



The Financial Decisions of Immigrant and Native Households: Evidence from Italy

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Abstract

Using rich Italian data for the period 2006–2014, we analyze differences in financial behavior between natives and immigrants in a unified setting covering a wide set of outcomes and including a large set of covariates. We document sizeable gaps between native and immigrant households with respect to wealth holdings and financial decisions. Immigrant household heads hold less net wealth than native along the entire wealth distribution. Immigrant status reduces the likelihood of holding risky assets, housing, mortgages, businesses, and valuables, and it increases the likelihood of financial fragility. Standard regression results are corroborated by a propensity score matching strategy. Years since migration, country of origin, and the pattern of intermarriage also matter. The Great Recession has worsened the condition of immigrants in terms of wealth holdings, home ownership, and financial fragility.

Keywords Immigrants · Household finance · Wealth · Financial portfolios

JEL Classification F22 · G11 · D14 · E21 · J15

1 Introduction

In today's world the issue of increasing immigration has reached center stage on policy makers' agenda and is also widely analyzed in academia. There is a large literature on earnings and employment gaps, as well as on assimilation between natives and

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immigrants, and more recent studies on ethnic differences in well-being.¹ The literature on the nativity differences in wealth, and financial behavior more generally, is still thinner despite wealth holdings and portfolio allocation are important components of households' economic well-being. Since wealth tends to be distributed more unequally than income, any disadvantage in the asset position of immigrants is likely to exert a persistent influence across generations, with implications for the chances of immigrants to assimilate. Wealth accumulation is determined not only by saving behavior but also by the allocation of financial portfolios. A nativity gap in the latter can therefore exacerbate the above processes. The ability to own a house is another crucial vehicle towards integration, which in turn depends on the availability of credit. Relative to natives, immigrants may have a harder time to achieve access to credit through traditional channels, even though informal networks may alleviate this disadvantage. Cultural differences may play a role as important as that of economic differences in determining a gap in financial behavior of immigrants and natives. Accumulated wealth, together with the financial diversification to minimize risks, becomes even more important in times of recessions, when immigrants often find themselves in a more vulnerable position vis-à-vis natives, since they are more likely to lose their jobs.

In this paper, we investigate native-immigrant differences in financial behavior, in particular in wealth holdings and the allocation of assets, employing data for Italy over the period 2006–2014. To this aim, we use the Bank of Italy Survey of Household Income and Wealth (SHIW) dataset. Our rich dataset allows us to present a comprehensive picture of financial portfolios by incorporating a wide range of components, for instance informal debts, which are highly important when analyzing immigrants' wealth, but due to data limitations were omitted from previous studies. Moreover, our data include a large set of information specifically on immigrants, including their immigration histories, their countries of origin, and their patterns of intermarriage, which allows us to explore potential heterogeneities along these dimensions. Furthermore, our data allow us to control for risk aversion, which is usually unobserved and yet crucial for this type of analysis. Finally, due to the length of the time period covered by our data, we can study the effect on nativity gaps of a large financial shock, such as the Great Recession, to identify differences in the financial response with respect to wealth and asset holdings. While parts of this information have been employed by others, it has rarely been available in its entirety.

Thus, the main contribution of this paper is to jointly analyze all the dimensions that are potentially relevant to the analysis of nativity gaps in financial behavior, in a unified setting where we look at a wide set of outcomes, we use a large set of covariates including risk aversion, countries of origin, cohorts of arrival, and patterns of intermarriage, and we distinguish between the pre- and post-financial crisis period.

Italy represents a particularly suitable country to study these questions. First, it has recently turned from an emigration country into an immigration country and has faced significant immigrant inflows following EU Eastern enlargements and the unrests in

¹ The economic well-being and the social integration of the immigrant population is equally important from a society's perspective, especially in the face of the population aging phenomenon and related fiscal burdens (for a discussion on the interaction between aging and migration and a review of related studies see, e.g., Zaiceva and Zimmermann 2016).

Africa. With its share of foreign-born amounting to over 10% in 2019 (OECD 2020), it is now comparable to traditional immigration countries such as Denmark or the Netherlands, and is approaching the levels of Germany, the UK and the US. Second, immigration could rebalance the population age distribution for a country that—with an old age dependency ratio of 37 in 2020 (as reported by the World Bank)—is one of the most aged countries in the world, and is predicted to age even more rapidly in the future. Third, Italy has experienced a severe recession post 2008, with GDP growth falling by 6% in 2009 only, and with an unemployment rate jumping from 6.7% in 2008 to 12.9% in 2014. Fourth, due to the rigidities in the country's financial markets including, for instance, difficulties in obtaining a loan or a mortgage, the reliance on informal credit channels involving relatives, friends or the reference community may be even more relevant.

Our main results can be summarized as follows. With reference to wealth holdings, a quantile regression approach allows us to uncover evidence of a sizeable gap between natives and immigrants along the entire wealth distribution. The median net wealth of a foreign-born household head is €21,121 lower than that of a native. We capture financial asset allocation decisions using five main variables: the decision to invest in risky assets and the corresponding portfolio share, home ownership, holding a mortgage, and holding informal debts. We find a negative correlation between the immigrant status of the household head and each of these outcomes, with the only exception of informal debts. Moreover, immigrant status is negatively associated with the likelihood of investing in foreign assets, together with the corresponding portfolio share, and of owning businesses and valuables, while it is positively associated with the likelihood of being in a condition of financial fragility.

The above described results are obtained after controlling for year and macro-region fixed effects as well as a rich set of observable characteristics (demographic and labor market variables as well as household composition, income, and risk aversion), which should help to diminish the potential bias due to unobservables. To further address this issue, we also apply a propensity score matching strategy, in order to restrict the comparison to immigrant and native households sharing a broad set of characteristics. Reassuringly, the two estimation strategies present a broadly similar picture.

We proceed with the analysis by dissecting the results along several dimensions, for both wealth holdings and portfolio decisions. We find evidence that years spent in Italy, countries of origin, and patterns of intermarriage do matter, while an alternative definition of an immigrant as a non-citizen, rather than a foreign-born, does not affect our conclusions. Finally, we show that following the Great Recession of 2008 the financial status of immigrants has worsened in several dimensions.

The paper is organized as follows. Section 2 contains a literature review. Section 3 documents immigration trends in Italy. Section 4 describes the data. Section 5 presents our main results on the immigrant-native gap in wealth holdings and asset allocation. Section 6 presents propensity score matching results. Section 7 extends the baseline analysis to account for citizenship status, cohorts of arrival, countries of origin, the influence of spouses, and the effects of the financial crisis. Section 8 points to limitations to our results and Sect. 9 concludes.

2 Literature Review

Immigrants and immigrant households are likely to differ from natives with respect to their financial choices, including wealth and asset allocation, due to several reasons. Apart for differences in employment status and earnings, migrants' self-selection, selective immigration policies, different cultural norms and risk preferences, as well as access to benefits and to credit and financial markets, are all important channels. Indeed, existing studies document gaps in wealth, asset portfolios and their components between immigrants and natives in the US (Carroll et al. 1999; Borjas 2002; Osili and Paulson 2004; Cobb-Clark and Hildebrand 2006a, b; Bauer et al. 2011; Seto and Bogan 2013; Chatterjee and Zahirovic-Herbert 2014), Canada (Carroll et al. 1994; Shamsuddin and DeVoretz 1998; Zhang 2003), Germany (Sinning 2007; Bauer et al. 2011; Mathä et al. 2011), Australia (Cobb-Clark and Hildebrand 2009; Doiron and Guttmann 2009; Bauer et al. 2011; Islam et al. 2013), Luxembourg (Mathä et al. 2011), and Sweden (Haliassos et al. 2016).

Most studies find a negative wealth nativity gap, that is, immigrants tend to hold less wealth than natives. However, there is considerable heterogeneity between different immigrant groups and across arrival cohorts. For example, focusing on married households in the US, while *ceteris paribus* immigrants are generally found to have lower net worth relative to natives, wealth is found to be on average higher for immigrants from Europe and Asia, and significantly lower for those in the latest arrival cohorts, i.e., post-1985 (Cobb-Clark and Hildebrand 2006a; Bauer and Sinning 2011).² Moreover, there is a large variation by ethnicity. For example, relative to US white couples, Hispanic couples have significantly less wealth overall, but within Hispanic couples Mexican American have significantly more wealth, while Puerto Rican and foreign-born other Hispanic couples have less wealth (Cobb-Clark and Hildebrand 2006b, c). Using the 2010 Survey of Consumer Finances, Shin and Hanna (2015) document that black and Hispanic households are less likely to hold high return investments while Asian/Other households are not different from white households. Moreover, a decomposition analysis suggests that some of this gap is attributable to differences in characteristics and risk tolerance. Regarding speed of assimilation, Shamsuddin and DeVoretz (1998) report that immigrants who had been in Canada less than eight years hold a wealth level that was half that of the natives, but that this gap tend to disappear about 15 years after arrival. Using a matching approach, Ferrari (2020) confirms the presence of a nativity gap for wealth for older immigrants in Europe.

Regarding differences in asset portfolio allocation, relative to natives, immigrant households in the US allocate their wealth less to housing and real estate, business and vehicles equity but more to financial wealth (Cobb-Clark and Hildebrand 2006a), while in contrast immigrant households in Australia allocate more of their wealth to real estate and less to vehicles and financial assets (Cobb-Clark and Hildebrand 2009). However, there is a great diversity in portfolio choices among immigrants from different origin and across migration cohorts, with more recent immigrants holding

² Bauer and Sinning (2011) find an insignificant overall effect for couple-headed immigrant households in the US. However, the data were drawn from the 2001 SIPP cross section only (while in the above study the authors employ the 1987, 1990, 1991, 1992, 1993 and 1996 SIPP waves), the effect was estimated for the median, and the estimation method was different.

less real estate equity and more financial wealth both in Australia and the US (Cobb-Clark and Hildebrand 2006a, 2009). Immigrant households in the US are also less likely than natives to own financial assets such as stocks, mutual funds, bonds, or other fixed income securities. However, again, considerable heterogeneity is found across countries of origin and arrival cohorts, with immigrants from, e.g., Eastern Europe and Hong Kong having rates of asset holding that are even higher than natives (Seto and Bogan 2013).

Previous literature also suggests that much of the wealth and financial market participation gaps is due to education, demographic composition, geographic location and sometimes income of households in the US, but not in Australia, and mainly due to education in Germany (Bauer et al. 2011; Cobb-Clark and Hildebrand 2006a; Osili and Paulson 2004; Sinning 2007). Interestingly, the wealth gap between natives and immigrants is found to be larger than the home equity gap, suggesting that immigrants may prefer real assets to financial assets (Osili and Paulson 2008; Cobb-Clark and Hildebrand 2009).

Cultural norms may also matter. Carroll et al. (1994, 1999) investigate the role of culture of the origin country on immigrants' saving behavior and find that while in Canada savings are not significantly different across origin, in the US there are statistically significant differences in immigrants' saving behavior by country of origin. However, the authors cannot reconcile the direction of this effect with the one in the countries of origin as, for example, immigrants from countries with high saving rates (such as Asian) do not save more than other immigrants. Immigrants in the US from countries with more effective institutions are also found to participate more in formal financial markets, suggesting that a country's institutional environment shapes beliefs (Osili and Paulson 2008). For Sweden, Haliassos et al. (2016) uncover differences across cultural groups within the immigrant population in how holdings of stock, debt and housing relate to household characteristics, and show that differences diminish with exposure to host country institutions. Huber and Schmidt (2019) isolate the effect of cultural preferences regarding home ownership for immigrants in the US. Finally, social interactions and social capital are important, as immigrant participation in financial markets (i.e., the likelihood of having savings and interest-bearing checking accounts) decreases with higher levels of ethnic concentration (Osili and Paulson 2004).

A study examining the differential impact of the Great Recession on wealth of immigrant and native households is particularly relevant for our study: Amuedo-Dorantes and Pozo (2015) investigate the impact of the 2008–2009 crisis on wealth, asset ownership and retirement plans of older households (aged 50 and above) in the US employing the 2006 and 2010 waves of the Health and Retirement Study. They find that immigrant households in the middle and top wealth quartiles prior to the crisis experienced larger wealth losses mainly due to losses in housing ownership and housing values. In addition, both native and immigrant households delayed their planned retirement. The authors, however, analyze only households aged 50 and older and do not account for migration histories.³

³ Gassoumis (2012) examines the impact of the crisis by age, race and ethnicity in the US and finds that older Hispanic households experienced the largest wealth losses, attributable to the reduction in housing

To sum up, each of the existing studies on nativity gaps in wealth and asset holdings carries out the analysis along a subset of the relevant dimensions. Some, for instance, restrict attention to either wealth or financial portfolio choices, or on either countries of origin or cohorts of arrival, or they address unobserved heterogeneity either by controlling for risk aversion or by implementing a matching technique. To the best of our knowledge, no one has ever included all the relevant dimensions in a single, coherent setting. Thus, with this study, we aim to fill this gap, by jointly analyzing wealth holdings and a wide variety of financial portfolio choices, and by dissecting the results by country of origin and cohort of arrival. We address unobserved heterogeneity both by controlling for risk aversion and by applying a propensity score matching estimator. Furthermore, we also shed some light on the impact of the financial crisis. Lastly, we contribute to the literature by focusing on Italy, a country that has experienced a recent bounce in immigration rate reaching figures comparable to those of traditional immigration countries such as Denmark or the Netherlands. The only other contributions dealing with Italian data, both based on the 2008 wave of the Survey of Household Income and Wealth, are Mathä et al. (2011), who compare the nativity wealth gap in Germany, Luxembourg and Italy and find a sizeable nativity wealth gap in all three countries, and Abdul-Razzak et al. (2015), who compare Italy with the US, to find higher financial participation in Italy. Both contributions, however, are not able—as we do—to extend the analysis to other years, to distinguish among the components of wealth, and to account for risk aversion, source countries, and intermarriages.

3 Immigration in Italy

A rapid increase in immigration flows in recent years represents a common tendency in European countries. Within this broader picture, Italy has experienced particularly fast dynamics, with an almost threefold increase in the stock of foreign-born legal residents during the past fifteen years or so. According to the OECD (2020), in 2019 the foreign-born population in Italy was around 6.3 million, corresponding to over 10% of the population (see Fig. 1).⁴ While between 2008 and 2015 the share has remained relatively stable, in 2001 (not depicted in the figure due to gaps in data availability) the corresponding share was less than 4%.

In Fig. 2 we show inflows of non-nationals, from 2000 until 2019. In 2019 the inflows consisted of about 261,000 units, with a huge decline with respect to the double figure of 2007, the peak year.⁵ Before 2007, immigration had been substantially increasing

Footnote 3 Continued

value. Wolff (2013) documents increased racial and ethnic gap in wealth in the US due to the recession. Related to this, Osili and Paulson (2014) show that financial crises have a significant detrimental effect on investors' confidence by studying immigrants in the US. They find that immigrants who have experienced a banking crisis in their country of origin are significantly less likely to have bank accounts in the US, and the effect is robust to controlling for home country characteristics. On the higher vulnerability of immigrants with respect to job losses in times of crisis, see e.g. Bratsberg et al. (2018).

⁴ See OECD (2020), available at <https://www.oecd-ilibrary.org/sites/ec98f531-en/index.html?itemId=/content/publication/ec98f531-en>.

⁵ See the OECD International Migration Database, available at <https://stats.oecd.org/Index.aspx?DataSetCode=MIG>

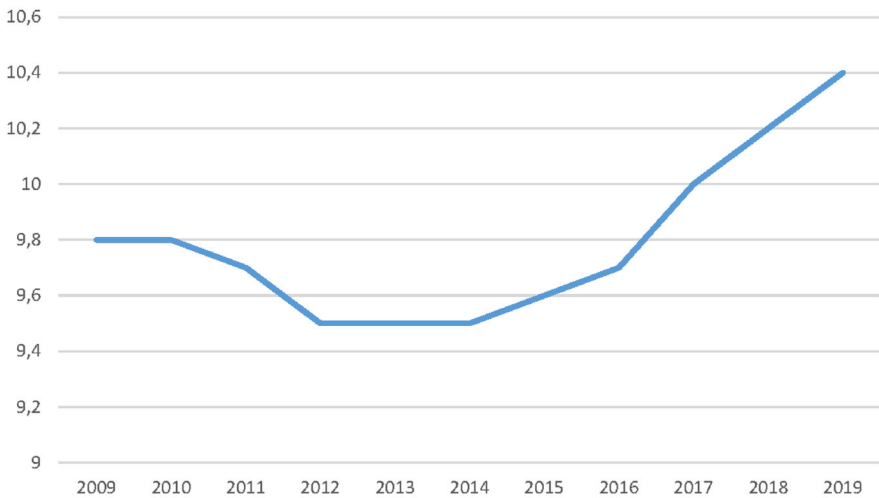


Fig. 1 Share of foreign-born over total population, Italy, 2008–2019 . Source: OECD

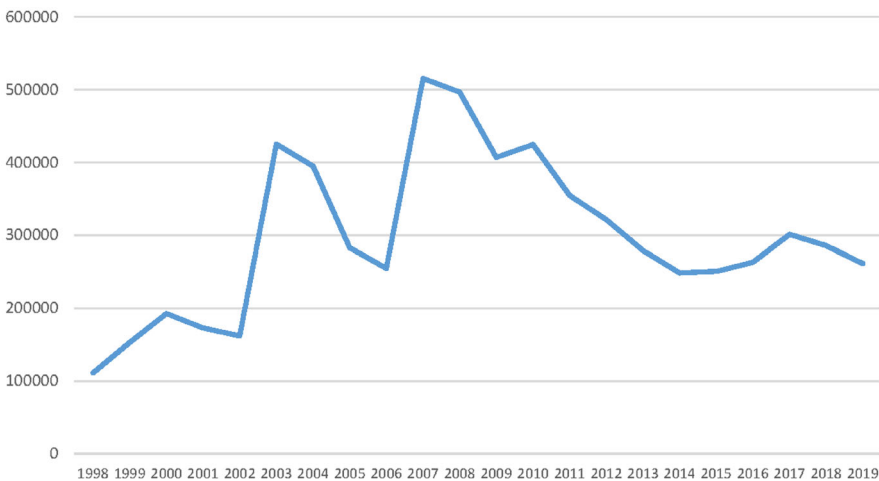


Fig. 2 Inflows of Foreign population, Italy, 1998–2019 . Source: OECD

since the 1980s, initially in the form of managed labor migration (often recognized de jure only after it had de facto occurred), and subsequently as family migration.⁶ The financial crisis exerted a large impact on migration flows to Italy, with a substantial reduction both of labor and family migration starting after 2008. Migration flows resumed partially because of an explosion of humanitarian migration in 2015, and remained relatively stable in the past few years.

Table 1 presents summary statistics for the foreign-born population in Italy, taken from the OECD Database on Immigrants in OECD and non-OECD Countries

⁶ Policy reforms include the labor quotas legislation of 2002 (Bossi-Fini), the family reunification legislation of 2008, and a series of amnesties.

Table 1 Foreign-born population, descriptive statistics, Italy, 2011

Variable	Obs	Mean	Std. dev.	Min	Max
Age	28,873	44.536	16.870	20	80
Male	28,873	0.475	0.499	0	1
Low education	28,873	0.165	0.371	0	1
Medium education	28,873	0.449	0.497	0	1
High education	28,873	0.385	0.487	0	1
Year since migration	6231	12.367	11.182	0.5	30
Unemployed	8282	0.248	0.432	0	1
Area of origin					
Africa	28,873	0.262	0.439	0	1
Asia and Oceania	28,873	0.232	0.423	0	1
Europe and North America	28,873	0.344	0.475	0	1
South and Central America	28,873	0.162	0.368	0	1

Source: OECD DIOC

(DIOC).⁷ We report data about the working-age (i.e., above age 15) foreign-born population.⁸ Average age is 44.5, 47.5% are males, the vast majority hold at least a medium level of education (within the Italian school system, this is equivalent to secondary school, which is usually completed at age 19). Information on the duration of stay (over 12 years since migration, on average) and unemployment (24.8% of the sample) is only available for a subset of observations. Lastly, the most represented area of origin is Europe and North America, followed by Africa and by Asia and Oceania, with South and Central America representing the place of birth for a minority.

Figure 3 in Panel A shows the geographic distribution of the share of resident foreign-born over resident population (in percentage points), by region, in 2020.⁹ The largest share is in Emilia Romagna (in the North East of the country), followed by Lombardy (in the North West) and other regions in Central Italy.

4 Data

Our dataset draws from the Bank of Italy Survey of Household Income and Wealth, which has been surveying household financial decisions since 1982.¹⁰ However, information about the immigrant status of the respondents, as well as years since migration

⁷ See <https://www.oecd.org/els/mig/dioc.htm>. The latest complete wave refers to 2010–2011. Data for Italy are for 2011.

⁸ The age variable is provided by age brackets, starting from 15 to 24. To compute a weighted average we take the middle of each age interval and for the last interval (65+) we take age 80. Similarly, we compute the average years since migration, taking 30 for the last (21+) interval.

⁹ The source is ISTAT, see <http://dati.istat.it/>.

¹⁰ See <https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese>.

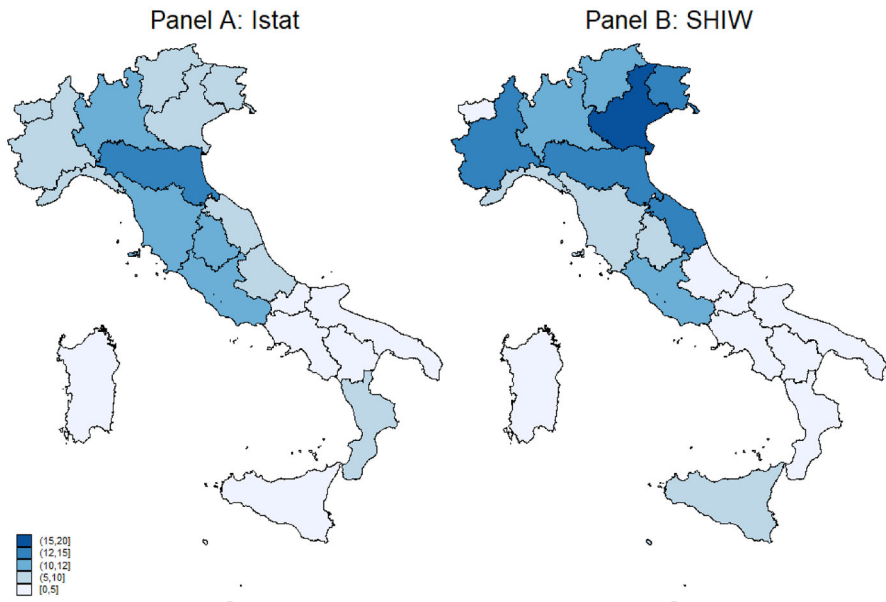


Fig. 3 Share of foreign-born over total population, Italy, by Region . Source: ISTAT (2020) for A, SHIW (2014) for B

and countries of origin, is only available since 2006.¹¹ We can therefore comprise five waves, up until 2014 (that is, 2006, 2008, 2010, 2012, and 2014), each including about 8000 households.¹²

The SHIW basic sample unit is the household, defined as “a group of cohabiting people who, regardless for their relationships, satisfy their needs by pooling all or part of their incomes”. The head of the household is identified as the person who is responsible for the financial and economic choices of the household, as declared by the survey respondents.¹³ For each household, the SHIW provides plenty of demographic information, of which we use the number of household members and, for the household head, age, gender, marital status, education, and employment status. In our sample period, information about risk aversion is also available, as the response to a subjective question in which the respondent is asked to indicate the characteristics of his/her preferred financial investments.¹⁴ On the basis of this information, we construct the

¹¹ Information on immigrant status alone is available since 1998. A distinction between temporary and permanent status is not provided.

¹² The SHIW is organized as a rotating panel, since within each wave half of the sample is refreshed with new, i.e., non-panel, households. This implies that the number of immigrant households we could follow all along the sample period 2006–2014 is very limited (only 30).

¹³ In contrast with household surveys for other countries, where the household head is defined on the basis of different attributes (e.g., highest income, or male gender), a useful feature of the Italian survey is that, by introducing the “declared” definition, it also provides specific information relative to the person making financial decisions, independently of her/him being, for instance, the main income earner.

¹⁴ In addition to financial risks, migrants are of course bearing other forms of risks. Bonin et al. (2009) show that in Germany first-generation migrants have lower risk attitudes than natives, while

dummy variable Risk Aversion, that takes value 1 if the respondent answers with the most risk-averse choice (i.e., he/she is willing to take no risk and receive low returns), 0 otherwise.¹⁵

Beside demographic information, the SHIW also provides economic and financial information about the households, including income, net wealth, as well as the amounts invested in a variety of assets.¹⁶ The survey collects information on financial portfolios at the household level, not at the individual one, and attributes financial decisions to the “declared” head of the household, as defined above.

In the following analysis, first we investigate the determinants of net wealth, defined as the sum of the household’s real and financial assets, net of liabilities.¹⁷ Next, we focus on the following five main financial decisions: (i) holding risky assets, defined as a dummy which takes value 1 if the household holds risky assets (whereby risky assets are defined as in Bertocchi et al. 2011); (ii) share of risky assets, defined by a continuous variable ranging between 0 and 1 and representing the share of financial assets held in risky ones; (iii) home ownership, defined by a dummy which takes value 1 if the household owns its primary residence in Italy; (iv) holding mortgage, defined by a dummy which takes value 1 if the household has mortgages; and (v) holding informal debts, defined by a dummy which takes value 1 if the household has debts with relatives or friends.¹⁸ We also investigate the determinants of the potential financially fragile status for the household and, using the definition proposed by Brunetti et al. (2016), we define a financial fragility dummy which takes value 1 if the household is able to afford expected expenses but does not have a sufficient liquidity buffer to face unexpected ones, and 0 otherwise.

In order to investigate the nativity gap along the above dimensions, our variable of interest is a dummy capturing the (legal) immigrant status of the household head: namely, a household head is defined as an immigrant when he/she is foreign-born.¹⁹ In

Footnote 14 Continued

Jaeger et al. (2010) find that individuals who are more willing to take risks are more likely to migrate between labor markets.

¹⁵ The survey question, which is associated with four possible answers, is stated as follows. “In managing your financial investments, would you say you have a preference for investments that offer: very high returns, but with a high risk of losing part of the capital; or a good return, but also a fair degree of protection for the invested capital; or a fair return, with a good degree of protection for the invested capital; or low returns, with no risk of losing the invested capital.” We also define an alternative measure based on a set of four binary variables, each capturing whether the preferred risk profile of financial investments is respectively associated with the following: high risk, high returns; reasonable risk, good returns; low risk, reasonable returns; or no risk, low returns.

¹⁶ In all the analysis, monetary amounts are expressed in Euro at 2010 constant prices.

¹⁷ We also separately consider the two most relevant wealth components, namely, housing and other real estate and valuables. Taken together, they represent about 78% of net wealth (namely, 99% for immigrants against 76% for natives).

¹⁸ Other financial decisions that we shall consider are holding foreign assets, defined as a dummy which takes value 1 if the household holds foreign assets; share of foreign assets, defined by a continuous variable ranging between 0 and 1 and representing the share of financial assets held in foreign ones; owning a business, defined as a dummy which takes value 1 if the household holds a business; and owning valuables, defined analogously. To be noticed that, under Italian law, both natives and foreign-born are allowed to hold foreign assets.

¹⁹ Naturalized household heads born abroad are therefore classified as immigrants, while second-generation immigrants are not classified as immigrants since they were born in Italy.

addition to immigrant status, we also exploit information about years since migration, which we include as a control in all our specifications (after having set it equal to 0 for natives). Moreover, for each immigrant household head, the survey asks his/her country of origin. However, for privacy reasons, data on country of origin are not available for external users and were thus provided for this research, and limitedly to the 2006–2012 sample period, only at the aggregated level for the following, not overlapping, seven groups of countries: EU15 and North America, New EU, Other Europe, North Africa, Sub-Saharan Africa, Central and South America, Asia and Oceania, as described in Table 17 in the Appendix.

To further investigate how the household head's decisions are influenced by the status of his/her partner, we focus on the sub-sample of households including a couple (either married, or in an informal relationship). Over this sub-sample, we investigate issues related to intermarriage, in particular whether the nativity gap in financial decisions differs in couples where both partners are immigrant if compared to those where a native is married to an immigrant. To this end, we define four dummy variables: Both Natives, which takes value 1 if both the head and the spouse are natives; Mixed with Immigrant Head, which takes value 1 if the only immigrant within the couple is the household head; Mixed with Immigrant Spouse, which takes value 1 if the only immigrant within the couple is the spouse; and Both Immigrants, which takes value 1 if both the household head and the spouse are immigrants.

Table 17 in the Appendix provides a more detailed description of all the data and variables we use. Table 18 presents summary statistics, separately for households with an immigrant and a native head, as well as *t* statistics for differences in mean.²⁰ The sample contains 38,665 observations, of which 1837 (5%) have an immigrant, i.e., foreign-born, household head.²¹ For most outcomes of interest, immigrant households display substantially different mean values if compared to the natives. Mean net wealth is only €45,704 against €256,449, with significant gaps for each component. Moreover, on average, fewer immigrants own risky assets (1.4% against 11.6%) and they choose them in lower shares (0.9% against 6.1%). A smaller share of the immigrants owns a house (19.4% against 72.7%), with a smaller but still significant gap for mortgages (10.9% against 11.3%). More are indebted with friends and relatives (7.4% against 2.7%) and fewer hold businesses (6.3% against 13.8%) and valuables (60.5% against 88.3%). The proportion of financially fragile households is larger for immigrants (10% against 8.8%), albeit not significantly so statistically.

Turning to the covariates, in terms of demographic characteristics, immigrant households are more likely than native ones to be headed by a male, albeit the difference is not statistically significant, while immigrant heads are much younger than native (41-year-old against 57). The proportion of household heads who are married (or in a stable union) is similar among immigrants and natives. The number of household members is slightly higher for immigrants. While the share of household heads holding a high level of education is similar among immigrants and natives, their education profile differs significantly at the lower bound, since 7.7% of the immigrants hold a low level of education against 27.5% of the natives, while 81.1% of the immigrants

²⁰ Summary statistics are computed using sampling weights provided by the SHIW.

²¹ The share of households with a foreign-born head increases from 2.4% in 2006 to 6.5% in 2014.

hold a medium level against 61% of the natives. Labor market characteristics reveal that 77% of immigrant household heads are employees against 36.1% of the natives, while 7.7% against 3.3% are unemployed, and 3.1% against 42.17% are retired, in line with the remarkably different age profile of natives and immigrants. Mean annual disposable income is lower for immigrants (€13,497 against €22,703).²² Immigrant heads are financially more risk averse than natives. On average, immigrant heads have been in Italy for almost 14 years. The North East attracts the largest share (37.7%), followed by the North West and the Center. 54% of the immigrant households come from Europe and North America, with Other Europe being the most represented area.

A direct comparison between the foreign-born in the SHIW and in the population is not straightforward, for a number of reasons. First of all, the characteristics reported by the SHIW cover a much larger set of information than, for instance, the OECD DIOC data used for Table 1 in Sect. 3 but, at the same time, the former refer to immigrant household heads while the latter refer to the entire working-age immigrant population. It should also be kept in mind that the summary statistics from the SHIW in Table 18 are computed using sampling weights and that no stratification in terms of immigrant households is present. Lastly, the classification by country of origin at our disposal does not exactly match the one in Table 1. This can explain why, for instance, male foreign-born are more represented in the SHIW sample, while the proportion of unemployed is lower. If we re-assign countries of origin from the SHIW to mimic the aggregation in DIOC, in the SHIW we observe an even larger share (54.1%) from Europe and North America, a very similar share (25.4%) from Africa, and lower shares for Asia and Oceania (13.4%) and Central and South America (7.1%). Figure 3 provides a comparison between the regional distribution of the shares of foreign-born population (Panel A, based on 2020 ISTAT data) and foreign-born household heads (Panel B, based on the 2014 SHIW sample). The emerging differences are attenuated in the empirical analysis where we refer to macro-regions, with both panels documenting that the North East, North West and Center attract more immigrants than the South.

5 The Immigrant-Native Gap: Main Results

In this section, we investigate how the immigrant status of the household head correlates with wealth accumulation and portfolio decisions.

5.1 Net Wealth

In order to assess how net wealth holdings are associated with immigrant status, we estimate over pooled data the following quantile regression model of household net wealth, W_h . This approach accounts for both the observed skewness in wealth distribution and the presence of zero or negative wealth levels.²³ It also offers the

²² Income is net of tax, therefore it can take negative values when the household represents an individual firm. Negative values are reported in 73 cases in 2006-2014.

²³ To account for skewness, a variable is often entered in terms of logarithmic terms, but a logarithmic transformation is not appropriate for variables with zero or negative values, as is the case for net wealth.

Table 2 Net Wealth, 2006-2014

	10th Q	25th Q	50th Q	75th Q	90th Q	OLS
Immigrant	-3.3848*** (1.276)	-3.3716 (2.929)	-21.1210*** (3.987)	-35.2221*** (4.894)	-33.0172** (13.147)	-24.8157 (16.787)
Years since migration	-0.1614** (0.074)	-0.6741*** (0.154)	-0.3882 (0.237)	0.0034 (0.213)	-0.5264 (0.530)	-0.1262 (1.319)
Constant	-23.5946*** (2.791)	-90.8075*** (5.877)	-100.1557*** (12.074)	-57.3730*** (12.729)	-18.3720 (33.100)	-287.8848*** (32.997)
N	38,665					

The table reports coefficients from quantile regressions and, in the last column, from an OLS regression. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, and year and macro-region fixed effects *Significant at 10%; **significant at 5%; ***significant at 1%

advantage of analyzing the nativity gap along the entire distribution of wealth rather than only for its mean. The model can be written as follows:

$$W_{ht}^q = \kappa^q + \beta^q I_h + X_{ht} \delta^q + \tau + \rho + e_{ht}^q \tag{1}$$

where h denotes the household, t denotes the year, and q denotes a specific quantile of the wealth distribution. Constant terms are captured by κ^q . I_h is a dummy variable capturing the immigrant status of the head of household h , X_{ht} is a vector of households and household heads' characteristics, including family size, income quartile dummies defined with reference to the whole population and, with reference to the household head, gender, age in linear and quadratic terms, education, labor force status, risk aversion, and years since migration. τ and ρ are year and macro-region fixed effects, respectively, and e_{ht}^q is the error term. Including such a rich set of controls as well as a specific proxy for risk aversion helps in containing the bias induced by potential unobserved heterogeneity between natives and immigrants due to, e.g., ability or motivation.

In Table 2 we present estimates of model (1) for the 10th, 25th, 50th, 75th, and 90th quantiles. Our variable of interest is Immigrant, a dummy variable that captures the immigrant status of the household head and shows negative coefficients at all quantiles (despite statistically insignificant at the 25th quantile), signalling a weaker position of immigrant households along the entire wealth distribution.²⁴ In particular, the median

²⁴ Since our focus is on the link between wealth and immigrant status, Table 2 only reports the corresponding coefficient, as well as the coefficient on years since migration and the constant. However, in Table 19 we reproduce the same regressions in Table 2 showing all covariates. It is instructive to report that, for instance, wealth is lower for males and higher for married household heads, varies non-linearly with age, increases with education and income, and decreases with risk aversion. An alternative specification including the more granular measure of risk aversion, omitting the category corresponding to the lowest level of risk aversion, yields similar results which we do not report for brevity. Since only less than 1% of the household

net wealth of immigrant household heads is estimated to be €21,121 lower than the median net wealth of natives. Thus, immigrant household heads are accumulating less than natives.²⁵ Years since migration, which can help in spotting the speed of a potential assimilation process and in proxying for differences in behavior between temporary and permanent migrants, exhibit negative and significant coefficients only at the lower end of the distribution. This suggests that, among migrants belonging to these quantiles, those who have migrated earlier are actually in a worse position. For the sake of comparison, the last column of Table 2 also reports the coefficient of a standard linear OLS regression for wealth, where the Immigrant dummy shows a negative, although not significant, coefficient, confirming that our approach based on quantile regressions is indeed more informative.²⁶

Our results are consistent with those previously found by Mathä et al. (2011) on the basis of the 2008 wave of the SHIW. In particular, they show for Italy a significant wealth gap, albeit only at and above the median. Our results are also broadly consistent with those found for other countries. For instance, for Germany, Sinning (2007) shows for the year 2002 that immigrants hold significantly less net worth than natives. Similarly, Cobb-Clark and Hildebrand (2006a) show that foreign-born households are less wealthy than US-born households and that the gap becomes larger as one moves up the wealth distribution. Regarding immigration histories, however, they find that the year of immigration is unrelated to wealth positions.²⁷

In order to understand the drivers of the gaps between immigrants and natives that we uncovered, we interact the immigrant dummy with some of the individual characteristics we entered among the controls. In each set of quantile regressions, the immigrant dummy is interacted with a single covariate of interest. In Table 3, where we report only the coefficient of the interaction and those of the linear terms, we show results for gender, marital status, education, employment status, and risk aversion. We detect a negative impact of being an immigrant male, except for the highest quantile, while being married and holding a high level of education exhibit a significantly negative interaction coefficient at all quantiles. The latter result can be explained by the fact that highly-educated migrants are more likely to be poorer than natives with a similar education level. In other words, the immigrant-native gap is larger for the highly-educated, while differences are smaller for household heads with lower education. This is not surprising given that for immigrants it is generally harder

Footnote 24 Continued

heads in the sample belong to such category, we prefer to keep the single-dummy measure for the remaining of the analysis.

²⁵ A specification where we only control for immigrant status yields negative coefficients that tend to be more significant and larger in size especially for the higher quantiles.

²⁶ The quantile regressions shown in Table 2 are standard conditional quantile regressions (Koenker and Bassett 1978). Excluding the covariates they produce negative and significant effects throughout the whole distribution.

²⁷ In Table 20 we also present estimates for the two most important components of wealth. For Housing and Other Real Estate, immigrants are holding less than natives, but significantly so only above the median. At the median, the gap is now even larger at €33,510. These results are consistent with those found by Cobb-Clark and Hildebrand (2006a) for the US and Sinning (2007) for Germany. For Valuables, instead, a gap for immigrants is present along the entire distribution, even though its size is relatively modest (only €643 at the median).

Table 3 Net wealth, interactions, 2006–2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Immigrant	0.5045 (2.065)	5.2644* (3.100)	-15.1372*** (4.295)	-30.4451*** (4.864)	-30.6043*** (10.575)
Male	-2.7820*** (0.540)	-11.2641*** (1.425)	-23.6312*** (2.431)	-26.1809*** (3.050)	-14.9552** (6.011)
Immigrant * Male	-6.7858** (2.642)	-17.1425*** (3.068)	-13.1221** (5.098)	-7.8740* (4.597)	-6.5774 (15.004)
Immigrant	3.8251*** (1.439)	18.5001*** (1.683)	4.6158 (3.778)	-0.8044 (4.657)	-0.7170 (6.729)
Couple	7.1542*** (0.731)	29.9797*** (1.581)	44.9379*** (2.830)	48.7735*** (3.563)	56.8089*** (5.258)
Immigrant * couple	-12.1076*** (1.691)	-39.5459*** (2.767)	-56.6410*** (4.072)	-72.5641*** (5.081)	-95.1483*** (10.133)
Immigrant	3.6401* (2.018)	15.0597*** (4.570)	-10.9165** (5.400)	-7.8805 (23.916)	28.7740 (21.293)
Medium edu.	3.0139*** (0.586)	13.9936*** (2.056)	22.8822*** (2.786)	32.3186*** (3.667)	61.0575*** (6.901)
High edu.	5.9625*** (1.864)	31.0617*** (5.014)	63.2585*** (6.550)	111.8312*** (14.085)	230.0109*** (29.281)
Immigrant * medium edu.	-6.1220*** (1.850)	-17.6100*** (3.788)	-7.0419 (4.600)	-23.3147 (23.127)	-65.3044*** (18.269)
Immigrant * high edu.	-15.2083* (8.791)	-50.9382*** (6.275)	-67.0969*** (8.263)	-86.3224*** (33.204)	-206.0264*** (36.955)
Immigrant	-3.6288*** (1.397)	-7.8310 (5.297)	-65.0316*** (8.400)	-92.8711*** (13.329)	-144.8913*** (21.577)
Employee	-9.9890*** (1.179)	-45.0781*** (2.121)	-97.2301*** (4.338)	-132.3514*** (5.452)	-185.9809*** (10.828)
Self-employed	2.9447** (1.441)	1.2204* (3.890)	-1.1472 (7.728)	45.0480*** (13.330)	172.7982*** (37.603)
Retired	-0.4552 (0.608)	-1.5272 (2.887)	-36.7886*** (4.678)	-59.6743*** (6.106)	-89.0712*** (11.886)
Immigrant * employee	1.8500 (1.676)	8.1940* (4.301)	51.0530*** (8.013)	64.0943*** (11.656)	115.5548*** (19.418)
Immigrant * self-employed	-21.2305*** (3.430)	-39.0399*** (5.979)	-17.7494 (12.946)	-69.9236*** (19.301)	-184.0978*** (45.705)
Immigrant * retired	-0.9628 (21.089)	6.2197 (24.114)	45.3498*** (16.144)	84.9389** (29.593)	166.3221 (164.512)
Immigrant	-4.6216** (2.113)	-8.2277** (2.475)	-38.2253*** (4.751)	-49.7825*** (10.255)	-59.6350*** (9.809)

Table 3 continued

	10th Q	25th Q	50th Q	75th Q	90th Q
Risk averse	-1.4305*** (0.374)	-8.3397*** (1.486)	-20.2783*** (2.350)	-27.0490*** (3.068)	-36.8431*** (5.806)
Immigrant * risk averse	1.9816 (2.937)	6.9848*** (2.617)	22.7492*** (3.970)	18.0552* (9.767)	36.3633*** (10.452)
N	38,665				

The table reports quantile regressions coefficients of the interactions between the immigrant dummy and each covariate of interest. In each set of quantile regressions, the immigrant dummy is interacted with a single covariate of interest. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include, besides the immigrant dummy: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

to obtain a recognition of a given education level. Heterogeneous effects also emerge by employment status with employees, relative to unemployed, performing better at all quantiles but the lowest, while self-employment emerges as a driver of lower wealth for immigrants at higher and lower quantiles but not at the median. Lastly, relatively more risk averse immigrants are better off along the entire wealth distribution apart from the lowest quantile, despite the low magnitude of the effect.

5.2 Asset Holdings

In this sub-section we explore the relationship between the immigrant status of the household head and his/her financial decisions along five main dimensions, namely: holding risky assets, share of risky assets, home ownership, holding mortgage, and holding informal debts. For each household portfolio decision D , we estimate the following model:

$$D_{ht} = \kappa + \beta I_h + X_{ht}\delta + \tau + \rho + e_{ht} \quad (2)$$

where D_{ht} represents the decision of interest for household h at time t while the regressors are defined as in model (1), with wealth quartiles (again defined with reference to the whole population) added among the controls. We estimate model (2) over pooled data using probit or OLS regressions when the dependent variable is binary or continuous, respectively. For probit, tables report marginal effects.

Results are presented in Table 4. For each portfolio decision, a negative correlation emerges between immigrant status and the dependent variable of interest, with the only exception of holdings of informal debts, which display a very small and insignificant coefficient most likely due to the extremely limited number of households holding informal debts among the immigrants (only 136). In terms of magnitudes, for the decision of holding risky assets after controlling for all covariates we find that immigrants are on average 9.33 percentage points less likely to hold risky assets (with an

Table 4 Asset holdings, 2006–2014

	Holding risky assets	Share risky assets of	Home ownership	Holding mortgage	Holding informal debts
Immigrant	−0.0933*** (0.006)	−0.0205*** (0.005)	−0.0970*** (0.026)	−0.0346*** (0.011)	0.0128 (0.008)
Years since migration	0.0027*** (0.001)	0.0002 (0.000)	0.0025*** (0.001)	0.0019*** (0.001)	−0.0003 (0.000)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, and year and macro-region fixed effects. For the OLS regression for share of risky assets, the coefficient of the constant is equal to -0.0356 , with standard error equal to 0.0152

*Significant at 10%; **significant at 5%; ***significant at 1%

overall gap of 1.02 percentage points given the sample mean of 10.94%).²⁸ The variable capturing years since migration shows a positive sign for all decisions, with the exception of the share of risky assets and informal debt holdings, for which it is not significant. This points to occurrence of assimilation, which tends to reduce the gaps as immigrants get settled.²⁹

In comparison with the literature, our results are consistent with those by Cobb-Clark and Hildebrand (2006a) and Borjas (2002), who also find that asset ownership rates, including housing, are relatively lower within the immigrant US population. For them, the timing of the migration decision matters, with more established immigrants holding significantly less and recent immigrants holding significantly more financial wealth, while an opposite pattern emerges with respect to real estate equity, possibly because of a migration cohort effect. Again for immigrants in the US, Chatterjee and Zahirovic-Herbert (2014) show that the probability of owning financial assets increases with risk tolerance. For Germany, Sinning (2007) shows that the migrants' degree of portfolio diversification is significantly lower than that of comparable natives.

To shed some light on the possible drivers of the observed gaps again we interact the immigrant dummy with gender, marital status, education, labor status, and risk aversion (in a set of regressions where interactions are entered one by one, as we did for wealth). Table 5 shows that male immigrants are relatively less likely than

²⁸ In Table 21 we reproduce the same regressions in Table 4 showing all covariates and revealing, for instance, that males are more prone to hold risky assets and informal debt, while married hold more mortgages and less informal debt. Risk aversion exerts a negative effect on all decisions except home ownership and mortgages. (Unreported) results based on the more granular measure of risk aversion yield consistent conclusions. For a discussion of the overall determinants of household portfolios in Italy we refer to Guiso and Jappelli (2002).

²⁹ In Table 22 we report results for additional decisions and financial fragility, showing all covariates. Immigrant status is negatively associated with holdings of foreign assets and the corresponding share, as well as owning a business and valuables, while being an immigrant is associated to a higher probability of being financially fragile.

female to hold risky assets, that they hold smaller shares of the latter and that they are more likely to be indebted with relatives and friends. Furthermore, education matters for holding risky assets, indicating that it is among the more educated that such holdings and the corresponding shares are lower for immigrants, a result which comes from the fact that at lower levels of education both natives and immigrants alike tend to avoid this kind of assets. Being employed (either as an employee or self-employed, where the omitted dummy is for unemployed) increases the likelihood that an immigrant heads holds risky assets. Lastly, being risk averse also matters for most decisions. In particular, the regression for holding risky assets shows a positive sign for the coefficient on the interaction, which suggests that the negative impact of risk aversion on this type of decision is attenuated for immigrants relative to natives. In other words, for a given level of risk aversion immigrants are more prone than natives to invest in risky assets. The differential intensity in the responsiveness of migrants to risk tolerance is consistent with the inherently risky migration decision they made in the first place.³⁰

6 A Matching Strategy

A potential issue with the results presented so far is that the possible unobserved heterogeneity between immigrants and natives is not controlled for in the baseline regressions and might induce a bias in the estimates. To reduce such bias we apply a matching estimator, with the aim of restricting the comparison to household heads with similar characteristics. Even though we can match only on observable characteristics, the set of observable characteristics at our disposal is quite rich, so that we can hope that unobservables will also be balanced. In other words, by matching on characteristics such as income, occupation, and education, we hope to capture also unobservables such as ability or motivation. Since an exact matching strategy is ruled out by the relatively low number of observations concerning immigrants in our dataset, we opt for a propensity score (PS) matching strategy. This strategy implies a first step in which the propensity score, i.e., the probability of being an immigrant, is computed conditional on a set of characteristics. We select the broadest possible set, including age, gender, marital status, household size, income quartiles, occupation, education, risk aversion, and year. For the asset holdings regressions, we also include wealth quartiles (see Table 24 in the Appendix). We opted for the widest possible set of observables with the aim of reducing the potential selection bias affecting our variable of interest. Indeed, on the one hand, under the assumption that covariates are correlated with unobservables, minimizing differences in terms of the former could also reduce disparities among the latter (see Altonji et al. 2010). On the other hand, we are reassured that the problem of over-parametrization as claimed by Bryson et al. (2002) does not apply in our case as all the variables included into the Propensity Score Model (see Table 24) are strongly significant. The covariates do not include macro-region fixed effects as the matching is

³⁰ On the other hand, the results for other decisions and financial fragility do not reveal any significant driver of the native-immigrant gaps (see Table 23, where some coefficients cannot be estimated because of the small number of observations).

Table 5 Asset holdings, interactions, 2006–2014

	Holding risky assets	Share risky assets of	Home ownership	Holding mortgage	Holding informal debts
Immigrant	-0.0938*** (0.006)	-0.0203*** (0.005)	-0.0973*** (0.026)	-0.0346*** (0.011)	0.0128 (0.009)
Male	0.0114** (0.005)	0.0080*** (0.003)	-0.0024 (0.004)	-0.0005 (0.005)	0.0089*** (0.003)
Immigrant * male	-0.0150** (0.007)	-0.0074 (0.005)	0.0055 (0.019)	-0.0002 (0.019)	0.0258* (0.015)
Immigrant	-0.0932*** (0.006)	-0.0205*** (0.005)	-0.1208*** (0.028)	-0.0327*** (0.012)	0.0140* (0.009)
Couple	0.0150*** (0.005)	0.0078** (0.003)	-0.0024 (0.005)	0.0341*** (0.006)	-0.0137*** (0.004)
Immigrant * couple	-0.0102 (0.007)	-0.0043 (0.005)	0.0663*** (0.017)	0.0548*** (0.016)	-0.0012 (0.017)
Immigrant	-0.0946*** (0.006)	-0.0179*** (0.005)	-0.0971*** (0.031)	-0.0338*** (0.012)	0.0124 (0.009)
Medium edu.	0.0291*** (0.005)	0.0122*** (0.003)	-0.0398*** (0.005)	0.0208*** (0.007)	-0.0077 (0.005)
High edu.	0.0601*** (0.008)	0.0241*** (0.006)	-0.0635*** (0.009)	0.0500*** (0.010)	-0.0145** (0.006)
Immigrant * medium edu.	-0.0209*** (0.007)	-0.0152** (0.008)	0.0053 (0.041)	-0.0239 (0.044)	-0.0036 (0.031)
Immigrant * high edu.	-0.0518*** (0.011)	-0.0290*** (0.011)	0.0248 (0.050)	-0.0199 (0.051)	-0.0054 (0.038)
Immigrant	-0.1031*** (0.007)	-0.0292** (0.014)	-0.1848*** (0.064)	-0.0469*** (0.012)	0.0177 (0.011)
Employee	-0.0467*** (0.012)	-0.0191*** (0.005)	0.0005 (0.008)	0.0421*** (0.008)	-0.0169*** (0.006)
Self-employed	-0.0591*** (0.012)	-0.0279*** (0.006)	-0.0953*** (0.011)	0.0233** (0.009)	-0.0110* (0.006)
Retired	-0.0373*** (0.012)	-0.0094 (0.006)	0.0046 (0.008)	0.0141 (0.009)	-0.0186*** (0.006)
Immigrant * employee	0.0482*** (0.014)	0.0047 (0.006)	-0.0438 (0.030)	-0.0609* (0.032)	-0.0493* (0.029)
Immigrant * self-employed	0.0520*** (0.014)	-0.0158 (0.010)	-0.0226 (0.042)	-0.0850** (0.040)	0.0297 (0.053)
Immigrant * retired	0.0269* (0.015)	-0.0117 (0.029)	-0.1186*** (0.041)	-0.1144*** (0.036)	-0.0472 (0.043)

Table 5 continued

	Holding risky assets	Share risky assets of	Home ownership	Holding mortgage	Holding informal debts
Immigrant	0.0482*** (0.014)	-0.0227*** (0.005)	-0.1038*** (0.026)	-0.0404*** (0.011)	0.0157* (0.009)
Risk averse	0.0520*** (0.014)	-0.0250*** (0.003)	0.0163*** (0.004)	0.0110** (0.005)	-0.0060** (0.003)
Immigrant * risk averse	0.0269* (0.015)	0.0156*** (0.006)	0.0145 (0.018)	0.0328* (0.018)	-0.0430** (0.021)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

performed so as to match households living in the same macro-region.³¹ As a second step, households are matched using the estimated propensity score, so as to rebalance the sample statistics between immigrants and natives.

Table 6 and Fig. 4 compare the selected characteristics of immigrants and natives before and after propensity score matching and show that, although there are still some differences left after matching between the two groups, the differences are much smaller and statistically less significant than before (see Table 25 for the corresponding confidence intervals).³² Another way to test for no systematic differences in the distribution of covariates between treated and control group is to re-estimate the propensity score on the matched sample and find a quite low pseudo- R^2 if compared to the one obtained on the unmatched sample (see e.g. Sianesi 2004). In facts, we find a pseudo- R^2 equal to 0.035 on the matched sample as opposed to 0.332 on the unmatched sample, thus being further reassured about the quality of the matching. Finally, the common support condition, ensuring that we are effectively matching only comparable immigrant and native household heads, is satisfied by all the observations but

³¹ Immigrants of course represent a selected group. Moreover, there is selective return migration, so those who stay in Italy are a selected sample (a double-selection). Given the data at our disposal, we control for many observable characteristics that should alleviate this concern, for instance risk aversion, years since migration, cohorts and countries of origin. In addition, matching constitutes an additional robustness check, which we perform using the radius matching algorithm with a caliper of width equal to 0.1. In doing so, we are not only guaranteeing the proper fulfillment of the common support condition while reducing the risk of bad matches (as the maximum distance in the propensity score of the matched treated and control equals 0.1.), but we are also able to maximize the number of potential good matches (as the radius allows to use all matches within the specified caliper, and not just the nearest one).

³² Ferrari (2020) applies a propensity score matching method to estimate the nativity wealth gap among older households in Europe using SHARE data and finds that immigrant households in the upper part of the wealth distribution are better off, and those in the lower part of the wealth distribution are worse off, than comparable native households.

Table 6 Descriptive statistics, before and after propensity score matching, 2006–2014

Variable	Before PS matching				After PS matching			
	Immigrants	Natives	Diff.	t stat	Immigrants	Natives	Diff.	t stat
Macro-region	2.186	2.780	-0.59	-18.52***	2.182	2.182	0.00	0.00
Year	2011	2010	1.00	15.09***	2011	2011	0.00	0.00
Income quartile	1.851	2.574	-0.72	-27.35***	1.852	2.113	-0.26	-8.42***
Wealth quartile	1.474	2.678	-1.20	-47.03 ***	1.474	1.696	-0.22	-7.35
Labor force status	1.072	1.947	-0.88	-33.40 ***	1.072	1.307	-0.24	-9.53***
Education	1.031	0.812	0.22	15.19***	1.029	1.038	-0.01	-0.59***
Family size	2.670	2.453	0.22	7.23***	2.669	2.392	0.28	5.93***
Age	43.465	59.730	-16.27	-45.36***	43.479	45.988	-2.51	-5.75
Male	0.593	0.577	0.02	1.40	0.594	0.551	0.04	2.63**
Married	0.639	0.617	0.02	1.91*	0.639	0.561	0.08	4.82***
Risk averse	0.699	0.543	0.16	13.18***	0.698	0.683	0.02	1.04

For each variable, the table reports the mean for immigrants and natives, and the difference between the two means before and after propensity score matching is applied

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 7 Net wealth, propensity score matching, 2006–2014

	Net wealth
Immigrant	-48.884*** (10.975)
N	38,665

The table reports the coefficient from propensity score matching with robust standard errors. Immigrant stands for immigrant household head
*Significant at 10%; **significant at 5%; ***significant at 1%

Table 8 Asset holdings, propensity score matching, 2006–2014

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Immigrant	-0.0435*** (0.007)	-0.0201*** (0.005)	-0.1192*** (0.013)	0.0013 (0.010)	0.0132** (0.007)
N	38,665	32,492	38,665	38,665	38,665

The table reports coefficients from propensity score matching with robust standard errors. Immigrant stands for immigrant household head

*Significant at 10%; **significant at 5%; ***significant at 1%

3 (see Fig. 5) and, as asserted in Bryson et al. (2002), when the proportion of lost individuals is so small, this poses no problem.

Tables 7 and 8 show the average treatment effect on the treated (ATT) for wealth and asset holdings, respectively. For wealth, the PS matching estimator reveals an average gap of €48.884, which is larger in magnitude and now significant if compared with the OLS coefficient displayed in the last column of Table 2, but consistent with the gaps

we observed along the entire distribution of wealth. For assets, the matching estimates are reassuringly in line with the ones obtained in our baseline empirical strategy and reported in Table 4. Immigrant status is still found to exert a significant and negative effect on risky assets holdings (both in terms of participation decision and share being held) and on home ownership, and a positive one, now statistically significant, on informal debts. On the other hand, the point estimates for holding mortgages are no longer precisely estimated.³³ Thus, in the subsequent extensions, where we investigate potential heterogeneities by immigrants' characteristics—so that the implementation of a matching strategy is consequently ruled out—we can quite confidently rely on our baseline empirical strategy.

In Table 27 we report the Rosenbaum (2002) bounds, by outcome variable and different values of the parameter γ , ranging from 1, where the model assumes no unobserved selection bias, up to 2, meaning that we assume that two individuals with the same vector of observables differ in terms of unobservables by a factor of 2, i.e., by 100%, quite a large factor considered the large set of observables we have controlled for.³⁴ Statistical significance of the Chi2 statistics would thus denote robustness to potential unobservables bias. We find that the ATT estimates are largely robust to unobserved selection bias, with the sole exception of the effect estimated for the share of risky and foreign assets (and to some extent for financial fragility, albeit only assuming a positive unobserved selection).

7 Further Results

The analyses performed so far refer to the entire pool of immigrants in the sample. However, the descriptive statistics in Table 18 prove quite a degree of heterogeneity in terms, e.g., of migration histories and countries of origin. Hence, in Sects. 7.1 and 7.2 we disaggregate the overall effect of being an immigrant by cohort of arrival and country of origin, respectively, while in Sect. 7.3 we investigate any potential role

³³ Estimates in Table 26 are very similar to those reported in Table 22, and with the expected signs, with holding valuables being the only case in which the effect of immigrant status turns out not statistically significant. Note that, as a further check, following the suggestions in Caliendo and Kopeinig (2008) we tried different specifications of the PS Model, starting with a parsimonious design including only the covariates that are most likely unaffected by treatment (i.e., fully exogenous, fixed over time and/or measured before participation) such as year, age and gender. Then, we progressively increased the set of covariates by adding education, risk aversion, and all the demographics. In all cases and for all outcomes considered, we find point estimates of the ATT which are consistent with the ones presented in Tables 7 and 8 but displaying even higher levels of significance (results available upon request).

³⁴ The bounds should be interpreted in the following way. In case of positive (unobserved) selection, i.e., when given the same vector of observables immigrants also have higher probability of holding risky assets (or any other outcome considered), the estimated ATT overestimates the true effect of being an immigrant. Hence, the reported chi-square statistics should be adjusted downwards, so that Chi2^- is actually lower than in the baseline case (with $\gamma = 1$). By contrast, with a negative (unobserved) bias selection, i.e., when given the same set of observables immigrants have a lower chance of investing in risky assets (or any other outcome), the estimated ATT actually underestimates the true effect of being an immigrant, so that the statistics should be adjusted upwards, so that Chi2^+ is higher than the baseline case. To be noted, however, that this sensitivity analysis, while showing how the presence of a certain degree of bias might alter inferences, does not indicate if and to what extent biases are actually present in the estimates.

Table 9 Net wealth by cohort of arrival, 2006–2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Pre-1980 Cohort	1.1407 (8.294)	-2.11496 (34.526)	-25.1199** (11.612)	-35.8835 (28.903)	-153.1465 (97.713)
1980s Cohort	0.3955 (4.671)	-12.4155 (11.600)	-48.4794*** (11.837)	-61.3957*** (17.362)	-142.8828*** (33.734)
1990s Cohort	-7.6770* (4.003)	-17.0402*** (4.815)	-51.4374*** (5.775)	-62.7887*** (13.462)	-105.0044*** (23.898)
Post-2000 Cohort	-2.3410 (2.034)	-2.4541 (3.269)	-19.1736*** (3.666)	-31.1049*** (5.342)	-48.2076*** (15.161)
N	38,665				

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

of the different combinations of immigrant and natives within the couple. Lastly, in Sect. 7.4 we split the sample period between a pre- and a post-crises sub-period.³⁵

7.1 Heterogeneity by Cohort of Arrival

Italy has been subject to several waves of immigration, that displayed several differences in terms of economic motivation and family consideration. To capture these differences, we replace the dummy for the immigrant status of the household head with a set of dummies capturing cohorts of arrival.³⁶ We assign four dummies, for household heads who migrated before 1980, in the 80s, in the 90s, and in 2000 or after.³⁷ While few of the immigrant heads in our sample arrived before 1980 (as shown in Table 18, only 7%, that is only 127 observations) and in the 80s (6%, ie., 116 observations), about 31% (560 observations) arrived in the 90s and 56% (1,034 observations) since 2000.

In Table 9 we present results for the distribution of net wealth. As before, the omitted binary variable identifies households with a native head. The table reveals several patterns. For the pre-1980 cohort, the gap for immigrants is only significant

³⁵ In Tables 28, 29 and 30 we also provide evidence of the robustness of our results to using an alternative definition of immigrant, based on citizenship rather than on country of birth. Information on citizenship is only available up to 2012.

³⁶ Starting with Borjas (1985), it has been documented that cohorts of arrival matter for immigrants' earnings assimilation, with the most recent cohorts often being in a worse position than the earlier ones. Unfortunately, we are not able to exploit the panel component of our data due to the negligible size of the sample of immigrants. Nevertheless, disaggregating by cohorts in our case should help to shed more light on the history of immigration to Italy with respect to immigrants' financial decisions.

³⁷ The rest of the model specification remains the same. In particular, years since migration is still included among the covariates—albeit not reported in the tables—so as to capture their potentially different effect for immigrants belonging to separate cohorts.

Table 10 Asset holdings by cohort of arrival, 2006–2014

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Pre-1980 cohort	−0.0267 (0.083)	−0.0097 (0.032)	−0.4912*** (0.171)	−0.1018*** (0.021)	−0.0227 (0.015)
1980s cohort	−0.0398 (0.043)	−0.0224 (0.021)	−0.2190* (0.119)	−0.0459 (0.035)	−0.0219** (0.011)
1990s cohort	−0.0849*** (0.013)	−0.0233** (0.012)	−0.1226* (0.069)	−0.0227 (0.028)	0.0067 (0.018)
Post-2000 cohort	−0.0909*** (0.009)	−0.0174*** (0.006)	−0.1844*** (0.043)	−0.0653*** (0.012)	0.0037 (0.010)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions have robust standard errors and are weighted by population weights. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

at the median. For the 1980s cohort, the gap is significant at and above the median. The 1990s cohort displays a gap at all quantiles. For the post-2000 cohort, the most numerous one, no gap is detected below the 25th quantile, which suggests that among the lowest quantiles those immigrant families that migrated more recently are not significantly poorer than native ones. The observed heterogeneities across cohorts are broadly consistent with those obtained by Mathä et al. (2011) using only the 2008 wave of the SHIW.³⁸

Table 10 applies the same disaggregation to portfolio decisions, showing a variegated picture. For the decision to hold risky assets, the gap is driven by the behavior of the two cohorts that arrived after 1990. This is consistent with the results for the corresponding share. Home ownership reveals a gap for all cohorts, suggesting that immigrants hardly catch up with natives when it comes to buying a house. For mortgages, the first and last cohorts are driving the average negative result. Interestingly, while informal debt holdings were not significant for immigrants overall, now we can spot a significant gap for the 1980s cohort, who somewhat unexpectedly seems to be relying less than natives on such kind of debts.³⁹

Overall, heterogeneities across cohorts appear substantial, reflecting the distinct stages of the recent immigration history of the country.

³⁸ We cannot perform an analysis by cohort for the wealth components since, due to the small number of observations, estimates do not converge. The same applies to the other extensions to follow.

³⁹ As shown in Table 31, for foreign assets the negative effect of immigrant status is to be attributed to the pre-1980 cohort; owning a business is less likely for immigrants that arrived in the 90s; for valuables and financial fragility, the pre-1980 cohort does not display a significant disadvantage if compared to natives, while the following three do.

Table 11 Net wealth by country of origin, 2006–2012

	10th Q	25th Q	50th Q	75th Q	90th Q
Panel A					
Immigrant	− 4.3345*** (1.399)	− 1.9669 (3.275)	− 16.2739*** (5.272)	− 30.3075*** (5.211)	− 38.6788** (18.922)
Panel B					
EU15 and N. America	− 5.9649 (5.048)	− 9.9105 (20.743)	14.0419 (28.536)	− 6.0505 (25.762)	− 54.8786 (45.957)
New EU	− 1.6935 (4.138)	0.3269 (3.245)	− 5.1008 (7.631)	− 30.7935*** (6.654)	− 25.0563 (24.658)
Other Europe	− 5.1491** (2.469)	− 4.6976 (2.888)	− 24.4376*** (6.220)	− 35.1379*** (12.235)	− 46.1858*** (17.616)
North Africa	− 7.1198 (6.843)	− 7.0085 (6.893)	− 10.1426 (8.128)	− 24.7669*** (6.908)	− 39.1736 (45.706)
Sub-S. Africa	− 0.2366 (13.842)	0.8432 (6.411)	− 1.8203 (6.780)	− 21.9184 (15.841)	− 3.3532 (61.044)
Central and S. America	− 2.6663 (2.673)	0.0827 (6.246)	− 22.7729*** (6.641)	− 10.6618 (8.829)	− 9.6959 (21.518)
Asia and Oceania	− 4.2625 (4.072)	− 27.341 (3.569)	− 16.4263** (7.005)	− 42.8675*** (8.087)	− 77.3930*** (19.907)
N	30,742				

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

7.2 Heterogeneity by Country of Origin

Immigrants from different countries may accumulate and allocate their portfolios differently, possibly to account for shocks in the source countries, or in response to distinct cultural backgrounds. In order to dig further in this direction, we estimate variants of models (1) and (2) where the immigrant dummy is replaced by a set of dummies reflecting an immigrant household head's country of origin, grouped into seven aggregations (defined in detail in Table 17): EU15 and North America (with about 6% of the household heads), New EU (21%), Other Europe (27%), North Africa (15%), Sub-Saharan Africa (11%), Central and South America (7%), and Asia and Oceania (13%).

We start by considering the correlates of net wealth. Since disaggregated data are only available for the period 2006–2012, for the sake of comparison in Table 11, Panel A we first report a specification involving once again the household head's

immigrant status dummy, but now over the shorter time period. The results are in line with Table 2. Next, in Panel B, we present results by groups of countries, where again the omitted binary variable identifies households with a native head. Despite the fact that the low number of observations for each group tends to decrease the significance of the coefficients, we do observe some interesting heterogeneities. For instance, immigrants from EU15 and North America are not significantly poorer than natives, while for immigrants from other European countries the average pattern is essentially replicated. Immigrants from Central and South America and Asia and Oceania are indeed poorer, but only at and above the median.

In Table 12 we repeat the above analysis for asset holdings. Panel A replicates the specification with the immigrant status dummy over the period 2006-2012 and confirms the results in Table 4. In Panel B we replace the immigrant status dummy with the seven dummies for country groups. The emerging picture is variegated. For instance, the lower probability of holding risky assets for immigrants appears to be equally present in all groups of countries, even though it cannot even be estimated for sub-Saharan Africa, due to the low number of immigrants from that region holding such assets. Indeed, as shown in Table 18, only 10.8% of the sample, that is only 143 immigrant household heads, come from sub-Saharan Africa. By contrast, other results are driven by specific source countries. For instance, the lowest probability of being a home owner, if compared to natives, is observed for households with a head born in a EU new member country, possibly since many of them come as domestic helpers, followed by Sub-Saharan Africa and Asia and Oceania.⁴⁰

To sum up, the above results on wealth and asset portfolios do shed some light on the financial choices of people coming from different source countries and, even though their interpretation is sometimes difficult due to the very small number of observations, they indeed testify substantial heterogeneities by source country, with variegated consequences across different kinds of assets. A comparison with the literature is complicated by the fact that other host countries have very different compositions of the immigrant population, if compared to Italy. In the US, for instance, European and Asian households are often found to behave differently from those from Mexico and Central and South America. Overall, however, a great deal of diversity by source country is always present within the immigrant population.

To shed further light on the potential determinants of the observed heterogeneity, we investigate how country-specific preferences may explain it. To do so, we rely on a country-level dataset assembled by Falk et al. (2018) and based on data collected in 2012 through the Global Preference Survey in 76 countries. We focus on those preference traits that they report as particularly relevant for our outcomes of interest, that is, measures of time and risk preferences. One shortcoming of our approach is that we can only rely on country of origin information by broad country groups. For each country group, we construct average measures of patience and risk taking that we then assign them to each household head born in that group. We assign to natives the

⁴⁰ Table 32, Panel B shows that holding valuables is less likely, and financial fragility more so, for most country groups if compared to natives.

Table 12 Asset holdings by country of origin, 2006–2012

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Panel A					
Immigrant	−0.0981*** (0.006)	−0.0261*** (0.007)	−0.0857*** (0.031)	−0.0342*** (0.013)	0.0077 (0.009)
N	30,742	25,769	30,742	30,742	30,742
Panel B					
EU15 and N. America	−0.0954*** (0.015)	−0.0363* (0.022)	−0.0121 (0.070)	−0.0638 (0.043)	−0.0003 (0.040)
New EU	−0.1066*** (0.007)	−0.0151** (0.007)	−0.2653*** (0.066)	−0.0823*** (0.012)	0.0230 (0.017)
Other EU	−0.0925*** (0.010)	−0.0337*** (0.009)	−0.0605 (0.040)	−0.0146 (0.022)	−0.0030 (0.010)
North Africa	−0.1043*** (0.008)	−0.0329*** (0.010)	0.0092 (0.037)	−0.0079 (0.031)	0.0230 (0.021)
Sub-S. Africa	− −	−0.0411*** (0.011)	−0.0735* (0.041)	−0.0226 (0.022)	−0.0064 (0.012)
Central and S. America	−0.0872*** (0.021)	−0.0276** (0.012)	0.0044 (0.025)	0.0150 (0.031)	−0.0193*** (0.007)
Asia and Oceania	−0.1053*** (0.009)	−0.0209* (0.011)	−0.0748* (0.042)	−0.0565*** (0.017)	0.0054 (0.016)
N	30,591	25,769	30,742	30,742	30,742
Panel C					
Risk taking	−0.2149 (0.163)	−0.0254 (0.025)	0.1174 (0.155)	0.0382 (0.102)	−0.0338 (0.027)
Patience	0.1975** (0.098)	0.0451 (0.027)	0.1317 (0.115)	0.0076 (0.072)	−0.0247 (0.024)
N	30,742	25,769	30,742	30,742	30,742

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions in Panel A and B have robust standard errors, while in Panel C standard errors are clustered at the country group level. All regressions are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects
*Significant at 10%; **significant at 5%; ***significant at 1%

reported values for Italy. The results suggest that patience, rather than risk taking, is the economic preference trait behind several portfolio decisions. In particular, being born in a country group that in aggregate displays more patience is positively associated with a higher probability to invest in risky and foreign assets (Table 12, Panel C) and

own a business and valuables (Table 32, Panel C).⁴¹ Albeit these findings are merely suggestive, they point to the potential relevance of cross-country preference variation for economic and financial decisions.⁴²

7.3 The Influence of Spouses and the Role of Inter marriage

The results from the previous sub-sections focus on the immigrant status of the household head, consistently with his/her responsibility for the financial choices of the household. However, within a household, the primary decision maker may well be influenced by other family members, and especially by the partner within a couple. In particular, a couple can involve two immigrants, or else an immigrant and a native, or two natives. In case of a mixed couple, it may also matter whether the household head, as opposed to the partner, is the immigrant. To account for all the possible combinations and assess their influence on financial decisions, we focus first on a sub-sample of households including a couple. As explained in Sect. 4, over this sample we then define four dummy variables denoting households including a couple of natives (both natives), a couple of immigrants (both immigrants) or a mixed couple, further distinguishing whether the immigrant is the household head (mixed immigrant head) or the spouse (mixed immigrant spouse).⁴³

In Table 13 we present results for the distribution of net wealth. Preliminarily, in Panel A we present the immigrant status dummy alone as in Table 2 but now, for the sake of comparison with the following specifications, the regression is run over the sub-sample of households including a couple. If compared to Table 2, where all households are included, some differences do emerge. The gap in wealth with respect to natives is larger in size and is significant also at the 25th quantile, while it becomes insignificant at the 10th quantile. Since in this specification we cannot distinguish whether the immigrant household head has a native or an immigrant spouse, the observed effect is a weighted average of the effect of Mixed Immigrant Head and Both Immigrants.

In Panel B of Table 13 we can verify if the composition of a couple by immigration status does matter. The reference is a couple involving two natives. We show that, for couples where both partners are immigrants, the gaps in wealth captured by the immigrant status dummy are largely confirmed. However, when we look at mixed couples, we find that those with an immigrant head are not significantly different from natives apart from the lowest quantile (where the effect is marginally significant and positive), while those with an immigrant spouse are poorer than natives along the entire wealth distribution. In other words, the average effect displayed in Panel A is

⁴¹ Qualitatively similar results are obtained by entering the variables one by one. Standard errors are clustered at the country group level. The need to cluster the standard errors rules out the possibility to run analogous quantile regressions for wealth with population weights. Patience and risk taking are not significant in an (unreported) OLS regression for wealth, with or without clustering.

⁴² The application of an epidemiological approach aimed at establishing the persistence of the broad effect of the country of ancestry's culture on second-generations immigrants (Fernández and Fogli 2006; Giuliano 2007) is prevented by lack of information on second-generation immigrants in the SHIW.

⁴³ This classification is done independently of the immigrant status of other household members, which amounts to implicitly attributing a stronger influence on the household head's decisions of his/her spouse, if compared to other household members.

Table 13 Net wealth and intermarriage (couples sub-sample), 2006–2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Panel A					
Immigrant	– 4.7239 (4.446)	– 16.3647*** (5.257)	– 39.8035*** (7.046)	– 61.5180*** (11.502)	– 58.1608*** (12.697)
N	24,134				
Panel B					
Mixed immigrant head	12.5725* (6.812)	9.8972 (7.979)	0.7227 (20.314)	– 5.8881 (18.429)	– 5.2049 (36.605)
Mixed immigrant spouse	– 11.7258*** (4.326)	– 27.5334*** (4.670)	– 37.8973*** (8.870)	– 38.4403*** (11.355)	– 36.4032*** (13.488)
Both immigrants	– 4.5744 (3.745)	– 17.2103*** (5.005)	– 40.4623*** (8.573)	– 53.9380*** (9.796)	– 53.5217*** (13.931)
N	24,134				
Panel C					
Mixed imm. head male	18.8029 (20.389)	18.0205 (24.815)	23.9698* (13.167)	– 9.6771 (29.352)	– 7.7423 (50.128)
Mixed imm. head female	10.0189 (7.144)	4.9641 (23.716)	– 4.4407 (13.111)	– 10.9632 (23.724)	– 12.5382 (40.656)
Mixed imm. spouse male	– 75.2273 (55.143)	– 61.1242*** (10.362)	– 62.9526* (36.120)	– 95.8642*** (17.934)	– 53.7289** (27.111)
Mixed imm. spouse female	– 5.8087 (5.175)	– 24.1946*** (6.146)	– 28.1009** (11.368)	– 20.5396 (17.177)	– 33.6144** (14.395)
Both immigrants	– 2.9963 (4.346)	– 14.5093** (6.070)	– 39.3405*** (7.549)	– 55.8957*** (11.099)	– 54.7254*** (14.695)
N	23,948				

All models are estimated on the subsample of households with a couple. The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

to be attributed not only to couples of immigrants, but also to mixed couples where the head is a native. In Panel C again we break the average effect displayed in Panel A in order to further distinguish whether, within a mixed couple, the gender of the head also matters, to reveal that the weaker position of mixed couples with a native head and an immigrant spouse is confirmed independently of gender considerations, even though the gap with respect to natives is much larger for couples with a male immigrant spouse, that is, couples with a female native head. Likewise, when the immigrant is the head, gender does not modify previous conclusions.

Table 14 Asset holdings and intermarriage (couples sub-sample), 2006–2014

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Panel A					
Immigrant	− 0.1090*** (0.010)	− 0.0237*** (0.008)	− 0.0513* (0.028)	− 0.0297 (0.019)	− 0.0007 (0.008)
N	24,134	21,071	24,134	24,134	24,134
Panel B					
Mixed immigrant head	− 0.0634* (0.038)	− 0.0314 (0.022)	− 0.0840 (0.068)	− 0.0232 (0.043)	− 0.0093 (0.019)
Mixed immigrant spouse	− 0.0202 (0.013)	− 0.0052 (0.009)	− 0.0025 (0.016)	0.0076 (0.016)	0.0056 (0.008)
Both immigrants	− 0.1141*** (0.009)	− 0.0246*** (0.008)	− 0.0541* (0.028)	− 0.0288 (0.019)	− 0.0012 (0.009)
N	24,134	21,071	24,134	24,134	24,134
Panel C					
Mixed imm. head male	− 0.0946*** (0.031)	− 0.0397 (0.032)	− 0.0806 (0.115)	− 0.0027 (0.077)	0.0258 (0.053)
Mixed imm. head female	− 0.0504 (0.041)	− 0.0280 (0.021)	− 0.0844 (0.067)	− 0.0302 (0.040)	− 0.0268*** (0.004)
Mixed imm. spouse male	− 0.0273 (0.031)	− 0.0194 (0.019)	0.0574** (0.026)	0.0184 (0.041)	− 0.0084 (0.014)
Mixed imm. spouse female	− 0.0193 (0.014)	− 0.0035 (0.009)	− 0.0126 (0.017)	0.0062 (0.018)	0.0077 (0.009)
Both immigrants	− 0.1167*** (0.008)	− 0.0249*** (0.008)	− 0.0552* (0.028)	− 0.0268 (0.019)	− 0.0003 (0.009)
N	23,948	20,904	23,948	23,948	23,948

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

In Table 14 we repeat the above analysis for asset decisions. Panel A replicates Table 4 over the sub-sample of couples, yielding very similar results with the exception of the decision to hold a mortgage, where immigrant status no longer displays a significant coefficient.⁴⁴ In Panel B we replace the immigrant status dummy with the set of dummies capturing pure vs mixed couples, where a couple of natives is the omitted

⁴⁴ In Table 33, Panel A, the likelihood of financial fragility also appears to be unrelated to immigrant status, possibly due to the definition of financial fragility, which requires not having sufficient liquidity, a more unlikely occurrence within a household including a couple rather than a single individual.

category. For couples including two immigrants, the results mirror those in Panel A. However, for mixed couples, the coefficients are never significant, with the only exception of the decision to hold risky assets when the immigrant is the head. In other words, the financial decisions of mixed households are largely indistinguishable from those of native households, independent of the immigrant status of the head or the spouse. One possible explanation for these findings is that, through intermarriage, immigrants might have gone through an assimilation process, prior and/or during marriage, that makes them more similar to natives even with respect to financial choices. However, this effect might not be precisely estimated due the very limited number of observations (only 195 mixed households in the sample). The distribution of household heads by gender, with a prevalence of males, may also be part of the explanation, as addressed in Panel C, where we observe different patterns across each investment decision. For instance, the lower participation in risky assets is explained, within mixed couples with an immigrant head, by those couple where the immigrant head is a male. With regard to home ownership, on the other hand, mixed couples where the immigrant spouse is a male actually outperform natives. Informal debts are significantly lower for mixed couples with a female immigrant head.

We can compare our results with those derived for other countries. For instance, for the US, Cobb-Clark and Hildebrand (2006a) focus exclusively on households including a couple and do not include mixed households among immigrant ones, since they expect them to behave like native-born households. Thus, they do not distinguish, as we do, between mixed households headed by an immigrant rather than a native. For Germany, Sinning (2007) adopts a classification similar to ours and finds that, in terms of portfolio diversification, pure immigrant households perform at the bottom, followed by mixed households with an immigrant head and mixed households with a native head.

To sum up, the results in this sub-section document complex interactions between the patterns of intermarriage, the responsibility of making financial decisions, and the gendered division of roles within the household. Moreover, these interactions are likely influenced by the cultural background associated with different source countries, as highlighted in the previous sub-section.

7.4 The Impact of the Great Recession

We now investigate whether the financial crisis has influenced how immigrant households behave if compared to native ones. To this end, the sample is split into two sub-samples, where 2006 and 2008 are interpreted as pre-crisis waves, while 2010, 2012, and 2014 are interpreted as post-crisis waves. The choice to assign 2008 to the pre-crisis sub-sample can of course be questioned. However, it can be defended on several grounds. First of all, responses for each survey wave are collected at the very beginning of the following year, that is, for 2008, in early 2009. Since the real effect of the crisis on GDP manifested itself, for the case of Italy, only in 2009, with a dramatic drop of 6%, it is reasonable to assume that survey respondents, at the beginning of

Table 15 Net wealth and the great recession: pre- and post-crisis, 2006–2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Pre-crisis (2006–2008)					
Immigrant	– 4.2944 (4.788)	– 0.2389 (3.984)	– 2.4668 (10.722)	– 8.8765 (11.626)	– 2.1240 (24.319)
N	15,152				
Post-crisis (2010–2014)					
Immigrant	– 1.6845 (1.846)	– 5.3534 (3.856)	– 25.0970*** (4.800)	– 49.0435*** (7.112)	– 44.8420*** (11.237)
N	23,513				

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

2009, had not yet perceived it. In other words, even though 2008 witnessed a turmoil in financial markets, culminating in September with the bankruptcy of Lehman Brothers, 2008 was not yet, at least for Italy, a recession year. The relative stability of the real economy as of 2008 is also confirmed by data on the rate of unemployment, which was then still at 6.7%, increased to 7.8% in 2009, and then continued its growth until 2014, when it reached 12.9%. Moreover, in Italy the banking sector showed a remarkable resilience, at least in the immediate aftermath of 2008, while the decline in house prices manifested itself only after the initial financial shock and developed very gradually.

In Table 15 we present quantile regressions for wealth, separately for the pre- and post-crisis sub-samples (the relevant term of comparison is the full sample in Table 2). While before the crisis immigrant status is associated with a non-significant gap at all quantiles, after the crisis wealth gaps are consistently larger, with significance levels that replicate those over the entire 2006–2014 time period, apart for the lowest quantile which is now insignificant, so that the effect in Table 2 is attributable to the after-crisis sub-sample. Thus, these results point to a worsening of the financial conditions of immigrant households after the crisis, relative to natives.

Turning to asset allocation, in Table 16 again we present separate regressions, for each outcome of interest, for the pre- and post-crisis sub-samples (with Table 4 as term of comparison). The results reveals that for some financial decisions the gaps for immigrants, if compared to natives, are relatively stable before and after the crisis.⁴⁵

⁴⁵ A potentially more informative approach to the analysis of the impact of the Great Recession is to perform an estimate for the full sample including interactions between immigrant status and year-specific dummies. In (unreported) regressions, this alternative approach indeed highlights how the impact is particularly strong in 2010 rather than in the following years, which also validates our choice of sub-samples. However, the approach is not viable for the asset allocation regressions, due to the low number of yearly observations for immigrants.

Table 16 Asset holdings and the great recession: pre- and post-crisis, 2006–2014

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Pre-crisis (2006–2008)					
Immigrant	– 0.1006*** (0.009)	– 0.0184*** (0.007)	– 0.1848** (0.076)	– 0.0755*** (0.015)	– 0.0026 (0.015)
N	15,152	12,810	15,152	15,152	15,152
Post-crisis (2010–2014)					
Immigrant	– 0.0842*** (0.009)	– 0.0140** (0.006)	– 0.0693*** (0.025)	– 0.0227 (0.015)	0.0229** (0.011)
N	23,513	19,682	23,513	23,513	23,513

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

This is the case, for instance, for the decisions concerning risky assets, which show similar coefficients over the two time periods. However, the gap in home ownership actually becomes smaller after the crisis, while it disappears for mortgages, possibly because native households as a consequences of the crisis also have reduced home ownership and mortgages. Informal debt holdings, on the other hand, become more likely for immigrants after the crisis.⁴⁶

To sum up, the financial crisis worsened the conditions of immigrant households, relative to native ones, in several dimensions, including wealth holdings and financial fragility. After the crisis, immigrants also appear to rely more on informal debt channels.⁴⁷

Even though the evidence we report is only descriptive, as it cannot capture a causal impact for the recession, our results are consistent with the assessment of the consequences of the crisis for Italian immigrants in Colombo and Dalla Zuanna (2019). It is useful to relate our results also to those obtained by Amuedo-Dorantes and Pozo (2015) by comparing 2006 and 2010 for US households. They find that post-crisis wealth losses for immigrants were particularly large for the middle and top wealth quartiles, which is broadly consistent with our findings. Moreover, they show that this outcome was driven by differences across assets, with greater losses in primary housing ownership and primary housing values. Again, this pattern broadly mirrors our results. However, it should be highlighted that, while the housing market crash in

⁴⁶ Table 34 shows that the higher likelihood of financial fragility for immigrants is also attributable to the post-crisis period, while for the other decisions no apparent difference arises before and after the crisis.

⁴⁷ In interpreting these findings, it should be kept in mind that, since we cannot exploit the panel dimension of the data, some migrants—possibly including the wealthier—may even have left as a consequence of the recession.

the US led the recession, as previously mentioned in Italy the decline in house prices manifested itself quite gradually after the initial financial shock.

8 Limitations

The main strengths of our results are that they provide a unified and exhaustive picture of the financial status of migrants compared to natives. On the other hand, they do suffer of a couple of limitations. First, attention should be given to other related economic and financial choices, such as saving behavior and the associated decision about remittances. De Arcangelis and Joxhe (2015) underline how the choice to save is closely linked to the decision to remit. In the present paper we focus on the stock of wealth and assets while remittances and savings are flow variables. At the same time, however, the ability to increase wealth and asset positions is linked to saving behavior which, for migrants, is in turn crucially affected by remittances. While the SHIW does not include information on remittances, their role in the Italian economy is significant. Aggregate data provided by the Bank of Italy⁴⁸ show that in 2014, the last year covered the present investigation, remittances amounted and 5.3 billion Euro, that is, about 5% of Italian households' gross savings (that amounted to 97.4 billion Euro in the same year; see ISTAT (2018)), or about 0.1% of Italian households' total financial assets (3897.2 billion Euro; see Bank of Italy 2015).⁴⁹

Second, further investigation is needed about potential broader differences between immigrants and natives in term of family structure and gender culture, and their reflection on economic and financial choices. Bertocchi et al. (2014) study the determinants of decision-making within the family over SHIW data and find a role for marriage heterogamy along economic and non-economic dimensions. The same approach could be extended to explore differences between native, immigrant, and mixed households, accounting at the same time for the gender of the household head.

9 Conclusion

Using household survey data for Italy over the period 2006–2014, we document the presence of sizeable gaps between natives and immigrants, both with respect to wealth

⁴⁸ The Bank of Italy defines foreign workers' remittances as transfers of money sent abroad by immigrants settled in Italy by means of payment institutions or other authorized intermediaries. Data are available at <https://www.bancaditalia.it/statistiche/tematiche/rapporti-estero/rimesse-immigrati/>.

⁴⁹ The available literature on immigrants' savings and remittances has achieved mixed results. For instance, Bauer and Sinning (2011) find a significant savings gap between immigrants and natives in Germany which, however, disappears once the remittances of temporary migrants are accounted for. Furthermore, potential return migration has a significant positive impact on migrants' savings and remittances (Sinning 2011). For the UK, De Arcangelis and Joxhe (2015) show that temporary migrants tend not only to save more, but also to remit more than permanent ones. For Australia, Islam et al. (2013) find that after controlling for income immigrants save more than natives. The impact on saving of cultural factor has also been examined, again with mixed results. Contrary to Carroll et al. (1994, 1999), who for the US find no evidence that saving behavior can be driven by cultural factors, Füchs-Schundeln et al. (2019) show that second-generation immigrants from countries that put strong emphasis on wealth accumulation do save more, both in Germany and in the UK.

and asset holdings. Controlling for a rich set of individual and household characteristics, including risk aversion and years since migration, we find that immigrants hold less net wealth than natives along the entire wealth distribution. Moreover, immigrant status is negatively associated with the chances of holding risky assets, housing, mortgages, businesses, and valuables, while it increases the likelihood of financial fragility. This evidence is qualitatively unchanged when a propensity score matching strategy is used.

The interaction between immigrant status and immigration histories, source countries, and patterns of intermarriage also matter, in a variegated fashion, for accumulation and investment decisions. Namely, the nativity gap in net wealth tends to decline for more recent cohorts. Moreover, immigrants from EU15 and North America are not significantly poorer than natives. Accounting for intermarriage, the gap in wealth is confirmed when both partners are immigrants and for mixed couples where the immigrant is the spouse. For decisions about asset holdings, the results are largely driven by couples including two immigrants. The results broadly hold when immigrants are identified as non-citizens, rather than foreign-born. The Great Recession is a major driver of the relatively worse conditions of immigrants in terms of wealth holdings, home ownership, and financial fragility, and also induces for them a greater reliance on informal debt.

While the above results offer novel and thorough evidence on how the financial decisions of immigrant households differ from native, further work is needed in order to link financial choices to decisions about saving and remittances. To investigate broader differences between immigrants and natives in term of family structure and gender culture, and their reflection on economic and financial choices, is another potential avenue for future research.

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Appendix

See Figs. 4, 5 and Tables 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33 and 34.

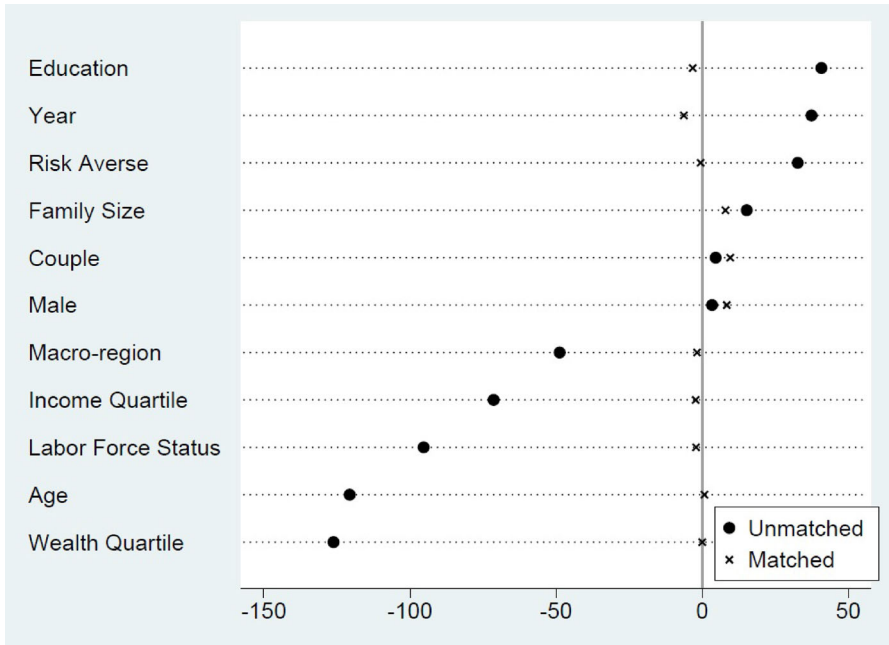


Fig. 4 Standardized bias across covariates before and after PS matching

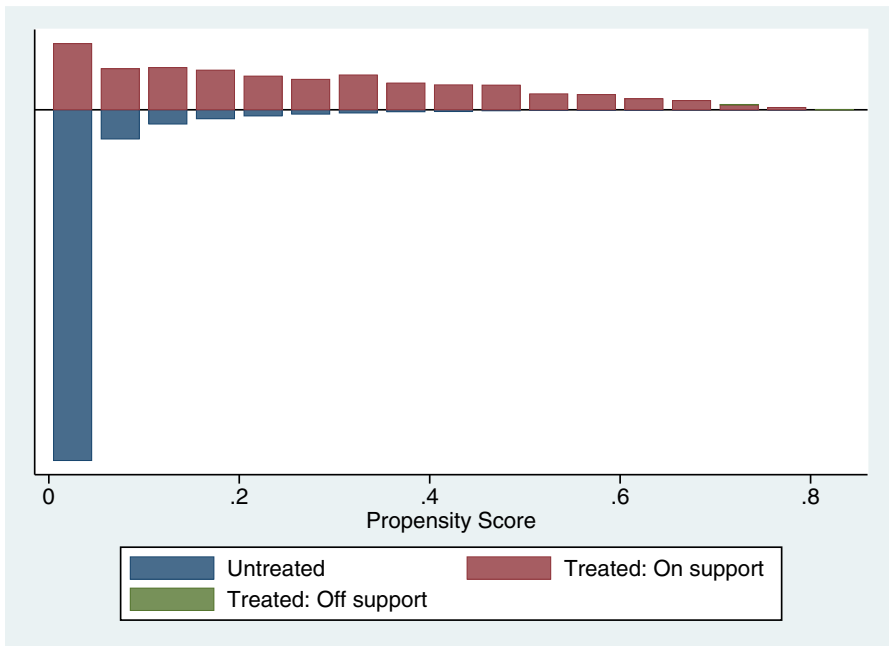


Fig. 5 Propensity score distribution, by treatment and common support status

Table 17 Data description

Variable	Description
Immigrant	Binary variable assuming value 1 for households whose household head is foreign-born, and 0 otherwise
Immigrant (non-citizen)	Binary variable assuming value 1 for households whose household head has non-Italian nationality, and 0 otherwise
Both natives, mixed immigrant head, mixed immigrant spouse, both immigrants	Set of binary variables locating who—within the couple—is a foreign-born, if any. These dummies are defined only for households including a couple (either married or in a stable union) Both natives takes value 1 for households where both members of the couple are natives, and 0 otherwise Mixed immigrant head takes value 1 for couple households where the household head is foreign-born, while the spouse is not, and 0 otherwise Mixed immigrant spouse takes value 1 for couple households where the spouse is foreign-born, while the head of the household is not, and 0 otherwise Both immigrants takes value 1 for couple households where both the household head and the spouse are foreign-born, and 0 otherwise
Net wealth	Sum of real and financial assets net of liabilities, in € at 2010 constant values
Housing and other real estate	Value of housing and other real estate, held either in Italy or abroad. It thus includes also properties held by immigrants in their home countries, in € at 2010 constant values
Valuables	Value of jewelry, gold, art, antiques, furniture, etc., in € at 2010 constant values
Holding risky assets	Binary variable taking value 1 for households holding risky financial assets, and 0 otherwise. Risky assets include stocks and shares, corporate bonds, and foreign assets
Share of risky assets	Continuous variable representing the share of financial assets held in risky ones
Home ownership	Binary variable taking value 1 for households owning their primary residence, and 0 otherwise. Only primary residential properties located in Italy are considered
Holding mortgage	Binary variable taking value 1 for households having mortgages, and 0 otherwise
Holding informal debts	Binary variable taking value 1 for households indebted with relatives or friends, and 0 otherwise
Holding foreign assets	Binary variable taking value 1 for households holding foreign financial assets, and 0 otherwise. Foreign assets are financial assets issued by non-resident institutions
Share of foreign assets	Continuous variable representing the share of financial assets held in foreign ones
Owning business	Binary variable taking value 1 for households holding a business, and 0 otherwise
Owning valuables	Binary variable taking value 1 for households holding valuables, and 0 otherwise

Table 17 continued

Variable	Description
Financial fragility	Binary variable taking value 1 for financially fragile households, and 0 otherwise. Financial fragility is defined as a condition in which the household earns sufficient income to at least cover all the expected expenses, but it does not hold enough liquidity to be unable to cope with unexpected expenses (see Brunetti et al. 2016)
Family size	Number of household members
Male	Binary variable taking value 1 for households headed by a male, and 0 otherwise
Age	Integer variable representing the age in years of the head of the household
Couple	Binary variable taking value 1 for households including a married or partnered couple, 0 otherwise
Low education, medium education, high education	Set of binary variables representing the highest education level achieved by the household head Low education takes value 1 for having completed only primary education or having no education at all Medium education takes value 1 for having completed secondary school High education takes value 1 for having completed university degrees at graduate or post-graduate level
Employee, self employed, retired, unemployed	Set of binary variables taking value 1 for household heads being in the relevant labor force status (i.e., employee, self-employed, retired, or not working), and 0 otherwise
Net wealth quartiles	Binary variables taking value 1 if the household net wealth falls within the relevant distribution quartile, and 0 otherwise
Income quartiles	Binary variables taking value 1 if the household disposable income falls within the relevant distribution quartile, and 0 otherwise
Risk aversion (alternative measure)	Set of binary variables representing the preferred risk profile of financial investments among the following: 1 = High risk, high returns 2 = Reasonable risk, good returns 3 = Low risk, reasonable returns 4 = No risk, low returns
Risk averse	Binary variable taking value 1 if risk aversion level is 4, 0 otherwise
Years since migration	Continuous variable representing the years since the first arrival in Italy of the head of the household. This variable is set to 0.5 for immigrants who are interviewed less than 12 months since arrival (so as to distinguish them from natives, for whom it is set equal to 0)

Table 17 continued

Variable	Description
North-West, North-East, Center, South, Islands	Set of binary variables taking value 1 for households residing in the relevant macro-region within Italy (i.e., North West, North East, Center, South, and Islands), and 0 otherwise
Cohort of arrival	Set of binary variables indicating the decade of arrival in Italy of the household head Pre-1980 Cohort = arrived before 1980 1980s Cohort = arrived between 1980 and 1989 1990s Cohort = arrived between 1990 and 1999 Post-2000 Cohort = arrived in 2000 or afterwards
Country of origin	Set of binary variables representing the macro-area of the country of birth of the household head among the following Native = Born in Italy EU15 and North America = Born in one of the EU15 countries or in Canada or in the US New EU = Born in Bulgaria, Malta, Cyprus, Croatia, Estonia, Latvia, Poland, Romania, Slovakia, Slovenia, or Hungary Other Europe = Born in any other European country not included in the lists above North Africa = Born in any country of North Africa Sub-Saharan Africa = Born in any country in sub-Saharan Africa Central and South America = Born in any country of Central or South America Asia and Oceania = Born in any country in Asia or Oceania
Risk taking	Continuous variable representing risk preference as an average computed by group of countries of origin (see Falk et al. 2018)
Patience	Continuous variable representing time preference as an average computed by group of countries of origin (see Falk et al. 2018)

Table 18 Descriptive statistics, 2006–2014

Variable	Immigrants					Natives					t stat
	Obs	Mean	Std. dev.	Min	Max	Obs	Mean	Std. dev.	Min	Max	
Immigrant	1837	1	0	1	1	36,828	0	0	0	0	
Immigrant (non-citizen)	1133	1	0	1	1	37,532	0	0	0	0	
Both immigrants	1004	0.840	0.366	0	1	23,130	0	0	0	0	
Mixed immigrant head	1004	0.160	0.366	0	1	23,130	0	0	0	0	
Mixed imm. head male	1004	0.072	0.258	0	1	23,130	0	0	0	0	
Mixed imm. head female	1004	0.088	0.283	0	1	23,130	0	0	0	0	
Mixed immigrant spouse	1004	0	0	0	0	23,130	0.036	0.187	0	1	
Mixed imm. spouse male	1004	0	0	0	0	23,130	0.004	0.066	0	1	
Mixed imm. spouse female	1004	0	0	0	0	23,130	0.032	0.176	0	1	
Net wealth (in thousand €)	1837	45.704	179.945	-47.75	4171.9	36,828	256.449	496.511	-725.6	28861.3	43.43
Housing (in thousand €)	1837	42.929	124.604	0	2237.9	36,828	213.820	326.200	0	11,617.9	50.8
Valuables (in thousand €)	1837	1.005	2.536	0	50.5	36,828	4.454	42.046	0	10,659.34	11.7
Holding risky assets	1837	0.014	0.117	0	1	36,828	0.116	0.321	0	1	26.3
Share of risky assets	1221	0.009	0.074	0	1	31,271	0.061	0.183	0	1	15.3
Home ownership	1837	0.194	0.396	0	1	36,828	0.727	0.446	0	1	50.1
Holding mortgage	1837	0.109	0.312	0	1	36,828	0.113	0.317	0	1	-3.5
Holding informal debts	1837	0.074	0.261	0	1	36,828	0.027	0.163	0	1	-7.1
Holding foreign assets	1837	0.003	0.050	0	1	36,828	0.009	0.092	0	1	5.58
Share of foreign assets	1221	0.001	0.021	0	0.6	31,271	0.003	0.039	0	1	2.77
Owning business	1837	0.063	0.243	0	1	36,828	0.138	0.3452	0	1	9.6
Owning valuables	1837	0.605	0.489	0	1	36,828	0.883	0.3209	0	1	21.9
Financial fragility	1837	0.100	0.300	0	1	36,828	0.088	0.283	0	1	-1.2
Family size	1837	2.563	1.558	1	12	36,828	2.481	1.254	1	9	-5.8

Table 18 continued

Variable	Immigrants					Natives					t stat
	Obs	Mean	Std. dev.	Min	Max	Obs	Mean	Std. dev.	Min	Max	
	Male	1837	0.621	0.485	0	1	36,828	0.577	0.494	0	
Age	1837	40.927	10.410	21	88	36,828	57.105	16.128	20	90	57.8 ***
Couple	1837	0.627	0.484	0	1	36,828	0.603	0.489	0	1	-1.9 *
Low education	1837	0.077	0.266	0	1	36,828	0.275	0.447	0	1	30.0 ***
Medium education	1837	0.811	0.391	0	1	36,828	0.610	0.488	0	1	-20.6 ***
High education	1837	0.112	0.315	0	1	36,828	0.115	0.319	0	1	-1.1
Employee	1837	0.770	0.421	0	1	36,828	0.361	0.480	0	1	-39.7 ***
Self employed	1837	0.076	0.265	0	1	36,828	0.109	0.312	0	1	2.8 ***
Retired	1837	0.031	0.174	0	1	36,828	0.421	0.494	0	1	68.2 ***
Unemployed	1837	0.077	0.266	0	1	36,828	0.033	0.178	0	1	-7.1 ***
Income (in thousand €)	1837	13.497	9.864	-6.063	167.184	36,828	22.703	19.470	-18.649	863.578	33.4 ***
Risk aversion = 1 (Lowest)	1837	0.007	0.085	0	1	36,828	0.008	0.087	0	1	0.8
Risk aversion = 2	1837	0.086	0.280	0	1	36,828	0.130	0.336	0	1	8.2 ***
Risk aversion = 3	1837	0.217	0.412	0	1	36,828	0.319	0.466	0	1	10.2 ***
Risk aversion = 4 (Highest)	1837	0.690	0.463	0	1	36,828	0.544	0.498	0	1	-14.2 ***
Risk averse	1837	0.690	0.463	0	1	36,828	0.544	0.498	0	1	-14.2 ***
Year since migration	1837	13.793	11.668	0.5	87	36,828	0	0	0	0	
Region of residence											
North - West	1837	0.314	0.464	0	1	36,828	0.259	0.438	0	1	-3.8 ***
North - Est	1837	0.377	0.485	0	1	36,828	0.211	0.408	0	1	-17.4 ***
Center	1837	0.201	0.401	0	1	36,828	0.198	0.399	0	1	1.3
South	1837	0.073	0.260	0	1	36,828	0.245	0.430	0	1	24.4 ***

Table 18 continued

Variable	Immigrants					Natives					t stat	
	Obs	Mean	Std. dev.	Min	Max	Obs	Mean	Std. dev.	Min	Max		
	Islands	1837	0.034	0.183	0	1	36,828	0.088	0.283	0		1
Cohort of arrival												
Pre-1980 Cohort	1837	0.069	0.254	0	1	36,828	0	0	0	0		
1980s Cohort	1837	0.063	0.243	0	1	36,828	0	0	0	0		
1990s Cohort	1837	0.305	0.460	0	1	36,828	0	0	0	0		
Post-2000 Cohort	1837	0.563	0.496	0	1	36,828	0	0	0	0		
Country of origin												
Native	1322	0	0	0	0	29,420	1	0	1	1		
EU15 and North America	1322	0.063	0.243	0	1	29,420	0	0	0	0		
New EU	1322	0.209	0.407	0	1	29,420	0	0	0	0		
Other Europe	1322	0.269	0.444	0	1	29,420	0	0	0	0		
North Africa	1322	0.146	0.353	0	1	29,420	0	0	0	0		
Sub-Saharan Africa	1322	0.108	0.311	0	1	29,420	0	0	0	0		
Central and South America	1322	0.071	0.256	0	1	29,420	0	0	0	0		
Asia and Oceania	1322	0.134	0.341	0	1	29,420	0	0	0	0		
Risk Taking	1322	-0.033	0.148	-0.156	0.340	29,420	-0.094	0.004	-0.094	0.340	-14.69	***
Patience	1322	-0.056	0.159	-0.213	0.484	29,420	0.108	0.003	-0.164	0.109	36.98	***

Statistics computed using sampling weights (pesopop)

Table 19 Net wealth, all covariates, 2006–2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Immigrant	− 3.3848*** (1.276)	− 3.3716 (2.929)	− 21.1210*** (3.987)	− 36.8271*** (4.894)	− 33.0172** (13.147)
Family size	− 0.4188*** (0.160)	− 0.3520 (0.616)	3.9983*** (1.046)	10.1469*** (1.253)	17.9089*** (3.188)
Male	− 3.4092*** (0.430)	− 12.5696*** (1.085)	− 25.2414*** (1.867)	− 27.4436*** (2.709)	− 16.8775*** (5.573)
Age	0.5383*** (0.060)	2.3268*** (0.214)	4.4325*** (0.315)	4.4897*** (0.426)	4.3447*** (0.898)
Age squared	− 0.3385*** (0.058)	− 1.5986*** (0.174)	− 2.7623*** (0.331)	− 2.4452*** (0.397)	− 1.6881* (0.903)
Couple	6.3787*** (0.604)	25.9683*** (1.577)	37.7206*** (2.306)	37.6852*** (2.700)	38.2602*** (6.572)
Medium edu.	2.8679*** (0.519)	11.2067*** (1.819)	22.2143*** (2.301)	30.0740*** (3.231)	54.9901*** (6.789)
High edu.	4.4782*** (1.192)	23.7263*** (2.603)	56.5791*** (5.771)	97.6814*** (10.401)	194.6864*** (22.012)
Employee	− 9.4273*** (0.993)	− 43.2982*** (2.009)	− 87.4090*** (4.027)	− 120.1739*** (5.133)	− 173.3098*** (10.620)
Self-employed	1.6186* (0.926)	− 0.6357 (3.000)	1.3698 (7.280)	43.3093*** (11.612)	162.2562*** (31.257)
Retired	0.4369 (0.492)	− 1.0569 (3.000)	− 31.1048*** (4.421)	− 51.7182*** (6.007)	− 82.5762*** (11.715)
Income Q. 2	7.6629*** (0.848)	34.8456*** (1.399)	52.3345*** (2.073)	64.5869*** (2.667)	82.4397*** (5.472)
Income Q. 3	19.4379*** (1.303)	93.2027*** (2.648)	131.2947*** (2.808)	157.1024*** (3.408)	190.2827*** (7.808)
Income Q. 4	120.1462*** (5.380)	223.0869*** (2.971)	294.3627*** (4.747)	441.8449*** (9.105)	709.2544*** (22.729)
Risk averse	− 1.3002*** (0.303)	− 7.1814*** (1.438)	− 18.3013*** (2.113)	− 25.3704*** (2.721)	− 32.0736*** (5.783)
Years since migration	− 0.1614** (0.074)	− 0.6741*** (0.154)	− 0.3882 (0.237)	0.0034 (0.213)	− 0.5264 (0.530)
2006	0.8321** ((0.420))	8.8138*** (1.743)	29.3071*** (2.989)	43.4360*** (3.359)	60.0804*** (6.860)
2008	1.5043*** (0.426)	10.6444*** (2.076)	29.9957*** (2.702)	41.7619*** (4.238)	51.6769*** (6.652)
2010	1.8798*** (0.475)	7.7852*** (1.835)	25.9016*** (3.126)	39.8128*** (3.318)	49.8201*** (9.183)
2012	− 0.1204 (0.481)	3.7277** (1.575)	11.9510*** (2.403)	16.9119*** (3.240)	29.5950*** (8.439)

Table 19 continued

	10th Q	25th Q	50th Q	75th Q	90th Q
North East	1.3410** (0.629)	6.4014*** (1.917)	9.7470*** (2.819)	20.1291*** (3.748)	35.1862*** (9.160)
Center	1.0449 (0.785)	16.9738*** (2.801)	29.7763*** (3.098)	41.9351*** (4.310)	44.9280*** (7.478)
South	0.5849 (0.390)	3.5675** (1.584)	-2.6836 (2.660)	-0.0602 (3.643)	2.3755 (7.293)
Islands	0.5153 (0.427)	4.8074** (2.031)	-9.9073*** (2.641)	-18.9334*** (2.968)	-34.0119*** (8.906)
Constant	-23.5946*** (2.791)	-90.8075*** (5.877)	-100.1557*** (12.074)	-57.3730*** (12.729)	-18.3720 (33.100)
N	38,665				

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. The omitted dummy variables are Low Education, Unemployed, Income Quartile 1, 2014, and North West, respectively for education, labor force status, income quartiles, year, and macro-region

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 20 Net wealth components, 2006–2014

	10th Q	25th Q	50th Q	75th Q	90th Q
Housing and other real estate					
Immigrant	0.0000 (739.303)	-0.1497 (3.323)	-33.5102*** (4.195)	-52.9535*** (5.731)	-50.4747*** (9.960)
Years since migration	0.0000 (17.489)	-0.3064 (0.200)	0.1665 (0.162)	0.3797** (0.188)	0.0235 (0.567)
Constant	0.0000 (0.000)	-52.5532*** (6.144)	-64.8694*** (12.141)	-21.5623 (18.534)	-15.8432 (25.033)
Valuables					
Immigrant	-0.0898*** (0.021)	-0.3575*** (0.024)	-0.6426*** (0.047)	-0.9421*** (0.102)	-0.6919*** (0.228)
Years since migration	-0.0004 (0.001)	0.0011* (0.001)	0.0073*** (0.002)	0.0100** (0.004)	-0.0025 (0.016)
Constant	-0.0442 (0.042)	-0.2320*** (0.072)	-0.3538*** (0.141)	-0.0931 (0.277)	-0.4493 (0.718)
N	38,665				

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 21 Asset holdings, all covariates, 2006–2014

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Immigrant	−0.0933*** (0.006)	−0.0205*** (0.005)	−0.0970*** (0.026)	−0.0346*** (0.011)	0.0128 (0.008)
Family size	−0.0062*** (0.002)	−0.0053*** (0.001)	0.0015 (0.002)	0.0092*** (0.002)	0.0029** (0.001)
Male	0.0113** (0.005)	0.0080*** (0.003)	−0.0023 (0.004)	−0.0005 (0.005)	0.0088*** (0.003)
Age	0.0057*** (0.001)	0.0028*** (0.001)	−0.0006 (0.001)	0.0031*** (0.001)	0.0025*** (0.001)
Age squared	−0.0048*** (0.001)	−0.0022*** (0.000)	0.0004 (0.001)	−0.0074*** (0.001)	−0.0030*** (0.001)
Couple	0.0150*** (0.005)	0.0078** (0.003)	−0.0032 (0.005)	0.0338*** (0.006)	−0.0138*** (0.004)
Medium edu.	0.0290*** (0.005)	0.0126*** (0.004)	−0.0398*** (0.005)	0.0211*** (0.007)	−0.0078* (0.005)
High edu.	0.0599*** (0.008)	0.0244*** (0.006)	−0.0631*** (0.009)	0.0503*** (0.010)	−0.0146*** (0.006)
Employee	−0.0466*** (0.012)	−0.0189*** (0.005)	−0.0014 (0.008)	0.0400*** (0.009)	−0.0173*** (0.006)
Self-employed	−0.0591*** (0.012)	−0.0276*** (0.006)	−0.0977*** (0.011)	0.0219** (0.009)	−0.0131** (0.006)
Retired	−0.0370*** (0.012)	−0.0087 (0.006)	0.0080 (0.008)	0.0160* (0.009)	−0.0180*** (0.006)
Income Q. 2	0.0182*** (0.006)	−0.0008 (0.003)	0.0042 (0.006)	0.0127* (0.008)	−0.0195*** (0.004)
Income Q. 3	0.0509*** (0.007)	0.0121*** (0.004)	0.0095 (0.007)	0.0143* (0.008)	−0.0250*** (0.005)
Income Q. 4	0.1156*** (0.008)	0.0553*** (0.005)	−0.0134 (0.009)	0.0362*** (0.010)	−0.0242*** (0.006)
Wealth Q. 2	0.0568*** (0.006)	0.0175*** (0.003)	0.6802*** (0.007)	0.1653*** (0.006)	−0.0182*** (0.004)
Wealth Q. 3	0.0628*** (0.005)	0.0210*** (0.003)	0.9187*** (0.004)	0.1092*** (0.006)	−0.0239*** (0.004)
Wealth Q. 4	0.1245*** (0.006)	0.0561*** (0.004)	0.9447*** (0.004)	0.0900*** (0.006)	−0.0289*** (0.005)
Risk averse	−0.0479*** (0.004)	−0.0250*** (0.003)	0.0163*** (0.004)	0.0108** (0.005)	−0.0054** (0.003)
Years since migration	0.0027*** (0.001)	0.0002 (0.000)	0.0025*** (0.001)	0.0019*** (0.001)	−0.0003 (0.000)

Table 21 continued

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
2006	0.0031 (0.006)	-0.0004 (0.004)	0.0010 (0.006)	0.0487*** (0.007)	0.0055 (0.004)
2008	0.0056 (0.006)	0.0061 (0.004)	-0.0035 (0.006)	0.0357*** (0.007)	-0.0011 (0.004)
2010	0.0042 (0.006)	0.0080* (0.004)	-0.0181*** (0.006)	0.0486*** (0.007)	0.0056 (0.004)
2012	-0.0091 (0.006)	-0.0025 (0.004)	-0.0028 (0.006)	0.0395*** (0.007)	0.0011 (0.004)
North East	0.0115* (0.006)	0.0101** (0.004)	0.0208*** (0.006)	0.0121* (0.006)	-0.0098*** (0.003)
Center	-0.0555*** (0.006)	-0.0240*** (0.004)	0.0133** (0.006)	0.0079 (0.007)	-0.0068* (0.004)
South	-0.0994*** (0.006)	-0.0434*** (0.004)	0.0451*** (0.006)	-0.0394*** (0.006)	-0.0049 (0.003)
Islands	-0.0690*** (0.007)	-0.0292*** (0.004)	0.0712*** (0.006)	-0.0286*** (0.008)	0.0010 (0.005)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. The omitted dummy variables are Low Education, Unemployed, Income Quartile 1, 2014, and North West, respectively for education, labor force status, income quartiles, year, and macro-region. For the OLS regression for share of risky assets, the coefficient of the constant is equal to -0.0356, with standard error equal to 0.0152

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 22 Other assets and financial fragility, all covariates, 2006–2014

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Immigrant	-0.0054*** (0.002)	-0.0012* (0.001)	-0.0242** (0.012)	-0.1726*** (0.022)	0.0764*** (0.020)
Family size	-0.0006 (0.001)	-0.0002 (0.000)	0.0199*** (0.002)	0.0017 (0.003)	-0.0118*** (0.002)
Male	0.0011 (0.001)	0.0004 (0.001)	-0.0160*** (0.004)	-0.0939*** (0.005)	0.0120*** (0.004)
Age	0.0008*** (0.000)	0.0003*** (0.000)	0.0010 (0.001)	-0.0020** (0.001)	-0.0006 (0.001)
Age squared	-0.0007*** (0.000)	-0.0002** (0.000)	-0.0019** (0.001)	0.0018** (0.001)	0.0013* (0.001)

Table 22 continued

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Couple	0.0010 (0.001)	0.0001 (0.001)	0.0097** (0.005)	0.1052*** (0.007)	-0.0597*** (0.005)
Medium edu.	0.0033** (0.001)	0.0002 (0.001)	0.0085* (0.005)	0.0221*** (0.007)	-0.0345*** (0.006)
High edu.	0.0070*** (0.002)	0.0028** (0.001)	-0.0153** (0.006)	0.0307*** (0.010)	-0.0502*** (0.008)
Employee	-0.0008 (0.004)	0.0004 (0.001)	-0.0255*** (0.007)	0.0224** (0.010)	0.0477*** (0.008)
Self-employed	-0.0024 (0.004)	-0.0006 (0.001)	0.6240*** (0.014)	0.0234* (0.012)	0.0499*** (0.010)
Retired	-0.0040 (0.004)	-0.0010 (0.001)	-0.0123 (0.008)	0.0346*** (0.011)	0.0355*** (0.007)
Income Q. 2	0.0019 (0.002)	0.0001 (0.001)	0.0074 (0.006)	0.0472*** (0.008)	0.0231*** (0.005)
Income Q. 3	0.0019 (0.002)	-0.0005 (0.001)	-0.0039 (0.007)	0.0747*** (0.009)	0.0356*** (0.006)
Income Q. 4	0.0082*** (0.002)	0.0023** (0.001)	-0.0002 (0.007)	0.0956*** (0.010)	0.0329*** (0.008)
Wealth Q. 2	0.0052*** (0.002)	0.0014** (0.001)	0.0596*** (0.005)	0.0528*** (0.007)	-0.0008 (0.006)
Wealth Q. 3	0.0032** (0.002)	0.0009 (0.001)	0.0620*** (0.005)	0.0588*** (0.008)	-0.0154** (0.007)
Wealth Q. 4	0.0072*** (0.002)	0.0015* (0.001)	0.1322*** (0.007)	0.0628*** (0.009)	-0.0451*** (0.007)
Risk averse	-0.0088*** (0.001)	-0.0027*** (0.001)	-0.0081** (0.004)	-0.0467*** (0.005)	0.0079* (0.004)
Years since migration	0.0002* (0.000)	0.0000 (0.000)	-0.0000 (0.001)	0.0014** (0.001)	-0.0010 (0.001)
2006	0.0005 (0.001)	0.0002 (0.001)	0.0075 (0.005)	0.0250*** (0.007)	0.0133** (0.006)
2008	0.0020 (0.001)	0.0008 (0.001)	-0.0059 (0.005)	-0.0200*** (0.008)	-0.0021 (0.006)
2010	0.0057*** (0.002)	0.0029*** (0.001)	0.0040 (0.005)	-0.0201*** (0.007)	-0.0092 (0.006)
2012	0.0002 (0.001)	0.0013* (0.001)	0.0088* (0.005)	-0.0241*** (0.007)	0.0029 (0.006)
North East	-0.0021 (0.002)	-0.0008 (0.001)	0.0137*** (0.005)	-0.0264*** (0.008)	0.0122** (0.005)

Table 22 continued

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Center	−0.0058*** (0.002)	−0.0012 (0.001)	0.0026 (0.005)	0.0512*** (0.007)	0.0150*** (0.005)
South	−0.0100*** (0.001)	−0.0030*** (0.001)	0.0287*** (0.005)	0.0514*** (0.007)	0.0849*** (0.006)
Islands	−0.0094*** (0.002)	−0.0027*** (0.001)	0.0154** (0.007)	0.0324*** (0.008)	0.1173*** (0.009)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. The omitted dummy variables are low education, unemployed, income quartile 1, 2014, and North West, respectively for education, labor force status, income quartiles, year, and macro-region. For the OLS regression for share of foreign assets, the coefficient of the constant is equal to -0.0045 , with standard error equal to 0.0027

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 23 Other assets and financial fragility, interactions, 2006–2014

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Immigrant	−0.0056*** (0.002)	−0.0012* (0.001)	−0.0255** (0.012)	−0.1730*** (0.022)	0.0769*** (0.020)
Male	0.0011 (0.001)	0.0004 (0.001)	−0.0160*** (0.004)	−0.0942*** (0.005)	0.0122*** (0.004)
Immigrant*male	−0.0026 (0.003)	0.0001 (0.001)	−0.0043 (0.010)	−0.1244*** (0.028)	−0.0280 (0.019)
Immigrant	−0.0053*** (0.002)	−0.0012* (0.001)	−0.0245** (0.012)	−0.1745*** (0.022)	0.0774*** (0.021)
Couple	0.0010 (0.001)	0.0001 (0.001)	0.0096** (0.005)	0.1040*** (0.007)	−0.0599*** (0.005)
Immigrant * couple	0.0007 (0.002)	0.0011 (0.001)	−0.0084 (0.010)	−0.0292 (0.031)	0.0242 (0.021)
Immigrant	—	−0.0014* (0.001)	−0.0248** (0.012)	−0.1830*** (0.025)	0.0867*** (0.023)
Medium edu.	—	0.0002 (0.001)	0.0087* (0.005)	0.0236*** (0.007)	−0.0355*** (0.006)
High edu.	—	0.0028** (0.001)	−0.0151** (0.006)	0.0320*** (0.010)	−0.0511*** (0.008)
Immigrant * medium edu.	—	0.0006 (0.001)	0.0011 (0.012)	0.0658 (0.049)	−0.0399 (0.038)

Table 23 continued

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Immigrant * high edu.	— —	− 0.0031* (0.002)	0.0086 (0.016)	0.0936 (0.065)	− 0.0481 (0.043)
Immigrant	— —	0.0020 (0.004)	− 0.0241 (0.016)	− 0.1457*** (0.041)	0.0513 (0.035)
Employee	— —	0.0004 (0.001)	− 0.0255*** (0.007)	0.0220** (0.010)	0.0484*** (0.008)
Self-employed	— —	− 0.0006 (0.001)	0.6254*** (0.014)	0.0243** (0.012)	0.0502*** (0.010)
Retired	— —	− 0.0007 (0.001)	− 0.0127 (0.008)	0.0385*** (0.012)	0.0338*** (0.007)
Immigrant * employee	— —	0.0003 (0.001)	0.0136 (0.012)	0.0633 (0.043)	− 0.0183 (0.026)
Immigrant * self-employed	— —	− 0.0013 (0.001)	− 0.0650 (0.048)	0.1166* (0.064)	− 0.0371 (0.040)
Immigrant * retired	— —	0.0071 (0.008)	0.0074 (0.022)	0.1353 (0.085)	− 0.0497 (0.040)
Immigrant	− 0.0056*** (0.002)	− 0.0016** (0.001)	− 0.0228* (0.013)	− 0.1724*** (0.022)	0.0771*** (0.020)
Risk averse	− 0.0088*** (0.001)	− 0.0027*** (0.001)	− 0.0081** (0.004)	− 0.0467*** (0.005)	0.0079* (0.004)
Immigrant * risk averse	0.0063* (0.003)	0.0029** (0.001)	− 0.0010 (0.010)	− 0.0455 (0.031)	− 0.0069 (0.020)

The table reports marginal effects and coefficients of the interactions between the immigrant dummy and each covariate of interest. In each regression, the immigrant dummy is interacted with a single covariate of interest. Probit models are estimated for the binary dependent variables and OLS for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions include, besides the immigrant dummy: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects
*Significant at 10%; **significant at 5%; ***significant at 1%

Table 24 Propensity score model

Variable	Marginal effect
2008	0.0103*** (0.002)
2010	0.0195*** (0.003)
2012	0.0432*** (0.003)
2014	0.0456*** (0.003)
Income Q.2	-0.0222*** (0.003)
Income Q.3	-0.0485*** (0.004)
Income Q.4	-0.0531*** (0.004)
Wealth Q.2	-0.0496*** (0.004)
Wealth Q.3	-0.0782*** (0.003)
Wealth Q.4	-0.0776*** (0.004)
Employee	0.0458*** (0.003)
Self-employed	0.0260*** (0.004)
Retired	-0.0070*** (0.003)
Medium edu.	0.0193*** (0.003)
High edu.	0.0327*** (0.005)
Family size	-0.0023*** (0.001)
Age	-0.0015*** (0.000)

Table 24 continued

Variable	Marginal effect
Male	0.0113*** (0.002)
Couple	0.0159*** (0.002)
Risk averse	0.0264*** (0.002)
N	38,665

The table reports the average marginal effects from a logit model for the treatment binary dependent variable, i.e. being an immigrant. The omitted dummy variables are Low Education, Unemployed, Income Quartile 1, and 2006 respectively for education, labor force status, income quartiles, and year. The matching is performed by macro-region of residence

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 25 Confidence intervals for propensity score covariates, before and after matching

	Before matching		After matching	
	Immigrants	Natives	Immigrants	Natives
Macro-region	(2.124; 2.247)	(2.766; 2.793)	(2.133; 2.230)	(2.133; 2.230)
Year	(2,010.900; 2,011.158)	(2,009.983; 2,010.041)	(2,010.905; 2,011.148)	(2,010.852; 2,011.095)
Income Quartile	(1.800; 1.901)	(2.563; 2.585)	(1.809; 1.895)	(2.070; 2.156)
Wealth Quartile	(1.425; 1.523)	(2.667; 2.689)	(1.433; 1.516)	(1.654; 1.738)
Labour Force Status	(1.022; 1.122)	(1.936; 1.958)	(1.038; 1.106)	(1.273; 1.341)
Education	(1.003; 1.058)	(0.806; 0.818)	(1.007; 1.050)	(1.016; 1.060)
Family Size	(2.612; 2.727)	(2.440; 2.466)	(2.604; 2.734)	(2.327; 2.457)
Age	(42.779; 44.151)	(59.576; 59.883)	(42.874; 44.084)	(45.383; 46.593)
Male	(0.571; 0.616)	(0.572; 0.582)	(0.571; 0.616)	(0.528; 0.573)
Married	(0.617; 0.661)	(0.612; 0.622)	(0.616; 0.661)	(0.538; 0.583)
Risk Averse	(0.676; 0.722)	(0.537; 0.548)	(0.677; 0.720)	(0.661; 0.704)

The table reports the 95% confidence intervals for all the covariates used in the Propensity Score Model, including Macro-region of residence

Table 26 Other assets and financial fragility, propensity score matching, 2006–2014

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Immigrant	-0.0036*** (0.002)	-0.0016*** (0.001)	-0.0179*** (0.009)	-0.1657 (0.013)	0.0375** (0.009)
N	38,665	32,492	38,665	38,665	38,665

The table reports coefficients from propensity score matching with robust standard errors. Immigrant stands for immigrant household head

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 27 Rosenbaum bounds, by outcome variable and values of gamma

	γ	1	1.1	1.2	1.3	1.4	1.5	2
Wealth	Chi2 ⁻	4.33***	4.69***	5.02***	5.33***	5.63***	5.92***	7.19***
	Chi2 ⁺	4.33***	3.99***	3.68***	3.40***	3.15***	2.92***	2.00**
Holding risky assets	Chi2 ⁻	13.09***	12.24***	11.49***	10.81***	10.20***	9.64***	7.43***
	Chi2 ⁺	13.09***	13.97***	14.80***	15.59***	16.34***	17.06***	20.24***
Share of risky assets	Chi2 ⁻	-0.15	-0.03	0.07	0.17	0.26	0.34	0.69
	Chi2 ⁺	-0.15	-0.26	-0.35	-0.23	-0.11	-0.01	0.43
Home Ownership	Chi2 ⁻	47.29***	44.65***	42.32***	40.23***	38.36***	36.65***	29.91***
	Chi2 ⁺	47.29***	50.02***	52.61***	55.07***	57.41***	59.66***	69.79***
Holding Mortgage	Chi2 ⁻	3.81***	5.12***	6.34***	7.46***	8.51***	9.50***	13.76***
	Chi2 ⁺	3.81***	2.50***	1.31*	0.21	0.73	1.67**	5.64***
Holding Informal Debts	Chi2 ⁻	10.64***	11.75***	12.78***	13.75***	14.67***	15.54***	19.39***
	Chi2 ⁺	10.64***	9.56***	8.59***	7.72***	6.91***	6.18***	3.17***
Holding foreign assets	Chi2 ⁻	3.02***	2.75***	2.52***	2.31**	2.12**	1.95**	1.24
	Chi2 ⁺	3.02***	3.28***	3.53***	3.77***	3.99***	4.21***	5.15***
Share of foreign assets	Chi2 ⁻	-1.18	-1.26	-1.34	-1.42	-1.49	-1.56	-1.87
	Chi2 ⁺	-1.18	-1.09	-1.02	-0.96	-0.90	-0.84	-0.63
Holding business	Chi2 ⁻	7.39***	6.32***	5.36***	4.48***	3.67***	2.93***	0.07
	Chi2 ⁺	7.39***	8.47***	9.48***	10.42***	11.30***	12.14***	15.77***
Holding valuables	Chi2 ⁻	31.23***	28.93***	26.89***	25.05***	23.39***	21.86***	15.73***
	Chi2 ⁺	31.23***	33.59***	35.81***	37.91***	39.90***	41.81***	50.29***
Financial fragility	Chi2 ⁻	1.25	2.45***	3.54***	4.56***	5.50***	6.39***	10.18***
	Chi2 ⁺	1.25	0.06	0.95	1.96**	2.89***	3.77***	7.46***

The table reports the Rosenbaum bounds with reference to our preferred matching design, by outcome variable and different values of the parameter γ

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 28 Net wealth, foreign citizens, 2006–2012

	10th Q	25th Q	50th Q	75th Q	90th Q
Immigrant (non-citizen)	-3.9458*** (1.196)	-1.9791 (2.507)	-16.1138*** (5.319)	-29.5770*** (5.288)	-35.2331* (18.101)
N	30,742				

The table reports coefficients from quantile regressions with robust standard errors and weighted by population weights. Immigrant (non-citizen) stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income quartiles, risk aversion, years since migration, and year and macro-region fixed effects.

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 29 Asset holdings, foreign citizens, 2006–2012

	Holding risky assets	Share of risky assets	Home ownership	Holding mortgage	Holding informal debts
Immigrant (non-citizen)	−0.0899*** (0.008)	−0.0227*** (0.006)	−0.0564** (0.024)	−0.0228* (0.013)	0.0086 (0.008)
N	30,742	25,769	30,742	30,742	30,742

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of risky assets. All regressions have robust standard errors and are weighted by population weights. Immigrant (non-citizen) stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 30 Other assets and financial fragility, foreign citizens, 2006–2012

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Immigrant (non-citizen)	−0.0052** (0.002)	−0.0006 (0.002)	−0.0305*** (0.011)	−0.1423*** (0.021)	0.0549*** (0.020)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. Immigrant (non-citizen) stands for non-citizen immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 31 Other assets and financial fragility by cohort of arrival, 2006–2014

	Holding foreign assets	Share of foreign assets	Holding business	Holding Valuables	Financial fragility
Pre-1980 cohort	0.7555** (0.357)	0.0114 (0.008)	−0.0136 (0.057)	−0.0846 (0.113)	0.1198 (0.137)
1980s cohort	0.3292 (0.231)	0.0115 (0.010)	−0.0176 (0.041)	−0.1931** (0.086)	0.1658* (0.100)
1990s cohort	0.0232 (0.027)	0.0022 (0.002)	−0.0525*** (0.017)	−0.1936*** (0.048)	0.0914** (0.045)
Post-2000 cohort	−0.0022 (0.005)	0.0004 (0.001)	−0.0087 (0.016)	−0.1526*** (0.027)	0.0808*** (0.026)
N	38,665	32,492	38,665	38,665	38,665

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 32 Other assets and financial fragility by country of origin, 2006–2012

	Holding foreign assets	Share of foreign assets	Holding business	Holding Valuables	Financial fragility
Panel A					
Immigrant	−0.0054*** (0.002)	−0.0015* (0.001)	−0.0221 (0.015)	−0.1743*** (0.026)	0.0784*** (0.025)
N	30,742	25,769	30,742	30,742	30,742
Panel B					
EU15 and N. America	0.0043 (0.015)	−0.0001 (0.005)	0.0179 (0.059)	−0.1397* (0.084)	0.2348** (0.113)
New EU	− (0.001)	−0.0024* (0.001)	−0.0097 (0.024)	−0.1062*** (0.035)	0.0464 (0.029)
Other EU	−0.0019 (0.004)	0.0006 (0.002)	−0.0158 (0.024)	−0.1522*** (0.034)	0.0715** (0.029)
North Africa	− (0.001)	−0.0026* (0.001)	−0.0328 (0.024)	−0.1944*** (0.048)	0.1723*** (0.066)
Sub-S. Africa	− (0.001)	−0.0029** (0.001)	−0.0847*** (0.018)	−0.2754*** (0.054)	0.0841* (0.046)
Central and S. America	− (0.001)	−0.0031** (0.001)	−0.0471** (0.022)	−0.1927*** (0.060)	0.0353 (0.046)
Asia and Oceania	−0.0067** (0.003)	−0.0011 (0.002)	−0.0012 (0.022)	−0.2637*** (0.054)	0.0792 (0.051)
N	30,591	25,769	30,742	30,742	30,742
Panel C					
Risk taking	−0.0410 (0.030)	−0.0033 (0.004)	−0.0945 (0.066)	−0.1674** (0.071)	0.0670 (0.064)
Patience	0.0291*** (0.008)	0.0047* (0.002)	0.0848*** (0.017)	0.2379** (0.095)	−0.0408 (0.112)
N	30,742	25,769	30,742	30,742	30,742

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions in Panel A and B have robust standard errors, while in Panel C standard errors are clustered at the country group level. All regressions are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **Significant at 5%; ***significant at 1%

Table 33 Other assets, financial fragility, and intermarriage (couples sub-sample), 2006–2014

	Holding foreign assets	Share of own assets	of for-business	Holding valuables	Financial fragility
Panel A					
Immigrant	− 0.0066*** (0.003)	− 0.0018** (0.001)	− 0.0416** (0.018)	− 0.1715*** (0.030)	0.0208 (0.019)
N	24,134	21,071	24,134	24,134	24,134
Panel B					
Mixed immigrant head	0.0204 (0.024)	0.0069 (0.007)	0.0475 (0.055)	− 0.0511 (0.045)	− 0.0135 (0.026)
Mixed immigrant spouse	0.0023 (0.004)	0.0008 (0.002)	0.0158 (0.017)	− 0.0103 (0.013)	0.0158 (0.011)
Both immigrants		− 0.0010 (0.001)	− 0.0415** (0.017)	− 0.1607*** (0.030)	0.0166 (0.019)
N	24,134	21,071	24,134	24,134	24,134
Panel C					
Mixed imm. head male	0.0074 (0.031)	0.0124 (0.016)	0.0374 (0.049)	− 0.1024 (0.072)	− 0.0204 (0.024)
Mixed imm. head female	0.0285 (0.028)	0.0050 (0.005)	0.0515 (0.059)	− 0.0321 (0.046)	− 0.0042 (0.035)
Mixed imm. spouse male	0.0211 (0.019)	0.0038 (0.005)	0.0049 (0.045)	− 0.0675 (0.041)	0.1009* (0.053)
Mixed imm. spouse female	− 0.0002 (0.004)	0.0005 (0.002)	0.0187 (0.018)	− 0.0028 (0.013)	0.0107 (0.011)
Both immigrants		− 0.0001 (0.002)	− 0.0419** (0.016)	− 0.1678*** (0.031)	0.0153 (0.018)
N	23,948	20,904	23,948	23,948	23,948

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

Table 34 Other assets, financial fragility, and the great recession: pre- and post-crisis, 2006–2014

	Holding foreign assets	Share of foreign assets	Holding business	Holding valuables	Financial fragility
Pre-crisis (2006–2008)					
Immigrant	–0.0046* (0.003)	–0.0008 (0.001)	–0.0186 (0.032)	–0.1882*** (0.049)	0.0158 (0.039)
N	15,152	12,810	15,152	15,152	15,152
Post-crisis (2010–2014)					
Immigrant	–0.0052* (0.003)	–0.0012 (0.001)	–0.0226 (0.015)	–0.1527*** (0.026)	0.0987*** (0.025)
N	23,513	19,682	23,513	23,513	23,513

The table reports average marginal effects from probit models for the binary dependent variables and OLS coefficients for the continuous dependent variable share of foreign assets. All regressions have robust standard errors and are weighted by population weights. Immigrant stands for immigrant household head. All regressions also include: family size, gender, age, age squared, marital status, education, labor force status, income and wealth quartiles, risk aversion, years since migration, and year and macro-region fixed effects

*Significant at 10%; **significant at 5%; ***significant at 1%

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