Immigrants and the distribution of income, consumption and wealth in the euro area: First descriptive facts[1]

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Abstract

We use representative data from household surveys in the euro area to describe differences in wages, income, consumption, wealth and liquid assets between households born in their country of residence ("natives") and those born in other EU and non-EU countries ("immigrants"). The differences in wealth and liquid assets are more substantial than the differences in wages, income and consumption: immigrants earn on average about 30% lower wages than natives and hold roughly 60% less net wealth. For all variables, only a small fraction of differences between natives and immigrants—around 30%—can be explained by differences in demographics (age, gender, marital status, education, occupation, sector of employment). Immigrants are more likely to be liquidity constrained: while we classify 17% of natives as "hand-to-mouth" (they hold liquid assets worth less than two weeks of their income), the corresponding share is 20% for households born in another EU country and 29% for those born outside the EU. Employment rates of immigrants are substantially more sensitive to fluctuations in aggregate employment.

Keywords: migration, inequality, distribution of income and wealth

JEL Codes: J15, D31, E21, E24

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[1] First version: March 2022. All opinions expressed are personal and do not necessarily represent the views of the European Central Bank or the European System of Central Banks. This paper uses data from the Eurosystem Household Finance and Consumption Survey.

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Additional results are available in the online appendix.

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1. Introduction

Recent empirical and modelling literature has quite extensively analyzed various dimensions of inequality and household heterogeneity, including issues related to age, education (skills) and gender. In contrast, the migration dimension of inequality is still under-researched, especially for European countries: little evidence is available on economic differences between euro area households born in their current country of residence and those born elsewhere. This paper provides evidence on differences between euro area residents born in the current country of residence ("natives") vs. elsewhere ("immigrants").

An organizing framework for our results is the household dynamic budget constraint:

$$a_{t+1} = (1 + r)\,(a_t + y_t - c_t),$$

where a denotes wealth, r the interest rate, y income and c consumption. Our results cover key facts for all three variables that enter the budget constraint: total household income, consumption and net wealth. In addition, we also document evidence on hourly wages and liquid assets, variables that reflect differences in labour markets and in households' capacity for smoothing adverse economic shocks. All these variables are key to illustrate the differences in economic welfare.

To our knowledge, this is the first paper that provides a comprehensive picture of differences between native and immigrant households for main budget components, based on micro datasets representative for the euro area population.

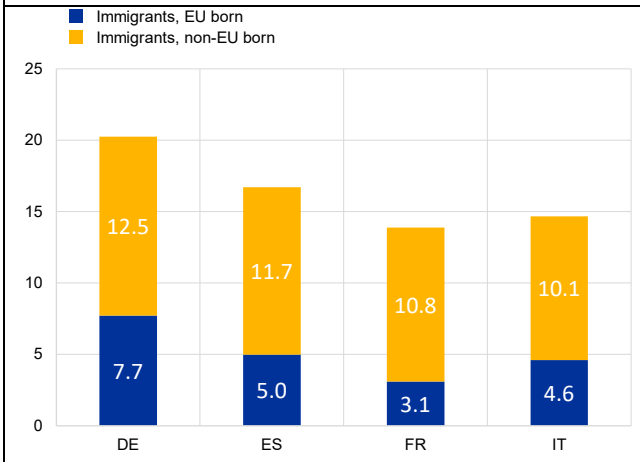
We report two sets of results: structural, which reflect facts that persist over many years, and cyclical, which are relevant for the response of the economy to shocks and policies at the business cycle frequency. From the structural perspective, we find two key results. First, the differences in wealth and liquid assets are much more substantial than the differences in wages incomes and consumption: immigrants earn on average about 30% lower wages than natives and hold roughly 60% less net wealth. This difference arises as wealth, in contrast to income, is a stock variable that is accumulated over many years. In addition, we document that natives are more likely to invest in higher return assets, such as housing and stocks. Second, for all five variables, we find that only a small fraction of differences between natives and immigrants (around 30%) can be explained by differences in demographics (age, gender, marital status, education, occupation, sector of employment). The rest of the gap is due to unexplained factors arising from differences in preferences, cultural factors, beliefs and differences in economic opportunities due to discrimination.

From the cyclical perspective, we report that immigrants are more likely to be liquidity constrained: while we classify 17% of natives as “hand-to-mouth” (they hold liquid assets worth less than two weeks of their income), the corresponding share is 20% for households born in another EU country and 29% for those born outside the EU. In addition, employment rates of immigrants are substantially more sensitive to fluctuations in aggregate employment. These results suggest that consumption of immigrants is more sensitive to aggregate economic shocks and policies through the employment channel.

Our focus on immigrants is important because they make up about 15% of the population. In the four largest euro area countries between 14 and 20% of the population has been born in a different country, with between 3 and 8% of people born in another EU country and between 10 and 13% of people born outside the EU (Chart 1). In addition, the share of immigrants in the euro area has risen by around 5 p.p. since 2007 (Chart 1.a in online appendix).[2] In terms of aggregates, immigrants account for about 12% of total consumption.

Chart 1: Share of population by country of birth

Percent



Sources: Labour Force Survey 2018-2019.
Notes: The chart shows the share of people born outside the country of residence on total population (in percent).

Our analysis collects facts for the four largest euro area countries (Germany, France, Italy and Spain) from several datasets, which provide ex ante harmonized, cross-country comparable micro data. We use the EU Statistics on Income and Living Conditions (EU-SILC) for results on hourly wages. The Household Finance and Consumption Survey (HFCS) provides a detailed description of household wealth and its components, liquid assets and income. The Household Budget Survey (HBS) is the best source of information on household consumption and its structure. The Labour Force Survey (LFS) documents at quarterly frequency facts about the labour force participation.

Our results document substantial differences between natives and immigrants in Europe. Modelling analysis of this aspect of household heterogeneity would be useful as it would

[2] Our results focus on first-generation immigrants and classify as natives also people born in the current country of residence whose ancestors immigrated into the country. The results thus under-estimate the extent of the issue given that differences from natives persist even for many second-generation immigrants.

The focus on the country of birth is informative also because it includes immigrants who may have become citizens in their current country of residence but still may have lower incomes or wealth than natives.

provide insights into how various economic policies affect welfare of native and immigrant households and how such heterogeneity affects aggregate dynamics. Our results are also informative for policy makers, who need to keep in mind distributional effects of alternative policies on various groups of households and implications of their actions for inequality.

The plan of the paper is as follows. After a brief review of the literature on migrant, racial and gender gaps, section 2 focuses on structural differences in wages, income, consumption, wealth and liquid assets and estimates to what extent these differences can be accounted for by observable demographics. Section 3 covers cyclical differences—the share of constrained households and the sensitivity of individual employment to aggregate employment ("worker betas")—which are relevant for the response of various households and the macro-economy to short-run shocks and policies. Section 4 concludes and highlights some important data gaps.

Existing literature on migrant, racial and gender gaps

Existing work analyses migrant, racial and gender gaps mostly in US data, less so in data from individual European countries. The work on wealth gaps is much smaller than analyses of wage gaps. The contribution of our paper is that it provides comprehensive evidence on wages, income, wealth and liquid assets for the euro area.

Research on migrant gaps in European countries documents, similar to our findings, that wealth gaps are much larger than income and wage gaps. For example, Mathä et al. (2011) reports in data from Germany, Italy and Luxembourg that wealth gaps between natives and immigrants are sizeable, somewhat narrowing in the upper tail of the wealth distribution. Cobb-Clark and Hildebrandt (2006) documents corresponding results on migrant wealth gaps for the U.S. As for wage gaps, Coppola et al. (2014) estimates substantial differences in Italy, which are particularly large for female immigrants and can only to a small extent be explained with demographics. For Germany Ingwersen and Thomsen (2019) finds smaller wage gaps which can largely be explained by observables. Cupák et al. (2021) estimates sizable pay gaps across European countries, for which the majority (around 70%) tends to remain unexplained, with substantial heterogeneity across countries.

Recently, the literature on racial wealth gaps in the U.S. has grown substantially. The work estimates very sizable and persistent wealth gaps between black and Hispanic households relative to white households (Bhutta et al., 2020, Derenoncourt et al., 2022 and Boerma and Karabarbounis, 2022). These differences matter for transmission of monetary policy (Bartscher et al., 2023 and Nakajima, 2021).

Gender wage gaps have been extensively investigated in the literature (e.g., Altonji and Blank, 1999, Blau and Kahn, 2017 and Weichselbaumer and Winter-Ebmer, 2005). Kukk et al. (2021) provides up-to-date results on gender wealth gaps across European countries.

2. A structural perspective

This section documents differences in hourly wages, income, consumption, wealth and liquid assets across the three groups of households. We first present the unconditional evidence, which does not control for differences in various demographic factors (such as gender, marital status, education and occupation). Then we estimate how much of the gaps can be accounted for by differences in demographics.

The five variables we analyze—wages, income, consumption, wealth and liquid assets—enter the household's budget constraint and are relevant for economic decisions of households. For hourly wages we restrict our sample to the population of employed individuals aged 18-64 years (and exclude people who are unemployed or inactive). In contrast, we report the evidence on income, consumption, net wealth and liquid assets for all households (in line with large existing literature documenting inequality for these variables). Total income includes various sources of household income in addition to employment (and self-employment) income, such as pensions, financial and rental income, unemployment benefits and transfers, and is informative about the inflow of resources into a household's budget constraint. Consumption is the key variable that typically enters household utility and thus directly reflects welfare. In contrast to income, net wealth, which consists of financial and real assets net of total liabilities, is a stock variable, which accumulates over (many) years. Liquid assets are resources immediately available to smooth consumption when households face an adverse shock to their income or wealth and have been found to be a key determinant of the marginal propensity to consume out of transitory income shocks (MPC).[3]

2.1 Unconditional evidence

Hourly wages of natives are substantially higher than wages of immigrants, across all age groups (Chart 2.a). The profiles are increasing with age for all three migration groups. Workers born in another EU country earn by about 20% less than natives, and those born outside the EU earn by about 25% less. The gap between wages of natives and immigrants remains substantial until retirement.

[3] The influential report of Stiglitz et al. (2009) echoes this perspective and recommends collecting data on household consumption, income and wealth and their distributions because these flow and stock variables provide complementary perspectives about households' well-being. For example, the flow of household consumption reflects current well-being, while the stock of wealth captures resources available to support future well-being.

Total gross incomes of natives tend to exceed somewhat incomes of people born in another EU country and substantially incomes of people born outside the EU. Chart 2.b shows median total gross household income for all households (workers and non-workers). Households born outside the EU tend to earn lower income than households born in another EU country and native households. Total income includes in addition to wages also other sources of income, such as social benefits, pensions and financial income. The fact that the income gaps are somewhat lower than wage gaps reflects the progressivity of the system of taxes and social benefits.

The gaps for consumption expenditures are similar as for income, around 30% and tend to narrow late in life (Chart 2.c). Consumption therefore tracks income over the life cycle, with a hump-shaped pattern peaking around the age of 50, a fact that confirms that households smooth consumption little across age.

Differences in holdings of net wealth between natives and immigrants are larger than for wages and income (Chart 2.d). Households headed by a native accumulate substantially higher median wealth than EU born and in particular non-EU born households.[4] The differences are large and persist over the life cycle, suggesting little convergence before retirement: immigrants accumulate much less wealth even at higher age.[5] The gap is particularly large for households born outside the EU, who at the age of 55, for example, own a median net wealth of only roughly EUR 40,000, compared to EUR 180,000 for natives. There could be various reasons for why the differences in wealth highly exceed those in income. First, in contrast to income, wealth is a stock variable that is accumulated over many years. The initial immigrant wealth at arrival is likely lower than wealth of comparable natives. In addition, wealth accumulation in the current country of residence tends to be faster than in the country of birth (thanks to higher incomes). Finally, natives are more likely to invest in assets with higher return (such as housing and stocks), to receive inheritance, and to have access to financial assistance from relatives or friends.[6]

[4] Net wealth includes assets held both in the country of residence and abroad.

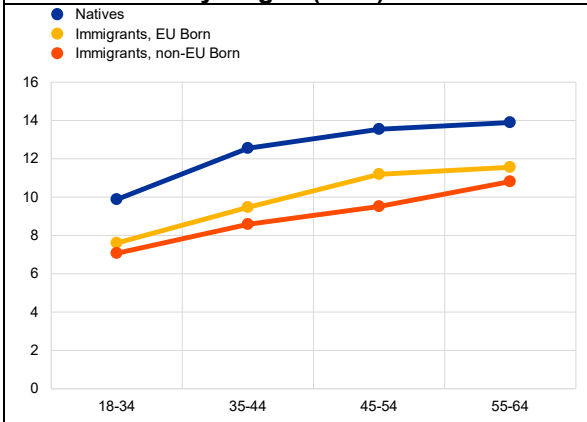
[5] Given that older immigrants likely spent a longer time in the current country of residence, one would expect the gaps to decrease with age.

For EU born immigrants, median wealth for households older than 65 is quite close to the wealth of natives. This may be affected by selection, with some immigrants moving back to their country of birth for retirement.

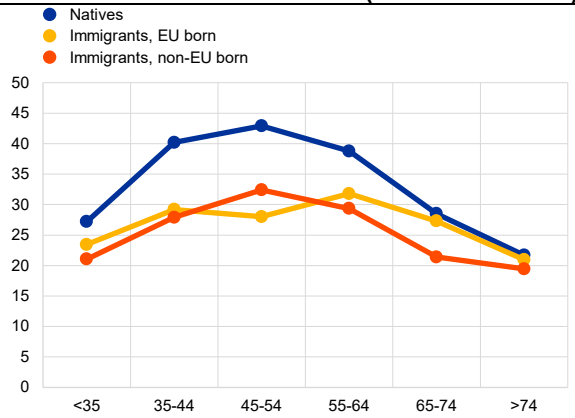
[6] Natives tend to save more than EU born households (also as share of their income), which in turn save more than non-EU born households. This can be due to the fact that native households tend to have higher incomes, or due to differences in cultural factors or beliefs (such as desire for wealth accumulation and attitudes toward thrift (see, e.g., Bisin and Verdier, 2011, Haliassos et al., 2017, Fuchs-Schündeln et al., 2020, and Fleck and Monninger, 2020). Zillessen (2022) finds that while immigrants without a right to citizenship save 30% less than natives, once immigrants have access to citizenship, they save as much as natives when individual characteristics, such as labour market outcomes, are accounted for.

Chart 2: Key economic variables by age and country of birth

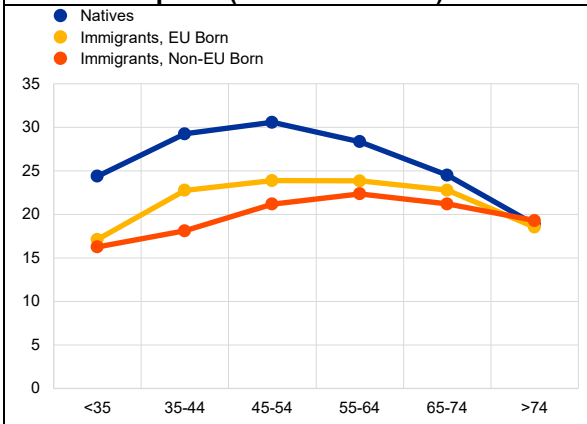
a: Gross hourly wages (EUR)



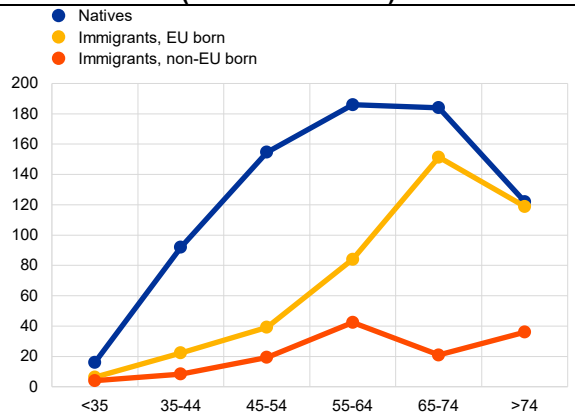
b: Gross household income (EUR thousands)



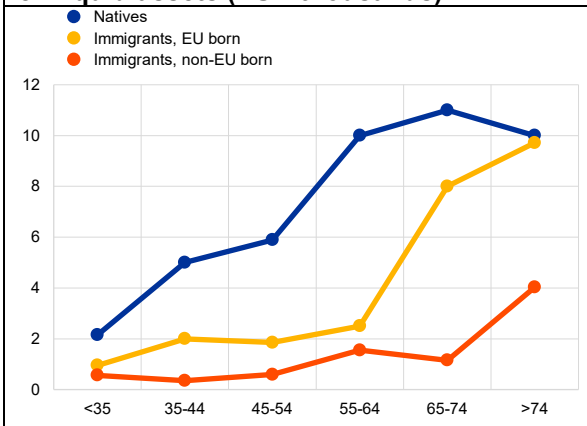
c: Consumption (EUR thousands)



d: Net wealth (EUR thousands)



e: Liquid assets (EUR thousands)



Sources: Household Finance and Consumption Survey 2010, 2014, 2017; EU Statistics on Income and Living Conditions 2009-2018, Italy: 2009-2017, Household Budget Survey 2015.

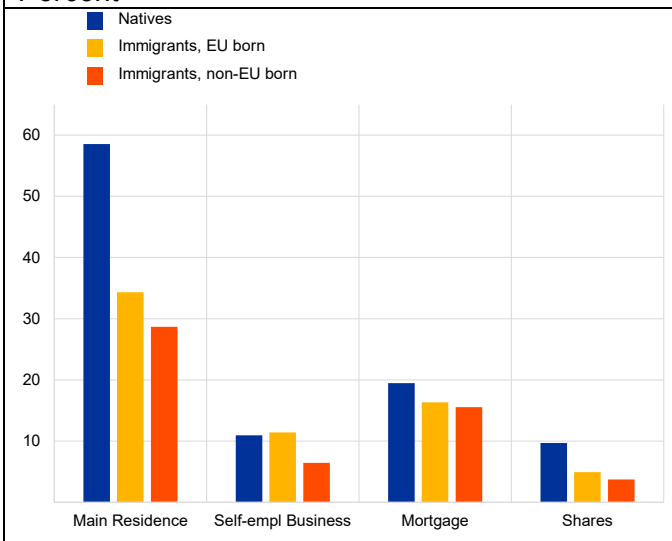
Notes: Hourly wages are calculated for employed individuals aged 18-64. Gross household income includes employee income, income from self-employment, pensions, financial income, rental income, unemployment benefits and transfers. Net wealth consists of financial and real assets (including housing), net of total liabilities (mortgage and non-mortgage debt). Liquid assets include deposits, directly held mutual funds, stocks and bonds, net of liquid liabilities (overdraft debt and credit card debt). Due to data limitations the chart on hourly wages shows data for France, Italy and Spain; the remaining charts show data for Germany, France and Italy. All reported numbers are medians.

Immigrants also hold a much lower stock of liquid assets (Chart 2.e). The difference is again particularly striking for non-EU born households who only hold median liquid assets of around EUR 1,500 at the age of 55, compared to roughly EUR 11,000 for natives (and around EUR 8,000 for EU born immigrants). Given the negative relationship between liquid assets and the marginal propensities to consume often estimated in data and implied by models (see, e.g., Ganong et al., 2020), these very low holdings of liquid assets make spending of non-EU immigrants exposed to adverse shocks (and result in a high share of constrained households, see Chart 8 in section 3 below).

Compared to gender gaps, which have extensively been studied in the literature, these differences between natives and immigrants are substantial, especially for net wealth and liquid assets. For example, the gender gap for mean wages is around 10-15% and for mean wealth around 35%.[7] In comparison, across the three groups by country of birth, for wages the gaps are roughly 25% and 35% respectively for people born in other EU countries and outside the EU. For income the corresponding migrant gaps are by about 10 p.p. lower, reflecting the progressivity of the systems of social benefits. For net wealth and liquid assets the gaps across migration groups are larger than across genders, amounting for non-EU immigrants to roughly 60% and for EU immigrants to roughly 40% (for both net wealth and liquid assets).[8] In contrast, compared to racial gaps reported in US data, the differences across migrant groups in the euro area are smaller. For example, Bartscher et al. (2021) estimate that black households in the U.S. own on average only 11% of the wealth of white households and earn about 50% of the income compared to white households.

Chart 3: Ownership of assets and liabilities

Percent



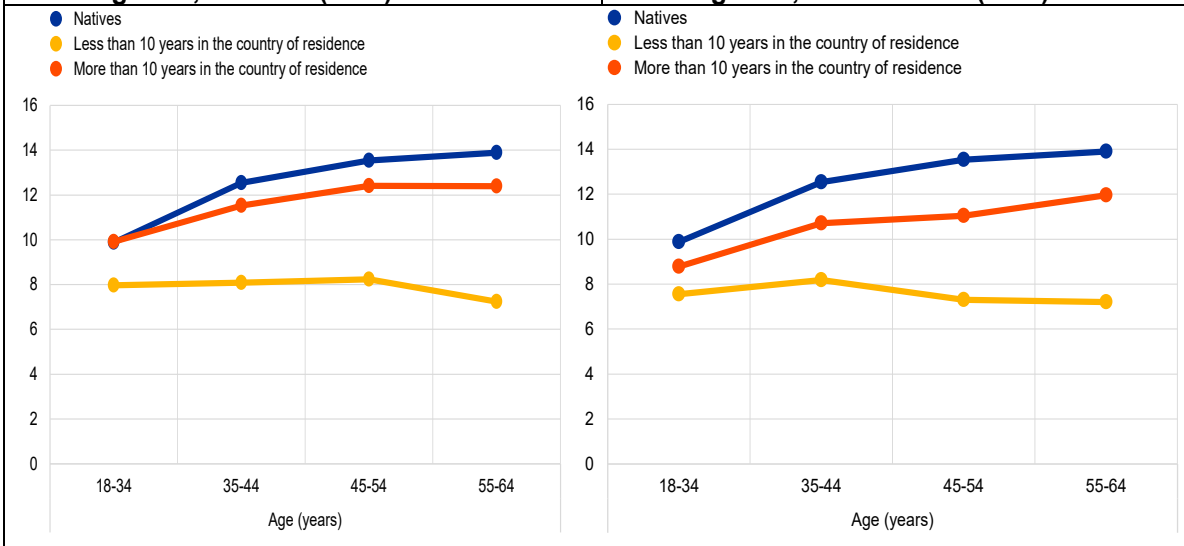
Sources: Household Finance and Consumption Survey 2017.
Notes: The chart shows the fraction of households holding a given asset or liability. Due to data limitations the chart shows data for Germany, France and Italy.

[7] See, e.g., Weichselbaumer and Winter-Ebmer (2005) for estimates of gender wage gaps and Kukk et al. (2021) for gender wealth gaps.

[8] These gaps refer to means, to be consistent with the numbers given for gender gaps (and with the Oaxaca–Blinder decompositions discussed below).

Looking into the composition of assets and liabilities, native households are more likely to own a house, shares or business and hold a mortgage (Chart 3). Immigrants are substantially less likely to own their main residence and business wealth or participate in the stock market. On the other hand, homeowners among immigrants are much more likely to hold a mortgage than homeowners among natives—in line with about the evidence on the lower availability of inheritances and family resources for immigrants: while around a half of homeowners among immigrants hold a mortgage, for natives the corresponding share is around one third. In particular the difference in owning the main residence is substantial because housing is a large asset and a key driver of wealth, and households who do not own their residence do not benefit from increases in house prices and tend to accumulate much less wealth than homeowners.[9] In sum, immigrants benefit much less from increases in asset prices and are more financially vulnerable, resulting in their lower welfare due to lower wealth accumulation over the life cycle and due to worse consumption smoothing capacity in the short run.

Chart 4: Hourly wages by length of time in the current country of residence



Sources: EU Statistics on Income and Living Conditions 2003-2018, Italy: 2009-2017.

Note: Hourly wages are calculated for employed individuals aged 18-64 (the self-employed are excluded). Due to data limitations the chart on hourly wages shows data for France, Italy and Spain; the remaining charts show data for Germany, France and Italy. All reported numbers are medians.

The migrant gaps depend on the time spent in the current country of residence (Chart 4). For the case of wage gaps, the differences between natives and immigrants is only about 15-20% for immigrants who have been in the country for more than 10 years. In contrast, for immigrants

[9] For evidence on long-run differences in returns between real estate and other (financial) assets, see Jordà et al. (2019).

who arrived less than 10 years ago the wage gaps are at least twice as high. In addition, for those immigrants wages do not increase with age, so that the wage gaps relative to natives widen at higher age.

2.2 Conditional evidence: Accounting for the role of demographics

While these univariate results are informative about the differences across the three migrant groups, multivariate analysis is needed to better understand what drives the differences, i.e., whether the differences can be explained by different demographics across the groups (e.g., age, gender, marital status or education). To see to what extent this is the case, we estimate the Oaxaca–Blinder decomposition, which separates the role of observable differences (due to demographics) from the remaining differences which cannot be explained by observable factors and are instead ascribed to other factors, such as preferences, culture and omitted variables not included in the regressors. The explanatory variables that control for the key observable demographics are age, gender, marital status, education (included as a proxy for skills), presence of a child in the household, occupation, the sector of employment, employment dummy and self-employment dummy.[10]

The differences between natives and immigrants are large for hourly wages, household income and consumption and very substantial for net wealth and liquid assets. Charts 5.a and 5.b confirm the earlier results that hourly wages of natives on average are about 25% higher than wages of people born in another EU country and by 35% higher than wages of people born outside the EU. The corresponding gaps for household income are somewhat lower, roughly 17% and 26% for EU born and non-EU born households, respectively. The gaps for net wealth and liquid assets are substantially higher than the gaps for hourly wages and income (panel 5.b).

Only a small fraction of the gaps—around 30%—can be explained by the demographics. The explained share of gaps is roughly stable across the two groups of immigrants and across the five variables. It is typically positive, suggesting that natives tend to be older, and more educated, variables that from the life cycle perspective correlate with higher wages and

[10] Our explanatory variables are the same for all five dependent variables. They consist of variables typically included in Oaxaca-Blinder (and other) decompositions for wage and wealth gaps. Marital status, gender and presence of children in the household are 0-1 dummy variables. Education is split into the following three categories: below secondary, secondary and tertiary. Age is measured using the following brackets: 18-34, 35-44, 45-54, 55-64 and 75 years and above. Occupation is based on the 1-character ISCO-08 classification and consists of 10 groups. The sector of employment is based on the 2008 NACE classification of economic activities, grouped into 12 areas. For income, consumption, net wealth and liquid assets we include 0-1 indicators of employment and self-employment.

wealth.[11] However, even once accounting for these factors, the bulk of the gap remains unexplained.Although the Oaxaca–Blinder decompositions suggest a large contribution from unexplained factors, the data do not allow us to disentangle the contribution to the gaps from differences in preferences, cultural factors, beliefs and differences in economic opportunities due to discrimination.[12]

Chart 5.a: Oaxaca–Blinder decomposition for hourly wages, household income and consumption

Percent

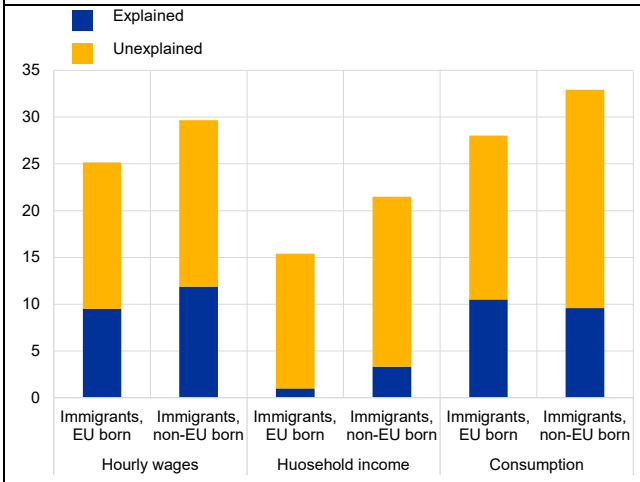
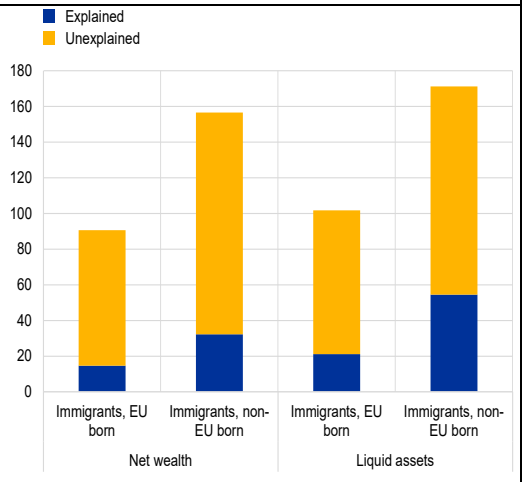


Chart 5.b: Oaxaca–Blinder decomposition for liquid assets and net wealth

Percent



Sources: Household Finance and Consumption Survey 2010, 2014, 2017; EU Statistics on Income and Living Conditions 2009-2018, Italy: 2009-2017; Household Budget Survey 2015.

Note: The charts decompose the average gaps between native and immigrant households into a part explained by observable variables and an unobserved part. The observable variables are: age, gender, marital status, education, presence of a child in the household, occupation, the sector of employment, employment dummy, self-employment dummy and time fixed effects. Net wealth and liquid assets were transformed using the inverse hyperbolic transformation (to account for the presence of zero and negative values). The top and bottom 5 percent of values were winsorised.

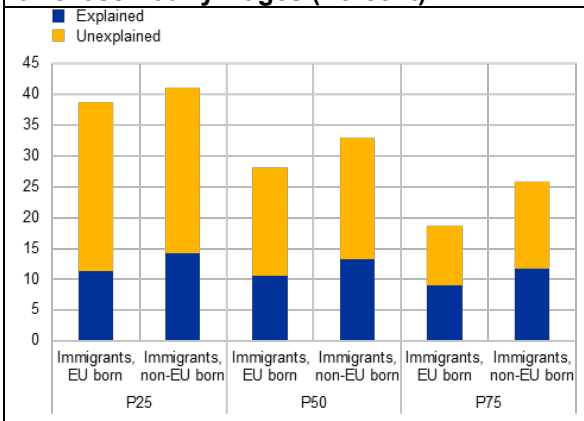
Chernozhukov et al. (2013) decomposition documents that the gaps vary across the distribution (Chart 6). For wages, wealth and liquid assets the gaps are about twice as large at the 25th percentile of the distribution compared to the 75th percentile. In contrast, for income and consumption, the gaps are broadly stable across the distribution. For all five variables the share of the explained part tends to be stable across the distribution.

[11] The results for wealth are qualitatively robust to including employment among explanatory variables and restricting the sample to employed households only (see Charts 6 and 7 in online appendix).

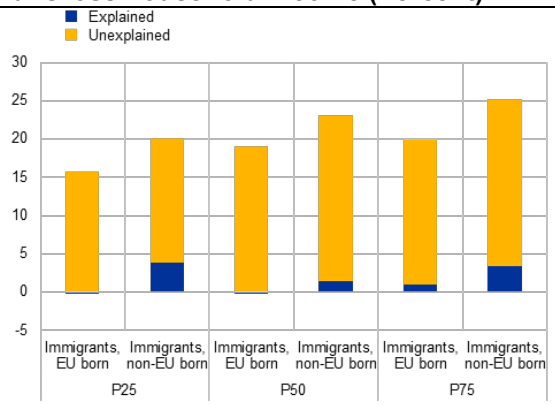
[12] The explanatory variables in Oaxaca–Blinder include basic demographics, determining variables (to some extent exogenous), which were fixed at the time when the regressor of interest was determined. The explanatory variables should not include "bad controls" or outcomes (such as homeownership status in the case of wealth regressions). The goal of the decompositions is thus not to maximize the explanatory power of the regression. For more detailed discussion see Angrist and Pischke (2008), section 3.2.3.

Chart 6: Decompositions across the distribution, percentiles P25, P50 (median), P75

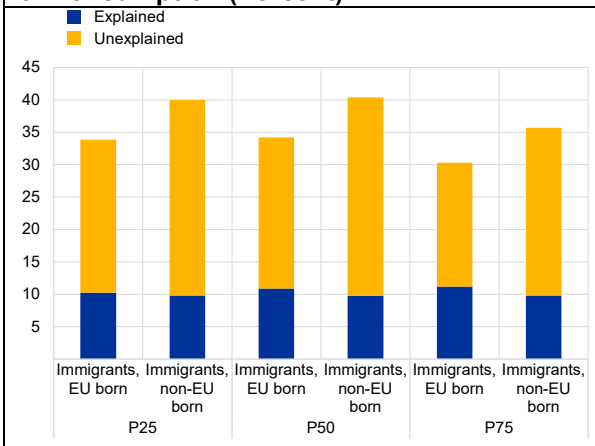
a: Gross hourly wages (Percent)



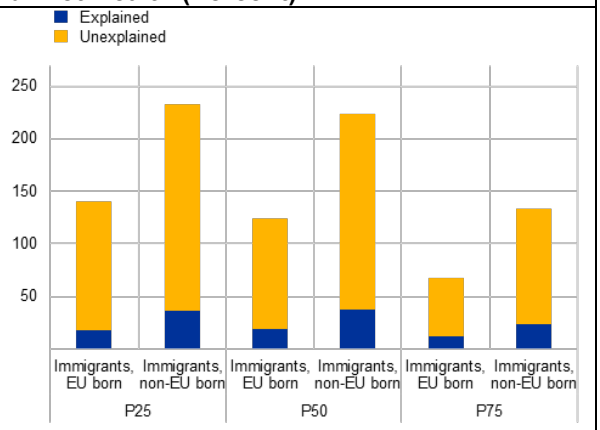
b: Gross household income (Percent)



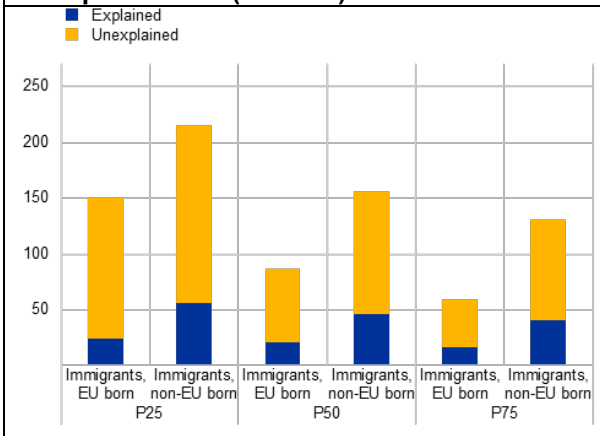
c: Consumption (Percent)



d: Net wealth (Percent)



e: Liquid Assets (Percent)



Sources: Household Finance and Consumption Survey 2010-2017; EU Statistics on Income and Living Conditions 2009-2018, Italy: 2009-2017; Household Budget Survey 2015.

Note: The charts use the method of Chernozhukov et al. (2013) to decompose the gaps between native and immigrant households into a part explained by observable variables and an unobserved part at various quantiles of the distribution of the gaps. The observable variables are age, gender, marital status, education, presence of a child in the household, occupation, the sector of employment, employment dummy, self-employment dummy and time fixed effects. Net wealth and liquid assets were transformed using the inverse hyperbolic transformation (to account for the presence of zero and negative values). The top and bottom 5 percent of values were winsorised.

Chart 7: Oaxaca–Blinder decompositions depending on the age of arrival in the country

Sources: Household Finance and Consumption Survey 2010, 2014, 2017; EU Statistics on Income and Living Conditions 2009-2018, Italy: 2009-2017.

Note: The charts compare estimates for people who moved to the country of residence before the age of 18 and after. The charts decompose the average gaps between native and immigrant households into a part explained by observable variables and an unobserved part. The observable variables are: age, gender, marital status, education, presence of a child in the household, occupation, the sector of employment, employment dummy, self-employment dummy and time fixed effects. Net wealth and liquid assets were transformed using the inverse hyperbolic transformation (to account for the presence of zero and negative values). The top and bottom 5 percent of values were winsorised. The results for consumption are not shown because the Household Budget Survey does not collect the variable on the time of arrival in the country of residence.

The gaps are substantially smaller for people who moved into their current country of residence at a young age and who spent there a longer time (Chart 7). Comparison of the two cohorts of people shows that the gaps persist even for people who moved into the country before the age of 18, but are by roughly 60% lower than for people who arrived as adults, both for people arriving from other EU countries and those arriving from outside the EU. This finding suggests that the length of time spent in the current country of residence reduces the gaps as younger people tend integrate more easily but does not close them.

Interestingly, the share of the explained part (in blue) in the total gaps is higher for younger immigrants, so that observable characteristics explain relatively more of the gaps.[13] Looking further into whether the length of stay matters more than the age at arrival, the evidence on wage gaps points in that direction although we are facing limitations due to limited sample sizes (see Chart 8 in online appendix).

3 A cyclical perspective

This section focuses on the implications of differences across the three migrant groups of households for monetary policy at the business cycle frequency (at a horizon of several quarters). The literature on the heterogeneous agent New Keynesian models (HANK) has identified that two objects are important to pin down the response of the macroeconomy to shocks and policies in the short run: the share of constrained households and the sensitivity of incomes of individual households to changes in aggregate employment (sometimes called "worker betas"). The share of constrained households (households with low holdings of liquid assets) affects monetary transmission because their spending is more sensitive to income and wealth shocks, i.e., they have higher marginal propensities to consume than the remaining households who hold adequate liquid assets. The sensitivity of incomes of individual households matters because following a monetary easing which stimulates aggregate demand and aggregate income, employment and incomes of some households respond more strongly than employment and incomes of others.

The share of constrained households is substantially larger for EU and especially non-EU immigrants than for natives (Chart 8). Following Kaplan et al. (2014), constrained households hold liquid assets worth less than two weeks of income. Depending on whether they own illiquid assets (most importantly housing), they are denoted either as poor hand-to-mouth or wealthy

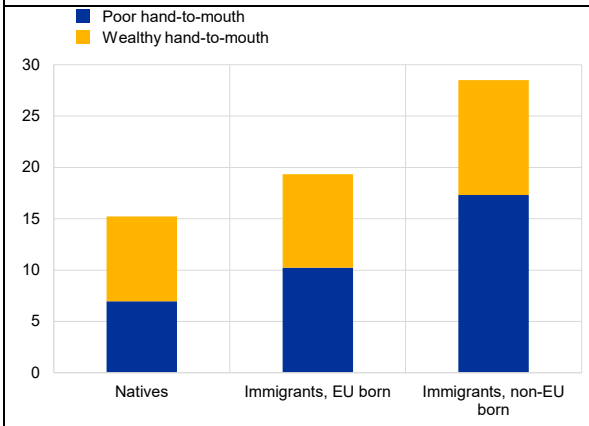
[13] Considering the gaps for people who arrived as children is also used in the literature to alleviate concerns related to the selection bias in our decompositions due to the fact that some of the adult immigrants endogenously chose their country of residence, and which may affect the share of the explained part of the gaps. This selection bias for some people who arrive as adults suggests that the above estimates of gaps are conservative.

Our data do not make possible for us to identify second-generation immigrants (people born in the current country of residence whose parents were born in a different country). Algan et al. (2010) compare labour market outcomes (earnings, labour force participation) of the first- and second-generation immigrants and find that the progress in closing the differences with respect to natives varies across countries. The UK has particularly large differences for the first generation but also much improved outcomes for the second generation. Evidence of progress in France and Germany is not so clear-cut. Individuals who moved into their current country of residence before or during their early teens are sometimes referred to as 1.5 generation immigrants, so Chart 6 is informative about how quickly the gaps reduce across generations.

hand-to-mouth.[14] While among natives 15% of households are constrained, for immigrants the share of constrained households is 18% and 29% for EU born and non-EU born, respectively. The difference is mainly driven by the share of poor hand-to-mouth households, which is for non-EU born households more than twice higher than for natives. These differences correspond to our previous finding that immigrants hold substantially lower amounts of liquid assets (Chart 2.d) and are less likely to be homeowners (Chart 3). EU born and in particular non-EU born immigrants thus tend to have less liquid assets available to smooth their spending than native households.[15]

Chart 8: Share of constrained (hand-to-mouth) households by country of birth

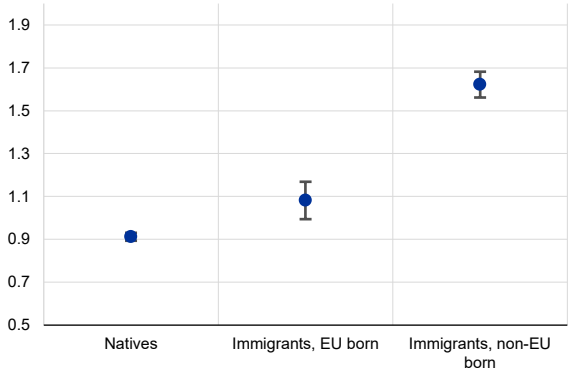
Percent



Sources: Household Finance and Consumption Survey 2017.

Notes: The chart shows the share of the two types of hand-to-mouth households for native households, households born in another EU country and those born in a country outside the EU. The estimates are based on an aggregate of France, Germany, Italy and Spain.

Chart 9: Sensitivity of individual employment to aggregate employment by country of birth



Sources: Labour Force Survey 2005-2019, quarterly data.

Notes: The chart shows the sensitivity of individual employment to aggregate employment for native households, households born in another EU country and those born in a country outside the EU. The estimates average to 1 and are based on an aggregate of France, Germany, Italy and Spain. The lines indicate the 95% confidence interval.

Employment of immigrants is particularly sensitive to the business cycle: they disproportionally lose during recessions, and strongly benefit from recoveries. Chart 9 shows the estimates of the sensitivity of employment of individuals to changes in aggregate employment ("worker betas"). For each of the three groups, the sensitivity is estimated by regressing individual

[14] We define constrained households following Kaplan, Violante and Weidner (2014). They are either poor hand-to-mouth or wealthy hand-to-mouth. Poor hand-to-mouth households are those with zero or negative illiquid wealth and net liquid assets close to zero, if positive, and close to the credit limit, if negative. Wealthy hand-to-mouth households have liquid assets defined in the same way, but also have positive holdings of net illiquid assets. By "close" we mean no more than half of their monthly disposable labour income away from zero or the credit limit.

[15] Ganong et al. (2020) document that black and Hispanic households in the U.S. hold less liquid assets and have substantially higher marginal propensities to consume than white households.

employment status on the aggregate employment rate. By construction, across all households the sensitivity averages to 1. A sensitivity higher than 1 indicates that incomes of that group of households react particularly strongly to aggregate shocks. Chart 9 indicates that the sensitivity among immigrants is substantially higher, amounting to 1.15 and 1.65 for EU born and non-EU born respectively, compared to 0.9 for natives.[16]

4 Conclusions

To our knowledge, this is the first paper that provides a comprehensive picture of differences between native and immigrant households for all main budget components. We document substantial differences in income, consumption and wealth between individuals born in their current country of residence (natives) and elsewhere (immigrants). Only about 30% of these differences can be explained by different demographics, the rest is due to unobservable factors (such as preferences, norms, beliefs, culture or discrimination). The gaps diminish slowly with the length of stay in the country of residence: gaps for people who arrived to their country of residence before the age 18 are still large, but about 60% lower than for people who arrived as adults.

In addition to having a direct impact on welfare of households, lower income, consumption and wealth also affect the transmission of economic policies to those households and the response of the economy to cyclical shocks. We document that people born abroad are much more likely to be constrained (i.e., they accumulate much less liquid assets) and their employment is particularly sensitive to the business cycle. Even if only descriptive, these facts suggest that consumption of immigrants is more volatile over the business cycle and can be particularly stimulated by lower interest rates or fiscal policy.

While our analysis documents that economic differences between natives and immigrants are substantial, better data are needed to uncover the underlying drivers. Although the Oaxaca–Blinder decompositions suggest a large contribution from unexplained factors, the available data do not allow us to disentangle the contributions from differences in preferences, cultural

[16] These estimates correspond to Aaronson et al. (2019), who estimate that in the U.S. the labor market experiences of less advantaged groups (as measured with unemployment rates) are more cyclically sensitive than the labor market experiences of more advantaged groups, and to Friedrich et al. (2021) with evidence for Sweden.

Chart 4 in online appendix presents a more detailed breakdown. Immigrants from new EU Member States, advanced economies (including North America, Australia, New Zealand and non-EU European countries), South America and in particular Africa have a higher employment sensitivity than natives, while those from EU-15, Near and Middle East and Asia have a lower sensitivity.

The results are not driven by seasonal workers because the Labour Force Survey does not include a disproportionate share of people who have lived in the current country of residence for less than one year.

factors, beliefs, and differences in economic opportunities. As it is well-known that discrimination is widespread in several–education, labour, housing–markets (cf. Bertrand and Mullainathan, 2004), better data are key to assess the role that different structural policies can play in reducing disparities across natives and immigrants. One particular aspect of inequality that in Europe is still under-researched and particularly relevant for future work are racial and ethnic disparities.

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