020) for a comprehensive overview on existing studies of the fiscal impact of migration.

In static analyses, an individual's net fiscal costs typically refer to the total revenues minus the total transfers received. Research on the net fiscal position of migrants reveals positive contribution to the public for the US, the UK and the EU (see Borjas, 1994; Dustmann et al., 2010; Dustmann and Frattini, 2014 for single-country studies and Berger, 2016; Boeri, 2010; Christl et al., 2022; Fiorio et al., 2023 for cross-country analyses). Borjas (1994) is one of the earliest studies to eval-

uate the fiscal costs of migrants in the US using US census data of the year 1990, finding that migrants contribute more to taxes than they receive in means-tested benefits, though results might differ when considering other public transfers such as social security benefits. Dustmann et al. (2010) examine the impact of the EU enlargement on public finances in the UK, indicating that migrants from Central and Eastern European countries joining the EU in 2004 significantly contributed positively due to their higher share in labour force, higher payment of indirect taxes and lower usage of welfare benefits and services. Similarly, Dustmann et al. (2014) assess the impact of European Economic Area (EEA) migrants and non-EEA migrants in the UK post-1995, noting significant negative contributions from non-EEA migrants, while EEA migrants appear to have a positive impact on the UK budget. Interestingly, both groups make positive contribution, given that they arrived after the year 2000. Static cross-country studies reveal differences in migrant's net fiscal costs compared to natives across countries (Boeri, 2010; Fiorio et al., 2023). Boeri (2010) uses EU-SILC data to evaluate the difference in the net fiscal position of migrants and natives in several European countries. He finds finds no evidence that migrants extract net profits from the state, with migrants in some countries, like Austria, being notably more frequent net fiscal contributors than natives. Fiorio et al. (2023) employ the tax-benefits microsimulation model EUROMOD to evaluate fiscal impact of migrants and natives in EU-14 countries, concluding that migrants are net contributors to the budget, even when accounting for income percentiles. By including indirect taxes and in-kind benefits, they find that migrants contribute 1,510€ yearly on average to the receiving country (compared to 32€ of natives). Christl et al. (2022) extend this analysis to the entire EU, demonstrating that both EU and non-EU migrants, on average, contribute more than natives, with significant negative contributions observed until age 30 and after retirement, and significant positive contributions during working age, for both migrant groups. Contrary, a dynamic lifecycle perspective reveals that natives generally maintain a higher net fiscal contribution than both migrant groups.

Dynamic accounting analyses employing general equilibrium models with overlapping generations find that immigration can alleviate the tax burden associated with ageing populations by introducing younger workers and enhancing fiscal con-

tributions. However, the extent of these benefits varies based on factors such as skills, age distribution, and number of immigrants (see Chojnicki and Ragot, 2016; Lee and Miller, 2000; Mayr, 2005; Storesletten, 2000). Chojnicki and Ragot (2016) find that in absence of immigration, welfare benefits payments would increase by about 1.9 to 2.9% of GDP in France. This advantage of an increase in fiscal gains due to immigration, however, is counteracted by the profound demographic changes brought about by aging. Lee and Miller (2000) conclude for the US that higher immigration rates would mitigate old-age, survivors and disability benefits. Migrants' higher fertility rates in the US temporarily reduce the fiscal burden of the aging population, but the overall fiscal consequences of more immigration are rather minor in the long term. Storesletten (2000) suggests that the net fiscal contribution is positive for high-skilled migrants and negative for low-skilled migrants, with both migrant groups exerting less negative fiscal impact than natives, particularly evident among skilled migrants aged between 40 and 44. Mayr (2005) adds to this discourse by presenting positive fiscal impacts in Austria through a generational accounting exercise. The overall effect is positive under the assumption that the age and characteristics of future immigrants resemble those of the current immigrant population in Austria, attributed to a favourable age composition and lower net public transfer receipts during retirement age. In a dynamic cross-sectional analysis on the impact of immigration on public budget, Berger et al. (2016) demonstrate significant variations in net fiscal effects across Austria, Germany, Poland and UK. Assuming equal future inflow rates of migrants, they find notable differences in the tax gains of immigration among the four countries (2.1 percentage points in the UK, 3.9 in Poland, 5.7 in Austria, and 7.3 in Germany).

Welfare benefits of migrants and natives

Within the literature, numerous studies have undertaken comparisons of welfare benefits between migrants and natives. A prevalent approach involves the estimation of probit or OLS models to assess whether migrants receive more welfare benefits than natives, on the extensive and intensive margin, even after accounting for specific individual characteristics (see Anastossova and Paligorova, 2006; Barret and Maitre, 2013; Boeri, 2010; Hansen and Lofstrom, 2003; Sarvimäki, 2011; Suari-Andreu and van Vliet, 2023). Additionally, researchers have employed different decomposition

methods at the mean to disaggregate the differences in welfare benefits between migrants and natives into an explained and unexplained component (see Huang et al., 2021; Huber and Oberdabernig, 2016; Jakubiak, 2020; Smedsvik et al., 2021; Suari-Andreu and van Vliet, 2023). These studies diverge in their focus, examining the effects of different migrant groups, such as comparisons between EU and non-EU migrants (see Anastossova and Paligorova, 2006; Barret and Maitre, 2013; Jakubiak, 2020), and utilizing various types of welfare benefits, including the distinction between contributory and non-contributory benefits (see Huber and Oberdabernig, 2016; Suari-Andreu and van Vliet, 2023), or focusing on means-tested benefits (see Castranova et al., 2001; Bruckmeier and Wiemers, 2016; Smedsvik et al., 2021). Overall, the literature indicates that in most European countries, as well as the US, migrants do not tend to have higher rates of receipt and higher levels of welfare benefits compared to natives, once individual characteristics are taken into account (Anastossova and Paligorova, 2006; Boeri, 2010; Barret and Maitre, 2013; Suari-Andreu and van Vliet, 2023). However, exceptions to this trend are observed in Scandinavian countries and Finland, where migrants tend to receive higher benefits (Hansen and Lofstrom, 2003; Boeri, 2010; Sarvimäki, 2011; Smedsvik et al., 2021). Anastossova and Paligorova (2006) use cross-sectional survey data to estimate probit regressions of social income on the immigration status, suggesting that in the US non-EU migrants receive lower levels of social income than natives, even after controlling for multiple characteristics. Conversely, in Germany, the authors find no significant effects for non-EU migrants or EU-migrants relative to natives. The results for Germany aligns with the findings of Castranova et al. (2001) and Bruckmeier and Wiemers (2016), studying the differences in welfare take-up rates of migrants and natives using data from the German Socio-Economic Panel. This similarity in welfare benefits may be explained by the high proportion of well-integrated Turkish migrants in Germany, with characteristics similar to German natives (Anastossova and Paligorova, 2006). Suari-Andreu and van Vliet (2023) estimate an OLS model for the Netherlands and find that EU migrants, including those from Eastern Europe, are significantly less likely to receive both contributory and non-contributory welfare benefits compared to natives. In contrast, Denmark, Finland, Norway, and Sweden exhibit significantly higher welfare receipt and benefits among migrants compared to natives, as noted by Barret and Maitre (2013), Boeri (2010),

Hansen and Lofstrom (2003), and Sarvimäki (2011). However, Sarvimäki (2011) finds significant higher levels of income transfers only among non-OECD migrants, with similar receipt rates observed for migrants from OECD countries compared to natives. Additionally, both Hansen and Lofstrom (2003) and Sarvimäki (2011) conclude that welfare take-up rates and benefit levels decrease with time spent in the host country, indicating a convergence between migrants and natives over time. For Austria, Boeri (2010) estimates probit regressions to examine the effect of migration status on the likelihood of receiving contributory and non-contributory welfare benefits. He finds that EU migrants are significantly less likely to receive contributory benefits, while third-country migrants are significantly less likely to receive non-contributory benefits among Austrian households.

Literature employing a decomposition analysis of the differences in welfare benefits between migrants and natives find mixed results depending on the definition of welfare benefits and on the country (Huang et al., 2021; Huber and Oberdabernig, 2016; Jakubiak, 2020; Smedsvik et al., 2021; Suari-Andreu and van Vliet, 2023). Huang et al. (2021) conduct a study using data from the Current Population Survey spanning 1995 to 2018 in the US, where they estimate a twofold Oaxaca-Blinder decomposition to analyse the migrant-native welfare receipt gap. They find that migrant households are notably 2.3 percentage points less likely to receive cash and near-cash programs but are 9.6 percentage points more likely to utilize safety net programs. The primary characteristics explaining these differences are race and educational attainment. Several studies conclude that a large share of the migrant-native differences in welfare benefits and welfare usage can be explained by observable differences in characteristics (Huber and Oberdabernig, 2016; Jakubiak, 2020; Smedsvik, 2021; Suari-Andreu and van Vliet, 2023). Furthermore, cross-country studies reveal divergent welfare benefit gaps between migrants and natives in European countries (Huber and Oberdabernig, 2016; Jakubiak, 2020). For instance, by applying Oaxaca-Blinder decompositions, Huber and Oberdabernig (2016) find negative gaps in contributory welfare benefits but positive gaps in non-contributory welfare benefits between migrants and natives in Austria. Studies that compare different migrant groups with natives reveal contrasting results depending on the migration group. (Suari-Andreu and van Vliet 2023; Jakubiak, 2020). Additionally,

Jakubiak (2020) highlights differing migrant-native gaps in welfare benefits based on definitions. While noting that EU and non-EU migrants receive fewer total welfare benefits compared to natives using Yun decompositions, he concludes that non-EU migrants receive more welfare benefits when old-age benefits are excluded (Jakubiak, 2020). Smedsvik (2021) applies a Kitagawa-Oaxaca-Blinder (KOB) decomposition and focuses on Norway, observing significant positive differences in social assistance levels for both first and second-generation migrants compared to natives, with the gap notably larger for first generations. Suari-Andreu and van Vliet (2023) utilize administrative data of households in the Netherlands spanning 2004 to 2014 to assess differences in migrant-native contributory and non-contributory public transfers through a twofold Oaxaca-Blinder decomposition. Their analysis reveals that EU and eastern EU migrants receive fewer contributory public transfers due to lower income levels, while simultaneously receiving higher non-contributory public transfers compared to natives. Age emerges as a significant factor contributing to the difference for contributory public transfers, whereas the number of children plays an important role in non-contributory public transfers.

My thesis is most closely related to the work of Suari-Andreu and van Vliet (2023). While their study focuses on differences in social benefits in the Netherlands, I adapt parts of their methodology to analyse the impact of migration status on social benefits for households in Austria. As Suari-Andreu and van Vliet (2023), I first estimate various baseline OLS models to to gain preliminary insights into this relationship in Austria. Subsequently, I conduct Oaxaca-Blinder decompositions of contributory and non-contributory social benefits between migrants and natives. Adding to the existing literature, I introduce several novel contributions. Firstly, I extend the analysis by incorporating decompositions at the unconditional distribution, as suggested by Chernozhukov et al. (2013). This facilitates a nuanced examination of differences in social benefits between migrants and natives across the entire distribution. Secondly, unlike previous studies, I explore more detailed migrant categories in Austria and distinguish between EU-14 migrants, EU-Other migrants, Ex-Yugoslavia & Turkey migrants, and migrants from Other regions. Lastly, my analysis utilizes the most recent available data for Austria, which is from 2022.

3 Data and statistical evaluation

This section describes the data utilized in this thesis and provides a definition of the main variables. Additionally, it offers a comprehensive statistical analysis of households and social benefits in Austria.

3.1 Data description

For the analysis I use the 2022 survey wave of the European Union Statistics on Income and Living Conditions (EU-SILC) for Austria. The EU-SILC is a representative probability sample for all private households and persons aged 16 years and above (European Commission, 2022, p. 59) with a particular focus on social exclusion, income and poverty. The Austrian EU-SILC sample design consists of a stratified simple random sample where sample weights are calculated based on the probability of selection and adjusted to the true distribution of individuals and households in Austria (European Commission, 2022, pp. 64-68). In the year 2022, the survey consists of 5,938 interviewed private Austrian households, including 12,096 individual household members, of which 1,905 are children below the age of 16 (Statistik Austria, 2023b, p. 16). The reference period for all the collected information is the year of the survey except for the income variables, where the calendar year preceding the survey, is taken as reference (Statistik Austria, 2023b, p. 12). I eliminate households with a household head under 18, and with missing information on educational, marital and health status, ending up with a sample of 5911 households (see Table 1), of which 3185 households receive positive amounts of contributory social benefits and 2858 households receive non-contributory social benefits[1].

The EU-SILC provides cross-sectional and longitudinal data. The longitudinal design is carried out as a rotating panel survey, where the sample is divided into four equally sized rotation groups and every year one rotation group is dropped. At the same time, a new rotation group is added to the sample. Each quarter of the sample thus remains in the panel for four years (Statistik Austria, 2023b, p. 13).

[1]Note that a single household can receive contributory and non-contributory social transfers simultaneously.

As the longitudinal component of the EU-SILC only allows for a maximum of four periods with a reduced sample[2], I focus my analysis on the cross-sectional design of the EU-SILC. A limitation of the data is that the survey data relies on a rather small sample of the Austrian population, thus, potentially suffering from sampling bias. Nevertheless, the EU-SILC is the most detailed available microdata to study social benefits of households in Austria. Likewise, several recent studies use the EU-SILC to study the overall fiscal impact of migrants (Christl et al., 2021; Fiorio et al., 2023) and to analyse differences in social benefits between migrant and natives (Barrett and Maître, 2013; Boeri, 2010; Huber and Oberdabernig, 2009). When working with survey data it is essential to correctly calculate the standard errors. Several studies show that by not accounting for the true sample design of EU-SILC data for the calculation of standard errors of estimates, and simply assuming a simple random sample design, this can lead to an underestimation of standard errors (Goedemé, 2013; Herter and Wirth, 2018). An advantage of Austrian EU-SILC data is that I can rely on replications weights based on the sample design. Since 2008, Austria's Federal Statistical Office provides replication weights from a bootstrap procedure[3] that takes the survey sample design into account (Statistik Austria, 2022, pp. 6-7). This allows for an adequate estimation of the standard errors, which I implement using 100 replications.

Table 1: 2022 EU-SILC household sample for Austria

	Households	% of complete sample
Complete sample	5936	100
Household head under 18	7	0.14
Missing data on education	4	0.07
Missing data on marital status	6	0.08
Missing data on health status	10	0.21
Final sample	5911	99.50

[2]See Berger and Schaffner (2017) for a detailed analysis of the shortcomings of the longitudinal component of the EU-SILC.

[3]For a detailed methodological guideline on the calculation of the replication weights using a calibrated bootstrap method see: `https://statistikat.github.io/surveysd`

3.2 Definition of main variables

As dependent variables I use social benefits. According to the EU-SILC, social benefits are defined as assistance provided to households to help alleviate various financial risks or necessities. These benefits can be distributed through organized programs or directly from government entities and non-profit organizations aimed at supporting households (European Commission, 2022, p. 40). Social benefits in EU-SILC data include only cash transfers (with the exemption of housing benefits) in the current income reference period and includes household level and personal level benefits (European Commission, 2022, pp. 41-42). Household level benefits include family related allowances, housing allowances and other social exclusion allowances, and personal level benefits include unemployment benefits, old-age benefits, survivors' benefits, sickness benefits, disability benefits and education related benefits. Importantly, social benefits do not cover payments from schemes where the recipient voluntarily contributes funds, such as private pension plans (European Commission, 2022, pp. 40-41). For my main analysis I distinguish between contributory social benefit schemes and non-contributory social benefit schemes. Contributory schemes involve individuals making payments to secure entitlement to benefits, a prominent example being unemployment payments. On the other hand, non-contributory schemes provide benefits without requiring such contributions for eligibility (European Commission, 2022, p. 41), such as family allowances as the Austrian Familienbeihilfe. I use net social benefits where the tax at source and/or social security contributions are deducted (European Commission, 2022, p. 43). As several social benefits are paid out at the household level criteria, I calculate the sum of personal and household level benefits for each household.

The variable of interest in my set of independent variables is the migration status of the household head. EU-SILC data allows to identify the migration status of individuals based on either the country of birth or the current citizenship[4]. Both options have limitations and potentially introduce a bias; where the definition based on the country of birth is incapable to correctly classify native citizens that are not born

[4]Where the main citizenship of individuals with more than one citizenship are based on the following rules: The Austrian citizenship is preferred over all citizenships and EU citizenships are preferred over non-EU citizenships.

in Austria, and the definition based on the citizenship cannot identify individuals that do not want to have the Austrian citizenship although they would have the possibility to obtain it (Boeri, 2010). Additionally, when analysing the migration status across countries, differences in naturalization laws are an issue (see Huber and Oberdabernig, 2016). As Boeri (2010), I decide to identify the migration status based on the citizenship as I do not compare results across countries, where the particularly strict naturalisation law in Austria might interfere (Bauböck, 2020). The Migrant Integration Policy Index ranks Austria as fourth to last of 56 countries regarding facilitating access to nationality (see Migrant Integration Policy Index 2020), as aggravating naturalisation conditions in Austria include a long duration of uninterrupted residence in Austria, the revocation of the second citizenship and high naturalization fees (Bauböck, 2020, pp. 187-188). The strict naturalisation law in Austria makes the citizenship a good indicator to identify migrants in Austria. Furthermore, I assign the migration status of the household based on the citizenship of the household head, where the household head is the person responsible for the accommodation (European Commission, 2022, p. 127) and, thus, is likely also the highest income earner of the household. The EU-SILC only provides anonymised data to researchers and a restriction of the cross-country EU-SILC data is that the citizenship of individuals is grouped into only three categories (natives, EU and non-EU). An advantage of only working with the Austrian EU-SILC is that the citizenship variable of individuals is recoded to 6 categories; native citizenship, EU-14/EFTA (except Austria) citizenship, remaining EU citizenship, Ex-Yugoslavian except Slovenian and Croatian citizenship, Turkish citizenship and all other citizenships (Statistik Austria, 2022, p. 7). For my final analysis I pool migrant households from Ex-Yugoslavia and Turkey as these two groups have a rather small sample size and show very similar individual and household characteristics (see Table 16 in Appendix A). For my final analysis, I calculate the migrant-native social benefits gap across five distinct groups: All migrants, as well as EU-14, EU-Other, Ex-Yugoslavia & Turkey and Other migrants.

3.3 Household characteristics

The following section dives into the household characteristics of different migrant groups and natives provided by the EU-SILC. Table 2 shows a comprehensive overview of household migration statuses in Austria. The predominant group comprises Austrian native households, numbering between 3,426,110 and 3,469,573, constituting 84.8 to 85.9 percent of all households. The remaining four migrant household groups (EU-14, EU-Other, Ex-Yugoslavia & Turkey, and Other) each represent approximately 3.1 to 4.2 percent of the total households sampled, ranging from 124,545 to 168,331 households.

Table 2: Representative households by migration status based on citizenship

		95% confidence interval	
	Households	abs. numbers	% of sample
Native	3,447,842	[3426110, 3469573]	[84.8, 85.9]
EU-14	155,080	[147047, 163113]	[3.6, 4]
EU-Other	158,905	[149479, 168331]	[3.7, 4.2]
Ex-Yugoslavia & Turkey	143,987	[134013, 153960]	[3.3, 3.8]
Other	134,324	[124545, 144102]	[3.1, 3.6]

Household structure across the different migrant groups reveals notable variations (see Table 3). Overall, EU-14, EU-Other, and Ex-Yugoslavia & Turkey, as well as native, households show comparable attributes, while those from Other parts of the world stand out with distinctive characteristics. For Austrian natives, the predominant household type is single households, followed by households consisting of two adults without dependent children. Within the EU-14 category, single households are even more prevalent, comprising nearly half of all households, while only a small fraction of household consists of more than three adults. In contrast, EU-Other, Ex-Yugoslavia & Turkey and Other households show a higher concentration of dependent children compared to native households. Moreover, households from Other regions exhibit the lowest number of single households of each group, and Ex-Yugoslavia & Turkey households are most likely to have dependent children, with over 50% of households having dependent children.

Table 3: Share of household types by migration status

	Native	EU-14	EU-Other	Ex-Yu./Tu.	Other
Single parent	0.02	0.03	0.07	0.07	0.02
	(0.001)	(0.004)	(0.008)	(0.009)	(0.003)
Single household	0.39	0.48	0.34	0.22	0.34
	(0.001)	(0.014)	(0.015)	(0.013)	(0.016)
2 adults with children	0.19	0.19	0.31	0.37	0.31
	(0.002)	(0.011)	(0.014)	(0.021)	(0.017)
2 adults no children	0.30	0.27	0.23	0.18	0.21
	(0.001)	(0.012)	(0.013)	(0.013)	(0.013)
2+ adults with children	0.03	0.01	0.03	0.10	0.04
	(0.001)	(0.002)	(0.006)	(0.013)	(0.007)
2+ adults no children	0.07	0.02	0.03	0.06	0.07
	(0.001)	(0.005)	(0.006)	(0.013)	(0.011)

Note: Standard errors in parentheses.

As a next step, I delve into individual and household characteristics potentially explaining differences in social benefits (Table 4), drawing from relevant literature (Huber and Oberdabernig, 2016; Smedsvik, 2021; Suari-Andreu and van Vliet, 2023). Individual variables encompass the age, gender, marital status, education level, and self-reported health of the household head. Additionally, household variables considered include the presence of dependent children, equivalised household income based on the modified OECD equivalence income scale, residence in Vienna, area density, ownership status of the main residence, and household size. The five migrant groups exhibit notable disparities in both household and individual characteristics. Comparatively, the EU-14 cohort bears a strong resemblance to the native group, while the Other group displays the most marked differences. Regarding the average age of household heads, a considerable range emerges, spanning from 42.06 years to 54.12 years, with the Other group featuring the youngest heads of households and natives the oldest.

Table 4: Household characteristics by migration status

	Native	EU-14	EU-Other	Ex-Yu./Tu.	Other
HH characteristics					
Dependent children	0.30	0.28	0.54	0.98	0.57
	(0.002)	(0.017)	(0.022)	(0.045)	(0.035)
Equ. yearly income	31997.34	28796.9	23840.14	16698.96	21254.85
	(98.663)	(445.57)	(574.56)	(351.326)	(259.038)
Vienna	0.20	0.31	0.37	0.44	0.43
	(0.001)	(0.011)	(0.013)	(0.021)	(0.017)
Thinly populated area	0.39	0.28	0.20	0.08	0.05
	(0.002)	(0.013)	(0.011)	(0.012)	(0.008)
Own main residence	0.51	0.30	0.13	0.05	0.06
	(0.002)	(0.012)	(0.009)	(0.006)	(0.007)
3+ household members	0.16	0.11	0.22	0.42	0.22
	(0.002)	(0.01)	(0.011)	(0.02)	(0.016)
Ind. characteristics					
Age	54.12	48.11	44.44	42.06	47.68
	(0.069)	(0.402)	(0.338)	(0.442)	(0.564)
Female	0.57	0.48	0.43	0.33	0.38
	(0.002)	(0.014)	(0.012)	(0.017)	(0.02)
Marital status	0.46	0.37	0.46	0.61	0.62
	(0.002)	(0.013)	(0.015)	(0.017)	(0.018)
Tertiary Education	0.18	0.50	0.29	0.34	0.13
	(0.002)	(0.014)	(0.013)	(0.018)	(0.012)
(Very) Bad health	0.10	0.04	0.08	0.10	0.23
	(0.002)	(0.005)	(0.009)	(0.013)	(0.015)

Note: All values in the table are represented as shares, except for the age and income variables. Standard errors in parentheses.

EU-14 and native households have the fewest dependent children, while Other households typically have the most, averaging one dependent child. In terms of income, native and EU-14 households demonstrate the highest equivalised yearly

incomes, with the Other group reporting the least available income annually. Geographically, while only 20% of native households reside in Vienna, this share rises to over 40% for Ex-Yugoslavia & Turkey and Other households. Gender distribution among household heads varies, with natives having more female heads and the migrant groups more male. Solely Ex-Yugoslavia & Turkey households show a lower proportion of household heads with tertiary education than natives, while EU-14 households exhibit a notably high share at 50%[5]. Health status reports suggest that Ex-Yugoslavia & Turkey household heads feel significantly worse than all other groups, where 23% report to have a bad to very bad health status. Moreover, while over 50% of native households own their main residence, ownership rates plummet to 13% for EU-Other households, and to below 7% for Ex-Yugoslavia & Turkey and Other households.

3.4 Social benefits

In the year 2022, households in Austria received aggregate total social benefits amounting to approximately 84.3 billion Euro (Table 5). Of this sum, roughly half comprised contributory benefits (52%) and the remaining non-contributory benefits (48%). This figure aligns with other available aggregate data on social benefits for the same year, which estimate monetary social benefits within a range of 81.6 to 87.0 billion Euro (Fiskalrat Austria, 2023; Statistik Austria, 2024b). Notably, benefits at the household level solely consist of non-contributory benefits, while those at the individual level encompass both contributory and non-contributory benefits. Among the various types, old-age benefits emerge as the largest, amounting to 39 billion Euro, closely followed by family allowances totalling 26.8 billion Euro. Within contributory benefits, a significant portion is attributed to old-age benefits, while family allowances and survivor benefits constitute the major share of non-contributory benefits.

[5]Note that the highest completed education has to be formally recognized by the Austrian education authority.

Table 5: Aggregate total social benefits in 2022 (in 1,000,000 Euro)

	Total		Con.		Non-Con.	
	Level	s.e.	Level	s.e.	Level	s.e.
Household-level						
Family Allowances	26,733	289	0	0	26,733	289
Housing Allowances	703	37	0	0	703	37
Other social allowances	3,164	215	0	0	3,164	215
Individual-level						
Unemployment benefits	3,227	58	1,295	31	1,932	45
Old-age benefits	38,937	163	37,762	164	1,175	26
Survivor benefits	4,827	85	0	0	4,827	85
Sickness benefits	1,022	33	1,022	33	0	0
Disability benefits	2,485	74	2,152	71	334	20
Education-related allowances	318	23	0	0	318	23
Total	84,260	421	43,973	144	40,286	407

Analysing household-level data on the share of households receiving social benefits and the average amount received reveals notable differences among the demographic groups (see Table 6). 78% of native households receive some form of social benefits, while each migrant group, except for Other households, receive a lower average share. Specifically, 82% of Other households benefit from social benefits, in contrast to 58% of EU-14 households, 64% of EU-Other households, and 73% of Ex-Yugoslavia & Turkey households. When focusing solely on contributory social benefits, the proportion varies between 31% and 61% across different household groups, with Austrian households ranking second highest at 55%, following Other households. However, in contrast to native households, EU-Other, Ex-Yugoslavia & Turkey, and Other households are more likely to receive non-contributory benefits. Analysis of the level of received social benefits reveals that Austrian households receive an average of €27,265 yearly total social benefits. In comparison, households from EU countries receive comparatively less, ranging between €17,650 and €20,933 annually. Similarly, Ex-Yugoslavia & Turkey households get €23,486 on average.

Conversely, Other households receive higher amounts, averaging €41,911 per year.

Table 6: Average share of receipt and level of social benefits by migration status

	Native	EU-14	EU-Other	Ex-Yu./Tu.	Other
Receipt					
Total	0.78	0.58	0.64	0.73	0.82
	(0.002)	(0.015)	(0.013)	(0.018)	(0.016)
Con.	0.55	0.31	0.4	0.37	0.61
	(0.002)	(0.013)	(0.014)	(0.022)	(0.018)
Non-Con.	0.51	0.4	0.52	0.65	0.6
	(0.002)	(0.015)	(0.014)	(0.019)	(0.019)
Level					
Total	27265	17650	20933	41911	23486
	(139)	(595)	(705)	(2750)	(977)
Con.	22178	11364	8506	3451	9900
	(92)	(444)	(365)	(182)	(416)
Non-Con.	17998	16642	19129	45492	21871
	(208)	(826)	(765)	(2904)	(1177)
Equ. scale					
Total	17999	11154	11319	17466	12673
	(66)	(317)	(372)	(853)	(385)
Con.	16295	8881	5588	2128	6838
	(68)	(356)	(252)	(136)	(304)
Non-Con.	10103	9205	9595	18560	10281
	(95)	(390)	(399)	(888)	(442)

Note: The amount of social transfers is expressed in Euros on an annual basis. Standard errors in parentheses.

However, since yearly social benefits are heavily influenced by the number of household members, particularly dependent children, I adjust the average level of social benefits using the OECD equivalence scale. This scale assigns weights to each household member to calculate the equivalised level of social benefits . On an equi-

valised basis, native households receive on average €17,999 in total social benefits, being the highest number in this category among each group. In contrast, EU-14, EU-Other, and Other households receive substantially less, averaging €11,154, €11,319, and €12,673 in total social benefits respectively. Similarly, in terms of equivalised contributory social benefits, native households receive significantly more on average with 16,295€, while migrant households receive between €2,128 and €8,881 annually. When considering equivalised non-contributory social benefits, native, EU-14, EU-Other, and Other households receive comparable amounts, ranging between €9,205 and €10,281. An exception is households from Ex-Yugoslavia & Turkey, which receive significantly more, averaging €18,560 in yearly equivalised non-contributory benefits.

4 Methodological approach

The following section covers the methodological framework of this thesis to evaluate the differences in social benefits between various migrant households and native households in Austria. Following the depiction of the diverse characteristics of households with different migration status in Austria through descriptive statistics, I estimate different baseline models to get a first insight on the relevance of the migration status on social benefits for households in Austria. Afterwards, I decompose the social benefits gap between different households applying two widely recognized decomposition methods.

4.1 Baseline models

As Suari-Andreu and van Vliet (2023), I estimate different baseline models to provide statistical evidence whether migrant households show significant differences in their yearly social benefits compared to native households. In model (1), I use the complete sample to investigate the impact of the migration status of households in Austria on the receipt of social benefits. Afterwards, in model (2), I restrict the sample conditional on the receipt of social benefits to look at the effects on the level of social benefits. As previous studies showed, it is crucial to distinguish between different categories of social benefits (Boeri, 2010; Huber and Oberdabernig, 2016; Suari-Andreu and van Vliet, 2023). Therefore, I estimate my baseline equations (1)

and (2) separately for contributory and non-contributory social benefits.

The baseline OLS equations can be expressed as:

(1) $receipt_i = \gamma_0 + migrant_i * \beta + X_i' * \gamma + e_i$

(2) $level_i = \gamma_0 + migrant_i * \beta + X_i' * \gamma + e_i$

where $receipt_i$ is a binary variable whether households i receives social benefits, $level_i$ is the level of social benefits conditional on receipt, expressed in log terms, $migrant_i$ is a binary variable indicating the different migration backgrounds of households i with natives as the reference group, X_i are various individual and household characteristics, and e_i is the error term. I estimate the equations by ordinary-least-squares (OLS)[6] and report heteroscedastic-robust standard errors[7] to account for potential heterogeneity in the data.

4.2 Decomposition at the mean

I use two different decomposition approaches to decompose the migrant-native differences in social benefits into an explanatory part, that results from differences in characteristics between the groups, and an unexplanatory part, that is accounted for by differences in coefficients, at the mean (see Blinder, 1973; Cotton, 1988; Neumark, 1988; Oaxaca, 1973; Oaxaca and Ransom, 1994) and at the unconditional distribution (Chernozhukov et al., 2013).

I first decompose migrant-native differences in social benefits using the Oaxaca-Blinder decomposition first developed by Blinder (1973) and Oaxaca (1973) and follow the notation of Jann (2008). The first step involves estimating the baseline regressions (1) and (2) separately for migrants (m) and natives (n) for households i:

(3) $Y_{mi} = X_{mi}' * \gamma_m + e_{mi}$

(4) $Y_{ni} = X_{ni}' * \gamma_n + e_{ni}$

[6] Running a logistic regression shows similar results.

[7] I report Horvitz-Thompson-type standard errors.

where Y is the dependent variable, either a dummy on whether the household i receives social benefits or the level of social benefits of household i conditional on receipt, separately for migrants and natives, and X is a vector of a constant and explanatory variables consisting of individual and household characteristics for the two groups.

The migrant-native differences in social benefits can be written by subtracting the expected values of (3) and (4):

$$(5)\quad E(Y_{mi}) - E(Y_{ni}) = E(X_{mi})' * \gamma_m - E(X_{ni})' * \gamma_n$$

Oaxaca and Ransom (1994) showed that the difference can be further decomposed by adding and subtracting $[E(X_{mi}) - E(X_{ni})]\beta_R$:

$$(6)\quad E(Y_{mi}) - E(Y_{ni}) = [E(X_{mi}) - E(X_{ni})]' * \beta_R + E(X_{mi})' * \gamma_m - E(X_{ni})' * \gamma_n - [E(X_{mi}) - E(X_{ni})]' * \beta_R = [E(X_{mi}) - E(X_{ni})]' * \beta_R + E(X_{mi})' * (\gamma_m - \beta_R) + E(X_{ni})' * (\beta_R - \gamma_n)$$

where β_R is a weighted coefficient, $\beta_R = \Omega * \gamma_m + (I\text{–}\Omega) * \gamma_n$. $[E(X_{mi}) - E(X_{ni})]' * \beta_R$ are the differences of observable characteristics between the two groups, evaluated at the weighted coefficient β_R and can be interpreted as the explanatory part of the migrant-native social benefits gap. $E(X_{mi})' * (\gamma_m - \beta_R) + E(X_{ni})' * (\beta_R - \gamma_n)$ is the difference that cannot be explained by characteristics, the unexplained part. It is important to note that this term captures all possible effects of the migrant-native differences in social benefits that cannot be explained by observable group differences.

As the selection of the weighted coefficient β_R is not straightforward, I use different weighted coefficients to compare different counterfactual scenarios. As non-discriminatory weighted coefficients I use estimates proposed by Neumark (1988) and Cotton (1988). Neumark (1988) uses the coefficient of a pooled regression without a group dummy over both groups as the weighted coefficient β_R. Contrary, Cotton (1988) uses the coefficient for migrants and natives, weighted by sample size of the groups[8]:

[8] As the sample size of the two groups are significantly different, I abstain from including the equally weighted estimator proposed by Reimers (1983), $\beta_R = 0.5 * \gamma_m + 0.5 * \gamma_n$.

(7) $\beta_R = N_m/(N_m + N_n) * \gamma_m + N_n/(N_m + N_n) * \gamma_n$

Although I believe that there is no discrimination against only one of the two groups, I compare the results with a "native based" weighted coefficient Blinder (1973); Oaxaca (1973), $\beta_R = \gamma_n$. I calculate Oaxaca-Blinder decompositions separately for contributory and non-contributory social benefits and report robust standard errors using the "delta method" (see Jann, 2008). I mainly focus on the explanatory part of the decomposition in order to determine the importance of individual and household characteristics on the receipt and level of social benefits.

4.3 Decomposition at the unconditional distribution

To further extend the analysis, I decompose the differences in social benefits at specific percentiles of the unconditional distribution between natives and migrants[9]. I use the method of Chernozhukov et al. (2013) which decomposes the native-migrant social benefits gap into differences in the distribution of characteristics, the explanatory part, and differences in the conditional social benefits function, the unexplanatory part; and follow the notation of Blau and Kahn (2017).

In a first step, the unconditional distribution of social benefits for natives and migrants has to be derived:

(8) $F_Y[n, n](y) = \int F_{Yn}|X_n(y|x)dFX_n(x)$

(9) $F_Y[m, m](y) = \int F_{Ym}|X_m(y|x)dFX_m(x)$

where $F_{Ym}|X_m(y|x)$ is the distribution of social benefits conditional on characteristics and $FX_m(x)$ is the distribution of characteristics for migrants, with equivalent definitions for natives.

Followed by the hypothetical unconditional distribution of social benefits for migrants given they would have the same social benefits function as natives:

[9]Note that contrary to the Oaxaca-Blinder decomposition at the mean, I calculate the native-migrant differences in social transfers for the decomposition at the unconditional distribution, necessitated by the constraints within the Stata package *cdeco*.

(10) $F_Y[n,m](y) = \int F_{Yn}|X_n(y|x)dFX_m(x)$

It can be shown that the difference between the unconditional distribution of social benefits of natives and migrants can be further decomposed into the final equation by adding and subtracting $F_Y[n,m](y)$:

(11) $F_Y[n,n](y) – F_Y[m,m](y) = F_Y[n,n](y) – F_Y[n,m](y) + F_Y[n,m](y) – F_Y[m,m](y)$

where, similar as in the Oaxaca-Blinder decomposition, the differences in the unconditional distribution of social transfers between the two groups can decomposed into a part due to differences in the distribution of characteristics, $F_Y[n,n](y) – F_Y[n,m](y)$, and a part due to differences in the distribution of the social transfers distribution conditional on characteristics, $F_Y[n,m](y) – F_Y[m,m](y)$. The second part captures the impact of the social benefits function.

As Chernozhukov et al. (2013) propose, I calculate the actual distribution of the explanatory variables and employ quantile regressions to estimate the distribution of social benefits conditional on characteristics for natives and migrants. I estimate 100 quantile regressions to approximate the conditional social benefits distribution and calculate standard errors through 100 bootstrapping replications.

4.4 Specifications of covariates

The Austrian EU-SILC provides a vast number of potential variables to include as covariates for my regression models. Thus, before starting the analysis, it is important to carefully select the covariates to avoid introducing a bias. Rather than trying to estimate as many model specifications as possible to get the most significant results, I select the covariates before starting the analysis by extracting the used covariates from the most closely related literature. I stick to this small pre-analysis plan to show transparently that I have not engaged in p-hacking by running multiple statistical tests per model.

Key variables commonly employed in analyses on differences in migrant-native social transfer are variables on *age*[10], *number of children*, *gender*, *marital status*, and regional indicators. Notably, regional indicators encompass a *Vienna* dummy as well as a *thinly populated area* dummy. It is important to note that all individual-level variables refer to characteristics of the household head. Further important variables consist of variables on the education status, income and the household structure (Anastossova and Paligorova, 2006; Huber and Oberdabernig, 2016; Smedsvik et al., 2021; Suari-Andreu and van Vliet, 2023). Specifically, my models incorporate a *tertiary education* dummy, a *highest income quartile* dummy, and a dummy indicating *households with more than three members*. Moreover, wealth indicators are frequently used (Huber and Oberdabernig, 2016; Smedsvik et al., 2021). In my analysis, I utilize a dummy variable indicating *household ownership of the main residence* as a proxy for overall household wealth. Finally, I introduce a variable capturing self-reported health, a dummy variable whether the household head indicates *very bad or bad health*, as studies show a negative correlation between receiving social assistance benefits and health (Bambra and Eikemo, 2008; Elkeles and Seifert, 1992).

It is important to note that existing literature mostly talks about leaving out important factors but does not give much thought to how adding certain variables might make bias worse, which is called the bad control problem (Cinelli et al., 2022). As Suari-Andreu and van Vliet (2023), I believe that work status serves as a bad control variable and, thus, exclude it from the analysis. As the aim of the study is to assess the overall impact of migration status on social benefits, and the work status likely acts as a mediator in the relationship between migration status and social benefits, conditioning the analysis on work status would block this mediation channel, leading to biased estimates ("over-control bias") and violating the backdoor criterion (Angrist and Pischke, 2009; Cinelli et al., 2022).

[10]In contrast to the decomposition methods, I include an age variable and an age squared variable, standardized by the z-score, for the baseline equations.

5 Results

Section 5 presents the result of the empirical models to analyse differences in social benefits between migrants and natives. First, I investigate the effects of migration status on the receipt and level of social benefits by estimating simple OLS models, including dummies for the different migrant groups. After looking at the baseline OLS equations, I calculate decompositions at the mean with various decomposition methods (Blinder, 1973; Cotton, 1988; Neumark, 1988; Oaxaca, 1973) to break down the social benefits gap between various migrant groups and natives into an explanatory part – due to differences in characteristics - and an unexplanatory part – due to differences in coefficients. Last, I estimate unconditional distribution decompositions as proposed by Chernozhukov et al. (2013) using quantile regressions. For each model, I distinguish between contributory and non-contributory social benefits as related studies find significant differences between those type of benefits (see Boeri, 2010; Suari-Andreu and van Vliet, 2023).

5.1 Baseline models

Table 7 shows the OLS results with the receipt of contributory and non-contributory social benefits as dependent variables for five different migrant specifications. The analysis of the receipt of contributory social benefits reveals a varied pattern among different migrant groups. While EU-14 migrants exhibit a significant lower likelihood of receiving such benefits than natives (i.e. negative coefficient), Ex-Yugoslavia & Turkey migrants display a significant positive coefficient, suggesting a greater likelihood of receiving contributory social benefits. Both the All migrant and the EU-Other migrant groups display not statistically significant effect of the migration status on receiving contributory social benefits. Regarding the receipt of non-contributory social benefits, the findings unveil negative coefficients for most migrant groups except Ex-Yugoslavia & Turkey migrants, suggesting a diminished likelihood to receive positive amounts of non-contributory benefits compared to natives. Notably, statistical significance at the 1% level is only detected for All migrants and the two EU migrant groups. Despite this, the coefficients associated with these observations remain modest in scale. Contextualising these results within related literature shows some comparable findings. Boeri (2010) estimates probit regres-

sions on the effect of migration status on the probability of receiving contributory and non-contributory social benefits for households in Austria. He finds that EU migrants are significantly less likely to receive contributory benefits. However, in contrast to some of my results, Boeri (2010) concludes that third country migrants are significantly less likely to receive non-contributory benefits. Suari-Andreu and van Vliet (2023) find comparable results for households in the Netherlands and locate that EU, as well as eastern EU migrants, receive significantly less likely contributory social benefits.

Table 7: Baseline OLS, receipt of contributory and non-contributory social benefits

	Dependent variable: Dummy receipt of social benefits									
	Con.	N.-con.	Con.	N.-con.	Con.	N.-con.	Con.	N.-con.	Con.	N.-con.
All	−0.01	−0.03***								
	(0.01)	(0.01)								
EU-14			−0.10***	−0.05***						
			(0.01)	(0.01)						
EU-Other					−0.01	−0.03***				
					(0.01)	(0.01)				
Ex-Yu./Tu.							0.12***	0.003		
							(0.02)	(0.02)		
Other									0.01	−0.03
									(0.02)	(0.02)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5,911	5,911	5,543	5,543	5,517	5,517	5,463	5,463	5,465	5,465

Note: Only the migration status coefficients are reported. Natives are the reference group.

*p<0.1; **p<0.05; ***p<0.01

Table 8: Baseline OLS, level of contributory and non-contributory social benefits

	Dependent variable: Log level of social benefits									
	Con.	N.-con.	Con.	N.-con.	Con.	N.-con.	Con.	N.-con.	Con.	N.-con.
All	−0.38***	−0.01								
	(0.04)	(0.03)								
EU-14			−0.39***	−0.13**						
			(0.06)	(0.06)						
EU-Other					−0.17***	−0.18***				
					(0.06)	(0.05)				
Ex-Yu./Tu.							−0.43***	−0.11**		
							(0.10)	(0.05)		
Other									−0.54***	0.37***
									(0.06)	(0.05)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,185	2,858	3,022	2,636	3,025	2,653	3,024	2,632	3,000	2,641

Note: Only the migration status coefficients are reported. Natives are the reference group.
*p<0.1; **p<0.05; ***p<0.01

Table 8 reports the result of the baseline OLS regression models with the log level of social benefits as dependent variable, separately for contributory and non-contributory benefits. The investigation of the determinants of the level of received contributory benefits discloses a relatively large and significant negative coefficient for each migrant group, meaning that even after controlling for individual and household characteristics, migrants obtain fewer contributory benefits than natives. Put differently, being a migrant is associated with 16% to 42% less contributory social benefits, ceteris paribus, depending on the migrant group. The most pronounced effects can be seen for Other and Ex-Yugoslavia & Turkey migrants and the least for EU-Other migrants. Similarly, I observe a significant negative coefficient in the model with non-contributory social benefits for most migrant groups except All and Other. The models reveal medium sized coefficients for EU-14, EU-Other and Ex-Yugoslavia & Turkey migrants, statistically significant at 95% confidence levels, but

only a small insignificant coefficient for All migrants. In contrast to most groups, Other migrants display a large and significant positive coefficient, meaning that being a migrant from Other countries is associated with 44% higher non-contributory social benefits compared to natives, holding everything else constant. Table 7 and 8 include several control variables but only report the coefficients for the variable of interest, various migration statuses with natives as the reference group. However, when looking at the complete model, most of the control variables show highly significant estimates (see Table 17 and 18 of Appendix A for the full specification of the baseline OLS).

5.2 Aggregate decomposition at the mean

Table 9-12 show the aggregate results of the Oaxaca-Blinder decompositions applying the method of Neumark (1988) to provide further insight into the social benefits gap between migrants and natives. Table 9 and Table 10 decompose the difference in receipt of social benefits between multiple migrant groups and natives into a part explained by individual and household characteristics and an unexplanatory part, for contributory and non-contributory social benefits respectively.

Examining the aggregate decompositions of the receipt of contributory social benefits (Table 9) reveals a negative overall gap for each migrant group, except for Ex-Yugoslavia & Turkey. A negative gap suggests that the respective migrant group is less likely to receive contributory social benefits than natives. The observed negative overall gaps are statistically significant at the 1% level and more pronounced for EU-14 migrants than for All, EU-Other and Other migrants. Contrary to most groups, migrants from Ex-Yugoslavia & Turkey show no significant overall difference compared to natives. Considering the explanatory gap (differences due to individual and household characteristics), reveals a negative estimate for each group, although not statistically significant for Ex-Yugoslavia & Turkey migrants. The negative estimate underscores that the individual and household characteristics of migrants make them less likely to receive contributory social benefits. This outcome is not unexpected, given that eligibility for contributory benefits is largely contingent on factors such as age and lifetime income. For instance, native households are, on average, older than other groups, making them more likely to receive old age bene-

fits, which constitute a significant share of contributory social benefits. The overall receipt of contributory benefits gap is largely explained by differences in characteristics for All, EU-Other and Other migrants, with the explanatory part explaining 88%, 87% and 103% of the overall gap, respectively. For EU-14 migrants roughly only 50% of the overall difference can be explained with individual and household characteristics. This suggests that differences in receiving contributory benefits can be attributed to both the known factors (like structural aspects) and the unknown factors (such as cultural and behavioural influences) for EU-14 migrants. Even after controlling for observable characteristics, the Oaxaca-Blinder decompositions provide little evidence of higher take-up rates of contributory social benefits of migrants compared to natives. Only for Ex-Yugoslavia & Turkey migrants I find a positive unexplained difference at the 10% level, meaning that this group has higher take-up rates of contributory social benefits as natives, after accounting for observable characteristics. The remaining migrant groups show either a negative or no difference of the unexplained part.

Table 9: Twofold decomposition, receipt of contributory social benefits

	All	EU-14	EU-Other	Ex-Yu./Tu.	Other
overall					
difference	-0.13***	-0.24***	-0.15***	0.07	-0.17***
	(0.03)	(0.04)	(0.04)	(0.06)	(0.06)
explained	-0.11***	-0.13***	-0.13***	-0.03	-0.18***
	(0.01)	(0.02)	(0.02)	(0.03)	(0.03)
unexplained	-0.02	-0.11***	-0.02	0.09*	0.00
	(0.02)	(0.03)	(0.04)	(0.05)	(0.06)
Observations	5,911	5,543	5,517	5,463	5,465
% explained	87.62	55.55	86.97	-45.23	102.76
% unexplained	12.38	44.45	13.03	145.23	-2.76

Note: Migrant-Native Oaxaca-Blinder decomposition following Neumark (1988). Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Twofold decomposition, receipt of non-contributory social benefits

	All	EU-14	EU-Other	Ex-Yu./Tu.	Other
overall					
difference	0.03	-0.11**	0.01	0.09	0.14**
	(0.02)	(0.05)	(0.05)	(0.06)	(0.06)
explained	0.06***	-0.06**	0.05*	0.10**	0.17***
	(0.02)	(0.02)	(0.03)	(0.04)	(0.04)
unexplained	-0.03	-0.05	-0.04	-0.00	-0.03
	(0.02)	(0.04)	(0.03)	(0.05)	(0.06)
Observations	5,911	5,543	5,517	5,463	5,465
% explained	200.23	51.33	398.43	102.10	123.00
% unexplained	-100.23	48.67	-298.43	-2.10	-23.00

Note: Migrant-Native Oaxaca-Blinder decomposition following Neumark (1988). Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Examining the receipt of non-contributory social benefits gap (Table 10) shows rather contrasting results compared to the previous analysis with contributory benefits. The overall gap is positive for Other migrants, with 0.14, suggesting that this migrant group is more inclined to receive non-contributory social benefits compared to native households. Conversely, EU-14 migrants are the only group with a significant negative difference, indicating a lesser likelihood of receiving those type of social benefits. Most migrant groups exhibit a positive explanatory gap, determining more than 100% of the overall gap. Thus, individual and household characteristics are the major factor constituting to the positive differences in the receipt of non-contributory social benefits for All, EU-Other, Ex-Yugoslavia & Turkey, and Other migrants. On the other hand, EU-14 migrants show a significant negative difference in characteristics. Similar to contributory social benefits, the unexplained gap of the receipt of non-contributory social benefits is not statistically different from zero across each group, suggesting that, after controlling for individual- and household-level characteristics, migrants would not be more likely to receive non-contributory social benefits than natives.

Table 11 and Table 12 provide the level of social benefits gap for different migrant groups compared to natives conditional on the receipt of social benefits, separately for contributory and non-contributory social benefits. Oaxaca-Blinder decompositions of the level of contributory social benefits (Table 11) show a uniform picture. I find highly significant negative contributory social benefits gaps for each migrant group, ranging between -0.72 log points for EU-14 migrants and -1.76 log points for Other migrants, meaning that the different migrants receive less in contributory social benefits. Also, the results suggest highly significant negative explanatory gaps of contributory social benefits for each group. For most groups, the difference in characteristics determines a large part of the overall gap. Only for EU-14 migrants, the unexplanatory part contributes more to the overall gap than the explanatory part. For EU-Other, over 85% of the overall gap is explained by observable differences in individual and household characteristics. Furthermore, the results suggest significant negative unexplained differences for All, EU-14 and Other migrants, meaning that even after controlling for observable characteristics, the level of contributory social benefits they receive is still lower compared to that of natives in the mean.

Investigating instead the decompositions of the level of non-contributory social benefits (Table 12) depicts contrasting gaps. I can only show a significant overall difference between All migrants and natives, as well as Other migrants and natives. The overall non-contributory social benefits gap being 0.16 log points for All and 0.69 for Other migrants. The remaining groups show no significant difference in non-contributory benefits. The groups with an overall positive difference in non-contributory benefits also display a positive explanatory difference, explaining more than 100% of the gap for All migrants and 56% for Other migrants. The unexplained gap is significant positive for Other migrants, suggesting that Other migrants still receive more non-contributory social benefits after controlling for differences in observable characteristics between Other migrants and natives. Given the relatively large overall gap for the Other group, it seems likely that the effect for All migrants is largely driven by this group.

Table 11: Twofold decomposition, level of contributory social benefits

	All	EU-14	EU-Other	Ex-Yu./Tu.	Other
overall					
difference	-1.14***	-0.72***	-0.97***	-1.10***	-1.76***
	(0.14)	(0.17)	(0.20)	(0.34)	(0.19)
explained	-0.83***	-0.35***	-0.84***	-0.72***	-1.28***
	(0.09)	(0.11)	(0.11)	(0.14)	(0.15)
unexplained	-0.31***	-0.36**	-0.14	-0.38	-0.49***
	(0.11)	(0.16)	(0.19)	(0.28)	(0.17)
Observations	3,185	3,022	3,025	3,024	3,000
% explained	72.79	49.23	86.09	65.09	72.46
% unexplained	27.21	50.77	13.91	34.91	27.54

Note: Conditional on receipt. Migrant-Native Oaxaca-Blinder decomposition following Neumark (1988). Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 12: Twofold decomposition, level of non-contributory social benefits

	All	EU-14	EU-Other	Ex-Yu./Tu.	Other
overall					
difference	0.16**	-0.19	-0.03	0.01	0.69***
	(0.08)	(0.21)	(0.15)	(0.22)	(0.19)
explained	0.19***	-0.06	0.15*	0.13	0.39***
	(0.05)	(0.08)	(0.09)	(0.14)	(0.13)
unexplained	-0.03	-0.13	-0.19	-0.12	0.31**
	(0.07)	(0.20)	(0.14)	(0.12)	(0.12)
Observations	2,858	2,636	2,653	2,632	2,641
% explained	117.63	30.83	-437.11	1170.88	55.73
% unexplained	-17.63	69.17	537.11	-1070.88	44.27

Note: Conditional on receipt. Migrant-Native Oaxaca-Blinder decomposition following Neumark (1988). Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As Böheim et al. (2020), I evaluate the reliability of these decomposition findings at the mean by examining the explained and unexplained differences using various decomposition methods. Table 13 compares outcomes of Oaxaca-Blinder analyses based on employing a pooled regression without a group dummy variable (Neumark, 1988), a coefficient weighting approach suggested by Cotton (1988), and a native-based decomposition technique (Blinder 1973; Oaxaca 1973). All the decomposition methods I have calculated show similar results for the unexplained and unexplained part suggesting that the results are rather robust to selected counterfactual distribution of social benefits.

Table 13: Different decomposition methods at the mean

	Receipt of social benefits				Level of social benefits			
	Gap	Explained			Gap	Explained		
		Neumark	Cotton	Native		Neumark	Cotton	Native
All								
Con.	-0.238	-0.132	-0.128	-0.130	-0.717	-0.353	-0.346	-0.338
Non-con.	-0.108	-0.056	-0.052	-0.052	-0.193	-0.060	-0.056	-0.061
EU-14								
Con.	-0.153	-0.133	-0.133	-0.134	-0.972	-0.837	-0.825	-0.835
Non-con.	0.012	0.047	0.048	0.050	-0.035	0.151	0.160	0.156
EU-Other								
Con.	0.065	-0.029	-0.036	-0.036	-1.101	-0.717	-0.681	-0.671
Non-con.	0.093	0.095	0.096	0.095	0.011	0.127	0.157	0.120
Ex-Yu./Tu.								
Con.	-0.131	-0.115	-0.113	-0.123	-1.137	-0.828	-0.777	-0.773
Non-con.	0.030	0.059	0.066	0.067	0.158	0.186	0.196	0.166
Other								
Con.	-0.174	-0.179	-0.180	-0.184	-1.761	-1.276	-1.245	-1.247
Non-con.	0.139	0.170	0.186	0.190	0.692	0.386	0.369	0.366

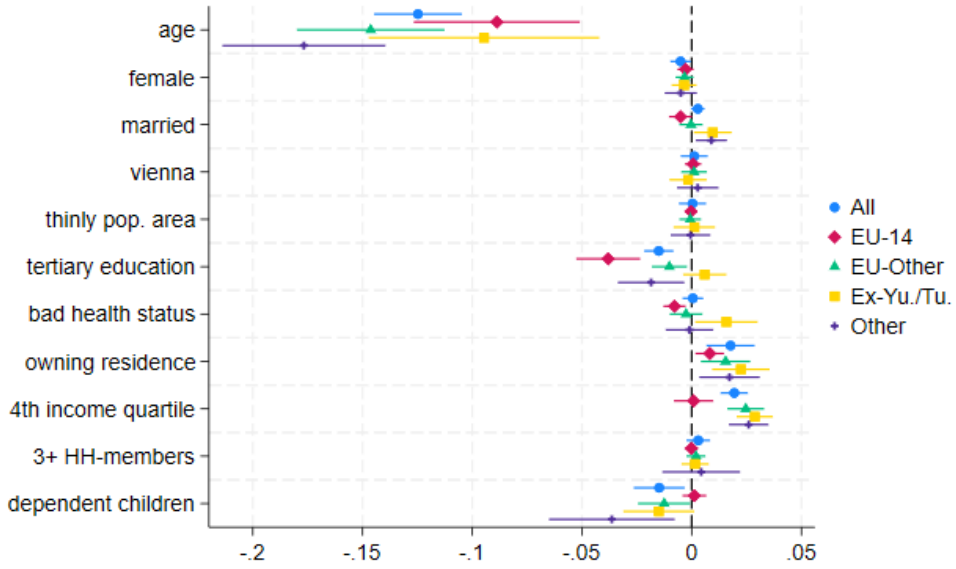
5.3 Detailed decomposition of explanatory part at the mean

The primary benefit of Oaxaca-Blinder decompositions is the ability to pinpoint the influence of each control variable to the explained, as well as the unexplained, social benefits gap. As other studies (Suari-Andreu and van Vliet, 2023; Smedsvik et al., 2021), the focus of this thesis lies in understanding the breakdown of the explained component, as it clearly reveals how much of the differences in social benefits can be attributed to variations in characteristics when comparing different migrant groups and natives.

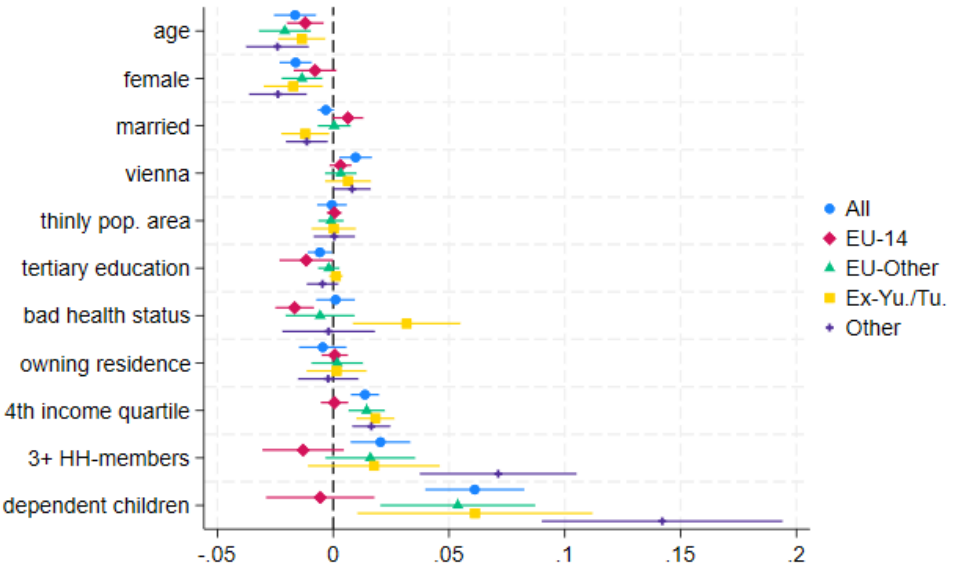
Looking at the explained differences of the receipt of contributory social benefits between migrants and natives (Figure 1, panel A), I find that age contributes by far most to the negative explained gap of each migrant group. This results from the fact that migrants are on average younger than natives in Austria, and though less likely qualify for the receipt of contributory social benefits. Further important characteristics for the receipt of contributory social benefits gap for All, EU-14, EU-Other and Other migrants[11] include education, wealth, income, and children, although minor in size compared to age. For these groups, I find that the difference in tertiary education compared to natives contributes negatively to the explanatory gap. This effect is particular large for EU-14 migrants, meaning that the higher share of tertiary educated household among EU-14 migrants compared to natives in Austria leads to a less likely receipt of contributory social benefits. Additionally, the disparities between wealth, represented by the share that owns the residence, and income determine a positive portion of the explanatory gap, except for EU-14. Put differently, the lower income and wealth of these groups make them significantly more likely to receive contributory social benefits, although minor in size. The number of dependent children shows a negative coefficient for All, EU-Other and Other migrants, with a large effect for Other. Meaning that the larger number of dependent children of Other migrant households make them less likely to receive contributory social benefits than natives.

[11]Note that I do not find a significant overall and explanatory gap between Ex-Yugoslavia & Turkey migrants and natives.

Figure 1: Detailed decomposition of explanatory part, receipt of social benefits



(a) Contributory social benefits



(b) Non-contributory social benefits

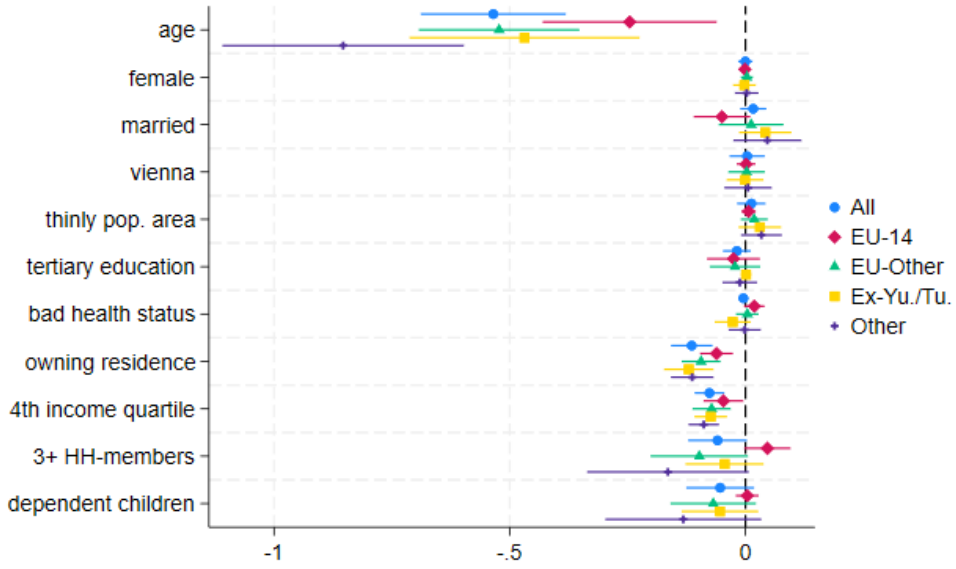
Note: Migrant-Native decomposition following Neumark (1988).

The results for the Oaxaca-Blinder decompositions of the receipt of non-contributory social benefits (Figure 1, panel B) show an overall negative gap for EU-14 migrants and an overall positive gap for Other migrants. For EU-14, variances in age, edu-

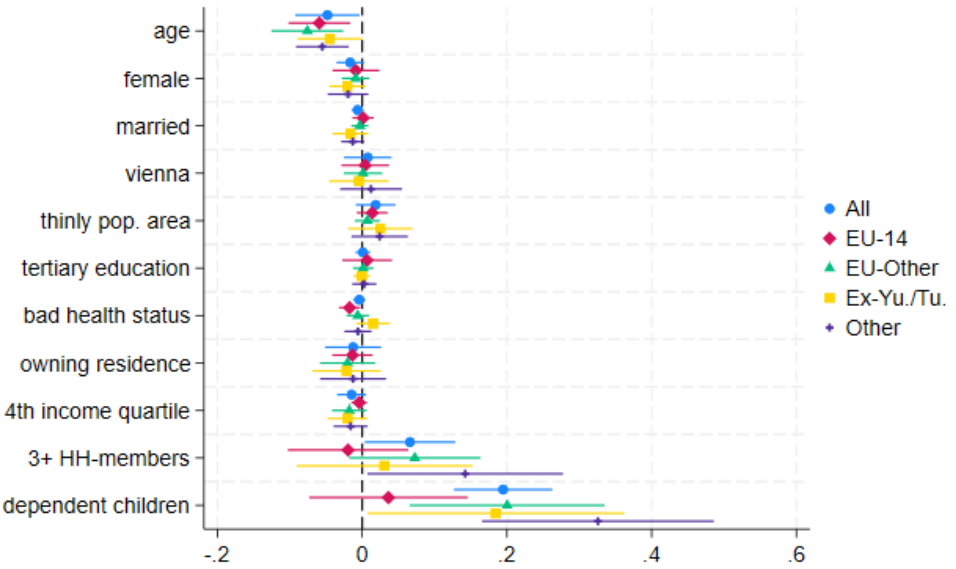
cation attainment and health status emerge as pivotal factors contributing to the explanatory gap. Results suggest that younger age, higher education levels, and better health status lead to the less likely receipt of non-contributory social benefits. Conversely, among Other migrants, the primary determinants influencing the explanatory gap are the number of children and household size. For this group the higher number of dependent children and household members compared to natives explain the more likely receipt of non-contributory social benefits to a great extent. Moreover, notable positive factors for Other migrants encompass income levels and the urbanity represented by the Vienna dummy. Negative variables for this group encompass age, female household heads, and marital status.

Oaxaca-Blinder decompositions on the level of contributory social benefits (Figure 2, panel A) suggest a negative overall, as well as explanatory, gap for each group. As in Figure 1, panel A, age emerges as the predominant determinant shaping this explanatory gap, showcasing a substantial negative effect across each migrant group. This implies that higher age among natives corresponds to the receipt of more contributory benefits in Austria. Conversely, in contrast to the dynamics observed in the receipt of contributory benefits, the variables of wealth and income exhibit a negative impact on the disparity in characteristics concerning contributory social benefits. This signifies that migrants receive fewer contributory social benefits due to their lower levels of income and wealth, a logical outcome given their reduced contributions to contributory schemes. Additionally, it is noteworthy that the number of household members now demonstrates a significant negative contribution to the explanatory gap at a 10% significance level. This finding suggests that the higher average number of household members of All, EU-Other, Ex-Yugoslavia & Turkey and Other migrants compared to natives correlates with a higher volume of contributory social benefits being received. In contrast, the smaller average household size for EU-14 migrants in relation to natives is associated with lower benefits.

Figure 2: Detailed decomposition of explanatory part, level of social benefits



(a) Contributory social benefits



(b) Non-contributory social benefits

Note: Migrant-Native decomposition following Neumark (1988).

Regarding the level of non-contributory social benefits (Figure 2, panel B), results suggest an overall positive gap for All and Other migrants. In contrast to the level of contributory social benefits, for these two groups, the variables number of

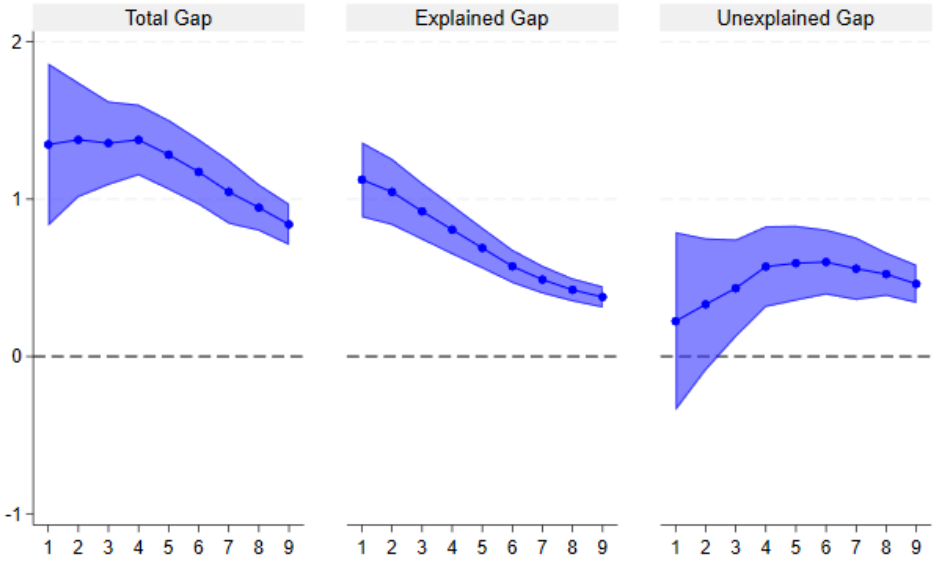
dependent children, household size and age constitute most to the explained part of the gap. The overall positive explanatory gap is almost solely driven by the difference in household size and dependent children. This is very likely as households with children and more household members are eligible for more non-contributory social benefits in Austria. In contrast to Huber and Oberdabernig (2016), I find that the difference in age contributes negatively to the explanatory gap, meaning that the younger age of migrants is accompanied by lower levels of non-contributory benefits.

5.4 Decomposition at the unconditional distribution

In addition to the analyses of the social benefits gap at the mean presented earlier, I employ the methodology of Chernozhukov et al. (2013) to assess the variations in the distribution of social benefits between natives and migrants in Austria. This section presents the findings of the differences in both contributory and non-contributory social benefits distributions estimated for nine quantiles (0.1 to 0.9). Note that for the interpretation of the results, contrary to the decomposition at the mean, a positive (negative) gap indicates instances where migrants receive lower (higher) levels of social benefits compared to natives. Moreover, a trend towards zero across the quantiles suggests a reduction in the differences of social benefits between natives and migrants, while a divergence from zero signifies an increase in such differences.

Figure 3 shows the results of the contributory social benefits decomposition at the unconditional distribution between All migrants and natives. The analysis reveals positive overall gaps across all quantiles. Furthermore, the positive unexplained gap is decreasing along the quantiles.

Figure 3: Unconditional distribution decomposition of contributory social benefits between All migrants and natives



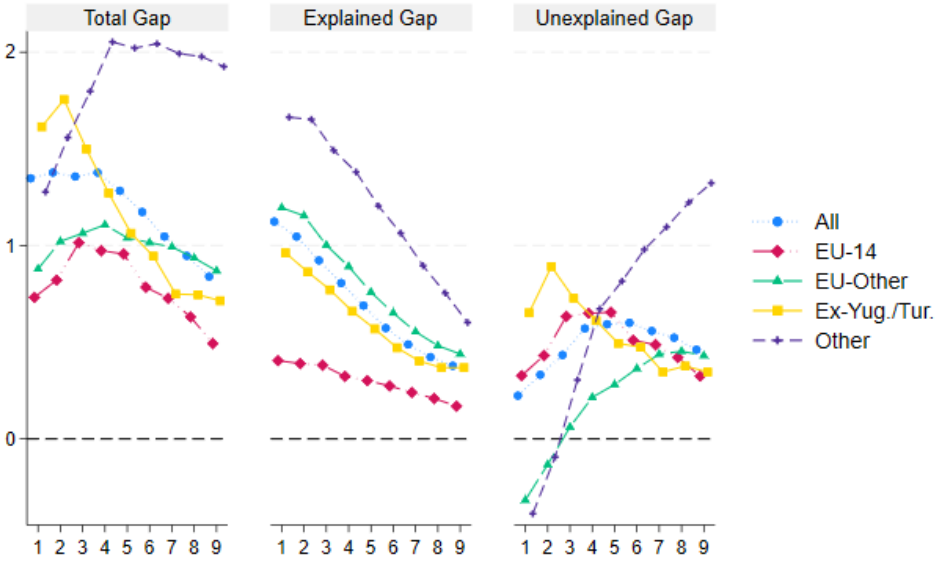
Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013). 90 % confidence intervals are displayed.

Figure 4 and Table 14 show the results for the remaining migrant groups[12]. I find a positive difference across the distribution for each group, meaning that natives receive significantly more contributory social benefits compared to migrants across all quantiles. The findings suggest a rather negative slope for Ex-Yugoslavia & Turkey migrants, while there is an increasing slope for Other migrants. For EU-14 and EU-Other migrants, the overall difference across the distributions is rather flat. The difference in characteristics is decreasing for each group along the contributory social benefits distribution, with a particular strong decrease for Other. For All, EU-Other and Other migrants the explained gap constitute significantly more to the overall gap at the bottom four quantiles than at the top four quantiles. While at the 0.2 quantile the differences in characteristics explain 76% for All, 113% for EU-Other and 106% for Other migrants of the overall difference in contributory social benefits, only 45%, 51% and 38% is explained at the 0.8 quantile, respectively. The pattern of the differences in coefficients for All, EU-14 and Ex-Yugoslavia &

[12]Confidence intervals have been omitted in Figure 4 and 6 to enhance visuality. For detailed results, please refer to Figure 7 and 8 in Appendix B.

Turkey migrants reveal rather no clear pattern. However, I find a positive slope for EU-Other and Other migrants, suggesting that the share of the unexplained gap gains importance across the distribution for these groups. The strong increase in the unexplained gap for the Other group also explains the high overall gap for the top six quantiles.

Figure 4: Unconditional distribution decomposition of contributory social benefits for each migrant group



Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013).

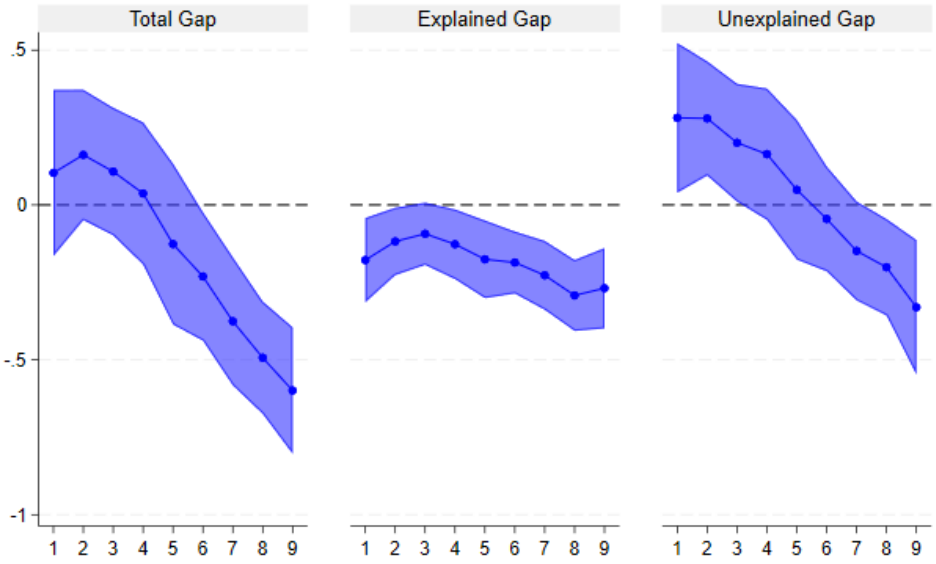
Table 14: Unconditional distribution decomposition of contributory social benefits for selected quantiles

	(1)	(2)	(3)	(4)	(5)
	All	EU-14	EU-Other	Ex-Yu./Tu.	Other
Differences in distribution:					
0.2	1.38***	0.82***	1.02***	1.75***	1.56***
	(0.20)	(0.31)	(0.37)	(0.57)	(0.42)
0.5	1.28***	0.96***	1.04***	1.06***	2.02***
	(0.14)	(0.20)	(0.23)	(0.36)	(0.20)
0.8	0.95***	0.63***	0.94***	0.75***	1.98***
	(0.08)	(0.13)	(0.19)	(0.16)	(0.20)
Effect of characteristics:					
0.2	1.05***	0.39**	1.15***	0.86***	1.65***
	(0.12)	(0.17)	(0.21)	(0.20)	(0.23)
0.5	0.69***	0.30***	0.76***	0.57***	1.21***
	(0.07)	(0.09)	(0.13)	(0.13)	(0.17)
0.8	0.42***	0.21***	0.48***	0.37***	0.75***
	(0.05)	(0.07)	(0.07)	(0.07)	(0.12)
Effect of coefficients:					
0.2	0.33	0.43	-0.13	0.89	-0.09
	(0.25)	(0.29)	(0.37)	(0.60)	(0.51)
0.5	0.59***	0.65***	0.28	0.49	0.82***
	(0.14)	(0.18)	(0.23)	(0.36)	(0.26)
0.8	0.52***	0.42***	0.45***	0.38**	1.22***
	(0.08)	(0.13)	(0.17)	(0.16)	(0.23)
N	3185	3022	3025	3024	3000

Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013). Standard errors in parentheses. *p<0.1; **p<0.05; ***p<0.01

In contrast, decompositions across the unconditional distribution of non-contributory social benefits between All migrants and natives show significant negative differences in non-contributory social benefits for higher quantiles (see Figure 5 and Table 15), with an increasing overall gap along the top four quantiles (from -0.231 log points to -0.599 log points). The explained gap is mostly negative across the quantiles, with a rather constant trend. In contrast, the explained gap follows a similar trend as the overall gap, with significant positive coefficients at the 0.2 and 0.3 quantiles, but negative for the top two quantiles.

Figure 5: Unconditional distribution decomposition of non-contributory social benefits between All migrants and natives

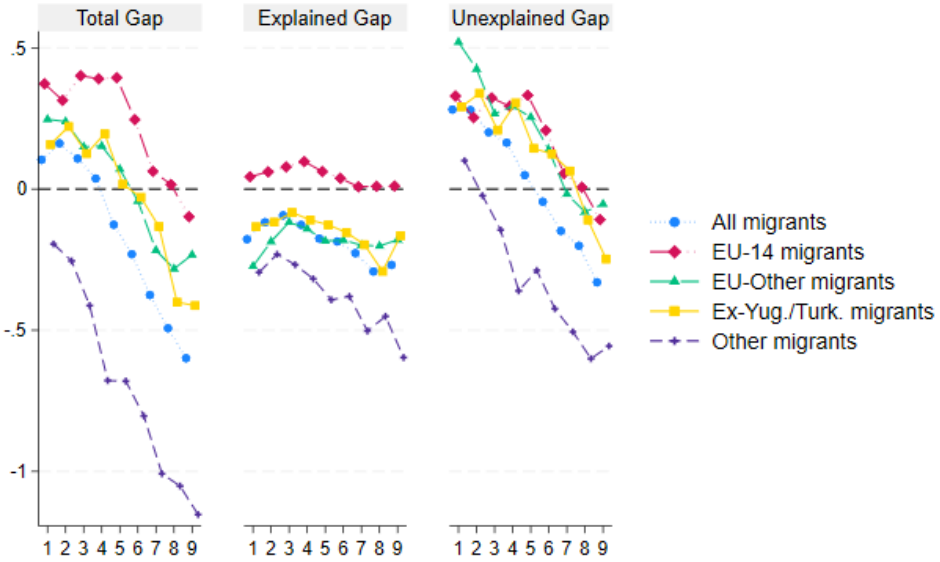


Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013). 90 % confidence intervals are displayed.

As for the additional migrant groups, findings reveal rather no significant overall differences in non-contributory social benefits for EU-14, EU-Other and Ex-Yugoslavia & Turkey migrants in Austria. Ex-Yugoslavia & Turkey migrants only show a significant negative overall difference for the top two quantiles. In contrast, Other migrants show significant negative differences in non-contributory social benefits for higher quantiles (see Figure 6 and Table 16). The overall gap is increasing for Other migrants along the 0.4 to 0.9 quantile (from -0.679 log points to -1.153 log points). The differences in characteristics among EU-Other and Other

migrant groups predominantly display negative trends across the distribution of non-contributory social benefits. In contrast, EU-14 and Ex-Yugoslavia & Turkey migrants rather show no differences in the explanatory gap compared to natives Notably, while the explanatory gap remains relatively constant for All and EU-Other migrants, it displays a progressively negative trend for Other migrants across the nine quantiles. Additionally, the proportion of the explained gap diminishes along the distribution for Other migrants, with 91% of the overall gap explained by differences in characteristics at the 0.2 quantile, decreasing to 58% at the 0.5 quantile, and further to 42% at the 0.8 quantile. The unexplained gap across the distribution follows a similar line as the overall gap for across each specification, exerting significant influence on the development of the overall gap. Nonetheless, findings indicate limited noteworthy disparities in the unexplained component throughout the distribution. Specifically, Other migrants exhibit a negative unexplained gap from quantiles 0.6 to 0.9.

Figure 6: Unconditional distribution decomposition of non-contributory social benefits for each migrant group



Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013).

Table 15: Unconditional distribution decomposition of non-contributory social benefits for selected quantiles

	(1)	(2)	(3)	(4)	(5)
	All	EU-14	EU-Other	Ex-Yu./Tu.	Other
Differences in distribution:					
0.2	0.16	0.31	0.24	0.22	-0.25
	(0.13)	(0.31)	(0.25)	(0.22)	(0.31)
0.5	-0.13	0.39	0.07	0.02	-0.68**
	(0.16)	(0.25)	(0.23)	(0.31)	(0.27)
0.8	-0.49***	0.02	-0.28	-0.40*	-1.05***
	(0.11)	(0.24)	(0.20)	(0.23)	(0.23)
Effect of characteristics:					
0.2	-0.12*	0.06	-0.19**	-0.12	-0.23*
	(0.07)	(0.08)	(0.09)	(0.10)	(0.13)
0.5	-0.18**	0.06	-0.18	-0.13	-0.39***
	(0.08)	(0.10)	(0.12)	(0.12)	(0.14)
0.8	-0.29***	0.01	-0.20**	-0.29**	-0.45***
	(0.07)	(0.09)	(0.10)	(0.12)	(0.14)
Effect of coefficients:					
0.2	0.28**	0.25	0.42*	0.34*	-0.02
	(0.11)	(0.29)	(0.24)	(0.19)	(0.30)
0.5	0.05	0.33	0.25	0.14	-0.29
	(0.14)	(0.24)	(0.19)	(0.25)	(0.23)
0.8	-0.20**	0.01	-0.08	-0.11	-0.60***
	(0.09)	(0.23)	(0.16)	(0.16)	(0.22)
N	2858	2636	2653	2632	2641

Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013). Standard errors in parentheses. *p<0.1; **p<0.05; ***p<0.01

5.5 Summary of Results

Descriptive statistics reveal notable differences in household structure, characteristics, and social benefits among various migrant groups and native households. When comparing average yearly received social benefits, natives tend to receive more in contributory social benefits but less in non-contributory ones compared to the different migrant groups. However, when adjusting for household size and calculating equivalised social benefits, solely households from Ex-Yugoslavia & Turkey emerge as receiving more non-contributory social benefits than natives. In addition to descriptive statistics, simple Ordinary Least Squares (OLS) models indicate that compared to natives, each migrant group is less likely to receive non-contributory social benefits. Additionally, EU-14, EU-Other, and Ex-Yugoslavia & Turkey migrants receive significantly fewer non-contributory social benefits. Conversely, being an Other migrant is accompanied by a 44% higher likelihood of receiving non-contributory social benefits compared to natives. Furthermore, being a migrant is associated with receiving 16-42% less in contributory social benefits.

Regarding the decomposition results, I find significant different results depending on the social benefits and migrant group. Oaxaca-Blinder decompositions on the receipt of contributory social benefits reveal a significant negative overall gap across most migrant groups compared to natives. This negative migrant-native gap is almost entirely explained by differences in characteristics between the groups, with the most important individual factor being age. The only exception is the EU-14 group, which shows a significant negative unexplained gap, meaning that when accounting for the differences in characteristics between EU-14 migrants and natives, EU-14 migrants still receive less likely contributory social benefits. Receipt of non-contributory social transfer decompositions at the mean only show a positive overall gap for Other migrants compared to natives and a negative overall gap for EU-14 migrants compared to natives. While the positive gap between Other migrants and natives, meaning that they receive significantly more likely non-contributory social benefits, is almost entirely explained by differences in the number of children and household size, only 50% of the negative gap between EU-14 migrants and natives is explained by differences in characteristics. After controlling for individual and household characteristics, however, I do not find any evidence of any migrant group

receiving non-contributory social benefits more likely than their native counterparts. As for the level of contributory social benefits, I find a highly negative gap for each migrant group compared to natives. Again, as for the receipt of contributory social benefits, this overall gap is mainly driven by differences in characteristics. Age has by far the largest impact. In contrast, the results suggest significant negative unexplained differences for All, EU-14 and Other migrants, meaning that after controlling for differing characteristics compared to natives, the level of contributory social benefits they receive is still lower compared to that of natives in the mean. Decompositions of the level of non-contributory social benefits show mixed results. I find a significant overall positive gap when analysing All migrants. However, when distinguishing between different migrant groups, I only find a positive difference for Other migrants compared to natives, and no significant differences for the remaining migrant groups. Most important differences in characteristics explaining this difference in levels are the number of children, household size and age. For All migrants, the overall difference is entirely explained by differences in characteristics. In contrast, roughly only half of the overall difference between Other migrants and natives results from differences in characteristics. On the other hand, the unexplained gap is significantly positive, indicating that Other migrants would still receive more in non-contributory social benefits after controlling for individual and household characteristics.

In addition to the analysis of the social benefits gap at the mean as summarized above, I assessed the variations of the gaps between natives and migrants in Austria across the distribution of social benefits. As for the contributory social benefits, I find that each of the migrant groups receive less across all quantiles. This difference is decreasing along the contributory social transfer distribution for All and Ex-Yugoslavia & Turkey migrants and increasing for Other migrants. Across quantiles, the share of the explained gap has the tendency to decrease. Furthermore, only at higher quantiles (0.4 to 0.9) and solely for All, EU-14 and Other migrants, I find significant unexplained gaps. In other words, even after controlling for observable characteristics, they receive less contributory social benefits only within the upper two-thirds of the distribution. The decomposition of non-contributory social benefits across the unconditional distribution reveals that only All and Other migrants

receive more in non-contributory social benefits, and only so at the upper half of the distribution. Similarly, for Ex-Yugoslavia and Turkey migrants this holds true for the top two quantiles. For All and Other migrants, I find that the differences in characteristics are an important factor explaining these gaps along the majority of quantiles. Investigating the unexplained gaps along the distributions brings mixed results. Generally, the unexplained gap is insignificantly different from zero. Solely for the top four quantiles, Other migrants receive significantly more non-contributory social benefits despite controlling for characteristics.

6 Conclusion and Discussion

Utilizing the latest available EU-SILC data, I examine differences in social benefits between five distinct migrant groups and native households in Austria. Through decompositions at the mean and at the unconditional distribution, I show that the migrant-native social benefits gap largely depends on the type of social benefits received and the migrant group. An examination of contributory social benefits suggests comparable differences between each migrant group and natives, indicating mostly negative overall gaps (negative in this case meaning that migrant households tend to receive lower benefits). The difference in contributory social benefits is explained mainly by varying characteristics between migrants and natives, largely because of differences in age and the critical importance of old-age pensions. I find no evidence that migrants receive more contributory social benefits than natives after controlling for differences in observable characteristics. Decompositions at the unconditional distribution confirm these results across quantiles. In contrast, the findings for non-contributory social benefits are mixed and depend on the migrant groups. The analysis finds a pronounced positive non-contributory social benefits gap between Other migrant and native households, implying that Other (= non-European) households tend to receive more such benefits. Additionally, even after accounting for differences in observable characteristics between Other and native households, Other households would indeed receive more non-contributory benefits in this analysis. It is noteworthy that, unlike for contributory social benefits, factors such as household size and presence of children play a significant role in explaining these disparities, where unexplained factors are also non-negligible. Unconditional

distribution decompositions furthermore show that these differences only hold for upper quantiles, i.e., households with social benefits receipt above the mean.

My results of differences in the receipt of social benefits are comparable to findings in related studies but show contrasting outcomes for selected migrant groups. Huber and Oberdabernig (2016) solely investigate the differences in welfare dependence between All migrants and natives in Austria and find a negative contributory social benefits gap, largely explained by differences in characteristics between the groups. Using the newest available data for Austria, I confirm this result for each migrant group except Ex-Yugoslavia & Turkey. In contrast, regarding non-contributory social benefits, in my thesis I assert their finding of a positive difference in the receipt of non-contributory social benefits only for the group Other migrants. I find similar results as Suari-Andreu and van Vliet (2023) for the Netherlands. They identify a negative gap of the likelihood to receive non-contributory benefits receipt between western EU migrants and natives, but no significant difference between eastern EU migrants and natives. Consistent with prior research, age emerges as a pivotal determinant in explaining this difference, aligning with the notion that younger migrants are less likely to qualify for contributory social benefits (Huber and Oberdabernig, 2016; Suari-Andreu and van Vliet, 2023). Differences uncovered in my thesis in the level of contributory social benefits received are highly in line with the findings in related studies in Austria and the Netherlands (Huber and Oberdabernig, 2016; Suari-Andreu and van Vliet, 2023). Additionally, decompositions at the unconditional distribution also show that each migrant group receives significantly less in contributory social benefits at all quantiles. Existing literature on the migrant-native differences in the level of non-contributory social benefits in Austria (Huber and Oberdabernig, 2016), the Netherlands (Suari-Andreu and van Vliet, 2023) and Norway (Smedsvik et al., 2021) find that migrants receive more non-contributory benefits than natives. My findings confirm these results when analysing All migrants. When looking at the more granular level, this only holds true for the subgroup Other migrants. Additionally, unconditional distribution decompositions suggest that these significant differences only hold for higher quantiles of the social benefits distribution. I also find positive impacts of household size and children to the non-contributory social benefits gap, underscoring that a higher number of

dependent children and a larger household size among migrants increase both the likelihood and the level of non-contributory social benefits received. Contrary to Suari-Andreu and van Vliet (2023), who argue that younger adults are often more eligible for non-contributory benefits due to their higher likelihood of having young children and their limited contribution to contributory schemes, I find that differences in age reduce the level of non-contributory benefits for migrants compared to natives in Austria, although small in size. Additionally, I do not find significant differences in the level of non-contributory social benefits between EU-14, EU-Other and Ex-Yugoslavia & Turkey households compared to native households. Furthermore, while some studies have suggested a positive relationship between residing in urban areas and the receipt and level of social benefits (Huber and Oberdabernig, 2016; Smedsvik et al., 2021; Suari-Andreu and van Vliet, 2023), in this study, I find no significant effect of residence variables. In line with related work, gender, marital status, and health status appear to have minimal influence in Austria in explaining the gap for both contributory and non-contributory social benefits.

It is important to acknowledge certain limitations in the data and analysis. First, survey data can be subject to missing information and self-reporting bias, thus, accurate calculation of standard errors, crucial for robust analysis, requires careful consideration of the survey design. To minimize this measurement error, I can rely on replication weights based on a bootstrapping procedure. Notably, EU-SILC is widely used to examine disparities in welfare benefits between migrants and natives (see Barrett and Maître, 2013; Boeri, 2010; Huber and Oberdabernig, 2009), and, to my knowledge, EU-SILC is the most extensive data source that is freely available to researchers for the assessment of welfare benefits in Austria. This important information is not available in alternative data such as the Austrian microcensus. Further, on the one hand, the analysis provides only a snapshot of a specific year and overlooks dynamic changes over time, but, on the other hand, does not require any assumptions about the future lifecycle of households. A potential drawback of using cross-sectional survey data is the possibility of an insufficient sample size, particularly notable when contrasting different migrant groups (see Table 1). One potential solution is to pool multiple survey waves to increase the sample size and assess if results differ significantly. I pooled the last two survey waves, 2021

and 2022, and reported 2-year average effects, however, identified no significantly different results. Considering the potential risk of introducing bias through pooling multiple survey waves, I opted against pooling multiple cross-sectional survey waves. Furthermore, the lack of precise country of origin data in EU-SILC presents another challenge. The dataset provides only anonymized information on citizenship, categorizing individuals into six broad regions, thus, there remains potential for issues, particularly concerning households categorised under "Other" citizenship. Such households may encompass a diverse range of backgrounds, from migrants originating from the United States to those from India, posing difficulties in making reliable statements for this group. Nevertheless, register data reveals that migrants from non-European countries mainly originate from Asian countries, comprising over 70% of this category. Among these, migrants predominantly originate from Syria (16%) and Afghanistan (24%). Ultimately, it seems that the majority of "Other" migrant households originate from low-income Asian countries (Statistik Austria, 2024a). Regarding the methodology, choosing an appropriate decomposition method (see Fortin et al., 2011), as well as determining the appropriate counterfactual treatment for decompositions at the mean is not straightforward. To address this challenge, I critically evaluate different baseline group choices. While a simple "native-based" counterfactual, akin to the "male-based" baseline group in gender wage gap analyses, may seem intuitive, it may not be appropriate for the specific economic question at hand. There is no inherent reason to assume that discrimination in social benefits solely targets migrants. To navigate this issue, I compare a "native-based" weighted coefficient with alternative weighted coefficients proposed by Neumark (1988) and Cotton (1988), ultimately finding similar results. I complement the aggregate Oaxaca-Blinder decompositions with a decomposition method beyond the mean by calculating decompositions at the unconditional distribution (Chernozhukov et al., 2013). By incorporating both methods, this analysis aims to provide a comprehensive assessment of the factors contributing to disparities in social benefits across different population groups.

From a fiscal perspective, studies show that migrants, who are generally younger, contribute significantly to the state budget through taxes and social insurance contributions, yet they receive fewer social benefits than natives. This effectively renders

migrants net fiscal contributors (see Dustmann et al., 2014; Fiorio et al, 2023). My findings support the finding that most migrant groups draw less from the contributory social benefits system than natives, making migrants „desirable“ from a current fiscal perspective as they drain the contributory social benefits system less than natives, thereby alleviating the burden on this largest component of the Austrian social benefits system. Considering Austria's demographic challenges, characterized by low birth rates among natives (Statistik Austria, 2023a), there is a recognized need for measures to ensure the sustainability of the social security system, particularly in financing old-age benefits. Since migrants tend to be younger than the domestic population, a steady inflow of migrants helps to lower the old-age dependency ratio (Berger et al., 2016) or to smoothen its increase. My findings highlight the fiscal advantages of fostering the integration of working-age migrants into the labour market.

Higher dependence on non-contributory social benefits among migrant compared to native households seem to stem from Other migrants only, with no differences observed for EU-14, EU-Other, and Ex-Yugoslavia & Turkey migrants. I find that the positive non-contributory social benefits gap between Other migrants and natives largely results from unexplained factors, potentially reflecting cultural and behavioural differences as suggested by dependency theory (Bane and Ellwood, 1997; Huber and Oberdabernig, 2016; Smedsvik et al., 2021). Other migrants are prone to receive more non-contributory social benefits even after controlling for observable characteristics, potentially suggesting that unobserved personal attitudes, including ‘expectations‘, ‘cultural background’, and ‘decision-making processes’, are indeed effecting the level of non-contributory social benefits to a great extent (Smedsvik et al., 2021). Additionally, I believe that two factors, among others, may also account for these disparities. First, as register data shows, third country migrants except Ex-Yugoslavia and Turkey are characterised by the lowest labour force participation rates, with only 48% in the active labour force. The remaining migrant groups, as well as natives, show significant higher labour participation rates (Statistik Austria, 2023a). Thus, Other migrants seem to face the biggest challenge in joining the active work force, thereby increasing their reliance on non-contributory social benefits. Second, Other migrants have the shortest duration of residence in Austria, where 65% arrived after 2010. In contrast, only 28% of migrants from Ex-Yugoslavia and

Turkey arrived in that period (Statistik Austria, 2023a). Their relatively short duration of residence in Austria may hinder their integration into the labour market and wider society, further exacerbating their dependency on non-contributory social benefits. This is particularly notable given that this group includes a significant proportion of refugees (BMI, 2024). It would be particularly insightful to replicate this analysis focusing separately on migrants who arrived in Austria within the last 5 to 10 years and those who have been in the country for at least a decade. This approach would help determine whether the observed results are predominantly influenced by recent arrivals. Comparable studies conducted in Sweden and Finland have found that welfare take-up rates and benefit levels tend to decrease with increased duration of residence in the host country, suggesting a gradual convergence between migrants and natives over time (Hansen and Lofstrom, 2003; Sarvimäki, 2011). However, undertaking such an analysis in Austria would necessitate access to comprehensive panel data, which is currently unavailable.

This analysis shows important policy implications. In response, policies should adopt a multifaceted approach. First, the limited impact of educational differences on the social benefits gap raises questions about the efficacy of policies solely focused on attracting highly skilled migrants. Instead, policies should consider attracting migrants with smaller household sizes and fewer children (see Huber and Oberdabernig, 2016), as these factors are likely to influence their reliance on social benefits, particular non-contributory social benefits. Moreover, targeted employment programs tailored specifically for Other migrants and efforts to remove structural barriers hindering the employment of Other migrants could help improve their access to the labour market and reduce their dependency on social benefits. Lastly, comprehensive integration programs aimed at addressing the needs of Other migrants, particularly considering their shorter duration of stay, are crucial for facilitating their integration into Austrian society and enhancing their economic participation.

Bibliography

Agersnap, O., Jensen, A., and Kleven, H. (2020). The welfare magnet hypothesis: Evidence from an immigrant welfare scheme in denmark. *American Economic Review: Insights*, 2(4):527–542.

Anastossova, L. and Paligorova, T. (2006). What is behind native-immigrant social income gaps? *Luxembourg : Luxembourg Income Study (LIS)*, 432.

Angrist, J. D. and Pischke, J.-S. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

Bambra, C. and Eikemo, T. A. (2008). Welfare state regimes, unemployment and health: a comparative study of the relationship between unemployment and self-reported health in 23 european countries. *Journal of Epidemiology & Community Health*, 63(2):92–98.

Bane, M. J. and Ellwood, D. T. (1997). *Welfare realities*. Harvard Univ. Press, Cambridge, Mass. [u.a.], 4. print edition. Includes bibliographical references (p. 201-212) and index.

Barrett, A. and Maître, B. (2013). Immigrant welfare receipt across europe. *International Journal of Manpower*, 34(1):8–23.

Bauböck, R. (2020). *Staatsbürgerschaft und Wahlrecht: Österreich im internationalen Vergleich*, pages 179–190. Migration & Integration 8: Dialog zwischen Politik, Wissenschaft und Praxis, Universitätsverlag der Donau-Universität Krems.

Berger, J., Davoine, T., Schuster, P., and Strohner, L. (2016). Cross-country differences in the contribution of future migration to old-age financing. *International Tax and Public Finance*, 23(6):1160–1184.

Berger, M. and Schaffner, S. (2017). A note on how to realize the full potential of the eu-silc data. *Journal of Economic and Social Measurement*, 41(4):395–416.

Blau, F. D. and Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature*, 55(3):789–865.

Blinder, A. S. (1973). Wage discrimination: Reduced form and structural estimates. *The Journal of Human Resources*, 8(4):436.

Boeri, T. (2010). Immigration to the land of redistribution. *Economica*, 77(308):651–687.

Borjas, G. J. (1994). The economics of immigration. *Journal of Economic Literature*, 32(4):1667–1717.

Borjas, G. J. (1999). Immigration and welfare magnets. *Journal of Labor Economics*, 17(4):607–637.

Bruckmeier, Kerstin; Wiemers, J. (2016). Differences in welfaretake-up between immigrants and natives: A microsimulation study. *AB-Discussion Paper, No.8/2016, Institut für Arbeitsmarkt- und Berufsforschung (IAB), Nürnberg.*

Brücker, H., Epstein, G. S., McCormick, B., Saint-Paul, G., Venturini, A., and Zimmermann, K. (2002). *Managing Migration in the European Welfare State*, chapter Immigration Policy and the Welfare System: A Report for the Fondazione Rodolfo Debenedetti, pages 1–167. Oxford University Press.

Bundesministerium für Inneres (2024). Asyl-statistik 2023. Wien.

Böheim, R., Fink, M., and Zulehner, C. (2020). About time: the narrowing gender wage gap in austria. *Empirica*, 48(4):803–843.

Castronova, E. J., Kayser, H., Frick, J. R., and Wagner, G. G. (2001). Immigrants, natives and social assistance: Comparable take-up under comparable circumstances. *The International Migration Review*, 35(3):726–748.

Chernozhukov, V., Fernández-Val, I., and Melly, B. (2013). Inference on counterfactual distributions. *Econometrica*, 81(6):2205–2268.

Chojnicki, X. and Ragot, L. (2015). Impacts of immigration on an ageing welfare state: An applied general equilibrium model for france. *Fiscal Studies*, 37(2):258–284.

Christl, M., Bélanger, A., Conte, A., Mazza, J., and Narazani, E. (2022). Projecting the fiscal impact of immigration in the european union. *Fiscal Studies*, 43(4):365–385.

Cinelli, C., Forney, A., and Pearl, J. (2022). A crash course in good and bad controls. *Sociological Methods & Research*, page 004912412210995.

Cotton, J. (1988). On the decomposition of wage differentials. *The Review of Economics and Statistics*, 70(2):236.

De Giorgi, G. and Pellizzari, M. (2009). Welfare migration in europe. *Labour Economics*, 16(4):353–363.

Dustmann, C. and Frattini, T. (2014). The fiscal effects of immigration to the uk. *The Economic Journal*, 124(580):F593–F643.

Dustmann, C., Frattini, T., and Halls, C. (2010). Assessing the fiscal costs and benefits of a8 migration to the uk*. *Fiscal Studies*, 31(1):1–41.

Elkeles, T. and Seifert, W. (1992). Arbeitslosigkeit und gesundheit: Langzeitanalysen mit dem sozio-Ökonomischen panel. *Soziale Welt*, 43(3):278–300.

European Commission (2018). *Special Eurobarometer 469: Integration of immigrants in the European Union.* Publications Office of the European Union. Luxembourg.

European Commission (2022). *Methodological Guidelines and Description of EU-SILC Target Variables - 2022 Operation.* Publications Office of the European Union. Luxembourg.

European Commission and Eurostat (2022). *European system of integrated social protection statistics – ESSPROS, manuals and user guidelines – 2022 edition.* Publications Office of the European Union. Luxembourg.

Eurostat (2023). Population on 1 january by age group, sex and citizenship. code: migr pop1ctz.

Fiorio, C. V., Frattini, T., Riganti, A., and Christl, M. (2023). Migration and public finances in the eu. *International Tax and Public Finance*.

Fiskalrat Austria (2023). *Bericht über die öffentlichen Finanzen 2022 bis 2027.* Fiskalrat.

Fortin, N., Lemieux, T., and Firpo, S. (2011). *Decomposition Methods in Economics*, volume 4, pages 1–102. Elsevier.

Goedemé, T. (2013). *The EU-SILC sample design variables: critical review and recommendations*. Herman Deleeck Centre for Social Policy-University of Antwerp.

Hainmueller, J. and Hopkins, D. J. (2014). Public attitudes toward immigration. *Annual Review of Political Science*, 17(1):225–249.

Halla, M., Wagner, A. F., and Zweimüller, J. (2017). Immigration and voting for the far right. *Journal of the European Economic Association*, 15(6):1341–1385.

Hansen, J. and Lofstrom, M. (2003). Immigrant assimilation and welfare participation: Do immigrants assimilate into or out of welfare? *The Journal of Human Resources*, 38(1):74.

Hennessey, G. and Hagen-Zanker, J. (2020). *The fiscal impact of immigration. A review of the evidence*. Swiss Agency for Development and Cooperation (SDC). Working paper 573.

Herter, A. and Wirth, H. (2018). Eu-silc tools: Calculating standard errors for eu-silc using spss. *GESIS Papers*.

Huang, X., Kaushal, N., and Wang, J. S.-H. (2020). What explains the gap in welfare use among immigrants and natives? *Population Research and Policy Review*, 40(4):819–860.

Huber, P. and Oberdabernig, D. A. (2016). Decomposing welfare wedges: An analysis of welfare dependence of immigrants and natives in europe. *Kyklos*, 69(1):82–107.

Jacobs, L., Hooghe, M., and de Vroome, T. (2017). Television and anti-immigrant sentiments: the mediating role of fear of crime and perceived ethnic diversity. *European Societies*, 19(3):243–267.

Jakubiak, I. (2020). Are migrants overrepresented among individual welfare beneficiaries? *International Migration*, 58(5):103–127.

Jann, B. (2008). The blinder–oaxaca decomposition for linear regression models. *The Stata Journal: Promoting communications on statistics and Stata*, 8(4):453–479.

Lee, R. and Miller, T. (2000). Immigration, social security, and broader fiscal impacts. *The American Economic Review*, 90(2):350–354.

Mayr, K. (2005). The fiscal impact of immigrants in austria – a generational accounting analysis. *Empirica*, 32(2):181–216.

Neumark, D. (1988). Employers' discriminatory behavior and the estimation of wage discrimination. *The Journal of Human Resources*, 23(3):279.

Oaxaca, R. (1973). Male-female wage differentials in urban labor markets. *International Economic Review*, 14(3):693.

Oaxaca, R. L. and Ransom, M. R. (1994). On discrimination and the decomposition of wage differentials. *Journal of Econometrics*, 61(1):5–21.

OECD (2021). *International Migration Outlook 2021*. OECD Publishing, Paris.

Pratscher, K., Huber, M., and Demiro, D. (2023). Sozialschutz 1990-2022: Ergebnissefür Österreich und die eu. sozialausgaben und ihre finanzierung gemäß europäischem system derintegrierten sozialschutzstatistik (essoss). Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz. Bundesanstalt StatistikÖsterreich.

Preston, I. (2014). The effect of immigration on public finances. *The Economic Journal*, 124(580):F569–F592.

Razin, A. and Wahba, J. (2014). Welfare magnet hypothesis, fiscal burden, and immigration skill selectivity. *The Scandinavian Journal of Economics*, 117(2):369–402.

Reimers, C. W. (1983). Labor market discrimination against hispanic and black men. *The Review of Economics and Statistics*, 65(4):570.

Rustenbach, E. (2010). Sources of negative attitudes toward immigrants in europe: A multi-level analysis. *International Migration Review*, 44(1):53–77.

Sarvimäki, M. (2011). Assimilation to a welfare state: Labor market performance and use of social benefits by immigrants to finland*. *The Scandinavian Journal of Economics*, 113(3):665–688.

Smedsvik, B., Iacono, R., and D'Agostino, A. (2021). Immigration and social assistance: Evidence from the norwegian welfare state. *Social Policy & Administration*, 56(4):648–660.

Solano, G. and Huddleston, T. (2020). Migrant integration policy index 2020.

Statistik Austria (2022). *EU-SILC 2022 - Erläuterungen*. Statistik Austria, Wien.

Statistik Austria (2023a). *Demographisches Jahrbuch 2022*. Statistik Austria, Wien.

Statistik Austria (2023b). *Standard-Dokumentation Metainformationen (Definitionen, Erläuterungen, Methoden, Qualität) zu EU-SILC 2022*. Statistik Austria, Wien.

Statistik Austria (2024a). *Census Austria 2021. Results of the Register-based Census*. Statistik Austria, Wien.

Statistik Austria (2024b). *Sozialquote, Sozialausgaben und Finanzierung*. Sozialschutzstatistik Statistik Austria, Wien. Accessed 03.05.2024.

Storesletten, K. (2000). Sustaining fiscal policy through immigration. *Journal of Political Economy*, 108(2):300–323.

Suari-Andreu, E. and van Vliet, O. (2023). Intra-eu migration, public transfers and assimilation. *Economica*, 90(360):1229–1264.

United Nations Department of Economic and Social Affairs (UN DESA) (2020). International migrant stock 2020.

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A Appendix - Tables

Table 16: Comparision of household types and characteristics of households from Ex-Yugoslavia and Turkey

	Ex-Yugoslavia	Turkey
household characteristics		
Age	47.20	48.61
Female	0.51	0.13
Marital status	0.64	0.58
Tertiary Education	0.17	0.06
(Very) Bad health	0.16	0.35
Dependent children	0.57	0.57
Equ. yearly income	21,855.01	20,115.59
Vienna	0.41	0.47
thinly populated area	0.08	0.00
own main residence	0.06	0.05
3+ household members	0.23	0.22
household type		
Single household	0.29	0.43
Single parent	0.02	0.01
2 adults with children	0.32	0.30
2 adults no children	0.25	0.14
2+ adults with children	0.05	0.02
2+ adults no children	0.06	0.10

Note: All variables in shares, except Age (years) and income (Euro)

Table 18: Baseline OLS, receipt of con. and non-con. social benefits (full table)

	Dependent variable: Dummy receipt of social benefits									
	Con.	N.-Con.	Con.	N.-Con.	Con.	N.-Con.	Con.	N.-Con.	Con.	N.-Con.
All	−0.01	−0.03***								
	(0.01)	(0.01)								
EU-14			−0.10***	−0.05***						
			(0.01)	(0.01)						
EU-Other					−0.01	−0.03***				
					(0.01)	(0.01)				
Ex-Yu./Tu.							0.12***	0.003		
							(0.02)	(0.02)		
Other									0.01	−0.03
									(0.02)	(0.02)
age	0.26***	0.03***	0.27***	0.02***	0.28***	0.03***	0.26***	0.02***	0.26***	0.03***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.01)
age^2	0.10***	0.02***	0.10***	0.03***	0.10***	0.03***	0.10***	0.04***	0.11***	0.03***
	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
female	0.03***	0.10***	0.03***	0.09***	0.02***	0.10***	0.02***	0.09***	0.02***	0.10***
	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)
married	0.07***	−0.06***	0.07***	−0.07***	0.07***	−0.07***	0.07***	−0.07***	0.07***	−0.07***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)
vienna	0.01*	0.06***	0.01	0.03***	0.01*	0.02***	−0.01	0.03***	0.01**	0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
thin. pop.	−0.001	0.001	0.01	−0.003	0.005	0.01	0.002	−0.0001	0.003	−0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)
education	−0.11***	−0.04***	−0.12***	−0.03***	−0.10***	−0.02***	−0.12***	−0.03***	−0.12***	−0.03***
	(0.005)	(0.01)	(0.005)	(0.01)	(0.005)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
badhealth	0.13***	0.25***	0.12***	0.26***	0.12***	0.27***	0.12***	0.25***	0.13***	0.26***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
ownhouse	−0.04***	0.01**	−0.03***	−0.0003	−0.03***	−0.002	−0.03***	0.002	−0.02***	0.01
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
income	−0.11***	−0.09***	−0.11***	−0.08***	−0.11***	−0.07***	−0.11***	−0.07***	−0.11***	−0.08***
	(0.004)	(0.01)	(0.004)	(0.01)	(0.005)	(0.01)	(0.004)	(0.01)	(0.004)	(0.01)
hh size	0.06***	0.25***	0.02**	0.29***	0.05***	0.29***	0.04***	0.28***	0.03***	0.27***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
children	−0.05***	0.22***	−0.06***	0.23***	−0.06***	0.23***	−0.06***	0.23***	−0.06***	0.21***
	(0.01)	(0.005)	(0.01)	(0.01)	(0.01)	(0.005)	(0.01)	(0.005)	(0.01)	(0.01)
Constant	0.38***	0.34***	0.38***	0.34***	0.38***	0.33***	0.39***	0.33***	0.38***	0.34***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	5,911	5,911	5,543	5,543	5,517	5,517	5,463	5,463	5,465	5,465

Note: Natives are the reference group. *p<0.1; **p<0.05; ***p<0.01

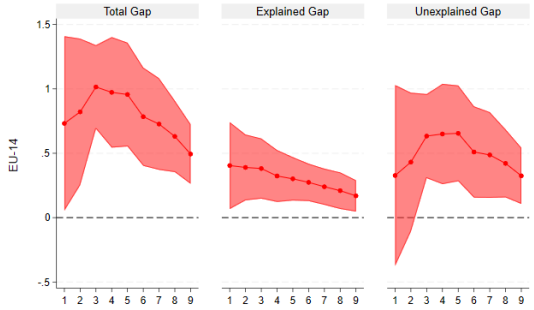
Table 19: Baseline OLS, level of con. and non-con. social benefits (full table)

	Dependent variable: Log level of social benefits									
	Con.	N.-Con.	Con.	N.-Con.	Con.	N.-Con.	Con.	N.-Con.	Con.	N.-Con.
All	−0.38***	−0.01								
	(0.04)	(0.03)								
EU-14			−0.39***	−0.13**						
			(0.06)	(0.06)						
EU-Other					−0.17***	−0.18***				
					(0.06)	(0.05)				
Ex-Yu./Tu.							−0.43***	−0.11**		
							(0.10)	(0.05)		
Other									−0.54***	0.37***
									(0.06)	(0.05)
age	1.17***	0.04*	1.14***	0.09***	1.17***	0.11***	1.17***	0.08***	1.15***	0.04*
	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
age^2	−0.13***	0.13***	−0.12***	0.13***	−0.13***	0.11***	−0.13***	0.13***	−0.12***	0.14***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
female	−0.02	0.10***	−0.03	0.09***	−0.04**	0.09***	−0.01	0.09***	−0.03	0.09***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
married	0.33***	−0.04**	0.41***	−0.06***	0.40***	−0.08***	0.34***	−0.06***	0.40***	−0.08***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
vienna	0.04	0.03	0.02	0.02	0.02	0.01	0.01	−0.01	0.04	0.02
	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
thin. pop.	−0.07***	−0.07***	−0.10***	−0.08***	−0.10***	−0.06***	−0.11***	−0.07***	−0.11***	−0.06***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
education	−0.08**	0.02	−0.06*	0.04*	−0.07**	0.03	−0.06	0.01	−0.05	0.05**
	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)	(0.02)
badhealth	−0.14***	0.22***	−0.21***	0.16***	−0.22***	0.16***	−0.16***	0.18***	−0.20***	0.19***
	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
ownhouse	0.22***	0.04***	0.22***	0.08***	0.21***	0.06***	0.22***	0.06***	0.22***	0.07***
	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)
income	0.44***	0.10***	0.41***	0.10***	0.42***	0.11***	0.44***	0.11***	0.42***	0.11***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
hh size	−0.41***	0.83***	−0.48***	0.76***	−0.46***	0.77***	−0.43***	0.74***	−0.47***	0.84***
	(0.07)	(0.02)	(0.07)	(0.02)	(0.07)	(0.02)	(0.07)	(0.02)	(0.07)	(0.02)
children	−0.12***	0.49***	−0.18***	0.53***	−0.14***	0.54***	−0.17***	0.54***	−0.14***	0.47***
	(0.03)	(0.02)	(0.03)	(0.01)	(0.03)	(0.01)	(0.03)	(0.01)	(0.03)	(0.02)
Constant	8.43***	8.51***	8.46***	8.51***	8.46***	8.52***	8.45***	8.52***	8.44***	8.52***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Observations	3,185	2,858	3,022	2,636	3,025	2,653	3,024	2,632	3,000	2,641

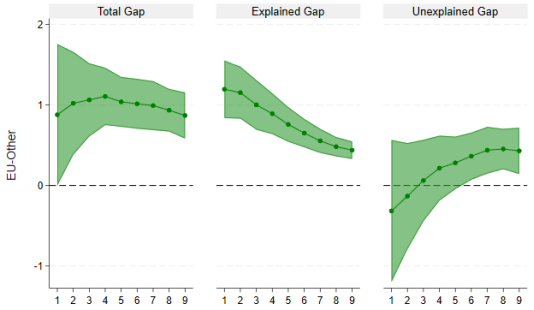
Note: Natives are the reference group. *p<0.1; **p<0.05; ***p<0.01

B Appendix - Figures

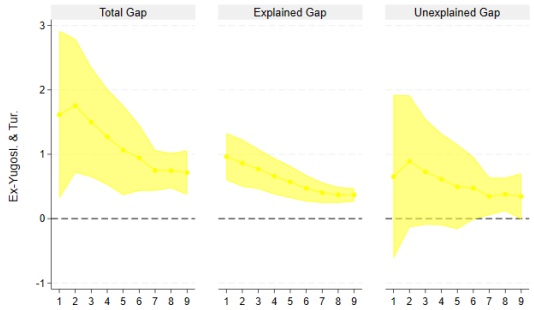
Figure 7: Unconditional distribution decomposition of contributory social benefits for EU-14, EU-Other, Ex-Yugoslavia & Turkey, and Other migrants



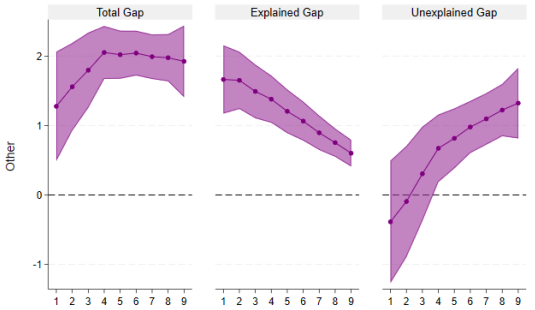
(a) EU-14



(b) EU-Other



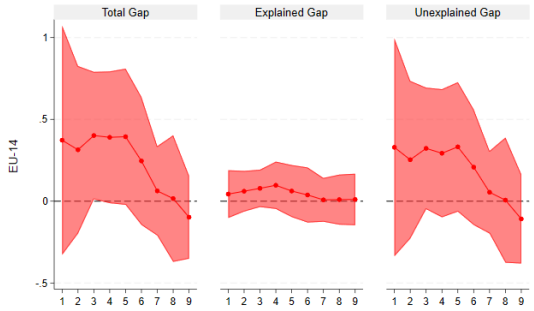
(c) Ex-Yugoslavia & Turkey



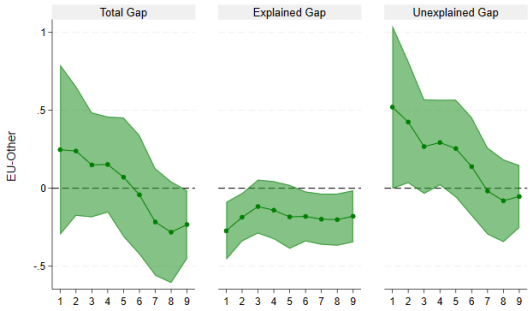
(d) Other

Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013). 90 % confidence intervals are displayed.

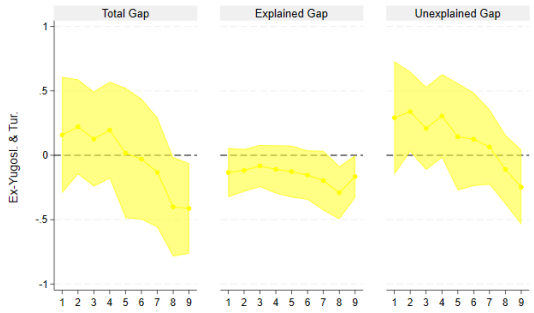
Figure 8: Unconditional distribution decomposition of non-contributory social benefits for EU-14, EU-Other, Ex-Yugoslavia & Turkey, and Other migrants



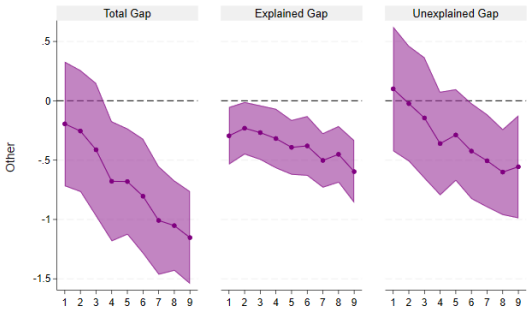
(a) EU-14



(b) EU-Other



(c) Ex-Yugolsavia & Turkey



(d) Other

Note: Native-Migrant unconditional distribution decomposition following Chernozhukov et al. (2013). 90 % confidence intervals are displayed.