European Commission

JRC TECHNICAL REPORTS

Migrants and Welfare Dependency: Evidence from the EU

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2019

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EU Science Hub
https://ec.europa.eu/jrc

JRC116591

Ispra: European Commission, 2019

How to cite this report: Conte A., Mazza J., *Migrants and Welfare Dependency: Evidence from the EU*, J.R.C., Ispra, 2019, JRC116591

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Abstract

By exploiting three waves of EU-SILC data on benefit receipt, this technical report analyses how receipt of welfare benefits differs between natives and Extra-EU immigrants for 20 EU countries. Our results suggest substantial heterogeneity in welfare dependence of immigrants between countries when not controlling for observed characteristics of immigrants and natives. The analysis of unconditional dependence shows that being an Extra-EU immigrant is associated with a lower probability of receiving contributory benefits. With respect to non-contributory benefits, the picture is quite different, as most countries show a greater welfare dependency of Extra-EU immigrants compared to natives. Controlling for observable characteristics between natives and immigrants reduces the gap in probabilities for almost all countries in the analysis, thus suggesting that the heterogeneity in welfare dependence is mainly driven by differences in demographic characteristics between the two population groups. Age, gender, family size, and the level of education, both for contributory and non-contributory benefits, play an essential role in explaining the gaps in probability, and once these characteristics are controlled for, Extra-EU immigrants receive social benefits as often as natives in most countries.

1 Introduction

In 2017, Eurostat recorded 4.4 million new immigrants in the EU-28 Member States (MS). Among them, 2 million were Extra-EU immigrants, 1.3 million citizens of a different MS and 1 million people migrated to a MS of which they were nationals. While regular migration to the EU has been rather stable in recent years[1], the growing complexity of recent migration patterns, and in particular the influx of refugees to the EU, has led to a greater attention on the economic and political consequences of immigration and requires new responses for both countries of origin and destination[2].

The recent economic debate has focused on the question of whether immigrants represent a burden on the economies of host countries. This discussion, intensified by concerns about the ageing and shrinking European society and the growing perception of immigration as a main concern of European citizens[3], has generated an increasing number of empirical studies investigating immigrants' dependence on welfare compared to natives, and the role of generous welfare transfers in attracting migrants (Borjas, 1999; De Giorgi e Pellizzari, 2009). Most of the literature finds that the fiscal impact of immigration is relatively small (in the magnitude of ±1 percent of GDP), and migrants contribute more to society than they take away. Migrants make a greater fiscal contribution, especially when they are young and integrated into the labour market, while elderly migrants, family, and refugees tend to be an economic burden (Batsaikhan et al., 2018). Moreover, the fiscal impact might change over time, for example, if labour migrants (with a positive fiscal contribution) bring family members later and they stay until pension age in the destination country, when their fiscal contribution may become negative (Batsaikhan et al., 2018).

This technical report aims to quantify the gap in the probability of receiving any public assistance benefit and allowance in 20 EU countries, paying particular attention to the role of demographic characteristics of individuals/households belonging to two population groups - Extra EU migrants and natives - in influencing these probabilities. This information is of great relevance for policy-making, as it can inform which characteristics of immigrants can reduce immigrants' dependence on welfare.

This technical report contributes to the "welfare magnet" literature by estimating the difference in residual welfare dependency between third-country nationals and natives in the MS considered. By exploiting the information contained in the European Union Statistics on Income and Living Conditions (EU-SILC), we separately estimate the differences in the probability of receiving contributory and non-contributory benefits between immigrants and natives, and we show how these differences are determined by differences in observable demographic characteristics using data for 20 EU countries.

Contributory schemes are social protection schemes that require the payment of individual contributions in order to secure individual entitlement to benefits, while non-contributory schemes are social protection schemes in which eligibility to benefits is not conditional on the payment of contributions by the protected persons. This distinction is relevant because non-contributory schemes directly draw their resources from the general fiscal budget and therefore weight on the entire population for their funding, while, contributory scheme are funded by the worker who will later enjoy the benefit and consequently are, at least partially, financed directly by the beneficiary.

Our results are in line with previous studies. We find that in most MS, Extra-EU immigrants access welfare programmes at higher rates compared to natives only in the case of non-contributory benefits, while the opposite occurs for contributory ones. These

[1] 2017 shows only a slight increase in the immigrant population in the EU28 compared to 2016. In 2016 a total of 4.3 new immigrants were registered in EU28 (Eurostat, 2017).

[2] Since 2010 the number of individuals lodging an asylum application in Europe has started to rise. Between 2014 and 2015, there was a steep increase in the number of new applications registered in the EU28, however the year 2017 shows an important decline in asylum applications, from 1.1 million new applications in 2016 to 0.7 million in 2017 (UNHCR, 2018).

[3] According to the latest data of Eurobarometer, immigration is on the list of top concerns of European citizens and it is second only to terrorism.

differences, though, are greatly diminished once differences in the age structure, gender, family composition and educational attainment of the two groups are accounted for. Once these characteristics of differences are taken into account, immigrants participate as often as or less often than natives, in both contributory and non-contributory benefits schemes, in most countries. We also encounter a substantial cross-country heterogeneity in the magnitudes of these differences. An in-depth analysis of the causes of these differences is beyond the scope of this report, but its existence suggests that the institutional design of the different welfare systems plays an essential role in creating welfare dependence.

Additionally, this report contributes to the blossoming literature on fiscal impacts of migration. It needs to be stressed though that this report does not have the ambition to provide an estimate of the net fiscal contribution of immigrants versus natives. This type of exercise would require the estimation of two separate phenomena: first, the estimation of individual probabilities of accessing welfare programmes, and second, the personal imputation of contributions and receipts in monetary terms; the second step exceeds the scope of the present work.

The remainder of this report proceeds as follows. Section 2 reviews the literature focusing on immigrants' dependence on welfare. Section 3 describes the data used in the empirical analysis. Section 4 presents the results of the empirical analysis of the unconditional and conditional welfare dependency, for both contributory and non-contributory benefits, between Extra-EU immigrants and natives. Section 5 concludes.

2 Literature

The literature has developed several approaches to analyse the per capita fiscal impact of migration, and the range of estimates is wide and depends on the methods and set of assumptions of the analysis. This section offers a brief review of the vast and growing literature on this issue.

The methodological approaches that have been used more frequently in this type of literature are a) the welfare magnet hypothesis, which suggests that immigration decisions are made on the basis of the generosity of social benefits of the receiving country; b) the static accounting approach, which assesses the net instantaneous contribution of immigration to public finances; c) the dynamic approach, aiming at measuring the fiscal impact of migrants over the entire life cycle.

The *Welfare Magnet Hypothesis* is used to assess the existence of a residual welfare dependency of immigrants that is the degree to which immigrants take up the welfare system more than natives (Giulietti, 2014; Giulietti et al., 2013). Studies adopting this approach show different results depending on the country considered, thus reflecting the diversity of social protection systems. Brücker et al. (2002) show large differences across European countries in terms of welfare dependency. The authors identify two groups of countries: Germany, Greece, Portugal, Spain and the UK where differences in welfare dependency rates are not significant; in Austria, Belgium, France, the Netherlands, and the Nordic countries, social benefits are higher for immigrants than for natives. After controlling for the individual characteristics, the residual dependency persists in the latter group of countries. Boeri (2010) shows evidence of residual dependency on non-contributory transfers and self-selection of unskilled migrants in countries with generous welfare regimes. Migrants receive more transfers than natives when educational attainments and family characteristics are considered. For Chojnicki et al. (2010), immigrants in France receive more unemployment and social assistant benefits, after accounting for differences in family size and qualification levels. On the contrary, according to Huber and Oberdabernig (2016) who analyze 16 EU countries, immigrants receive less social benefits than natives. Differences in welfare benefits received by the two groups decreased after controlling for differences in observable characteristics. Specifically, age gaps between immigrants and natives are critical factors determining welfare wedges in contributory benefits.

Static Accounting models compare taxes and contributions paid by immigrants to expenditures on benefits (e.g., social security benefits) and services provided (e.g., education, health care, police services) that they enjoy as part of the resident population. Results are sensitive to several factors, including the generosity of social protection, the burden of taxation, and the socio-demographic characteristics of immigrants compared to those of the natives (Dustmann and Frattini, 2014). According to Rowthorn (2008), in developed countries, the net contribution of immigrants to public finances can vary between ± 1% of GDP. Chojnicki (2013) finds a positive impact on public finances (+0.2% of GDP) of immigrants in France in 2006. The OECD (2013) analyses the fiscal impact of foreign-born individuals in 27 countries, and shows that immigration contributes to national budgets by 0.3% of GDP in the period 2007-09[4]. For Dustmann and Frattini (2014), immigrants from the European Economic Area (EEA) in the UK made a positive net contribution, unlike those from non-European countries. These differences are mainly determined by the larger household size of the latter group and by their lower employment rate. Chojnicki et al. (2018) quantify the portion of public revenues and costs attributable to immigrants and native-born in France, for the years 1979-2011, and show a negative and low net contribution of immigrants. Following Nyman and Ahlskog (2018), for most EEA countries, the net fiscal effects of hosting EU migrants are positive, for the years 2004-2015. They find that EU migrant households generate net fiscal impacts within the range of ± 5000 euros per year, in 23 out of 29 host countries.

[4] The report finds large positive contribution in Luxembourg and negative, but smaller, in a number of Eastern European countries characterised by small immigrant populations, as well as in Germany, France, and Ireland.

The last approach that we discuss is the so-called *Dynamic Approach Models*. With this terminology, we indicate a family of models that share the goal of capturing the full life-cycle impact of migrants, projecting their future contributions, and cost relative to public finances in the future. These models account for future population growth, by modelling the impact of an additional immigrant on future public budgets, as well as future changes in employment, wage profiles, tax rates, and public spending. There are three main dynamic approaches used in the empirical literature: the Net Present Value (NPV), the Generational Accounting (GA), and Dynamic Applied General Equilibrium Models (DAGEM).

The NPV approach projects the evolution of the net fiscal impact of immigrants over their lifetime in the receiving country. Results are sensitive to assumptions about uncertain future variables, including the amount of taxes immigrants will pay over their lifetime, or the length of stay in the host country. Two examples of this approach can be found in Monso (2008) and in a recent report by The Migration Advisory Committee (2018). Monso (2008) shows a negative net fiscal impact of new entrants in France, whereas younger and high-qualified migrants could lead to a positive contribution. The Migration Advisory Committee (2018), focusing on the cohort of immigrants who arrived in the UK in 2016, finds that both EEA and non-EEA migrants are expected to contribute positively to the public finances.

The GA approach focuses on the intertemporal distribution of the public debt, i.e. the extent to which different generations contribute to financing public expenditure, and thus subsidize each other (OECD, 2013). The fiscal burden imposed on future generations is the difference between the expected public expenditure and the tax payments of all living generations (OECD, 2013). Analyses carried out for Europe suggest that immigration has a positive effect on the intertemporal public budget, as shown in Bonin et al. (2000) and Collado et al. (2004). Chojnicki (2013) suggests a negative effect of the average life cycle contribution of the immigrants in France in 2005 (of approximately - 8,700 euros). However, the impact of immigration on public finances is positive in the long term, due to the arrival of working-age individuals and considering the contribution of the descendants of these immigrants.

Finally, the DAGEM approach has been recently applied to assess the direct and indirect impacts of immigration simultaneously. Chojnicki and Ragot (2016) show that immigration positively affects social protection finances in France and, without net migration after 2010, the financial need for social protection would increase by two percentage points of GDP by the end of the century. According to Berger et al. (2016), the contribution of future immigration to the financing of social expenditures varies from country to country and depends on the volume of immigration and the institutional setup. Their estimates show a positive contribution of immigration equivalent to 2.1% points labour income taxes in the UK, 3.9 points in Poland, 5.7 points in Austria, and 7.3 points in Germany in 2060.

3 Data

To examine empirically the difference in probability of receiving some form of social benefit between natives and immigrants' populations we use the EU-SILC data. This is a standardized annual survey carried out in the European Union since 2004, managed by Eurostat, and based on reported data from MS's statistical authorities. It contains information both at the individual and family levels on demographic characteristics, labour market status, income, transfers received and taxes paid. Crucially for our purpose, since 2014, the national statistical authorities are requested to classify the various benefits paid according to whether they are contributory or non-contributory[5]. Contributory schemes are social protection schemes that require the payment of individual contributions to secure individual entitlement to benefits. Non-contributory schemes are social protection schemes in which eligibility to benefits is not conditional on

[5] See ESSPROS manual for further details: https://ec.europa.eu/eurostat/documents/3859598/7766647/KS-GQ-16-010-EN-N.pdf/3fe2216e-13b0-4ba1-b84f-a7d5b091235f.

the payment of contributions by the protected persons. Therefore, we use 2014, 2015 and 2016 waves of the survey for our analysis. There are nine types of contributory or non-contributory benefits recorded in the EU-SILC: Family/children related allowances, social exclusion, housing allowances, unemployment benefits, sickness benefits, survivors and disability benefits, education-related allowances, and old-age benefits.

Table 1 shows, for the entire sample of the 20 countries and without differentiating between migration statuses, the proportion of beneficiaries of each of the nine possible types of benefits, distinguishing between benefits which are "contributory and means-tested", "contributory and non means-tested" and those which are "non-contributory and means-tested" and "non-contributory and non-means tested"[6]. From these numbers, it is clear that most of the non-contributory benefits are rewarded as family and children allowances[7]. Summing the means and non-means tested benefits of this kind, we see that around 70% of the beneficiaries of a non-contributory treatment receive this type of benefit. In contrast, 58% of the contributory benefits paid in our sample are Old-age benefits[8]. It is also interesting to note that less than 15% of the contributory benefits paid are non means-tested, while the distribution among non-contributory benefits is almost equal. The reasons for these differences can be multiple. Some might have to do with labour market performances as the higher unemployment risk experienced by immigrants. Other might have to do with welfare state regulations such as minimum residence conditions[9] that might exclude immigrants from accessing certain benefits. A direct analysis of the causes of these differences between the two groups of interest is beyond the scope of this analysis but is of crucial policy interest. We leave this promising avenue of inquiry to future efforts.

[6] Means-tested social benefits refer to benefits where entitlement is explicitly or implicitly conditional on the beneficiary's income/wealth. This covers cases where income/wealth is used to determine entitlement or both entitlement and amount of the transfer.

[7] Percentages sum to more than 100 because 9% of beneficiaries in our sample receive more than one benefit.

[8] The high proportion of family/child benefit recipients can be influenced by the amounts spent on all other areas of welfare. In addition, expenditure on family/child benefits may be linked to fertility rates and the size of the youth population. On the other hand, expenditure on unemployment benefits is related to the labour market situation, whereas the expenditure on old-age benefits is associated to the age structure of the population.

[9] https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/networks/european_migration_network/reports/docs/emn-studies/final_synthesis_report_migrant_access_to_social_security_final_3july2014_en.pdf

Table 1. Proportion of benefits paid by type

	Non-contributory	Contributory
Non means-tested:		
Family/children allowance	0.437	0.055
Social exclusion	0.015	0.001
Housing allowance	0.041	0.001
Unemployment benefits	0.011	0.151
Old-age benefit	0.078	0.565
Survivor benefit	0.046	0.078
Sickness benefit	0.002	0.062
Disability	0.032	0.082
Education-related allowances	0.025	0.001
Means-tested:		
Family/children allowance	0.272	0.088
Social exclusion	0.13	0
Housing allowance	0.153	0
Unemployment benefits	0.102	0.012
Old-age benefit	0.078	0.021
Survivor benefit	0.001	0.005
Sickness benefit	0	0.003
Disability	0.027	0.003
Education-related allowances	0	0

Unfortunately, EU-SILC shows also some limitations. First, it reports information for the year preceding the year of the interview. This means that short term immigrants[10] are excluded from the dataset. As this type of immigrants are often workers who are likely contributing, but who are unlikely to benefit from welfare protection programmes, the estimates for the fiscal position of Extra-EU immigrants will tend to overstate their costs and understate their contribution to public finances. Second, not all statistical authorities have conformed to Eurostat request to classify benefits in contributory and non-contributory; as this distinction is not made for Latvia, Romania, Sweden and Slovakia, we have to exclude these countries from our analysis. Third, as some countries, namely Germany, Estonia, Malta and Slovenia, do not distinguish between third-country nationals and EU immigrants, we have decided to drop these countries from the analysis as well[11]. After having applied these selection rules, we are left with 2,283,466 total observations distributed between 20 MS, over the period 2014-2016.

In the literature, there are two possible ways to define a migrant: citizenship or birth. The first defines a migrant as someone whose current nationality is different from the country in which she currently resides. The second defines as a migrant anyone who is born outside of the country of current residence irrespective of her current nationality that might or might not be that of the country of current residence. We opt for the country of birth criteria and define as an immigrant any person who lives temporarily or permanently in a country where he or she was not born[12]. In our sample, and over the

[10] A short term immigrant is a person who moves to a country other than that of its usual residence for a period of at least three months but less than 12 months, except in cases where the movement to that country is for purposes of recreation, holiday, visits to friends/relatives, business, medical treatment or religious pilgrimage.

[11] A possible alternative solution used, for example, by Nyman and Ahlskog (2018) is to simulate how intra and extra-EU migrant differ in those countries for whose data are absent basing the simulation on the other countries where data exists and impose that similar differences hold.

[12] Country of birth is defined by the survey as the country of residence of the mother at the time of birth.

whole period, about 92% of individuals are local, 3% come from a European country other than their country of residence, and 5% were born in a non-European country[13].
Figure 1 shows the breakdown of the total sample by country of destination and area of birth for the three years considered. From here we can appreciate how observations are not equally distributed among MS: Italy comprises the highest share of our sample, with 256,590 observations, and Ireland the lowest, with 62,790. Also the geographical distribution by the origin of immigrants varies substantially. Eastern European countries have fewer immigrants (both intra and extra-EU) than the rest. In Bulgaria and Poland, for example, less than 1% of the sample is classified as immigrant, while the largest number of foreign-born residents were in Luxembourg (45%).

Figure 1. Number of observations by country of destination and origin – Sum 2014-2016

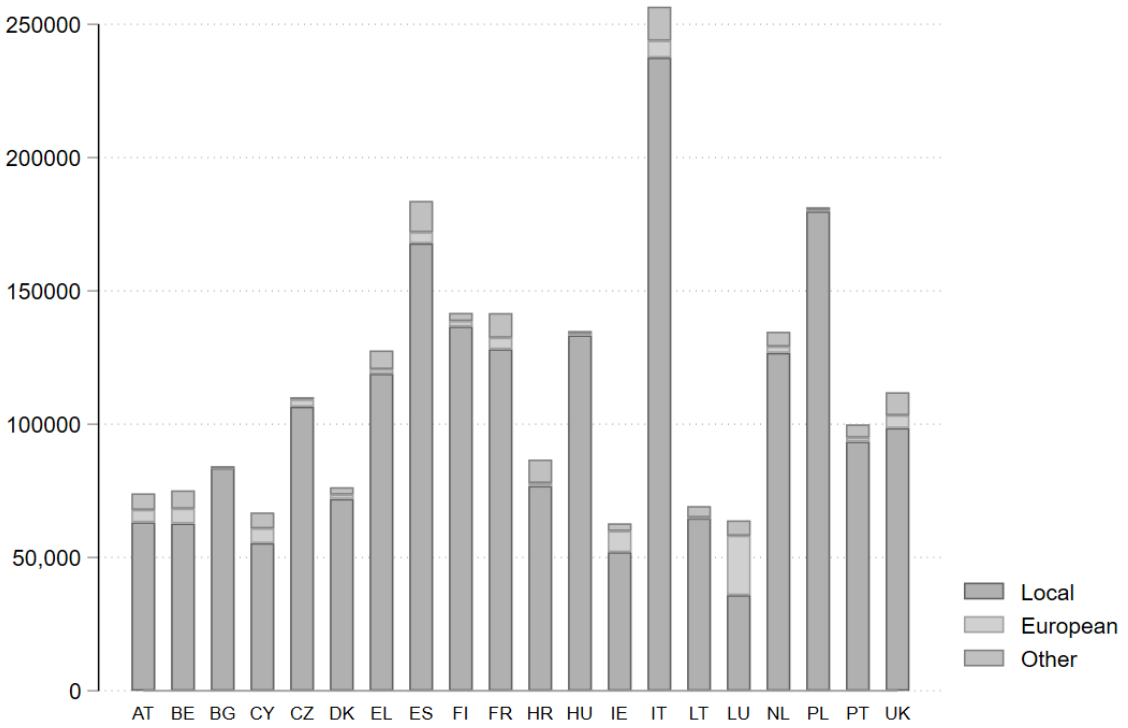


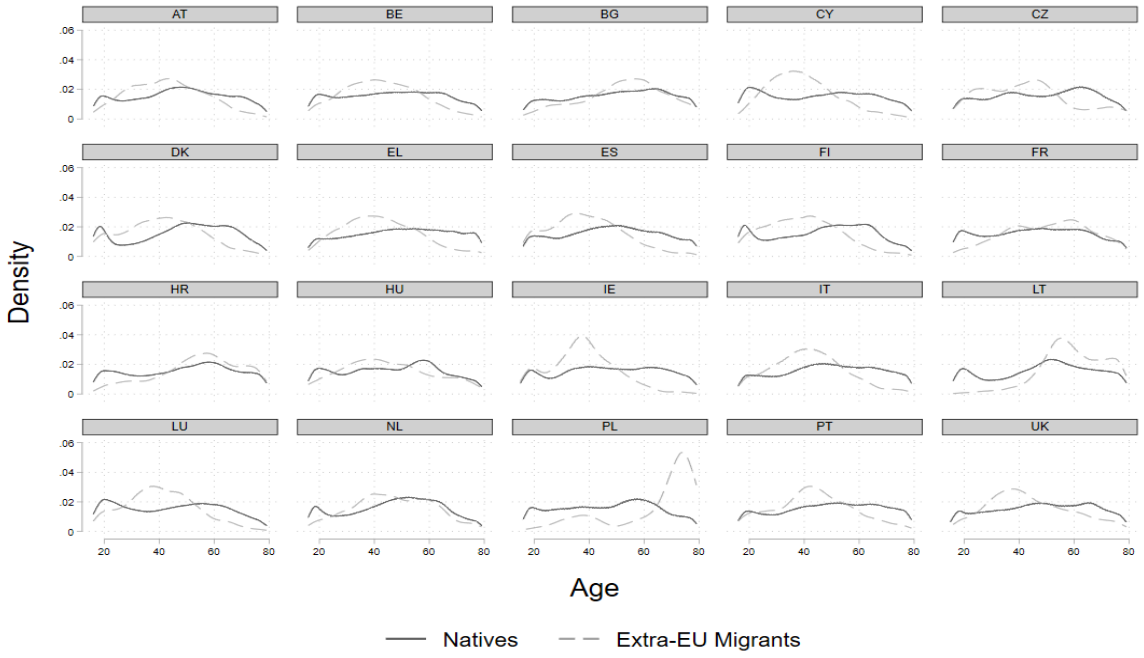
Figure describes the age distributions (of adults aged 16+) for Natives and Extra-EU immigrants for each country. It shows that with the sole exception of some Eastern-European countries – Latvia, Poland and to some extent Bulgaria – and France (a country with a long history of migration), on average, Extra-EU immigrants tend to be younger than the population already resident in the country of destination.
Table 2, instead, breaks down our two populations of interest by education, gender, and number of children in the family. Regarding the level of education, captured by the highest educational level that individuals achieved[14], natives' schooling surpasses that of migrants in 11, mostly Western-European, countries (Austria, Belgium, Cyprus, Denmark, Greece, Spain, France, Croatia, Luxembourg, Italy and The Netherlands), while the opposite occurs in the remaining 9 countries. Regarding the gender distribution of the populations and the number of children in the households, for the years 2014-2016, the

[13] EU-SILC statistics do not provide information on the reason for migration, so we do not have information on whether the immigrant is an economic immigrant, an asylum seeker or a refugee.
[14] The original categorical variable indicating the highest educational levels is here recorded according to 5 levels. In ascending order: Primary or less, Lower secondary, Upper Secondary, Post-secondary non-tertiary, Tertiary. In the data, those categories take values from 1 to 5 where 1 indicates Primary or below and 5 Tertiary or above.

picture appears sharper: interestingly, migrants display a higher share of women[15] – only exceptions are Hungary and Poland – and have a higher number of kids (number of children under 18 years in the household) – only exceptions are Bulgaria, CY, LT, and, Poland – compared to natives. It also has to be noted that these differences are almost always statistically significant.

These differences in the demographic profile of the two populations will have important implications when estimating their differential access to the welfare state, but ex-ante, it is not clear whether they imply that migrants or natives are more likely to be welfare users. For example, being younger, the typical migrant will access a country health system less frequently, on the other hand, having more children means that they will use the host country educational system more intensely; in partially founded welfare systems, these two behaviors will have contrasting effect on the State coffers.

Figure 2. Age distribution profile by destination country



[15] The MS reporting the highest incidents of females among immigrants was CY, followed by Bulgaria. Women are also slightly overrepresented among the immigrant population of working age, accounting for about 55% of the total, compared to 51% for the native population.

Table 2. Education, gender, and number of children in the family. Descriptive statistics

	Highest educ.			Female			Nr. Children		
	Natives	Extra EU	Difference	Natives	Extra EU	Difference	Natives	Extra EU	Difference
AT	3.431	2.962	0.470***	0.506	0.544	-0.0373***	0.729	1.22	-0.490***
BE	3.545	3.025	0.519***	0.505	0.543	-0.0372***	0.848	1.323	-0.475***
BG	3.108	3.66	-0.552***	0.492	0.6	-0.108**	0.687	0.626	0.0613
CY	3.352	3.295	0.0563**	0.494	0.741	-0.247***	0.916	0.812	0.104***
CZ	3.226	3.602	-0.376***	0.507	0.518	-0.0113	0.724	0.753	-0.0293
DK	3.406	3.301	0.104***	0.51	0.57	-0.0597***	0.968	1.119	-0.151***
EL	3.26	2.842	0.419***	0.502	0.528	-0.0260***	0.684	0.978	-0.294***
ES	3.122	2.758	0.364***	0.503	0.552	-0.0485***	0.72	1.119	-0.398***
FI	3.511	3.88	-0.369***	0.49	0.571	-0.0802***	1.03	1.176	-0.146***
FR	3.424	3.044	0.380***	0.511	0.54	-0.0291***	0.95	1.381	-0.432***
HR	3.089	2.908	0.181***	0.492	0.544	-0.0522***	0.756	0.912	-0.155***
HU	3.165	3.657	-0.492***	0.519	0.506	0.0134	0.825	0.88	-0.0551
IE	3.554	4.097	-0.543***	0.52	0.551	-0.0314**	1.156	1.646	-0.490***
IT	3.024	2.805	0.219***	0.502	0.541	-0.0390***	0.659	0.973	-0.314***
LT	3.567	3.847	-0.279***	0.515	0.535	-0.0197	0.631	0.402	0.229***
LU	3.047	2.951	0.0961***	0.49	0.56	-0.0695***	0.736	1.305	-0.569***
NL	3.493	3.35	0.143***	0.511	0.584	-0.0732***	0.977	1	-0.0234
PL	3.231	3.566	-0.335***	0.52	0.438	0.0825**	0.899	0.848	0.0514
PT	2.383	2.851	-0.469***	0.517	0.551	-0.0336***	0.735	0.903	-0.168***
UK	3.51	3.924	-0.414***	0.525	0.548	-0.0234***	0.926	1.255	-0.329***

Notes: * p<0.05, ** p<0.01, *** p<0.001.

4 Evidence on welfare dependency

In this section, we present the estimates for both conditional and unconditional welfare dependency. Both approaches are useful to understand the impact of migration on European welfare states, but although related, they respond to two different questions. The unconditional dependency simply estimates whether migrants and native have a different frequency of access to welfare from that observed in the data. It provides a snapshot of the situation in the MS under examination for the survey years analyzed without trying to explain the reasons for these differences. Such numbers may guide policymakers only if future migrants are identical to those observed. The estimation of conditional dependency, on the other hand, by taking into account the demographic differences between the two groups, allows starting explaining why such differences exist and whether migrants display a different innate propensity to access welfare scheme, maybe because of different social values as some authors have argued (Algan and Cahuc, 2008).

4.1 Unconditional dependency

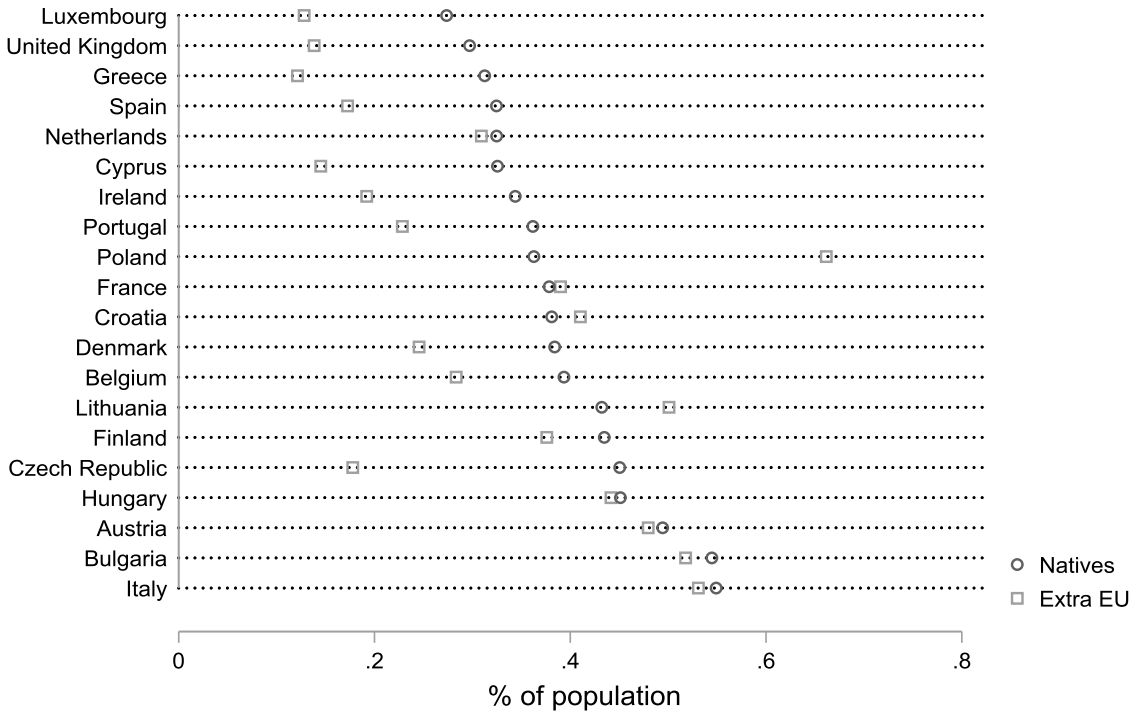
In this section, we present the unconditional differences in the probability of access to welfare benefits between migrants and natives as observed in our data. Unconditional in

this context means that demographic differences are not taken into account, in this sense, these numbers can be defined as raw statistics. For example, the numbers presented here, cannot account for the fact that migrants are, on average, younger and therefore less likely to use the health system. Nevertheless, unconditional dependency deserves to be examined as it provides a useful snapshot of the existing population and their behaviours.

Figure and Figure show the percentage of natives and migrants enjoying some form of contributory and non-contributory benefits, respectively, for each country in our sample.

By first looking at Figure , we can appreciate how, for the majority of countries considered, the percentage of Extra EU migrants enjoying a contributory benefit is lower than that of natives. Only in Poland, Lithuania, Croatia, and France the opposite occurs, while in The Netherlands, France, Austria, Hungary, Bulgaria, and Italy the two shares are almost identical. It is also worth noting that for several countries the difference is quite substantial; for example, in the Czech Republic, around 50% of the native population is receiving some form of contributory benefit, while less than 20% of the immigrant population is.

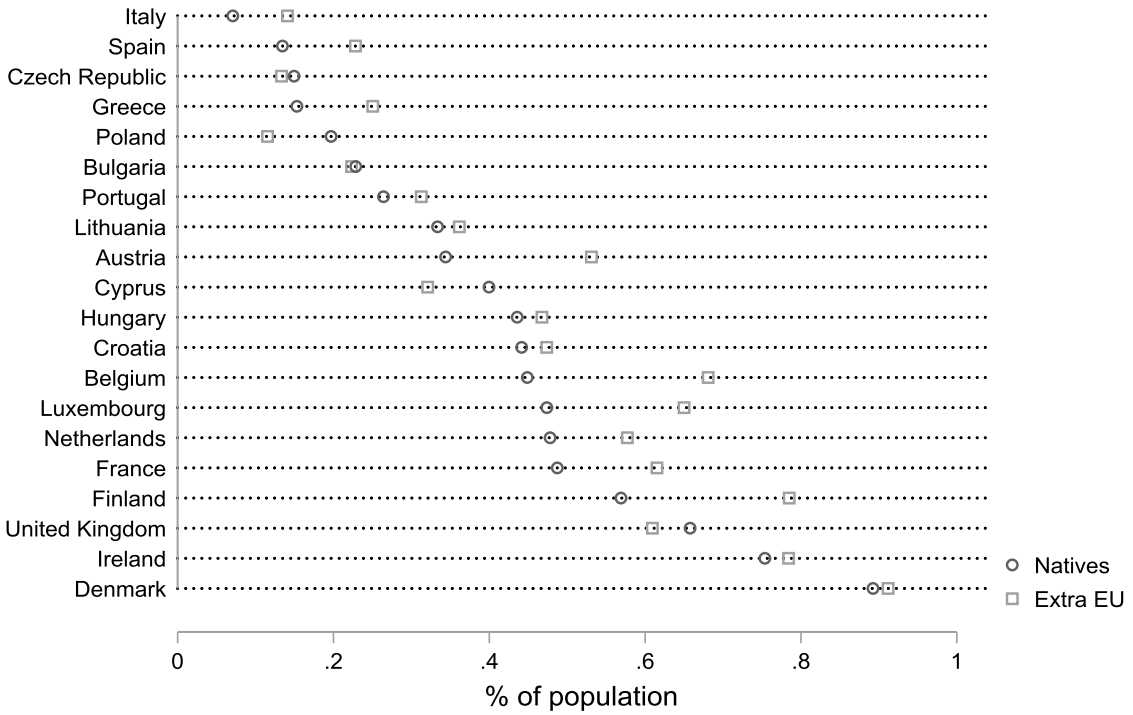
Figure 3. Access to contributory benefits for natives and migrants



When reading these numbers, we should remember that the right of access to contributory benefits is granted as a result of previous payments by the individual in the form of taxes and the amount given should be related to what has been previously paid into the systems. In this sense, contributory benefits are less onerous for the state coffers. However, very often, the contributory part of social schemes only partially covers the benefit provided, therefore we cannot always interpret these type of benefits as revenue neutral for public finances. If contributory benefits might or might not be fully funded and therefore rely on taxpayers' contributions, non-contributory benefits are surely not related to past contributions and in this sense automatically (and negatively) affect state revenues.

Figure shows the proportions of Extra EU migrants and natives benefiting from non-contributory benefits, such as family supports, in each country. As opposed to the contributory benefits shares, the proportion of migrants assisted by these schemes is higher in most cases, with the few exceptions of Poland, Cyprus, UK, Czech Republic and Bulgaria. In Austria, Belgium, Luxembourg, and Finland these differences are sizeable.

Figure 4. Access to non-contributory benefits for natives and migrants

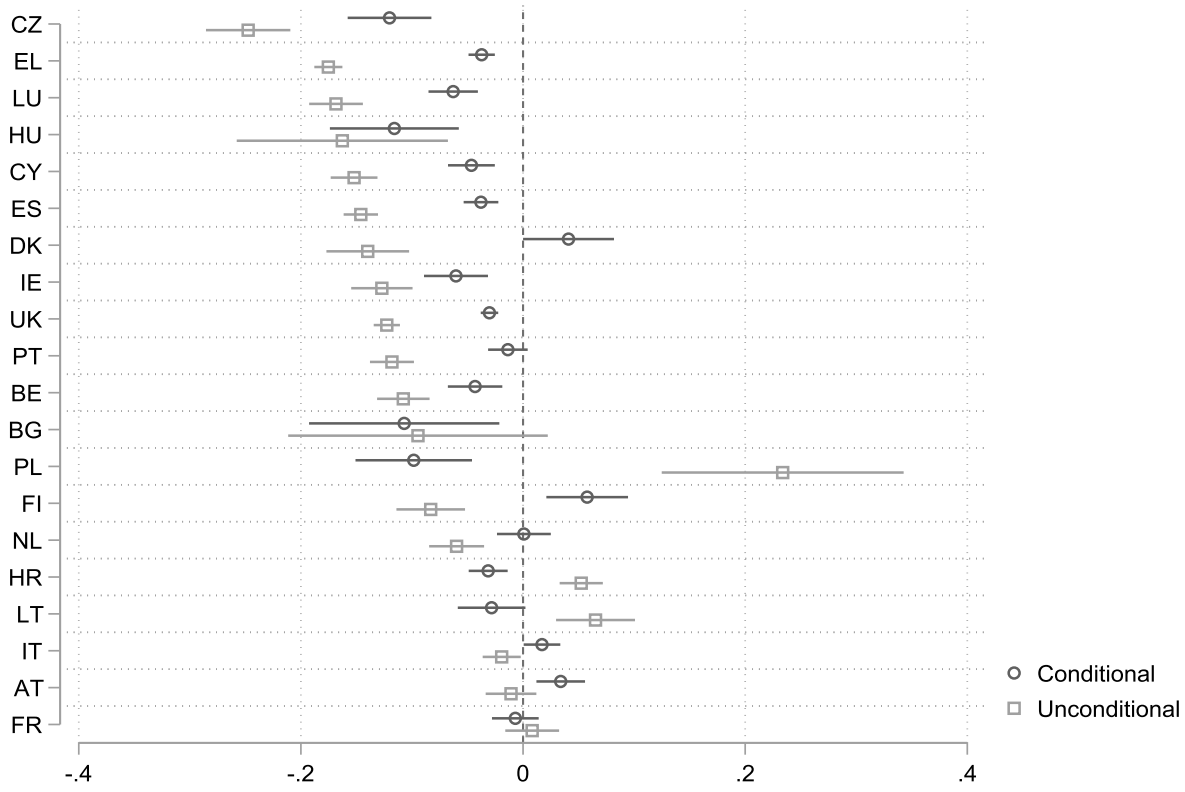


4.2 Conditional dependency

The raw percentages presented in Figure 3 and Figure 4 express the incidence of beneficiaries of contributory and non-contributory benefits, respectively, between natives and migrants, but do not explain why this incidence differs between the two groups. We can explore the source of these differences by accounting for the demographic composition of the two groups. For example, in the case of contributory benefits, pensions are one of the main benefit of this kind paid in European welfare systems, we could then reasonably assume that the lower percentage of migrants benefiting from contributory benefits is driven by their average younger age (see Figure 2). Conversely, the higher incidence of non-contributory benefits paid to migrants could be partly explained by the fact that child-related benefits are often conceived as non-contributory benefits and migrants tend to have more children.
To account for these observable differences, we estimate two linear probability models, one for contributory and one for non-contributory benefits separately for each country in our sample, where a dummy variable indicating whether the individual is benefiting from a welfare transfer is regressed on a quadratic term in age, gender, number of children in the family, 5 dummies for the highest educational level achieved and 2 dummies for area

of origin (native and extra-EU). All regressions include year fixed effects, and data are weighted by respondent's survey sampling weights.
The results of the regression are presented graphically in Figure and Figure 6 where each round marker represents the estimated coefficient for the extra-EU dummy for the conditional model just described, while each squared marker is the estimated coefficient for an unconditional model in which the benefit dummy is regressed only on the set of two dummies indicating the area of origin[16]. This latter model is the unconditional difference and directly reflects the raw percentages presented in Figure 3 and Figure 4. To each marker we have added line indicating the confidence interval around the point estimates; if the confidence interval does not cross the line drawn at 0, then the coefficient is statistically significant at the 95% confidence level. The point estimates have to be interpreted as the difference in probabilities between natives and extra-EU migrants of benefiting from a transfer. A negative estimate indicates that migrants are less likely than natives to receive a benefit, while a positive coefficient indicates the opposite.
Let us first turn our attention to the results for contributory benefits displayed in Figure . As we would expect from the previous analysis of raw percentages, for all countries except Poland, Croatia, Lithuania, and, marginally France, the unconditional probability of receiving a contributory benefit is lower for Extra-EU migrants than for natives. In two cases – Czech Republic and Poland – these differences exceed ±20%, but the majority of them lies in the -1.5/+0.5 range.

Figure 5. Contributory benefits Natives vs. Extra-EU immigrants, estimated coefficients



Accounting for observable demographic differences, as we do when estimating the conditional dependencies, has the effect of diminishing the gaps between natives and Extra EU immigrants for almost all countries considered. The largest difference between migrants and natives is estimated for the Czech Republic where migrants are 12% less

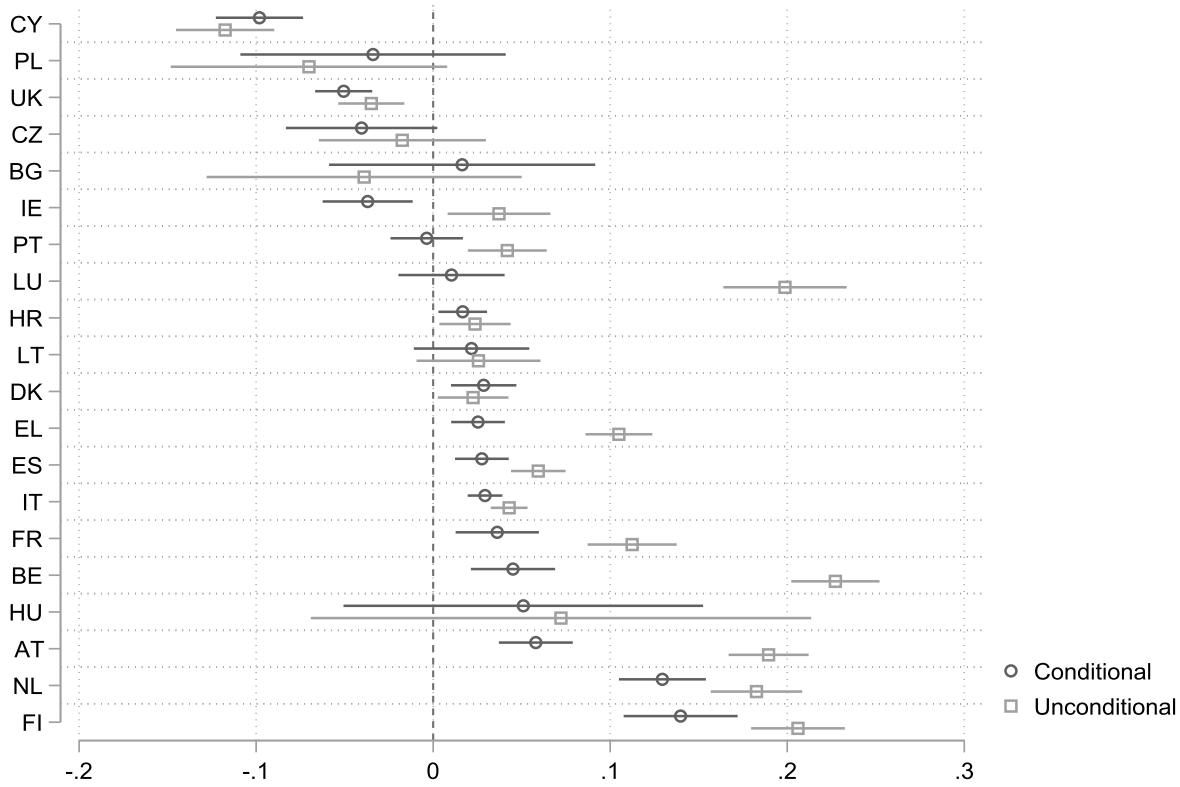
[16] The full set of estimated coefficients is presented in Table A1-A4 of the Appendix.

likely to have access to contributory welfare benefits. For all other countries the difference is smaller than that and in most cases is within the ±0.5% range. It is also worth noting that in the case of Poland, Croatia, and Latvia the sign of the probability changes from positive to negative, while the opposite occurs for Denmark, Italy, Finland, and Austria.

The closing on the gap indicates that, as we anticipated, the differences in the likelihood of access to contributory benefits are at least partially explained by differences in age, gender, family composition, and educational level between the two groups of natives and Extra-EU migrants; in some cases, as for The Netherlands, UK and Portugal, almost all of the difference is explained by the few demographic characteristics that we include in our econometric model.

Let us turn our attention to non-contributory benefits, as presented in Figure . As for the contributory benefit analysis, we show both the unconditional and conditional dependency. The estimated parameters for the unconditional dependency reflect the gaps in raw numbers discussed in Section 4.1 and Figure 4, so that in this case migrants are benefiting more from this type of assistance programs. The gaps are particularly evident in seven countries: Luxembourg, Greece, France, Belgium, Austria, The Netherlands and Finland; while in Cyprus we see a gap higher than 10%, but in favour of natives. Extra EU migrants are less likely to receive any type of non-contributory benefit in Poland, UK, and Czech Republic, compared to natives, unconditionally on demographics.

Figure 6. Non-contributory benefits Natives vs. Extra EU migrants, estimated coefficients



As in the case of contributory benefits, if we move from unconditional to conditional dependencies, we see that the gaps in probability diminish and they diminish more for those countries where the gap in unconditional dependency probabilities was larger. For example, in Luxembourg, we see that the probability drops from 20% to around 2%, but the parameter for conditional dependency is now not distinguishable from zero in

statistical sense. The drop is equally sizeable in Belgium and Austria; only in The Netherlands and Finland, even though diminished, the gap remains above 10%.
In conclusion, our regression analysis shows that controlling for just few observable demographic characteristics greatly diminishes the differences in access to contributory and non-contributory benefits between immigrants and natives displayed in raw statistics. If compositional effects are accounted for, the differences in the probability of access rarely exceed 10% - in favour of natives – for contributory benefits, and 15% in non-contributory benefits – in favour of extra-EU migrants.
Overall these findings suggest that in countries with a high welfare dependency among immigrants, policies aimed at changing the structure of migration, for example by attracting more highly skilled immigrants, are probably more effective means to reduce the dependence of immigrants on welfare. Separate regressions for each type of allowance are however essential for a clearer interpretation of the results and important for showing on which allowances the residual dependency depends in the case of contributory and non-contributory benefits between natives and immigrants at the national level.

5 Conclusions

This report provided an analysis of differences in access to welfare benefits between Extra- EU immigrants and natives, for 20 European countries and the years 2014-2016. By exploiting the most recent EU-SILC data, we estimated differences in probabilities of receiving both contributory and non-contributory benefits and allowances. We show how the observed differences in the raw data (unconditional dependence) are explained, at least partially, by differences in observable demographic characteristics (conditional dependence).
Our results suggest substantial heterogeneity in unconditional welfare dependence of immigrants between countries. The analysis of unconditional dependence shows that immigrants have significantly lower welfare dependence (with the only exceptions represents by Poland, Lithuania, Croatia, and France) for contributory benefits. For non-contributory benefits, the picture is quite different, as 15 countries show a higher welfare dependency compared to natives. The few exceptions are Poland, Cyprus, UK, the Czech Republic, and Bulgaria.
Controlling for observable characteristics between natives and immigrants reduce the gap in probabilities for almost all countries, suggesting that this heterogeneity is mainly driven by differences in demographic characteristics between the two groups. For the contributory case, Extra-EU migrants still receive less benefit than natives, with the largest difference between migrants and natives observed in the Czech Republic, where migrants are 12% less likely to have access to contributory welfare benefits. In some other cases, the considerations of individual characteristics completely reverse the results: in the case of Poland, Croatia and Latvia, the probability of receiving benefits becomes lower for immigrants than for natives (in the case of conditional dependence), compared to a higher probability observed in the case of unconditional dependence. The gaps in probability also diminish in the case of non-contributory benefits, with sizeable reduction observed in Luxembourg, Belgium and Austria. A significantly higher participation of immigrants, after controlling for observable characteristics, can be found in Denmark and Finland (for contributory benefits) and the Netherlands and Finland (for non-contributory benefits).
The largest contribution to this difference in probability stems from differences in the individual characteristics that we include in the model. Specifically, age, gender, family size, and the highest levels of education, for both contributory benefits and non-contributory benefits, play an important role in the explanation of the gaps in probability. Once these differences in characteristics are controlled for, as a rule, differences between immigrants and natives' participation in welfare scheme is greatly diminished for both contributory and non-contributory benefits.

The access to social benefits by immigrants is a very complex issue as different programmes have different eligibility criteria that vary between countries. We suggest future research to focus on a detailed analysis of country-level information where differences in entailments between Natives and newly arrived immigrants can be accounted for. Our study has also shown how some demographic characteristics, particularly age, are critical determinants of welfare access and use. This opens up an interesting avenue of research where demographic projections can supplement more traditional economic analysis of this phenomenon.

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A.1. Contributory Benefits

Table A 1. Coefficients of Unconditional Dependency

	AT	BE	BG	CY	CZ	DK	EL	ES	FI	FR
Origin:										
European	-0.068***	0.004	-0.299**	-0.027*	0.026	-0.018	-0.165***	-0.059***	-0.092***	0.106***
	(0.000)	(0.768)	(0.001)	(0.032)	(0.216)	(0.474)	(0.000)	(0.000)	(0.000)	(0.000)
Extra-EU	-0.011	-0.108***	-0.095	-0.152***	-0.247***	-0.140***	-0.175***	-0.146***	-0.083***	0.008
	(0.352)	(0.000)	(0.113)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.506)
Constant	0.493***	0.379***	0.525***	0.292***	0.388***	0.365***	0.283***	0.318***	0.464***	0.367***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R^2	0.001	0.004	0.001	0.010	0.003	0.004	0.011	0.008	0.001	0.002
N	30,851	21,037	24,136	18,405	29,536	22,515	77,768	77,486	61,485	40,090

	HR	HU	IE	IT	LT	LU	NL	PL	PT	UK
Origin:										
European	-0.042	-0.072*	0.002	-0.034**	-0.028	-0.050***	-0.014	0.302***	-0.197***	-0.151***
	(0.083)	(0.027)	(0.863)	(0.005)	(0.657)	(0.000)	(0.459)	(0.000)	(0.000)	(0.000)
Extra-EU	0.052***	-0.163***	-0.127***	-0.019*	0.065***	-0.168***	-0.060***	0.234***	-0.118***	-0.123***
	(0.000)	(0.001)	(0.000)	(0.028)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	0.338***	0.406***	0.314***	0.539***	0.421***	0.294***	0.339***	0.325***	0.339***	0.249***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
R^2	0.001	0.001	0.003	0.000	0.001	0.014	0.001	0.002	0.006	0.014
N	41,183	29,804	29,440	109,081	27,697	14,948	59,542	22,991	52,198	49,254

*Note: Data are weighted by respondent's survey sampling weight. All regressions include year fixed effects. P-values in parentheses. Significance levels: * p<0.05, ** p<0.01 and *** p<0.001.*

A 2. Coefficients of Conditional Dependency

	AT	BE	BG	CY	CZ	DK	EL	ES	FI	FR
Origin:										
European	-0.055***	-0.012	-0.205***	0.018	-0.021	0.054*	-0.027*	0.016	0.016	-0.015
	(0.000)	(0.382)	(0.000)	(0.122)	(0.168)	(0.041)	(0.011)	(0.258)	(0.508)	(0.328)
Extra-EU	0.034**	-0.043***	-0.107*	-0.046***	-0.120***	0.041*	-0.037***	-0.038***	0.058**	-0.007
	(0.002)	(0.001)	(0.014)	(0.000)	(0.000)	(0.050)	(0.000)	(0.000)	(0.002)	(0.518)
Highest educ.:										
Lower sec.	-0.050	-0.002	0.055***	-0.019	-0.449***	-0.075***	-0.001	-0.003		-0.049***
	(0.177)	(0.889)	(0.000)	(0.165)	(0.000)	(0.000)	(0.812)	(0.606)		(0.000)
Upper Sec.	-0.073*	-0.026*	0.144***	0.009	-0.449***	0.016	0.029***	-0.025***	0.040***	-0.016
	(0.049)	(0.038)	(0.000)	(0.372)	(0.000)	(0.181)	(0.000)	(0.000)	(0.000)	(0.066)
Post-sec.	-0.138***	-0.035	0.143***	0.026		0.053	0.071***	-0.060	-0.042	-0.005
	(0.001)	(0.230)	(0.000)	(0.198)		(0.502)	(0.000)	(0.092)	(0.174)	(0.928)
Tertiary	-0.153***	-0.073***	0.128***	0.054***	-0.484***	0.035**	0.050***	-0.023***	-0.038***	-0.077***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.006)	(0.000)	(0.000)	(0.000)	(0.000)
Age	-0.025***	-0.011***	-0.012***	-0.021***	-0.024***	-0.037***	-0.031***	-0.020***	-0.020***	-0.030***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age sq.	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	-0.032***	-0.018**	0.054***	-0.036***	0.061***	0.039***	-0.036***	-0.085***	-0.000	-0.009
	(0.000)	(0.005)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.930)	(0.074)
Nr. of Children	0.052***	0.020***	0.035***	0.046***	0.014***	0.009*	-0.009***	-0.005*	0.042***	-0.025***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.030)	(0.000)	(0.034)	(0.000)	(0.000)
Constant	1.037***	0.270***	0.756***	0.366***	0.838***	0.711***	0.472***	0.499***	0.433***	0.634***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	30841	20594	24136	18405	29536	22157	77768	77459	60593	38786
R-squared	0.288	0.283	0.295	0.255	0.441	0.361	0.486	0.217	0.289	0.411

	HR	HU	IE	IT	LT	LU	NL	PL	PT	UK
Origin:										
European	0.012	-0.067*	0.045***	0.051***	-0.058	-0.021**	0.034	-0.082*	-0.004	0.004
	(0.538)	(0.016)	(0.000)	(0.000)	(0.366)	(0.009)	(0.053)	(0.025)	(0.750)	(0.239)
Extra-EU	-0.031***	-0.116***	-0.060***	0.017*	-0.028	-0.063***	0.001	-0.098***	-0.014	-0.030***
	(0.000)	(0.000)	(0.000)	(0.042)	(0.069)	(0.000)	(0.950)	(0.000)	(0.134)	(0.000)
Highest educ.:										
Lower sec.	0.077***	-0.055*	-0.021	-0.023***	0.032	-0.003	-0.039***	-0.072***	-0.005	0.121
	(0.000)	(0.029)	(0.069)	(0.000)	(0.087)	(0.789)	(0.000)	(0.000)	(0.408)	(0.174)
Upper Sec.	0.128***	-0.100***	0.018	-0.072***	0.104***	-0.007	-0.031**	0.011	-0.017**	0.133
	(0.000)	(0.000)	(0.119)	(0.000)	(0.000)	(0.527)	(0.001)	(0.267)	(0.006)	(0.135)
Post-sec.		-0.057*	0.065***	-0.064***	0.089***	-0.010	-0.033	0.007	-0.037*	
		(0.041)	(0.000)	(0.000)	(0.000)	(0.690)	(0.105)	(0.656)	(0.015)	
Tertiary	0.089***	-0.136***	0.050***	-0.147***	0.134***	-0.027*	-0.051***	-0.001	-0.008	0.150
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.015)	(0.000)	(0.932)	(0.211)	(0.092)
Age	-0.025***	-0.018***	-0.020***	-0.026***	-0.008***	-0.031***	-0.029***	-0.035***	-0.026***	-0.042***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age sq.	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.001***	0.000***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	-0.020***	0.042***	-0.009	-0.047***	0.034***	-0.025***	-0.000	0.028***	-0.030***	0.011***
	(0.000)	(0.000)	(0.140)	(0.000)	(0.000)	(0.000)	(0.927)	(0.000)	(0.000)	(0.000)
Nr. of Children	0.067***	0.045***	0.047***	0.156***	0.106***	0.024***	-0.018***	0.028***	0.014***	-0.002**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)
Constant	0.283***	0.378***	0.390***	0.876***	0.361***	0.571***	0.577***	0.552***	0.446***	0.495***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	41177	29804	28962	109081	27486	14747	57911	22988	52175	47928
R-squared	0.395	0.385	0.146	0.160	0.195	0.396	0.394	0.492	0.436	0.685

*Note: Data are weighted by respondent's survey sampling weight. All regressions include year fixed effects. P-values in parentheses. Significance levels: * p<0.05, ** p<0.01 and *** p<0.001.*

A.2: Non-contributory benefits

A 3. Coefficients of Unconditional Dependency

	AT	BE	BG	CY	CZ	DK	EL	ES	FI	FR
Origin:										
European	-0.043***	-0.010	-0.205***	-0.147***	0.067***	-0.007	0.066***	-0.004	0.068***	-0.054**
	(0.001)	(0.501)	(0.000)	(0.000)	(0.001)	(0.719)	(0.001)	(0.760)	(0.001)	(0.006)
Extra-EU	0.189***	0.227***	-0.039	-0.118***	-0.017	0.023*	0.105***	0.059***	0.206***	0.112***
	(0.000)	(0.000)	(0.391)	(0.000)	(0.469)	(0.027)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	0.360***	0.446***	0.244***	0.419***	0.177***	0.912***	0.156***	0.139***	0.572***	0.495***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	30851	21037	24151	18405	29536	22515	77768	77486	61485	40090
R-squared	0.017	0.017	0.000	0.012	0.001	0.000	0.005	0.002	0.005	0.004

	HR	HU	IE	IT	LT	LU	NL	PL	PT	UK
Origin:										
European	-0.010	0.091*	0.031***	0.001	0.062	0.117***	0.081***	-0.097*	0.122***	-0.112***
	(0.718)	(0.014)	(0.001)	(0.911)	(0.353)	(0.000)	(0.000)	(0.040)	(0.000)	(0.000)
Extra-EU	0.024*	0.072	0.037*	0.043***	0.026	0.199***	0.183***	-0.070	0.042***	-0.035***
	(0.021)	(0.317)	(0.012)	(0.000)	(0.152)	(0.000)	(0.000)	(0.078)	(0.000)	(0.000)
Constant	0.499***	0.416***	0.748***	0.074***	0.343***	0.448***	0.479***	0.193***	0.268***	0.602***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	41183	29804	29440	109081	27697	14948	59542	22991	52198	49254
R-squared	0.000	0.000	0.001	0.002	0.000	0.021	0.012	0.000	0.002	0.003

Note: Data are weighted by respondent's survey sampling weight. All regressions include year fixed effects. P-values in parentheses.
*Significance levels: * p<0.05, ** p<0.01 and *** p<0.001.*

A 4. Coefficients of Conditional Dependency

	AT	BE	BG	CY	CZ	DK	EL	ES	FI	FR
Origin:										
European	-0.053***	-0.023*	-0.148**	-0.114***	0.060***	0.004	0.002	-0.014	0.021	0.006
	(0.000)	(0.044)	(0.002)	(0.000)	(0.000)	(0.868)	(0.897)	(0.278)	(0.315)	(0.723)
Extra-EU	0.058***	0.045***	0.016	-0.098***	-0.040	0.029**	0.025**	0.028***	0.140***	0.036**
	(0.000)	(0.000)	(0.669)	(0.000)	(0.064)	(0.002)	(0.001)	(0.000)	(0.000)	(0.003)
Highest educ.:										
Lower sec.	-0.142***	-0.016	-0.092***	-0.169***	-0.268***	-0.031***	-0.015*	-0.050***		-0.093***
	(0.000)	(0.176)	(0.000)	(0.000)	(0.001)	(0.000)	(0.020)	(0.000)		(0.000)
Upper Sec.	-0.207***	0.001	-0.173***	-0.183***	-0.350***	-0.013*	-0.035***	-0.119***	-0.034***	-0.138***
	(0.000)	(0.961)	(0.000)	(0.000)	(0.000)	(0.025)	(0.000)	(0.000)	(0.000)	(0.000)
Post-sec.	-0.233***	-0.071**	-0.219***	-0.206***		-0.098*	-0.061***	-0.134***	-0.119***	-0.037
	(0.000)	(0.003)	(0.000)	(0.000)		(0.020)	(0.000)	(0.000)	(0.000)	(0.685)
Tertiary	-0.242***	-0.027*	-0.259***	-0.319***	-0.353***	-0.088***	-0.104***	-0.163***	-0.116***	-0.193***
	(0.000)	(0.020)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	-0.003**	-0.004***	0.004***	-0.011***	0.001	-0.019***	-0.002***	0.015***	-0.016***	-0.003***
	(0.002)	(0.000)	(0.000)	(0.000)	(0.573)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
Age sq.	-0.000	-0.000***	-0.000***	0.000***	-0.000	0.000***	0.000	-0.000***	0.000***	-0.000**
	(0.638)	(0.000)	(0.000)	(0.000)	(0.136)	(0.000)	(0.559)	(0.000)	(0.000)	(0.008)
Female	0.022***	0.041***	0.023***	0.023**	0.015**	0.062***	0.003	0.010**	0.049***	0.017**
	(0.000)	(0.000)	(0.000)	(0.002)	(0.001)	(0.000)	(0.394)	(0.002)	(0.000)	(0.002)
Nr. of Children	0.177***	0.265***	0.201***	0.219***	0.189***	0.073***	0.155***	0.038***	0.186***	0.251***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	0.331***	0.613***	0.597***	0.718***	0.422***	1.265***	0.252***	-0.071***	0.985***	0.690***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	30841	20594	24151	18405	29536	22157	77768	77459	60593	38786
R-squared	0.328	0.480	0.320	0.233	0.197	0.108	0.262	0.049	0.269	0.334

	HR	HU	IE	IT	LT	LU	NL	PL	PT	UK
Origin:										
European	-0.006	0.010	0.017*	0.010	0.043	0.033***	0.051**	0.001	0.050**	-0.020
	(0.709)	(0.673)	(0.035)	(0.135)	(0.528)	(0.000)	(0.002)	(0.986)	(0.009)	(0.089)
Extra-EU	0.017*	0.051	-0.037**	0.029***	0.022	0.010	0.129***	-0.034	-0.004	-0.051***
	(0.017)	(0.326)	(0.004)	(0.000)	(0.193)	(0.499)	(0.000)	(0.374)	(0.728)	(0.000)
Highest educ.:										
Lower sec.	-0.033**	-0.009	-0.041***	-0.079***	0.042*	0.016	-0.073***	-0.091***	-0.024***	-0.116
	(0.006)	(0.704)	(0.000)	(0.000)	(0.038)	(0.265)	(0.000)	(0.000)	(0.000)	(0.229)
Upper Sec.	-0.079***	-0.081***	-0.095***	-0.108***	-0.001	-0.070***	-0.081***	-0.113***	-0.090***	-0.193*
	(0.000)	(0.001)	(0.000)	(0.000)	(0.974)	(0.000)	(0.000)	(0.000)	(0.000)	(0.046)
Post-sec.		-0.121***	-0.063***	-0.123***	-0.044*	-0.148***	-0.157***	-0.169***	-0.149***	
		(0.000)	(0.000)	(0.000)	(0.031)	(0.000)	(0.000)	(0.000)	(0.000)	
Tertiary	-0.138***	-0.136***	-0.147***	-0.113***	-0.169***	-0.150***	-0.172***	-0.240***	-0.211***	-0.273**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.005)
Age	-0.002**	0.002	-0.008***	-0.004***	-0.013***	-0.001	-0.014***	-0.003*	-0.003***	-0.033***
	(0.001)	(0.096)	(0.000)	(0.000)	(0.000)	(0.549)	(0.000)	(0.024)	(0.001)	(0.000)
Age sq.	0.000*	-0.000***	0.000***	0.000***	0.000***	-0.000*	0.000***	0.000	-0.000**	0.000***
	(0.016)	(0.000)	(0.000)	(0.000)	(0.000)	(0.044)	(0.000)	(0.824)	(0.002)	(0.000)
Female	-0.011**	0.024***	0.008	0.003	0.011	0.044***	0.014**	0.014*	0.031***	0.020***
	(0.009)	(0.000)	(0.162)	(0.104)	(0.174)	(0.000)	(0.004)	(0.016)	(0.000)	(0.000)
Nr. of Children	0.128***	0.287***	0.179***	0.045***	0.125***	0.307***	0.268***	0.144***	0.200***	0.269***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	1.058***	0.487***	0.775***	0.225***	0.348***	0.462***	0.935***	0.348***	0.381***	0.994***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	41177	29804	28962	109081	27486	14747	57911	22988	52175	47928
R-squared	0.582	0.471	0.247	0.037	0.173	0.392	0.432	0.166	0.219	0.368

*Note: Data are weighted by respondent's survey sampling weight. All regressions include year fixed effects. P-values in parentheses. Significance levels: * p<0.05, ** p<0.01 and *** p<0.001.*

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Publications Office

doi:XX.XXXX/XXXXXX

ISBN XXX-XX-XX-XXXXX-X