Beliefs, Precautionary Savings and Home Ownership*

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August 2020

Abstract

This paper shows that individual beliefs on the effectiveness of formal and informal sources of risk sharing determine financial precautionary behavior. We present empirical evidence demonstrating that higher trust in public insurance systems reduces net liquid wealth while higher trust in communal insurance increases it. This dichotomy is consistent with theories on access to private risk sharing networks. Moreover, we find that both types of trust associate positively with the probability to take on financial risk for the purpose of becoming a homeowner and the related loan-to-value ratio. Our findings are robust across a wide range of econometric controls and specifications.

Keywords: Household Saving, Portfolio Liquidity, Public and Communal Insurance
JEL Classification: D14, D31, E71, G5

*We are deeply indebted to the members of the European Central Bank's Household Finance and Consumption Network (HFCN), in particular Jirka Slacacek, Oreste Tristani and Philip Vermeulen. We also thank an anonymous referee, Pascal Achard, Miguel Ampudia, Axelle Ferriere, Nicola Fuchs-Schündeln, Luigi Guiso, Ana Lamo, Ramon Marimon, Stefan Nagel, Fabiano Schivardi and Kjetil Storesletten for helpful comments and Juha Honkkila for answering numerous questions on country specific details of the HFCS data. Peter Lindner, Reamonn Lydon, Frédérique Savignac and the Bundesbank's RDSC-Team provided valuable support in obtaining access to the country of origin variable of the Austrian, Irish, French and German HFCS datasets. We also benefited from comments of audiences at the ECB, the EUI, the HFCN meeting in March 2020 as well as the SEM 2019 and CEF 2020 conferences. All errors are our own. Fleck did some of the work on this paper while he was visiting the economics department at the University of Oslo. Financial support of Oslo Fiscal Studies (OFS) is gratefully acknowledged. Discussion Papers represent the authors' personal opinions and do not necessarily reflect the views of the Deutsche Bundesbank or the Eurosystem.

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1 Introduction

Household portfolios vary profoundly across advanced economies such as the European Union member states. While about 22% of Belgian total household net wealth consisted of liquid assets in 2014, this share was only 6% in Poland. In the same year, French households dedicated about 10% of their wealth to private pensions. Their Italian counterparts less than 3%. Those discrepancies are even more striking for real estate assets; 70% of Italian households were home owners. In Germany, this was true for only 42%. These differences have attracted considerable attention in recent years as the composition of household portfolios has been found to be a relevant factor in determining the efficacy of fiscal and monetary policy interventions.[1]

In this paper, we study the relationship between culture and the liquidity structure of household savings. Using household portfolio data of four European economies we find that cultural norms which emphasize trust in other individuals and in public institutions affect the liquidity composition of portfolios. This is also true for the probability to become a home owner using a mortgage and the related loan-to-value (LTV) ratio. We provide evidence that culturally determined expectations on risk sharing from informal and formal channels generate these outcomes as they lead to differences in perceived uninsurable risks.

Our paper contributes to research on household portfolio heterogeneity by studying its relationship to cross-country cultural differences. Following the seminal works of Banfield (1958), Putnam, Leonardi, and Nanetti (1993) and others, many papers have used cultural variation as an explanation for a wide array of outcomes such as income and growth, trade linkages, redistributive policies, entrepreneurship, financial development and portfolio choice.[2] Previous research on the relationship between culture and portfolios, most prominently Guiso, Sapienza, and Zingales (2008b), has interpreted trust in other individuals as "the subjective probability individuals attribute to the possibility of being cheated" (page 2557). Using this definition, variation in trust has been related to differences in stock market participation as the expected return of these assets depends on subjective beliefs regarding the honesty of others.

In contrast, we investigate a link between culture and portfolio liquidity based on the view that trust represents *the subjective probability individuals attribute to the possibility to receive support in financial distress*. Thus, our definition emphasizes subjective views on other individuals' reliability and solidarity in times of need, i.e. their willingness to share risks. Accordingly, we focus on portfolio choice from a precautionary perspective. Hence, while the definition of Guiso, Sapienza, and Zingales (2008b) emphasizes unconditional beliefs attributable to culture, ours highlights state contingent implications; different intensities of trust in other individuals and in public institutions correspond to distinct expectations on risk sharing provided by informal and formal sources in bad state realizations. In other words, high and low trust individuals have different subjective beliefs on uninsurable risks. Therefore, they have distinct views on the desirability of holding liquid assets, i.e. savings dedicated to precautionary motives.

[1] For example, using data from the United States, Kaplan and Violante (2014) demonstrated that the share of illiquid assets held by households is a critical determinant of the aggregate consumption expenditure response to fiscal stimulus programs. In the Euro Area, differences in household portfolios are highly important from several additional dimensions as they pose a challenge for the conduct of common monetary policy.

[2] See Guiso, Sapienza, and Zingales (2006) for a comprehensive survey.

We explicitly distinguish between trust individuals have in other individuals and trust individuals have in public institutions, such as a nation's justice, health care and social security system. While earlier research studied the consequences of trust differences in specific institutions such as the central bank or the financial system, we focus on trust in public institutions as providers of insurance. Furthermore, we put particular emphasis on housing tenure choices. This is because for most households, purchasing a home – as opposed to renting – reduces asset liquidity and requires taking out a mortgage. Since assuming this specific liability has implications regarding the (financial) risk a household exposes herself to, higher trust promotes the willingness to participate in mortgage debt markets. Accordingly, our study goes beyond pure asset choice but also considers the liability side of household portfolios.

A concern regarding our investigation is that national institutions affecting household financial decisions are not invariant with respect to cultural norms; if the culture of a country's population favors participation in a specific asset, its institutions will be designed to ensure low access costs.[3] This relationship is consequential as public choice mechanisms are responsive to expressed cultural preferences. Earlier studies facing this problem have either not been able to address it or pursued a variety of ways to account for it. The by far most common econometric approach is to instrument culture, i.e. to find measures which are correlated to cultural variation but exogenous to variation in institutions. However, as noted by Alesina and Giuliano (2015) all variables used for this purpose so far have been found to meet this requirement only to a limited degree. Accordingly, a growing number of recent papers follows alternative methodological avenues.

In cross-sectional studies, a well-established possibility to implement a suitable research design is to follow Fernandez (2011) in applying the *Epidemiological Approach*. Its idea is to study the behavior of second-generation immigrants whose parents grew up in a country where cultural norms differ sufficiently from those governing social behavior in their current country of residence. As individual cultural preferences are strongly determined by parental transmission, second generation immigrants growing up in this setting can be expected to differ from the rest of the population in that dimension. At the same time, this group faces institutions which have been determined by the culture of the native society. Moreover, their parents made the migration decision which addresses concerns related to selection bias.

Our work follows the spirit of the Epidemiological Approach as we study the portfolios of immigrant communities. We are able to do so using two specific variables of the Household Finance and Consumption Survey (HFCS); its questionnaire asks respondents for their country of birth and for how long they have already been living in their current country of residence. Answers to the former question are recoded to country aggregates in the public version of the HFCS but they have been made available to us for research purposes. Hence, we can explore a novel feature of this dataset allowing us to conduct our empirical analysis in a setting which minimizes concerns regarding the endogenous relationship between culture and institutions. This is particularly true as we are able to observe immigrants from the same country of origin

[3]These societal preferences can manifest themselves in, for example, taxation of different kinds of capital incomes, deductibility of mortgage expenses, generosity of rent subsidies etc.

in several destination countries, i.e. in different institutional environments.

Our analysis provides evidence that variation in trust in other individuals and in public institutions has implications for the liquidity structure of household portfolios. First, we find that higher public trust decreases the demand for precautionary savings (measured as the amount of net liquid wealth) while higher private trust has the opposite effect. Specifically, if public trust increases by 1%, liquid wealth *decreases* by up to 3.4%. For private trust, our findings indicate a 2.6% *increase*. This dichotomy is consistent with theories on reciprocity regarding risk sharing in private networks. Second, we estimate that a one standard deviation increase of private trust improves the probability to become a home owner with a mortgage by around 10 percentage points. This finding also applies to the intensive margin; for the same home value, households which are more trusting by a one standard deviation assume mortgages which are 4 to 6% larger.

The remainder of this paper is organized as follows; in the next section, we provide stylized facts on cross-country differences in the liquidity structures of household portfolios, outline why this heterogeneity is considered a relevant puzzle and provide a review of the most prominent explanations. In section 3, we describe how culture affects portfolio choice in detail, i.e. we postulate a mechanism and derive its testable implications. Section 4 illustrates our empirical strategy as well as the datasets we use. In section 5, we present the results of our analysis regarding the relationship between trust and portfolio choice. Section 6 is dedicated to assessing the robustness of our findings, in particular with respect to omitted variables and alternative measures of trust. Finally, section 7 concludes the paper with a discussion of our results and points out avenues for further research.

2 Precautionary Household Portfolio Heterogeneity

In this section, we illustrate cross-country heterogeneity of household portfolios with respect to precautionary aspects and emphasize the policy relevance of this variation as a motivation for our investigation. We focus on European countries because they are all developed economies but still vary substantially with respect to institutions and culture. As we describe below, these characteristics play a prominent role in theories explaining portfolio heterogeneity.

2.1 Stylized Facts from Europe

The Household Finance and Consumption Survey (HFCS) allows to compare household portfolios across most European countries in a comprehensive and consistent manner as it contains detailed and ex-ante harmonized information on household assets and liabilities.[4] Figure 1 displays the breakdown of total household assets and liabilities for all countries participating in its second wave. Specifically, it shows the contribution of liquid versus illiquid assets and liabilities to average household net wealth.[5]

[4]For a comprehensive description and documentation of the first two waves of this dataset, see Household Finance and Consumption Network (2013) and Household Finance and Consumption Network (2016a).

[5]In this figure, we classify assets as liquid if they consist of deposits, funds, bonds and stocks and as illiquid if they represent real estate and voluntary and occupational pensions. For liabilities, we classify non-mortgage debt

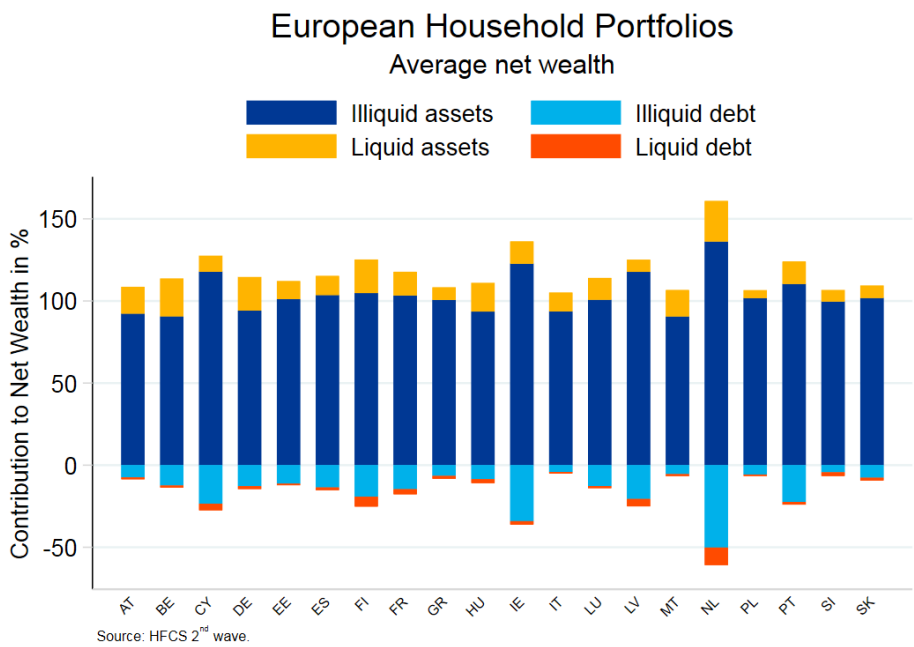


Figure 1: Household portfolios in HFCS countries

While household net wealth level differences between European member states have already been documented[6], figure 1 shows that net wealth varies in several additional dimensions. First, the breakdown of assets into liquid versus illiquid items is strikingly different. For example, the average household in Germany or Belgium holds a larger share in liquid form compared to countries like Greece or Poland (about 19 and 22% versus 4 and 6%). An analogous variation applies to liabilities. Second, household portfolios differ substantially with respect to the ratio of assets and liabilities. For instance, in the Netherlands, Ireland and Cyprus, liabilities constitute approximately 28 to 61% of average portfolio net wealth while households in other countries, for example Italy, Poland, Slovenia and Slovakia seem much more reluctant to take on liabilities; in these countries the share is only around 5 to 10%. As a result, the average household leverage (i.e. the ratio of assets and liabilities) also varies across countries in a non-negligible way and ranges from 2.6 in the Netherlands to 20.6 in Italy.

The differences in the cross-country distributions of European household illiquid assets and liabilities are partly driven by drastically different home ownership rates as well as distinct ways of acquiring the household's main residence. To illustrate this point, figure 2 shows the fraction of households in each country who rent their main residence as compared to owning it. Average home ownership rates vary considerably across countries; around 42% of German and Austrian households rent their main residence while more than 80% own it in Spain, Hungary and Slovakia. Hence, it is no surprise that liabilities such as mortgages play a substantially different role in the composition of average household portfolios. A relevant dimension of

(which consists of credit card debt and non-collateralised loans) as liquid and mortgage debt as illiquid.

[6]For instance, the release report of the second HFCS wave contains an entire section dedicated to country specific net wealth distributions. See Household Finance and Consumption Network (2016b), section 4.

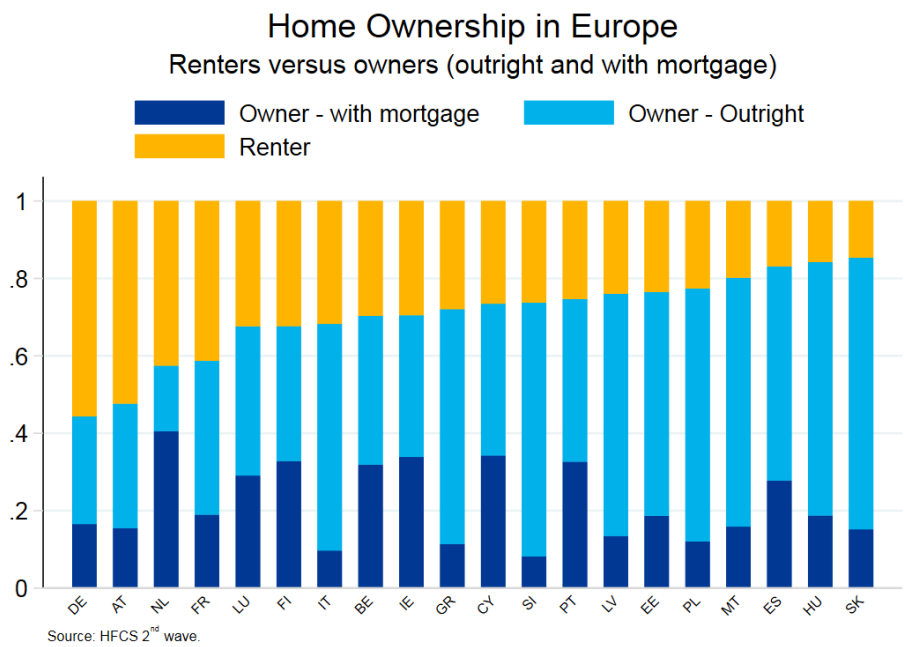


Figure 2: Home ownership and home acquisition in HFCS countries

heterogeneity among home owners explaining this discrepancy is the way in which households acquired their main residence. As figure 2 illustrates, more than or about half of all owners have a mortgage in Cyprus, Belgium, Ireland and the Netherlands. In Italy, Greece and Slovenia, this is true for only a small fraction of home owners. In the latter group of countries, obtaining residences as an inheritance or gift is much more common. For that reason, households are less likely to participate in mortgage markets in order to become owners. Accordingly, the distribution of mortgage debt is uneven across countries and does not necessarily correspond to average home ownership rates.

2.2 Consequences for Fiscal and Monetary Policy

The objective of our paper is to explain why household portfolio structures – the share of liquid wealth, mortgage debt and leverage in particular – are so different across developed countries. To motivate our investigation we briefly describe why this heterogeneity is relevant from the viewpoint of fiscal and monetary policy makers.

First, papers as Ampudia, Vlokhoven, and Zochowski (2016) demonstrated there is a link between an economy's household finances and the stability of its financial sector. Specifically, they examined the capacity of households in Euro Area member states to absorb unexpected interest rate increases or income decreases. For identical shocks, they discovered large differences in the share of financially distressed households across countries and found the differential outcomes to be driven by the average amount of household mortgage debt (and whether it is indexed at fixed or adjustable rates). Indeed, as household mortgage defaults have triggered the failure of savings banks during the Great Recession, several publications, for instance Hartmann (2015), argued that Euro Area macroprudential regulation needs to account for country

specific household portfolio indicators and for price dynamics of national real estate markets.

Second, household portfolios determine the redistributive effects of monetary policy *within* and *across* countries of a currency union. Several recent contributions point out that for a given central bank policy change, it is the composition of their assets which distinguishes households from gaining and losing in terms of net wealth.[7] Other papers showed that differences in national household portfolios determine the direction and magnitude of cross-country wealth redistribution due to policies implemented by the European Central Bank (ECB). For example, Adam and Zhu (2016) and Adam and Tzamourani (2016) found that ECB decisions which result in unexpected price level changes or alter relative asset prices lead to asymmetric wealth gains (and losses) across Euro Area member states because net nominal positions differ. Furthermore, Lenza and Slacalek (2018) and Slacalek, Tristani, and Violante (2020) reported that cross-country differences in portfolio interest rate exposures had implications for the across (and within) redistributive effects of the ECB's Quantitative Easing (QE) program.

Third, household portfolios regulate the effectiveness of monetary policy in providing economic stimulus. As Luetticke (2018) and Hintermaier and Koeniger (2018) demonstrated, the share of liquid versus illiquid assets and the fraction of home owners facing borrowing constraints determine the transmission of ECB monetary operations into the economies of Euro Area member states. Their findings are based on the visceral relationship between household portfolios and marginal propensities to consume (MPCs).[8] The same holds true for the efficacy of fiscal policy interventions as shown by Kaplan and Violante (2014) for the United States.[9]

Finally, household portfolio heterogeneity needs to be considered when designing and reforming risk sharing mechanisms and tax codes. For the United States, the role of the financial sector as a shock absorber and risk sharing channel has been emphasized by Asdrubali, Sorensen, and Yosha (1996) and other publications. Based on those findings, there has been a push towards greater integration of Euro Area financial markets – culminating into the creation of the Capital Markets and Banking Union – to increase Europe's capacity to share and reduce risks through private channels. However, if households in certain member states do not participate in asset markets which provide insurance against domestic shocks, their behavior limits the scope of risk sharing integrated financial markets can provide. Following the same reasoning, a joint fiscal revenue scheme based on a common financial transaction tax as proposed by the European Commission (2011) could imply asymmetric tax burdens for households in different Euro Area member states; the tax might fall disproportionately on households in countries where participation in stock and bond markets is more common. Hence, a better understanding of

[7] For example Coibion et al. (2017), Auclert (2019), Gornemann, Kuester, and Nakajima (2016) and Doepke, Schneider, and Selezneva (2015).

[8] Jappelli and Pistaferri (2014) and Fagereng, Holm, and Natvik (2018) reported large empirical variations of MPCs across households and provide evidence that portfolio heterogeneity is among their main explanatory factors.

[9] As a consequence, many researchers are now working with models which include an explicit role for (nominal) portfolio heterogeneity. For illustrative examples, see Kaplan, Violante, and Weidner (2014) for fiscal policy and Kaplan, Moll, and Violante (2018) for monetary policy. While substantial progress has been made with respect to developing and solving Heterogeneous Agent New Keynesian (HANK) models, it remains a challenge to provide a framework which can capture the tremendous variation in households' asset and liability choices. See Hubmer, Krusell, and Smith (2018) for a discussion of this shortcoming and an account of the avenues researchers are currently pursuing to address it.

households' portfolio choices is essential to gauge the intended and unintended consequences of complementary financial and economic Euro Area institutions.

2.3 Theories of Portfolio Heterogeneity

There is a considerable number of papers investigating why households in different countries allocate their portfolios in such heterogeneous ways. In what follows, we sort them into four groups according to the explanation they promote; institutions, shocks, product familiarity and culture.[10]

1. Institutions The first explanation is based on the large variability of institutional settings across countries, where institutions are considered formal and informal rules which affect portfolio choices. Even among developed economies numerous and large differences exist with respect to those regulating precautionary financial behavior and housing tenure choice. As an illustration, consider the generosity of minimum income benefits displayed in figure 3; they range from about 60% of median disposable income in Ireland to 0% in Italy as of 2014. The same is true for institutions regulating access to home ownership which has profound implications for household portfolios. For example, figure 4 illustrates that in 2015 the Netherlands spent about 2% of annual GDP on mortgage interest tax deductions while this kind of subsidy does not exist in many other European countries (which focus on subsidizing renters instead).

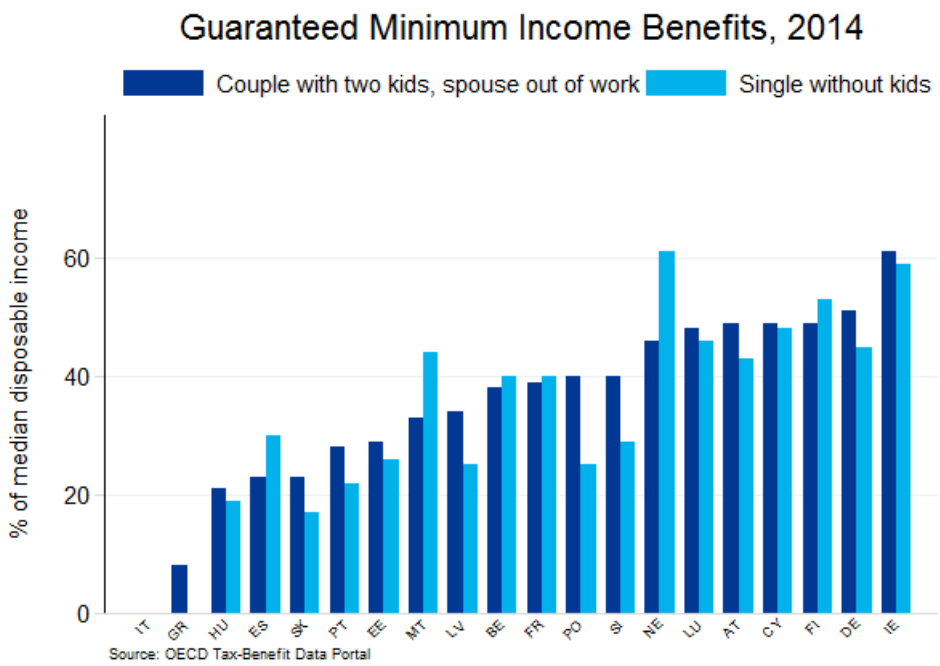


Figure 3: Minimum Income Benefits in OECD countries

[10]Some papers even considered genetical endowments to explain differences in financial behavior. For instance, studying identical twins, Cronqvist and Siegel (2015) found that the decision how much to save out of one's current income can be traced to shared genes. Moreover, Barth, Papageorge, and Thom (2020) demonstrated that wealth at retirement age can partly be explained by indirect effects of distinct genetic endowments.

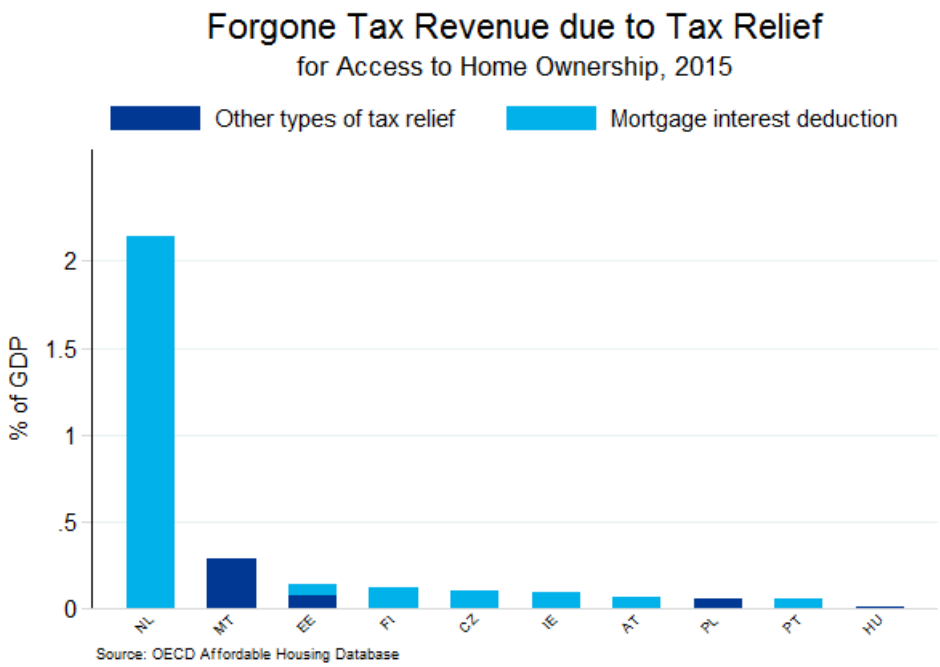


Figure 4: Promotion of Home Ownership

Two illustrative papers promoting explanations for portfolio heterogeneity based on institutional variation are Christelis, Georgarakos, and Haliassos (2013) and Christelis, Ehrmann, and Georgarakos (2017). Focusing on the portfolios of older households in the United States and selected European countries, they apply a counterfactual method to investigate cross-country variation in the amount and types of assets and liabilities households chose to accumulate during their lifetimes. Both papers conclude that portfolio variation is associated less with differences in cross-country household characteristics and more with different institutions.

Other contributions promoting this explanation analyze the role of specific institutions in more detail. Two recent examples are Pham-Dao (2019) and Glass, Simon, and Andersson (2016). The former emphasizes the fact that public institutions of Euro Area member states such as social security, pension and unemployment insurance systems provide distinct benefits to their residents. Therefore, households face different incentives regarding their portfolio choices. The latter points out that policies governing the generosity and duration of support for families vary substantially in Europe. Applying the same reasoning as in the former paper, it follows that portfolio heterogeneity of families with children are a mere reflection of country specific institutions.

2. Shocks The second explanation for cross-country variation in household portfolios is based on exogenous events which only specific economies or cohorts were exposed to. In a European context, economic examples of these are episodes of hyperinflation, sovereign defaults and bank failures while political examples are the Spanish Civil War, the Portuguese Carnation Revolution and German Reunification to name only a few. The relevance of these events for portfolio choice has been documented in household finance data from different European

countries. For example, Ampudia and Ehrmann (2017) discovered that individuals who lived through periods in which financial markets yielded high and stable returns are more willing to participate in stock markets and invest larger amounts. The same has been confirmed for the United States; using data on American household portfolios, Malmendier and Nagel (2011) found that the probability of a household to invest in a certain type of asset (e.g. stocks as opposed to bonds) depends on the returns which this asset realized during the life time of the household's reference person. Finally, Malmendier and Steiny (2017) have been able to trace back generational differences in home ownership rates to economic shocks, such as episodes of high inflation, which only certain cohorts experienced.

3. Product Familiarity The third explanation highlights national biases in financial behavior related to familiarity with specific financial instruments. For example, Guiso and Jappelli (2005) documented that stock market participation is determined by awareness and familiarity with this type of asset. Inasmuch as they are distinct across populations, familiarity patterns can lead to cross-country differences in portfolio choices. Moreover, they are highly persistent as familiarity is determined by social and geographic proximity. This finding is due to Brown et al. (2008) who documented that stock market participation is linked to the financial behavior of households in the immediate neighborhood. More recently, cross-sectional and serial correlation in investment decision was also documented by Fuchs-Schündeln and Haliassos (2020) who, using German reunification as a natural experiment, showed that product familiarity can explain inertia of households' asset choices.

4. Culture The fourth explanation relates differences in household portfolios to cultural variation. Since culture is a vague and multidimensional concept (comprising language, tradition, religion, etc.), scholars have focused on trust in other individuals as a particular cultural norm to explain differences in financial choices. In fact, based on surveys such as the European Value Study (EVS), there is a striking variation of this cultural norm across Europe. For example, when asked to evaluate the statement "people can be trusted", only 9% of respondents in Cyprus agree, while this share is close to 60% in Finland. To study the implications of these cultural differences on portfolio choices, the most widely used definition is due to Guiso, Sapienza, and Zingales (2008b) who specified trust as the "subjective probability individuals attribute to the possibility of being cheated". Based on this definition, it has been found that more trusting individuals and societies are more likely to participate in formal financial markets, and are more willing to invest in risky assets such as stocks.

However, this explanation suffers from two consequential shortcomings. First, it has focused on explaining differences in the readiness to assume financial risks but it has been mute on other portfolio aspects. Specifically, it has not been able to establish a connection between culture and the variation in precautionary portfolio structures – such as liquidity ratios – as well as in housing tenure choice. Second, this explanation has taken a precise yet narrow perspective on culture; it has focused on trust in an informal (interpersonal) context exclusively, but has neglected its formal (institutional) dimension. Yet, there is also substantial variation with respect to this aspect of trust. For example, when asking Europeans if they trust the political

parliament "a great deal" or "quite a lot", less than 20% of households would agree in Poland and Latvia, while this share is more than 60% in Luxembourg. A similar pattern can be found when asking about trust in the social security system. Here 25 and 30% in Poland and Greece state they have high trust in the social security system, while in Belgium and Luxembourg more than 80% do so.

In summary, this section demonstrated that household portfolios differ profoundly in terms of precautionary aspects and housing tenure choice. While scholars have argued that institutions, shocks and familiarity play a role, culture has also been credited explanatory power. However, no link between culture and precautionary portfolio choices has been established so far.

3 Culture and Portfolio Choice

3.1 Trust as the Subjective Probability to be Cheated

The human trait to which our paper relates is culture. Earlier papers studying the relationship between culture and financial behavior focused on trust in other individuals as the central cultural norm determining portfolio choices. Common to this literature is that it considers private trust as measuring the "subjective probability individuals attribute to the possibility of being cheated" (Guiso, Sapienza, and Zingales (2008b), page 2557). Based on this operating definition, several papers have argued that the causal link between culture and individual as well as aggregate financial outcomes is based on subjective beliefs determined by trust. For example, higher trust implies fewer expected incidences of check fraud, more faith in the fairness of brokers and greater confidence in the accuracy of companies' profit reports. In other words, low trust prevents individuals from engaging in financial transactions which are mutually beneficial but subject to some form of incompleteness (due to e.g. limited commitment, enforcement costs, asymmetric information and non-contingency).

The two most prominent papers in this literature are Guiso, Sapienza, and Zingales (2004) and Guiso, Sapienza, and Zingales (2008b). The former employs regional blood donations and voter turnout as a measure for social capital in Italian regions. Arguing that social capital is a critical determinant of trust among individuals, the authors approximate regional differences in private trust by these variables. Using Italian household portfolio data, they then investigate the relationship between trust and a broad set of financial participation measures (probability to have a bank account, use of checks, applications for mortgages, etc.). Their findings indicate that trust in other individuals can indeed explain extensive and intensive variation in financial participation. Guiso, Sapienza, and Zingales (2008b) use portfolio data of Dutch and Italian households to investigate if differences in private trust make households more likely to participate in stock markets. While controlling for a large set of characteristics such as optimism, loss and risk aversion as well as ambiguity, they find that participation in risky assets (stocks) critically depends on trust. Again, higher trust increases the probability to participate along the extensive and intensive margin.

By characterizing the relationship between trust and financial choices from a theoretical and empirical perspective, these papers have laid the foundations for a prolific field of research.

Two examples of recent contributions are Bucciol, Cavasso, and Zarri (2019) and Jiang and Lim (2018). Answering the question if higher trust can compensate for (financial) risk aversion is the objective of Bucciol, Cavasso, and Zarri (2019). In a sample of cross-country data on household investments, they find that, for risk averse households, higher trust appears to compensate for the reluctance to invest in risky assets. Moreover, they argue their finding also sheds light on the cross-country dimension of the limited stock market participation puzzle. With respect to participation in debt markets Jiang and Lim (2018) report that variation in trust also explains behavior with respect to assuming financial liabilities. Using a set of general household debt indicators, they document that having more trust is associated with, for example, fewer missed debt payments and fewer instances of personal bankruptcies.[11]

3.2 Trust as the Subjective Probability to be Supported in Financial Distress

Our paper is related but complementary to these earlier studies as our operational definition of culture is distinct; we do not presuppose that trust determines subjective beliefs on the safety of participating in formal financial transactions and the expected return of risky assets. Instead, our view is that trust affects individual assessments of uncertainty in a more pervasive sense. Specifically, we hypothesize that trust determines subjective assessments of *uninsurable risk*;[12] Thus, different intensities of trust make households heterogeneous in their perception of how much risk has to be borne by them.

Cultural differences generate heterogeneity in perceived uninsurable risks because trust determines subjective beliefs regarding external support available in times of need. Thus, our operational definition of trust resembles the description given by Gambetta (2000) who defined trust as "a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both before he can monitor such action (...) and in a context in which it affects his own action". The particular action our hypothesized mechanism refers to is the provision of insurance by other individuals and public sources. In other words, more trusting individuals expect external sources of risk sharing to play a bigger role in mitigating idiosyncratic shocks. As a consequence, individuals who face the same objective uncertainty (e.g. due to uninsurable earning fluctuations) but differ in trust endowments tend to perceive the degree of uninsurable risk they are exposed to as lower (higher). Therefore, they are less (more) concerned about the likelihood of being constrained in their choices by borrowing limits or liquidity constraints. The same applies to their capacity to service financial obligations.

Trust in formal and informal insurance systems. In our analysis, we consider trust in other individuals as referring to a households' social network, i.e. extended family, friends, neighbors and members of the same religious and interest-based communities. High informal *(private)* trust means that a household expects this group to provide financial support in case of

[11] They also discover a non-linear relationship of trust on net worth which they argue is due to the fact that households can be 'too' trusting, i.e. suffer financial losses due to credulous behavior.

[12] This kind of risk is also sometimes referred to as 'background risk' which Guiso and Paiella (2008) define as "risks that cannot be avoided or insured against".

unforeseen reductions of her income, for instance due to job loss, or unexpected required expenditures, such as paying for the repair of a broken car.[13] In other words, trust reflects the households' expectations regarding the availability of financial support from risk sharing arrangements in case of unexpected changes to their financial situation. Therefore, we interpret trust as households' subjective beliefs in the efficacy of *informal insurance systems*. Accordingly, higher trust is associated with lower perceived uninsurable risk.[14] Thus, while the definition of Guiso, Sapienza, and Zingales (2008b) emphasizes unconditional beliefs regarding the honesty of other individuals, ours focuses on their state contingent behavior, i.e. their willingness to share risks.

These views are not mutually exclusive and there is empirical support for our interpretation. The second wave of the German Panel on Household Finances (PHF) asks respondents to what extent they trust others[15] and if they believe they could obtain assistance from their social network in case of financial need.[16] As figure 5 shows, households who answer the latter question with yes (1) have more trust in others; after controlling for additional characteristics affecting access to private insurance (e.g. marital status, income, etc.) we find that an increase in private trust by one standard deviation at the mean increases the probability to expect private risk sharing by 5.3 percentage points (see table 6 in the appendix). We interpret this finding as evidence in support of our view on private trust and perceived uninsurable risk; higher trust individuals expect more private (informal) risk sharing which reduces their subjective assessment regarding the amount of risk they are exposed to.

We refine and extend our working definition of trust by also considering trust in formal (*public*) networks as a source of risk sharing. Analogous to our reasoning regarding trust in other individuals, trust in public institutions such as a nation's social security, healthcare and judicial system corresponds to beliefs in the capacity of public institutions to provide assistance in case of economic and financial need. Put differently, we think that public trust captures the subjective probability households assign to support arriving from formal insurance systems, i.e. publicly managed assistance programs. Low subjective probabilities can be sustained by perceptions of lengthy bureaucratic procedures, differences between legal entitlements and actual disbursements, high administrative workloads on the side of the claimant, uncovered costs in health insurance such as illicit payments demanded by service providers, or, in the case financial disputes, partial court decisions.[17]

Earlier work has studied the role of specific social insurance policies on precautionary portfolio choices, also considering the decision between investments in risky and unrisky assets.

[13] In principle, this support can take many forms beyond financial assistance such as sharing private goods, provision of (co)residence, help with job search, free legal advice and so forth.

[14] Note that the mechanism implied by our interpretation of trust is different from risk aversion or confidence.

[15] The survey question reads: "Question: How do you view yourself: Are you in general a person who trusts others or do you tend to distrust people?" The respondent replies by picking an integer value from 0 ("I do not trust them at all") to 10 ("I trust others completely"). We normalize the variable to be bounded between 0 and 1.

[16] The survey question reads: "Question: (Could you / your household / the household) rely on financial support from friends or family in an emergency and could they cover (your / the) cost of living for (you / your household / the household) for approximately three months? By this, we do not mean friends or family who live in (your / the) household." The response is coded as 1 if the respondent answers in the affirmative and 0 otherwise.

[17] They can also reflect unwillingness to accept financial support from public sources, e.g. due to ideological reasons.

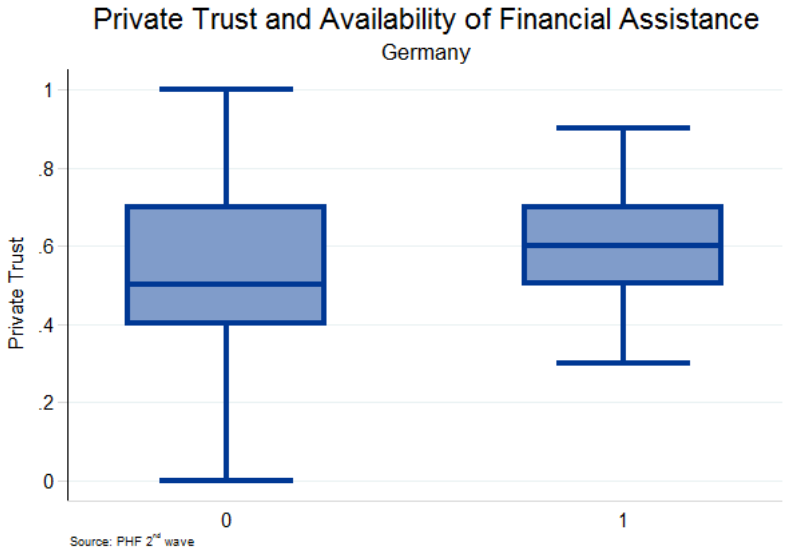


Figure 5: Self-reported private trust by financial assistance

For example, there is a literature on the respective role of unemployment and health insurance programs.[18] These studies show that such programs reduce uninsurable risks from the perspective of households; more insurance makes households invest more in risky assets and reduce precautionary savings. Those findings are consistent with the theoretical relationship between trust and portfolio choices we described above. However, it should be pointed out that our notion refers to the subjective view on the efficacy of these policies, not the rational expectations assessment.

Testable implications. Given that we interpret trust endowments as determining beliefs on the efficacy of formal and informal insurance systems, variation in trust has implications for the degree by which a household uses her portfolio for *self-insurance*, i.e. how much of it is dedicated to *precautionary motives*. Hence, differences in trust affect household portfolios through an insurance substitution effect. This effect is easily illustrated in a standard consumption-savings model in which agents face idiosyncratic income risk, incomplete asset markets and are required to make positive consumption expenditures every period. Suppose they deviate from rational expectations due to heterogeneous trust endowments. This dimension of heterogeneity makes agents differ with respect to their perceived exposure to uninsurable risk; they vary in their beliefs regarding the transmission of income fluctuations to their disposable income due to expected transfers from their informal and formal risk sharing networks. Therefore, the high trust agent assigns lower probabilities to events such as reaching borrowing or liquidity constraints. As a consequence, if agents can self-insure by accumulating non-contingent liquid and illiquid assets, it is their perceived uninsurable risk which dictates the optimal level and liquidity composition of their portfolios. In summary, if an agent expects more insurance to be provided by sources other than her own portfolio, she dedicates her savings less to precaution-

[18] As illustrative examples, see Engen and Gruber (2001) and Goldman and Maestas (2013).

ary purposes.

Based on this reasoning, we investigate the following empirical relationship:

1. **Trust and precautionary savings:** Liquid wealth mirrors precautionary savings since liquid wealth can be used immediately and without liquidation costs to cover unexpected required expenses and dampen the effect of adverse income shocks. Therefore, if trust in insurance systems is higher, the need to hold large amounts of liquid assets decreases.

   Note, however, that the effect of higher trust in other individuals may not be identical to that of higher trust in public institutions. This is because households who expect their social network to provide financial assistance internalize that other members expect the same. Therefore, the subjective uninsurable income risk a household takes into consideration is also determined by the risk of other network members. This effect, known as reciprocity in the literature, has been formalized by researchers such as, for example Cox (1987). It is based on the notion that informal risk sharing arrangements require setting aside resources. If members fail to do so, they can be excluded from access to the network. Hence, households with high private trust decide to hold liquid assets not for the purpose of self-insurance but to signal their readiness to share risks with others.[19] Thus, our first hypothesis has two separate components:

   - **H1a:** Higher trust in public institutions *decreases* precautionary savings
   - **H1b**: Higher trust in other individuals *increases* precautionary savings

2. **Trust and mortgage-based home ownership and leverage:** Distinct trust endowments can also explain decisions taken by households who have to choose between renting a residence or becoming an owner using a mortgage. The former allows an unconstrained choice of the portfolio's liquidity composition and does not require any regular debt service payments. The latter, on the other hand, implies a large swap of liquid savings for a single illiquid asset. Thus, not only does a mortgage introduce a substantial liability into a household's portfolio but the acquisition of a home also reduces its capacity to smooth consumption spending in the event of income fluctuations. Moreover, both rental and mortgage obligations require regular payments but re-scheduling a mortgage contract is a much more costly and lengthy process than adjusting or terminating a rent contract; in the face of a negative income shock, a renter can informally discuss the rent schedule with the landlord or ultimately take a unilateral decision (i.e. move out) while rescheduling a mortgage requires lengthy negotiations with the issuing bank, possibly even filing for personal bankruptcy. Hence, we test the hypothesis if a household who has higher trust in informal and formal insurance systems is more likely to become an owner using a mortgage:

   - **H2a:** Higher public or private trust *increase* the probability to be a home owner with mortgage (as compared to being a renter)

[19] Note this reciprocity effect does not hold for public trust as the household will, arguably, not consider being ready to assist the government with liquidity.

Furthermore, a higher trusting household should also be more willing to take out a mortgage which is larger in relation to the value of the main residence, i.e. results in a larger loan-to-value (LTV) ratio. Thus, our second hypothesis related to home ownership decisions is:

- **H2b:** Higher trust *increases* the portfolio's loan-to-value ratio

In the context of these hypotheses, we emphasize that we do not consider variation in trust to be associated with different preferences regarding the quality or tenure status (owned versus rented) of housing services. Instead, we associate cultural variation with differences in perceived uninsurable risk exclusively. Furthermore, a reciprocity effect does not seem applicable for home ownership and leverage decisions as purchasing a home is an investment and differs from precautionary savings which need to be available instantaneously. Therefore, we argue that trust in private and public institutions influences the home ownership decision in the same direction.

Moreover, while hypotheses H1a and H2b are related, the latter is no by-product of the former. It might appear that a household holding less liquid wealth is mechanically forced to assume a higher LTV ratio for a given house value as she cannot make the same down payment. However, this proposition does not apply for two reasons. First, it is not obvious that a low trusting household would spend more of her liquid assets on the down payment as she wants to continue holding more liquid assets as a buffer even after the purchase. Yet, as we do not observe the liquidity structure of the portfolio at the time of acquisition[20] we cannot directly test for how much of her liquid assets a low trust household would give up to make a down payment. Second, savings for the purpose of home ownership can be held in illiquid accounts (e.g. building savings contracts) which are liquidated for the purpose of the down payment at the time of acquisition.

4 Methodology and Data

4.1 Separating Cultural Norms from Institutions

Our econometric objective is to identify the effect of two cultural norms, trust in other individuals and in public institutions, on household portfolio choice. To illustrate our empirical approach, let s_h denote a certain portfolio choice of household h, e.g. the share of her wealth held in liquid assets. According to the mechanism described above, we conjecture that these choices are determined by h's demographic and economic characteristics (X_h), her cultural norms (ν_h) and the institutions of the country c in which h resides (Ω^c). We consider institutions formal and informal rules determining the availability and prices of asset and liability

[20] Mortgage and home value are reported retrospectively in the HFCS but other portfolio items are not.

instruments.[21] Hence, our conjecture implies a true portfolio choice model specified as

$$s_h = f_s(X_h, \nu_h, \Omega^c) \tag{1}$$

Yet, when considering to estimate equation (1), the econometrician faces the problem that a country's institutions reflect the culture of its population and vice versa. On the one hand, institutions are designed according to a public choice mechanism so governments need to account for societal preferences when designing them. On the other hand, institutional changes have the capacity to alter cultural norms. For example, increasing regional autonomy can lead to higher levels of trust among individuals.[22] Therefore, institutions jointly determine the covariate of interest and the dependent variable.

Moreover, the full universe of these institutions is multifaceted as well as informal and unobservable so they cannot be captured by a single numerical measure. In addition, their functional relationship to our variable of interest is opaque. However, one cannot omit institutions because estimating the linear regression model

$$s_h = \gamma X_h + \delta \nu_h + \varepsilon_h \tag{2}$$

violates the OLS exogeneity assumption because ν_h is correlated with the error term ε_h due to its endogenous relationship with (omitted) institutions and so

$$E[\varepsilon_h | \nu_h] \neq 0 \tag{3}$$

Accordingly, if we proceed on the assumption that institutions determine the supply of assets and liabilities while cultural traits determine household demand, we cannot identify the effects of culture on portfolio choice using the research design shown above. Instead, we need to hold fix one of these variables so we can study the effect of variation in the other on observed outcomes. For this reason, earlier research has focused on instrumenting culture, i.e. on finding measures which are correlated with cultural variation but uncorrelated with institutional variation. For example, Guiso, Sapienza, and Zingales (2006) used religion and ethnicity as instruments for culture while Tabellini (2010) used literacy rates. Critical to the validity of the results produced by this approach is the exclusion restriction, i.e. the assumption that the instrument is correlated with culture but not with institutions. In general, these assumptions have little theoretical underpinning and have to rely mostly on plausibility. Thus, the academic verdict on papers in this tradition is not too positive. "(...) the exclusion restriction has been problematic" is a characterization given by Alesina and Giuliano (2015) in a survey article on this methodological approach.

Moreover, instrumenting culture in longitudinal analyses comes with a serious limitation. When studying the relationship between trust and the evolution of GDP, Algan and Cahuc (2010)

[21] As illustrated in section 2.3, these institutions can materialize in, for example, the tax treatment of mortgage expenses, the generosity of housing subsidies, the taxation of different kinds of capital incomes, the design of health and unemployment insurance programs as well as of minimum income support and public pension systems.

[22] See Guiso, Sapienza, and Zingales (2008a).

noted that pursing this approach makes it "impossible to control for specific invariant national or regional features which could codetermine both trust and economic development". Put differently, statistical estimates based on instrumenting culture with time invariant variables are likely to be contaminated by time invariant omitted variation which determines both the instrument and the variable of interest.

Since our investigation focuses on the household level, we require an approach which keeps aggregate institutions fixed but features cultural variation at the individual level. An ideal environment for this kind of investigation is a culturally diverse population within a given set of institutions. To illustrate this point note that, so far, we assumed that h resides in the particular country where institutions are endogenous to her culture. Yet, if we can relax this assumption for some households, we gain an essential advantage for our investigation. Let $c(h)$ describe the relationship between h's country of origin and her current country of residence as

$$c(h) = \begin{cases} n & \text{if } h \text{ resides in her country of origin} \\ i & \text{if } h \text{ does not reside in her country of origin} \end{cases}$$

Using this notation, we can classify households h as natives (n) and immigrants (i). For the former group, the endogenous relationship between culture and institutions applies but for the latter it does not. In other words, immigrants face the same set of institutions but vary with respect to their cultural norms. Hence, by studying this group of households we can identify the parameters of our model specified in equation (2) because the covariate v_h is exogenous and so we can estimate the model without concerns regarding endogeneity.

This design of our empirical investigation is inspired by the *Epidemiological Approach*.[23] According to Fernandez (2011), it can be summarized as follows: "The Epidemiological Approach studies the variation in outcomes across different immigrant groups residing in the same country. Immigrants presumably differ in their cultures but share a common institutional and economic environment. This allows one to separate the effect of culture from the original economic and institutional environment."

Accordingly, our investigation exploits two facts related to culture. First, it is considered to be close to time-invariant at the individual level. In the words of Becker (1996): "Because of the difficulty of changing culture and its low depreciation rate, culture is largely a 'given' to individuals throughout their lifetimes." Note that this understanding does not rule out the possibility of individual cultural adjustment but assumes this process is slow. Second, culture is assumed to be strongly serially correlated across generations. In fact, Guiso, Sapienza, and Zingales (2006) defined culture as "(...) those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation". In other words, through parental (vertical) transmission, culture can be considered as inherited so there is a

[23]Other recent papers which have applied the Epidemiological Approach to study a research question related to ours are Fuchs-Schündeln, Masella, and Paule-Paludkiewicz (2019), Guin (2017), Huber and Schmidt (2019), Haliassos, Jansson, and Karabulut (2017), Mathä, Porpiglia, and Sierminska (2011) and Bertocchi, Brunetti, and Zaiceva (2018).

close correspondence between the cultural norms of parents and their children.[24] As both of these features stress the notion that culture is established during infancy, associating cultural beliefs of parents and children has become a common practice. Moreover, structural models of parental value transmissions have been proposed, for example by Bisin and Verdier (2000).

Our particular interest in this context is in parental transmission of trust as this is the specific aspect of culture we are investigating. Indeed, there exists a rich set of evidence that trust is among those cultural traits most influenced by parents. One recent example of this literature is Dohmen et al. (2012). Studying regionally dis-aggregated household information from the German Socioeconomic Panel, they provide conclusive evidence that more trusting parents raise more trusting children and that the transmission is enforced by assortative mating of parents.

First versus second generation immigrants. In the literature applying the Epidemiological Approach, second generation immigrants are the preferred units of observation. This is because members of this group have been exposed to vertical cultural transmission but have not made the decision to emigrate from their country of origin themselves. Hence, selection bias, i.e. cultural sorting with respect to the culture of the resident population, is no concern for this group. As we explain below (section 4.3), we cannot identify second generation immigrants in our dataset and so our work differs as we study first generation immigrants.

An important aspect in which second and first generation immigrants differ is their exposure to horizontal cultural transmission; several scholars, for example Bisin and Verdier (2001) and Benabou and Tirole (2006) emphasized that parental transmission is not the only source of cultural formation, neither at the individual nor aggregate level. They argued that sources from within the current environment, e.g. role models outside of the family and social norms, also affect cultural formation.[25] To illustrate that age is a critical measure determining the effects of exposure to vertical versus horizontal cultural transmission, let the expected difference in the distribution of cultural norms ν between natives n and immigrants i be defined as

$$N_\nu = |E[\nu_h^n] - E[\nu_h^i]| \tag{4}$$

Presumably, for a fixed distribution of natives' cultural norms, N_ν increases in the age at immigration of non-natives. This is because individuals who left their country of origin at an older age had more exposure to norms prevailing in their country of origin and less to those in their current country of residence.

For this reason, we explore different thresholds for the age at immigration in our sample of first generation immigrants. For instance, it seems likely that immigrants who arrived before or after schooling age had a distinct exposure to country of residence non-parental transmission sources. Accordingly, all of our regressions are conducted separately for the entire sample and for households who arrived prior to their 18th birthday. The latter are the key group of interest

[24] We want to point out that shared genes are another channel which link cultural values between parents and children. This aspect receives little attention in economics but more in medical science and psychology. A good recent survey on this growing field is Sanchez-Roige et al. (2018).

[25] Bisin and Verdier (2011) provide a review of various channels of cultural transmission.

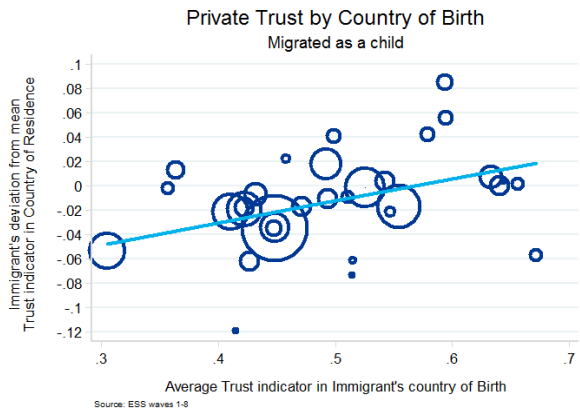


Figure 6: First generation value transmission

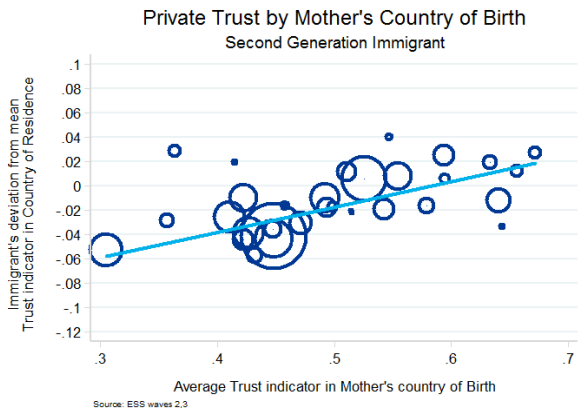


Figure 7: Second generation value transmission

from the perspective of the Epidemiological Approach. In addition, we are controlling for years in country in all of our regressions and allow for a non-linear relationship by also considering a squared term.[26]

Finally, we provide external verification that second and first generation immigrants do not systematically differ with respect to parental transmission of the particular cultural trait we are interested in. The European Social Survey (ESS) asks respondents questions related to cultural values as well as about their own (waves 1-8) and their parents' (waves 2-3) country of birth.[27] Using this data, we compute for all second generation immigrants as well as for those who arrived before their 18th birthday the deviation from the average trust reported in the current country of residence and then take the average of each country of origin. Figures 6 and 7 compare this measure for first and second generation immigrants to average trust prevalent among the population of the parental country of origin. The figures indicate a positive relationship between the two measures. Thus, an immigrant coming from a high trust country reports higher trust values than people born in their current country of residence. Additionally, the regression line has a similar slope for first and second generation immigrants. Hence, the difference in horizontal transmission discussed above does not make first and second generation immigrants incomparable with respect to trust.

Individual versus country of origin trust measures. In our data we do not observe trust in the same unit of observation for which we have portfolio data. This is a common data shortcoming in the literature related to our research question and a widely employed solution is to assign immigrants with the cultural norms of their origin country.[28] This practice exploits the

[26]We acknowledge that another difference between first and second generation relates to familiarity with their destination country. For instance, the latter might face lower language barriers, better information about financial product markets etc. We control for this concern in the robustness section using an omitted variable approach.

[27]The ESS questionnaire contains the same set of questions to measure private trust as the EVS. In specific: "Most people can be trusted or you can't be too careful"; "Most people try to take advantage of you, or try to be fair?"; "Most of the time people helpful or mostly looking out for themselves?" We apply the same normalization as we describe in section 4.2.

[28]Some examples of papers related to ours which follow this approach are Luttmer and Singhal (2011), Giuliano (2007), Fernandez (2007) and Fernandez and Fogli (2009).

slow evolution of trust and is supported by robust empirical evidence. For example, Guiso, Sapienza, and Zingales (2006) use the American General Social Survey to study if differences in trust in the US population can be traced back to the trust prevailing in the country of their ancestors. They report that a country of origin specific cultural prior "continues to affect individual beliefs even in the new environment and even several generations later." Using the same survey, Algan and Cahuc (2010) confirmed and extended this finding; they found that among immigrants of different countries, "inherited trust is strongly persistent" and respective differences can be observed even after four generations. Exploiting this empirical regularity, Algan and Cahuc (2010) "proxy the inherited trust of people living in country c by the trust that the descendants of US immigrants have inherited from their ancestors coming from country c." Our approach is analogous as we associate our observations with measures of trust observed in their countries of origin.

Immigration and exogenous institutions. We conclude with a final remark regarding our econometric approach and identification assumption. As mentioned above, we assume that immigrants arriving to a country face a supply of assets and liabilities which is exogenous to their culture as it is determined by institutions which a culturally distinct resident population has adopted. In this environment, cultural differences among immigrants materialize in different demand behavior. Variations in trust are particularly relevant for immigrants as they are generally less informed about local customs and practices and so they have to fall back on prior beliefs, in particular with respect to the behavior of other individuals.[29] It is worth mentioning, however, that in the case of large inflows of foreigners, our identification assumption could be questionable as newly arriving immigrants could cause a change in the institutions governing the supply of financial instruments.

For several reasons, we think it is justifiable to abstract from this possibility. First, the immigrants would need to arrive from the same country of origin, or at least a set of countries which are culturally very similar. Second, even if respective immigration episodes actually took place, they would have needed to lead to pervasive institutional change, far beyond the scope of, say, labor market regulations or redistributive policies; as numerous formal and informal institutions affect portfolio choice, the newly arriving immigrants would need to be in a median voter position with respect to a wide array of policy topics. Hence, it appears unlikely that the institutional composition affecting portfolio choice changes drastically and abruptly, even during waves of immigration.[30] Yet, to minimize concerns regarding this potential pitfall for identification, we use country fixed effects for all of our destination countries and age at immigration in all of our estimations. The former controls for heterogeneity across countries with respect to institutional change caused by immigrants and the latter accounts for portfolio choice differences across cohorts, i.e. time variation in institutions.

[29] This idea is reflected in the words of Porta et al. (1997) as follows: "Trust should be more essential for ensuring cooperation between strangers."

[30] Guiso, Sapienza, and Zingales (2006) show that the redistributive policies of US states can be traced back to the preferences for redistribution of immigrants. In Europe however, this finding cannot be replicated. For example, studying data from Germany and the UK, Dancygier and Saunders (2006) report "we observe that immigrants are no more likely to support increased social spending or redistributive measures than natives."

4.2 Measuring Trust in Other Individuals and in Public Institutions

The literature has taken two different avenues to measure trust. The first relies on indirect evidence and uses outcome-based variables determining or correlated with trust (blood donations, voter turnout, literacy rates, etc.). The second is a more direct approach which elicits trust of individuals based on their actions in an experimental setting[31] or via questioning in surveys. Given our research objective, the most suitable approach is to use survey-based measures which distinguish between trust in other individuals and in public institutions. We construct them from responses to the European Value Study (EVS) and World Value Survey (WVS). The EVS provides pertinent data from a large-scale, cross-national and longitudinal survey since 1981 at a nine-year frequency. Its fourth wave was conducted in 2008 and includes more than 22,000 households interviewed in a face-to-face setting. This EVS release[32] corresponds best to the HFCS second wave from which we obtain household portfolio data for our empirical analysis. To construct trust indicators for countries of origin not covered by the EVS, we use the sixth wave of the WVS which was collected between 2010 and 2013. Even though both surveys are harmonized, not every question in the EVS is asked in the WVS. Therefore, we use two slightly different trust indicators in our regressions, depending on an immigrant household's country of origin.

In the EVS, we associate trust in other individuals with the following three[33] questions:

- "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"
- "Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?"
- "Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?"

For our investigation, trust in public institutions refers to their role as providers of insurance. Regarding these institutions, the EVS asks "How much confidence you have in them: is it a great deal, quite a lot, not very much or none at all?" From a range of different options, we pick the social security, health care and justice systems as those institutions are relevant for providing insurance against adverse income and required expenditure shocks. Unfortunately, in the WVS only the last option is available.

In the EVS and WVS, possible answers depend on each question. For instance, the first question which we associate with private trust can be answered with "Most people can be trusted" or "Can't be too careful", whereas for the other two questions more than ten different answer options are available. Therefore, we normalize the variables as shown in equation (5) where $\tilde{x}$

[31] The 'trust game' developed by Berg, Dickhaut, and McCabe (1995) has become the standard tool for this purpose.

[32] The specific EVS datafile we work with is "Integrated Dataset EVS 2008 (ZA4800 Data file Version 4.0.0)"

[33] In the WVS, only the first two questions are available. In contrast to Guiso, Sapienza, and Zingales (2008b) who use only the first question, we use all three to obtain a more robust measure.

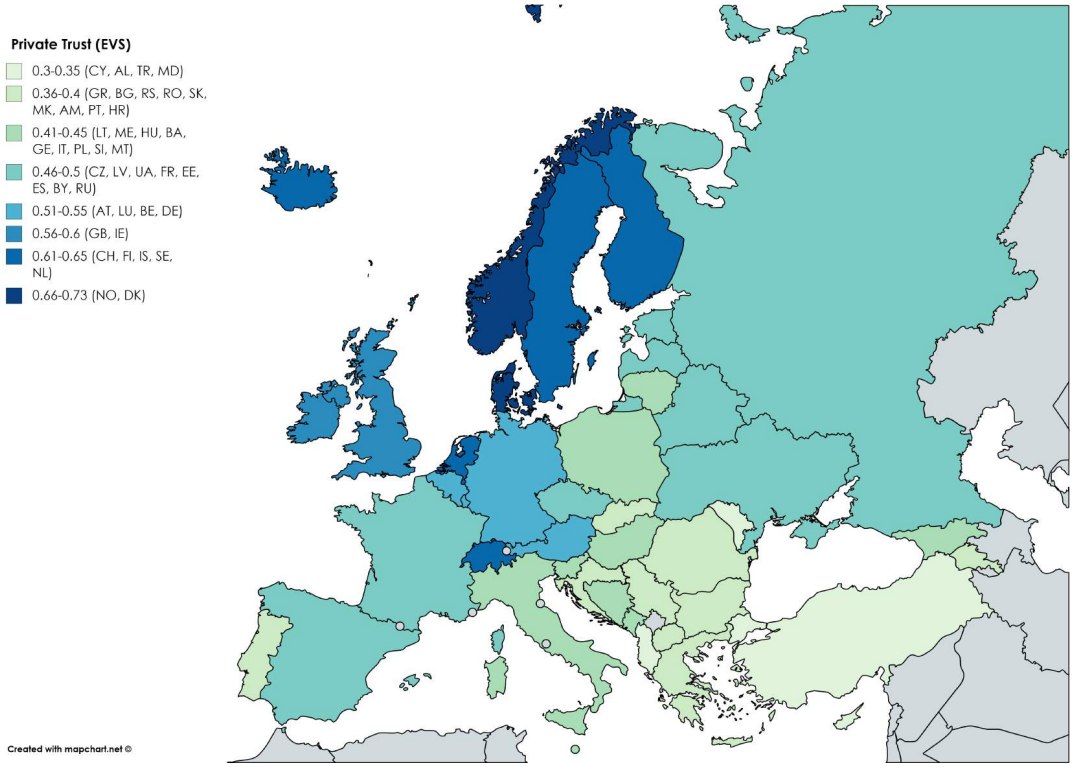


Figure 8: Private Trust Indicator (constructed from EVS)

is the normalized version of x while x_{min} and x_{max} are its minimum and maximum realization:[34]

$$\tilde{x} = \frac{x_i - x_{min}}{x_{max} - x_{min}} \tag{5}$$

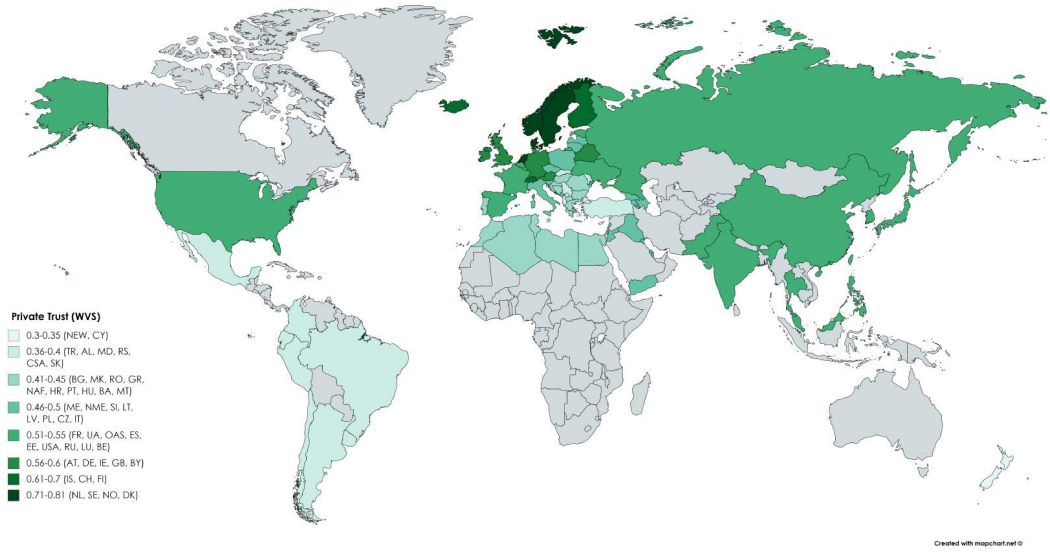
As a result of this normalization, we receive values in the interval between zero (no trust) and one (full trust). To construct the trust indicators, we use the unweighted mean of all associated variables to treat each question as equally important. Figures 8 to 11 show the intensity of the indicator in each country or region. The realizations of our indicators range from around 0.25 to 0.8 with multiple increments reflecting the fact that trust in other individuals and in public institutions vary substantially across countries. Overall, the ranking is as expected; households in Scandinavian countries have high trust while those in Southern American countries are at the lower end of the spectrum.[35]

Table 1 shows the correlation between each variable which is used to construct the private and public trust indicator in the EVS. Within each trust category, the answers to the associated survey questions are closely correlated.[36] The correlations between variables measuring private

[34]Note that this normalization does not affect correlations between variables.

[35]Throughout our investigation, we take self-reported intensities of the cultural norms of our interest as given since our research question does touch upon their generation. We note, however, that there is a rich literature which considers a wide array of phenomena explaining variations in trust. Some prominent of these are hierarchical religions (Porta et al. (1997) and Guiso, Sapienza, and Zingales (2006)), ethnic fractionalization (Knack and Keefer (1997)), episodes of regional autonomy (Guiso, Sapienza, and Zingales (2008a)), enslavement raids (Nunn and Wantchekon (2011)), traumatic experiences, discrimination, unequal opportunities (Alesina and Ferrara (2002)), class conflicts, famines, totalitarian or communist regimes (Algan and Cahuc (2010)).

[36]Hence, using only the question on confidence in the justice system as a measure for public trust in the WVS



NAF: ALG, EGY, LIB, MOR, TUN. CSA: HAI, TRI, MEX, COL, ECU, PER, BRA, CHL, ARG, URU. NME: ARM, AZE, BAH, GRG, IRQ, JOR, KUW, LEB, PSE, QAT. OAS: CHN, TAW, HKG, ROK, JPN, IND, PAK, THI, MAL

Figure 9: Private Trust Indicator (constructed from WVS)

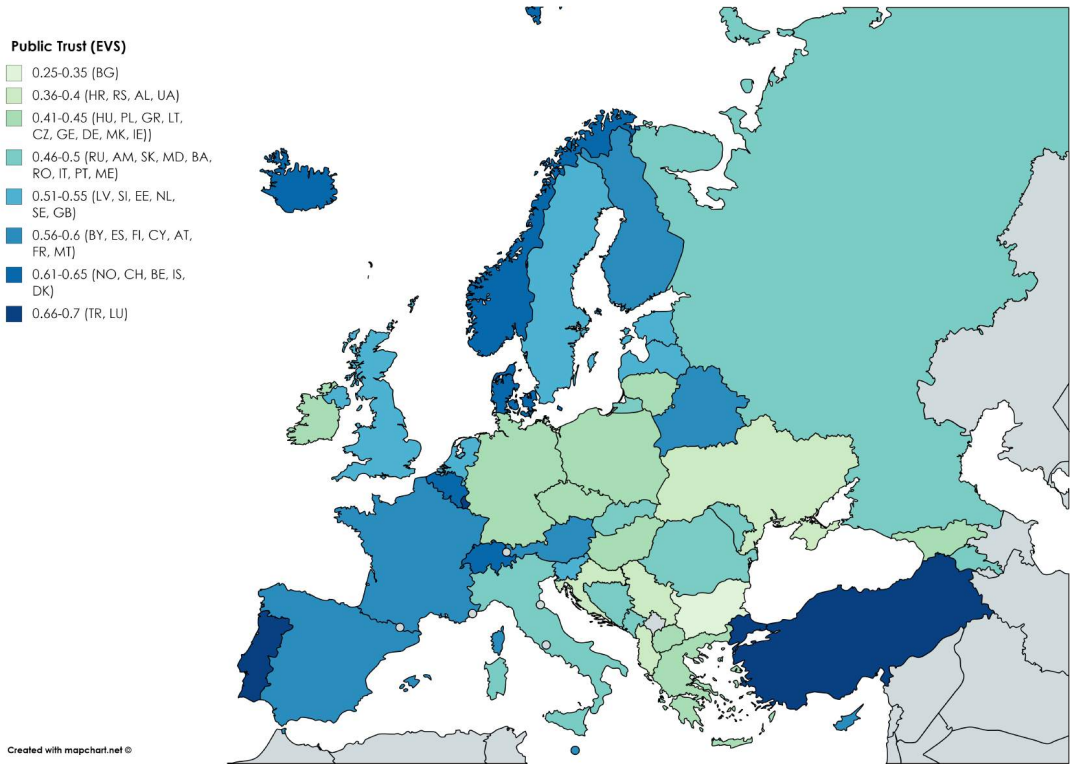
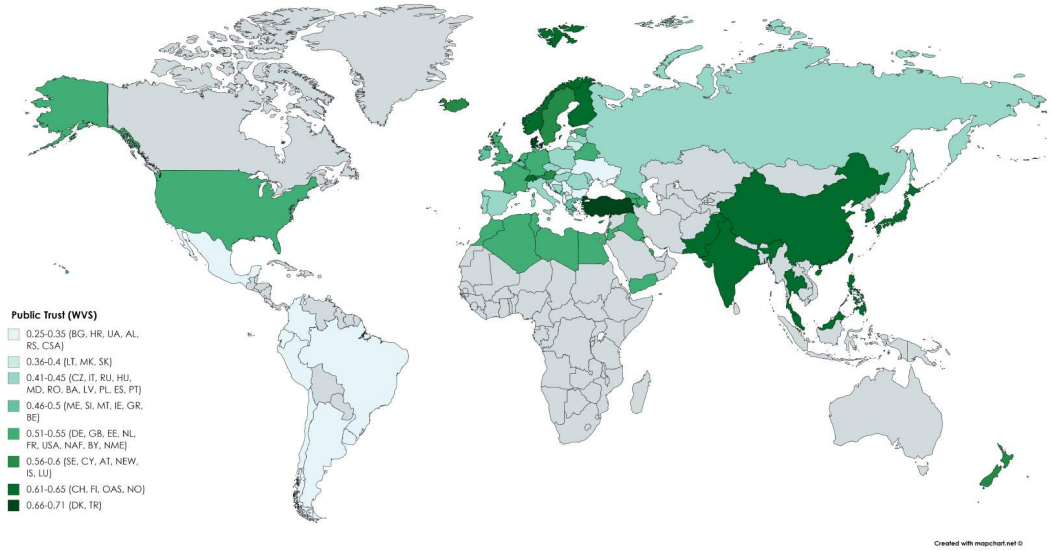


Figure 10: Public Trust Indicator (constructed from EVS)



NAF: ALG, EGY, LIB, MOR, TUN. CSA: HAI, TRI, MEX, COL, ECU, PER, BRA, CHL, ARG, URU. NME: ARM, AZE, BAH, GRG, IRQ, JOR, KUW, LEB, PSE, QAT. OAS: CHN, TAW, HKG, ROK, JPN, IND, PAK, THI, MAL

Figure 11: Public Trust Indicator (constructed from WVS)

and public trust are smaller but uniformly positive. This relationship in our sample conforms to earlier research; using data from 20 countries, Porta et al. (1997) documented that higher private trust is associated with higher government effectiveness (measured by indicators on the efficiency of the judicial system, corruption, bureaucratic quality etc.).[37]

		Private Trust			**Public Trust**		
		People can be trusted	People are fair	People are helpful	Social Security System	Health care System	Justice System
Private Trust	People can be trusted	1.0000					
	People are fair	0.4097	1.0000				
	People are helpful	0.3362	0.5365	1.0000			
Public Trust	Social Security System	0.0672	0.0891	0.1100	1.0000		
	Health care System	0.0813	0.1044	0.1318	0.5295	1.0000	
	Justice System	0.1292	0.1221	0.1464	0.4702	0.5537	1.0000

Table 1: Trust Indicators: Correlation Matrix

4.3 Our Sample

We use the HFCS to obtain information on household assets and liabilities as this dataset is exceptionally rich with respect to portfolio information. However, it does not allow to identify

countries seems justifiable.

[37] Aghion et al. (2010) provide evidence showing that low trust is associated with high governmental regulation. However, regulation in this paper refers to product and labor markets, the ease to start a business, price controls etc., and does not concern social insurance policies which we are considering.

second-generation immigrants; the survey does not ask respondents for their parents' countries of birth and it does not allow to link different generations of the same family. Fortunately, we have access to a variable which allows us to identify households headed by a first generation immigrant.[38] In the public release version of the HFCS, answers to the question "In which country was (were) X (you) born?" (RA0400) are converted to aggregate country groups for non-native residents due to confidentiality restrictions. From researchers and representatives of the national central banks of Austria, France, Germany[39] and Ireland, we received the as-collected information of this variable and permission to use it for our research project.

Moreover, using information on years in current country[40], we can compute the age at arrival of first generation immigrants. Hence, if we restrict our attention to immigrants who arrived as young children (for example younger than 18), the assumption that their immigration decisions were exogenous is valid. Furthermore, as discussed in section 4.1, second generation immigrants and first generation immigrants who arrived at a young age are comparable with respect to trust, i.e. our main measure of interest. In our regressions presented in section 5, we show results separately for all immigrants and for those who immigrated before their 18th birthday who are the focal group of our investigation.

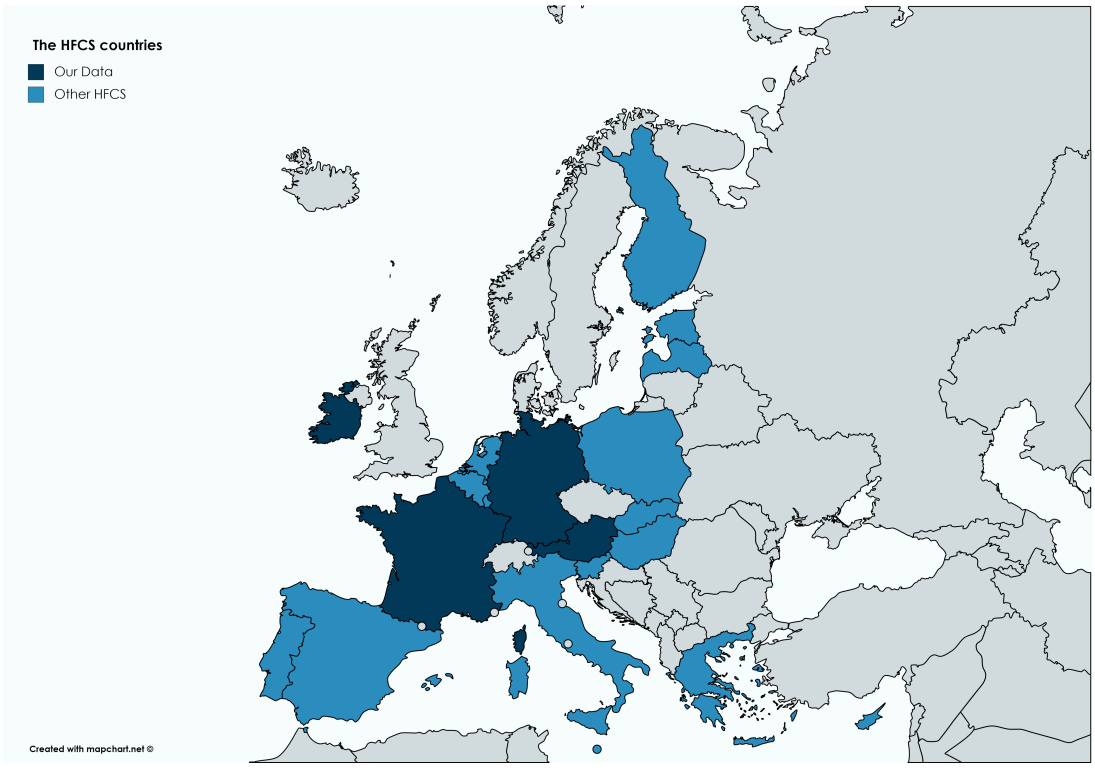


Figure 12: HFCS countries

Figure 12 shows all wave two HFCS countries (in light blue) and those countries for which we have the non-anonymized information on country of birth (in dark blue). As we have four

[38] We use the Canberra Definition to determine household reference persons.

[39] This paper uses data from the Deutsche Bundesbank Panel on Household Finances. The results published and the related observations and analysis may not correspond to results or analysis of the data producers.

[40] RA0500: "For how many years (have you/has X) lived in 'country in which the interview is taking place'?"

countries of destination, we can observe immigrants from the same country of origin in different institutional settings. This is a distinction of our paper as most other studies have been conducted in a single country context. Thus, our econometric identification has a twofold advantage. First, we observe immigrants from a large set of countries of origin and so our sample features a broad spectrum of cultural variation. Second, if the same cultural traits lead to similar financial behavior in different institutional environments, we can consider our findings a robust and well-identified effect of culture on portfolio choices.[41]

Another feature of the HFCS data we need to account for is the fact that it does not provide us with a household specific measure of trust.[42] Consistent with the literature (as presented in 4.1), we construct indicators measuring private trust and trust in public institutions from the EVS and WVS and assign each immigrant household its values of her country of birth. Hence, a household with a reference person born in Italy but currently living in France receives a trust indicator from the mean of all Italian answers in the EVS (and WVS).

Table 25 in the appendix summarizes the demographics and portfolio categories of natives, all non-natives and the five largest immigrant groups in our sample countries Austria (AT), Germany (DE), France (FR) and Ireland (IE). The portfolios of immigrant groups differ not only from those of natives but also among each other. Hence, within a given institutional environment, we observe variation both in the trust measures and also in the portfolios. Moreover, the immigrant groups are fairly similar with respect to demographic characteristics which addresses concerns that selection differs across countries of origin.

For our analysis, we focus on the working age population so we restrict the age of the household head to the range of 25 to 65 years. Moreover, we drop unbanked households because we do not have any information regarding the portfolios of these households. In other words, they could be holding large amounts of liquid savings in the form of cash or have no savings at all but these choices are unobservable for us.[43] To do so, we apply the definition provided by Ampudia and Ehrmann (2017) and consider an unbanked household as "neither holding checking accounts nor savings accounts with financial institutions". Finally, note that our non-anonymized HFCS country of birth variable (RA0400) provides limited information for some households. For example, several countries are recorded in broader country groups (such as North Africa). We assign trust indicators to these households by calculating averages over the respective country groups.

[41] To ensure that we can compare choices of culturally similar immigrants across our sample countries, we use fixed effects to control for country specific institutional features regulating the supply of assets.

[42] Some contributing surveys, for example the German PHF, contain a small number (one) of related questions. However, these questions are neither in the HFCS core nor non-core questionnaires. Hence, they are not harmonized across countries.

[43] Guiso, Sapienza, and Zingales (2004) reported that households with low levels of trust are less likely to engage in transactions occurring in formal financial markets. For example, they made more frequent use of cash payments and informal loan agreements. Thus, they could be overrepresented among unbanked households. To gauge the effect of our related sample selection decision, we computed the share of unbanked households in our dataset. We find that, in our sample countries Austria, France and Germany, the share of non-banked households among natives and immigrants is extremely low (the share in Germany is largest with about 0.5%). It is also worth emphasizing that the differences between natives and immigrants are minuscule. Non-banked households also represent a very small fraction of the population in Ireland, albeit larger than in the other three countries. However, the share of unbanked households among immigrants is actually lower than among natives (3% vs. 6%).

Portfolio Choice Variables

Precautionary Savings: The HFCS provides a detailed breakdown of assets which allows to classify them as liquid versus illiquid. Recall that in our research design, liquid net wealth mirrors precautionary savings as it consists of assets which are quickly converted to cash and can be used to dampen adverse economic shocks. Following standard conventions, we compute liquid assets as the sum of deposits, mutual funds, bonds and stocks and liquid debt as the sum of overdraft and credit card debt. The difference between them is liquid net wealth.

Home Ownership Status: As described above, we model the home ownership decision as the choice between staying a renter or becoming a home owner with the exigency of a mortgage. Hence, for this investigation, we exclude households which acquired their main residence as inheritance or gift. This approach allows us to focus on the financial risk related to becoming an owner as opposed to renting. Using the HFCS data, we create a home ownership variable which is 1 if the household owns the main residence and took out at least one mortgage and 0 if the household is a renter. All other cases result in missing values and we exclude them from our regression as we cannot determine if they ever took out a mortgage.

Leverage Ratio: We also investigate the intensive mortgage choice, i.e. the extent to which a household is ready to assume debts relative to the value of the acquired residence. The relationship between these variables is called loan-to-value (LTV) ratio and defined as

$$\text{LTV} = \frac{\text{Value Mortgage}}{\text{Value Main Residence}} \tag{6}$$

In our baseline investigation, we compute this measure using the values of the mortgage and the main residence at time of acquisition. Picking this reference period has two clear advantages over using their current values. First, it mirrors the leverage ratio at the time of the decision (when the household could choose the ratio). Second, given that the price of the residence as well as the exact mortgage amount was known to the household, it is less contaminated by measurement error. For completeness, we report the results of using current values in the robustness section.

5 Estimation and Results

In this section, we empirically characterize the relationship between portfolio choice and trust in other individuals and in public institutions, which reflect subjective expectations on the efficacy of informal and formal insurance systems. Hence, in what follows, we describe in detail how we test the four hypotheses H1a, H1b, H2a and H2b stated above, present the corresponding results and provide some comparisons with related findings in the literature. Our analysis distinguishes between immigrants from European and non-European (World) countries of birth because the trust indicators have to be constructed differently as mentioned earlier. Additionally, we differentiate between our full sample (all) and immigrants who arrived as children

(< 18). The former comprises all immigrants while the latter group is our best proxy for second generation immigrants which are the main group of interest in the context of the Epidemiological Approach as discussed in section 4.1.

5.1 Trust and Precautionary Savings

We first test hypothesis H1. Recall it states that higher trust in public institutions reduces precautionary savings (H1a) while higher trust in other individuals increases them (H1b). In order to test this relationship, we estimate the model shown in equation (7) using OLS, i.e. we regress log precautionary savings[44] on our (log) trust indicator and a set of controls.

$$\log(Y_i) = \alpha + \beta \log(\tilde{Z}_i) + \gamma' X_i + \delta' W_i + \epsilon_i \tag{7}$$

In this model, Y_i measures net liquid wealth (liquid assets less liquid liabilities) of household i while X_i is a vector of household control variables[45] which includes income, level of net illiquid wealth, gender, age, years in country, marital status, number of children, level of education, occupation status and risk taking behavior[46]. Moreover, we control for country fixed effects using W_i as we pool immigrants living in the four HFCS countries of our sample. $\tilde{Z}_i$ is the variable of our main interest; it represents the value of the trust indicator (summarized in figures 8 to 11) assigned to immigrant household i based on the reference person's country of birth. Table 2 presents the coefficient estimate of $\tilde{Z}_i$ and table 8 in the appendix reports the complete results of estimating equation (7).

Columns 1 to 4 of table 2 show that we cannot reject hypothesis H1a for the group of our main interest. For first generation immigrants who arrived as children to their current country of residence, the indicator measuring trust in public institutions is negatively correlated with precautionary savings and highly significant; if the public trust indicator increases by 1%, liquid wealth decreases between 3.4 to 1.8%. Thus, these coefficient estimates provide support for our hypothesized relationship. For the entire group of immigrants, i.e. also including those who arrived as adults, the estimated sign of the relationship is identical. However, its magnitude is smaller and statistical significance can only be established for immigrants arriving from non-European origins to our HFCS sample countries.

The estimates presented in columns 5 to 8 illustrate that this direction is reversed for precautionary savings and trust in other individuals. The coefficient estimate of the private trust indicator is highly significant and ranges from 2.2 to 2.6%. Both magnitude and significance are comparable for all immigrant groups. This finding is in accordance with the mechanism described in section 3.2, i.e. it is based on *reciprocity*; households who trust their social net-

[44] We choose to measure precautionary savings as current Euros held in liquid wealth for two reasons. First, this specification allows a clear interpretation of the estimated coefficients. Second, alternative measurements, such as the share of liquid versus illiquid assets, are not suitable if there are large differences of net wealth among the observations; the shares of liquid assets in two portfolios with different total assets can be identical but represent distinct amounts of liquid assets in nominal terms (which is the relevant dimension from a precautionary perspective).

[45] We apply the Canberra Definition to identify the household reference person so that we can assign person level variables (gender, age, etc) to each household.

[46] As a categorical measure for risk taking behavior, we use the HFCS variable HD1800 which asks respondents about risk preferences in financial investments.

Table 2: H1: Trust and Liquid Wealth (OLS)

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.59	-3.43***						
		(0.60)	(1.01)						
	World			-0.81*	-1.81***				
				(0.41)	(0.65)				
Private Trust	Europe					2.44***	2.55**		
						(0.63)	(1.16)		
	World							2.20***	2.47***
								(0.52)	(0.83)
N		1,308	454	2,111	807	1,308	454	2,111	807
Controls		✓	✓	✓	✓	✓	✓	✓	✓
Fixed Effects		✓	✓	✓	✓	✓	✓	✓	✓

Dependent variable: log liquid wealth; Variables of interest: Public/Private Trust (ln)
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Significance at * p<.1, ** p<.05, *** p<.01

works to provide support in financially challenging situations ready themselves to be able to do the same for other network members.[47] Hence, when deciding on how much net wealth to hold in liquid form, a household considers not only the uninsurable risk faced by herself, but also risk facing other network members. As discussed earlier, the reciprocity effect does not apply to trust in public institutions. Hence, trust in private and public insurance systems should have a distinct impact on precautionary savings from a theoretical perspective and our findings provide empirical support for this hypothesis.

Our findings regarding hypothesis H1b also relate to results reported by other researchers. For instance, Guiso, Sapienza, and Zingales (2008b) argue that trust in other people increases the willingness to invest in risky liquid assets such as stocks. However, their mechanism is based on subjective expectations to be cheated while ours is based on perceived uninsurable risk, i.e. differences in precautionary behavior. To explore these distinct views, we follow their analysis and replace the dependent variable in equation (7) with the share of risky assets (stocks and mutual funds) in total liquid wealth. Given the scale of this alternative dependent variable, we estimate a logistic regression and find a positive, yet insignificant relationship between private trust and stock holdings in the sample of all immigrants which we report in table 7 in the appendix.[48] Thus, while Guiso, Sapienza, and Zingales (2008b) document a link between private trust and the amount of risky assets in the liquid share of the portfolio, we find a positive

[47] In fact, this behavior can be considered a requirement to be admitted to a private risk sharing network and remain a member.

[48] Due to the small number of households owning stocks or mutual funds in our sample (not more than 20% across all age and country of origin groups) it is not surprising that we do not find significant results.

association between trust and the overall amount of net liquid wealth a household owns.[49]

Table 3: H1: Trust and Precautionary Motive to Save (Probit)

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.25	-0.63**						
		(0.19)	(0.32)						
	World			-0.24*	-0.23				
				(0.14)	(0.23)				
Private Trust	Europe					0.29	-0.49		
						(0.22)	(0.44)		
	World							0.42**	0.14
								(0.18)	(0.31)
N		1,308	454	2,111	807	1,308	454	2,111	807
Controls		✓	✓	✓	✓	✓	✓	✓	✓
Fixed Effects		✓	✓	✓	✓	✓	✓	✓	✓

Dependent variable: Dummy is 1 if motive to save for precautionary reasons has highest priority; Variables of interest: Public/Private Trust
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

To investigate further if the empirical evidence supports our theory regarding the effect of trust on portfolio choices, we proceed by testing it in a way which does not refer to realized portfolio choices but to reported intentions. For that purpose, we employ the HFCS question "What are your (household's) most important reasons for saving?" (HI0400x). The range of possible answers contains "Provision for unexpected events" which is closely related to the precautionary motive we investigate. Hence, to check if liquid wealth is accumulated for precautionary reasons, we code whether the household has chosen this particular answer (or not) as a binary variable and regress it on the trust indicators and the same controls as in equation (7) using a Probit model. As shown in table 3 (see full results in table 9 in the appendix), our earlier findings remain unchanged; precautionary financial behavior is negatively associated with public trust but positively with private trust.[50] If trust in public institutions increases by one standard deviation at the mean, the probability that a household saves for precautionary reasons

[49]Note that we control for income as well as net illiquid wealth which rules out a general wealth or income effect.
[50]Even though not all coefficient estimates are significant, we still consider their implications on the empirical relationship between trust and motives for precautionary saving as credible. This is because we generated the binary dependent variable used in this estimation in the most conservative way; from all twelve possible reasons

decreases by 1.9 to 5.1 percentage points. However, a one standard deviation increase of trust in other individuals increases this probability by about 3 percentage points.

To sum up, we do not reject hypotheses H1a and H1b. We find evidence that i) more trust in public institutions decreases the motive to hold liquid wealth for precautionary reasons ii) more trust in other individuals has a reverse effect which we cannot attribute to increasing participation in risky liquid assets such as stocks, but rather to a reciprocity mechanism. With respect to earlier findings, for example those presented by Guiso, Sapienza, and Zingales (2008b), we conclude that higher trust in other individuals drives up liquid savings *independent* of the risk associated with the asset.

5.2 Trust and Home Ownership

Hypothesis H2a states that the probability to own the main residence with a mortgage as opposed to renting it increases in trust. Accordingly, we shift the focus from liquid to illiquid assets and compare renters to home owners with a mortgage. As described above, we restrict ourselves to these two groups as their distinct willingness to take financial risks is apparent; becoming a home owner with mortgage requires the transformation of most assets from liquid to highly illiquid for the average household. In addition, taking out a mortgage increases the financial risk the household's portfolio is exposed to. For these reasons and because of the intrinsic differences between rent and mortgage contracts discussed in section 3.2, we consider owning with a mortgage as financially riskier than renting. Since home ownership is a binary variable at the household level, we apply a Probit model as specified in equation (8):

$$Y_i = \alpha + \beta \tilde{Z}_i + \gamma' X_i + \delta' W_i + \epsilon_i \tag{8}$$

In this model, Y_i assumes the value 1 for home owners with a mortgage and 0 for renters.[51] As above, the trust indicator is the variable of our main interest and is represented by $\tilde{Z}_i$, while X_i is a vector of household controls and W_i captures country fixed effects.

Table 4 presents the main findings relating to hypothesis H2a (the full results are in table 10 in the appendix). With respect to trust in public institutions, we find that the indicator is positively correlated with the probability to be an owner with mortgage (except for all immigrants from non-European countries) and has a comparable magnitude for all groups. However, only the coefficient for all European immigrants is estimated with statistical significance. For our main group of immigrants (those who arrived as children), the coefficient is positive but not significant for both sets of origin countries. Thus, we can only interpret this set of results as indicative evidence that the probability to take financial risk for the purpose of being a home owner is increasing in trust in public institutions.

In contrast, the empirical relationship between trust in other individuals and the dependent variable is uniformly positive. Moreover, it is highly significant with the exception of immi-

for saving listed in HI0400x (e.g. old-age provision, travels or holidays, to leave a bequest, etc) we only classified "Provision for unexpected events" as reflecting a precautionary motive.

[51] All other cases, such as outright owners, result in missing values and do not enter our regression.

Table 4: H2a: Trust and Home Owner with a Mortgage (Probit)

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.54***	0.22						
		(0.21)	(0.40)						
	World			-0.12	0.05				
				(0.15)	(0.29)				
Private Trust	Europe					1.35***	0.90		
						(0.25)	(0.57)		
	World							1.30***	1.22***
								(0.20)	(0.42)
N		1,036	338	1,646	562	1,036	338	1,646	562
Controls		✓	✓	✓	✓	✓	✓	✓	✓
Fixed Effects		✓	✓	✓	✓	✓	✓	✓	✓

Dependent variable: Dummy is 1 if household is owner with a mortgage and 0 if renter; Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

grants from European countries who arrived before 18. In quantitative terms, if the private trust indicator increases by 1 standard deviation, the probability to become a home owner with a mortgage increases by around 9.1 to 10.4 percentage points. This is a sizeable and precisely estimated effect in our sample.

In summary, we fail to reject hypothesis H2a for trust in other individuals, but we find mixed empirical evidence with respect to trust in public institutions as we cannot characterize a robust relationship. We can, however, draw the conclusion that differences in risk uninsured by private sources do not only affect the amount of precautionary savings a household accumulates but they also have the capacity to affect home ownership decisions. Indeed, given the magnitude of the coefficient estimates, small cultural differences with respect to trust in other individuals have large effects in this dimension.

5.3 Trust and Leverage

In a final step, we evaluate the link between trust and willingness to assume liabilities and financial risk. Hypothesis H2b, which we developed in section 3.2, states that a portfolio's leverage ratio should be higher for more trusting households. As a dependent variable for the corresponding empirical investigation, we use the ratio between the value of the mortgage and the value of the main residence which is used as a collateral, i.e. the loan-to-value (LTV) ratio. We use a Tobit specification and retain the same controls as in the previous investigations.[52]

[52] Using a linear estimation would produce biased results because renters have a leverage ratio of 0. Hence, Tobit specifications are commonly used for this kind of investigation, see for instance Georgarakos, Haliassos, and Pasini

Specifically, we estimate:

$$Y_i = \alpha + \beta \tilde{Z}_i + \gamma' X_i + \delta' W_i + \epsilon_i \tag{9}$$

Table 5: H2b: Trust and LTV Ratio (Tobit)

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.46***	0.25						
		(0.13)	(0.21)						
	World			-0.05	0.13				
				(0.10)	(0.16)				
Private Trust	Europe					0.82***	0.46		
						(0.15)	(0.30)		
	World							0.71***	0.56**
								(0.13)	(0.23)
N		1,036	338	1,646	562	1,036	338	1,646	562
Controls		✓	✓	✓	✓	✓	✓	✓	✓
Fixed Effects		✓	✓	✓	✓	✓	✓	✓	✓

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both at time of acquisition); Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before turning 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 5 shows the coefficient estimates of the trust indicators (table 11 in the appendix contains the full results). Overall, we find similar results as for hypothesis H2a; the relationship between trust in public institutions and the LTV is positive (or weakly negative for one group) but not significant except for immigrants from Europe. The coefficient estimates of the private trust indicator, on the other hand, are uniformly positive, larger in magnitude and significant. Specifically, if trust in other individuals is one standard deviation higher, the leverage ratio increases between 0.04 to 0.06. This means that for a given value of the main residence, a more trusting household would be ready to assume a 4% (6%) higher mortgage on average. Hence, we cannot reject hypothesis H2b and find a sizable effect of trust in other individuals on the leverage ratio, i.e. the household's willingness to take financial risks for the purpose of becoming a home owner.

Again, our results relate to the findings of Guiso, Sapienza, and Zingales (2008b) mentioned

(2014).

earlier. They reported that trust in other individuals makes households more willing to assume risks in financial investments. Our findings generalize their conclusion as it indicates that this mechanism also applies to assuming liabilities. In this context, it is worth pointing out that Jiang and Lim (2018) hypothesize high trusting households appear to have better debt management capacities. Complementing their reasoning, our findings indicate that differences with respect to assuming liabilities are additionally driven by trust-related perceptions of uninsurable risk.

6 Robustness

1. Unobservable Heterogeneity in Familiarity If a household head is more familiar with her current country of residence (e.g. with respect to language, legal system, etc.) barriers to asset and debt markets might play a smaller role. Since we control for age at immigration in our baseline estimations, we already account for this concern to a large extent as the degree of familiarity is increasing in total years spent in the country and will be stronger for individuals who immigrated at an earlier age. Still, differential familiarity with respect to specific financial products might have a major confounding effect; if certain products do not exist in some countries of origin, it might take longer to become familiar with them or to consider using them at all. We can address this concern by controlling for the status of the reference person's spouse (who can be immigrant or native). If the reference person is married to a native, the degree of familiarity is arguably stronger. In other words, our baseline regressions might suffer from an omitted variable. When extending our regressions, we find that being married to a native increases the amount of liquid assets as well as the probability to own the main residence and also the leverage ratio. However, as shown by tables 12 to 14 in the appendix, the coefficient estimates for the trust indicators remain unchanged. Hence, stronger familiarity might help to overcome barriers to specific product markets, but it does not affect the relationship between trust in other individuals and in public institutions and the financial choice variables we are interested in.

2. Noise in Survey Trust Measures A plausible concern regarding our results is that the trust indicators are contaminated by measurement error or different interpretations of the survey questions. However, the implied ordinal ranking of countries should be unaffected by this concern. Hence, we split our sample and differentiate between high and low trust countries and repeat our estimation. Our results remain largely unchanged (see tables 15 to 17 in the appendix), but one has to be aware of the fact that most countries are bunched close to the mean of the trust indicator variable. Hence, by splitting the immigrant sample based on an arbitrary cutoff with many countries close to this margin, interpreting the results is not as straightforward. Hence, our preferred approach remains to control for specific numeric realizations of the trust indicators.

3. Trust and Price Expectations One could argue that purchasing real estate such as the main residence is an investment which reflects expectations on future house price increases. For ex-

ample, at the time of acquisition, more trusting households could expect a mechanical decrease in the LTV ratio due to an increase in the value of the main residence. As a consequence, if these expectations are related to variations in trust, there would be a systematic difference between measures referring to the time of acquisition and *current* values. However, as shown in table 18, when accounting for this concern using current values of the mortgage and the main residence, our results remain unchanged.

4. Robustness of the Private Trust Measure As mentioned above, scholars have used different variables to measure trust in other individuals. A prominent approach which is distinct from ours but also based on survey responses utilizes information on membership and participation in voluntary organizations to construct a "civic indicator". As explained for example by Anheier and Kendall (2002), the reasoning behind measuring trust in this way is that interacting with people outside the narrow personal circle teaches to cooperate with and to rely on other individuals – which ultimately improves trust. We follow Dekker and Broek (1998, 2005) and construct this type of trust measure using EVS and WVS questions on membership and voluntary work in multiple categories.[53] In line with their reasoning, we do not include affiliations to religious and work-related organizations as the former have country specific interpretations and the latter (such as trade union membership) can be quasi mandatory.[54]

Tables 19 to 21 show the results for each hypothesis when we use these alternative trust measures. As it has been argued that the intensity of participation in these organizations is important in this context, we first generate a binary variable which is 1 if the respondent is at least a passive member in one organization and 0 otherwise (columns 1-4). Additionally, we follow Howard and Gilbert (2008) and distinguish between the indicator realizations 'inactive', 'passive' and 'active' members (columns 5-8). In doing so, we consider an individual an active member if she is currently doing unpaid voluntary work. The results reveal that the binary civic indicator (columns 1-4) gives similar estimates as our baseline private trust indicator in terms of significance. Interestingly, distinguishing between different levels of engagement (columns 5-8) does not increase predictive power. In terms of magnitude, we discover a smaller association of the civic indicator with our outcome variables, presumably because being passively or actively involved in a voluntary organization measures multiple individual characteristics and not solely inter-personal trust. Hence, the variable is probably more noisy than our direct measure used in the baseline estimations.

[53]The EVS asks for a wide range of related organizations, communities and activities: social welfare services for elderly, handicapped or deprived people; religious or church; education, arts, music or culture; trade unions, political parties or groups; local community action on issues like poverty, employment, housing, racial equality; third world development or human rights; conservation; environment, ecology, animal rights; professional associations; youth work (e.g. scouts, guides, youth clubs etc.); sports or recreation; women's groups; peace movement. The WVS asks about membership and participation in organizations related to church or religion; sport or recreation; art, music or education; labor unions and political parties; environment; professional and humanitarian or charity and consumer associations, self-help and mutual aid groups.

[54]Note that the literature using civic indicators focuses on Western countries. As we include other parts of the world in our analysis, which might differ substantially in the concept of membership, the estimates using indicators derived from the WVS should be interpreted with caution.

5. Individual-Specific Uninsurable Risk Another concern regarding our results is based on individual heterogeneity with respect to income variability. It seems plausible that households who have highly variable earnings would tend to i) increase their precautionary savings ii) decrease their exposure to financial obligations, independent of their cultural dispositions. Indeed, for some countries in our sample (France and Germany) Dossche and Hartwig (2019) have shown that workers with different income levels and ages differ with respect to the exposure of their income to aggregate risk. Note, however, that we already control for these variables in our baseline regression.

Moreover, in household-level data from the United States, Guvenen et al. (2017) found that earnings risk also depends on the sector in which a worker is employed. Furthermore, there is anecdotal evidence that some immigration groups tend to be systematically more self-employed than others. To address this issue, we re-estimate our baseline regressions with additional controls for individual specific income variability by adding dummies for self-employment and sector of occupation for salaried households.[55] This extra set of controls also addresses concerns related to self-selection; for the United States and Germany, Schulhofer-Wohl (2011) and Fuchs-Schündeln and Schündeln (2005) found that more risk tolerant households select into jobs with higher earnings risk. By including these extra controls, we also reduce concerns our coefficient estimates might be suffering from omitted variable bias (due to heterogeneous income risk). Tables 22 to 24 in the appendix show that, when controlling for these additional variables, the estimate of the trust coefficients are unaffected. Hence, these results indicate that in our sample, trust is not (strongly) correlated with sector of occupation or entrepreneurship, i.e. objective differences in uninsurable risk.

In summary, we addressed several possible shortcomings of our empirical investigation. We did so using a variety of approaches to estimate our relationships of interest and included additional controls to account for omitted variables. Throughout all of these robustness investigations, we found only small changes in the magnitude of the trust indicator coefficient estimates. Hence, our baseline empirical results regarding the effect of trust on liquid wealth, home ownership with mortgage and LTV ratios seem robust.

7 Conclusion

In this paper, we investigate if different intensities of two cultural norms – trust in other individuals and trust in public institutions – help to explain household portfolio liquidity. Our specific interest is to explore if higher trust is associated with lower precautionary savings, measured as liquid wealth, and higher willingness to take financial risk for the purpose of becoming a home owner. The underlying mechanism relating culture to portfolio choice is based on subjective expectations regarding the role of private and public institutions as informal and formal insurance systems; households who have more trust in them assign higher probabilities to receiving support in financial distress, i.e. they consider uninsurable risks to be smaller.

[55]The sectors we control for are based on the first letters of the 2008 NACE classification. Due to confidentiality restrictions, we do not report results for each sector but treat them as fixed effects in our estimation.

Non-anonymized information on country of birth in the HFCS and measures on public and private trust from the EVS and WVS allow us to apply the Epidemiological Approach to isolate the effect of culture from (endogenous) institutions on financial behavior of households. The key advantage of this approach is that we do not need to rely on exclusion restrictions of instrumental variables. Instead, we observe a culturally diverse population in an exogenous institutional environment. Accordingly, we can identify the pure effect of culture on portfolio choice. Finally, as we have a large set of origin countries as well as four destination countries, our estimates result from observing individuals with the same cultural traits in several distinct environments. Hence, our identification strategy minimizes concerns regarding the consequences of country specific financial market features.

The results of our empirical investigation document two regularities which provide support in favor of the relationship between trust and precautionary portfolio choices we hypothesize. First, trust influences the amount of precautionary savings; an increase in trust in public institutions by 1% decreases the desire to hold liquid wealth by around 0.8-3.4%, as households believe that public insurance channels reduce uninsured risks. Contrarily, an increase in private trust by 1% increases liquid wealth by approximately 2.2-2.6%. A *reciprocity effect* explains this finding; to access communal risk sharing networks, households need to signal their readiness to provide financial assistance to other network members. These results hold even when we use measures on reported purposes for saving as opposed to observable financial choices.

The second hypothesis relates trust and home ownership decisions. In our setting, the household can either rent the main residence or purchase it by taking out a mortgage. Differences in trust in public institutions do not affect this decision significantly. However, we find that an increase in trust in other individuals by one standard deviation at the mean increases the probability to purchase a home using a mortgage by 9.1-10.4 percentage points. In addition, more trusting households also assume LTV ratios which are higher by 4-6 percentage points. Thus, private trust has a sizable effect on asset and liability choices related to a household's home ownership decision.

Our findings document that cultural variation helps to explain household portfolio heterogeneity across advanced economies. To study its quantitative effect from a general equilibrium perspective, one also needs to consider cross-country variation in other dimensions affecting portfolio choice. Put differently, controlling for economy specific features such as institutions, shocks and product familiarity allows to decompose the quantitative effect of cultural variation on cross-country portfolio differences. The model we use in section 3.2 to derive testable implications between subjective differences in uninsurable risks and portfolio choice is a starting point for this endeavor. Moreover, this exercise would also quantify the relevance of each explanation as well as residual, i.e. unexplained, variation.

As we only have access to non-anonymized information on country of birth in four HFCS national datasets (Austria, France, Germany and Ireland) our sample has a small number of observations. Due to this restriction, our sample is unbalanced with respect to the cultural norms we study; we have a large number of immigrant households from low trust countries and only few from high trust countries. Moreover, the small sample size also limits our ability

to incrementally control for different ages at immigration. Finally, the HFCS does not provide geographic information of respondents so we cannot control for location sorting of different immigrant communities.

A caveat exclusive to our analysis of mortgage decisions is that observable differences among immigrants might not be due to different demand behavior but, rather, driven by varying degrees of discrimination.[56] While we can control for endogeneity in aggregate supply, we do not observe the distribution of mortgage offers at the individual level. Hence, we cannot assess if it differs systematically for high and low trust immigrants. If it does, observed differences in LTV ratios could not be attributed to different demand behavior alone. One can think of two reasons why mortgage offers might vary across immigrant communities. First, for the US, there is some indicative evidence that discrimination in mortgage loan application exists despite extensive regulation promoting equal opportunities in lending.[57] However, the few available studies do not provide a conclusive verdict on its quantitative aspects, in particular with respect to offered leverage. Moreover, to the best of our knowledge, there are no comparable studies on mortgage offers in Europe so we cannot address this concern.

Second, differences in mortgage offers could be related to differences in trust more directly. In a seminal paper, Glaeser et al. (2000) found that high trust individuals are more trustworthy themselves. If brokers and bank loan officers recognize and endogenize this feature of applicants, higher trust individuals would be offered more favorable terms when taking out a mortgage. Yet, there is scarce empirical evidence on this "trustworthiness discrimination" mechanism. So far, it has only been found to play a role in experimental peer-to-peer lending and in a peer-to-peer micro finance platform (see Duarte, Siegel, and Young (2012) and Chen, Foster, and Putterman (2019)). For settings represented in our sample, we have not been able to find studies providing quantitative assessments on the extent of discrimination attributable to applicants' trust differences.

Given the tentative evidence on both of these aspects, we believe dedicated studies on discrimination in European credit markets would make for valuable contributions to this field of research. On the one hand, their findings would provide additional insights into the causes of household portfolio heterogeneity in the Euro Area. On the other hand, they would help to sharpen the understanding of cultural determinants of household portfolio choices, those related to differences in perceived uninsurable risk in particular. In fact, the HFCS is the natural starting point for these empirical studies.

[56] Our investigation is not the first to face this concern. Fernandez (2011) mentioned this possibility when discussing the results of Guiso, Sapienza, and Zingales (2004): "They find that people who were originally from provinces with higher civic capital make larger investments in stocks, rely more on checks to settle transactions, and have easier access to loans. It should be noted that while the authors interpret the latter finding as resulting from trustworthiness, it is also consistent with discrimination."

[57] Some papers speaking to this specific topic are Ladd (1998), Hanson et al. (2016), Ambrose, Conklin, and Lopez (2018) and Fuster et al. (2017). A common descriptive finding of these papers is that the characteristic on which lenders discriminate most often is race (Afro-American especially). Since racial characteristics are a minor difference among immigrant groups in our sample, it is not evident if and how these findings affect our analysis.

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9 Empirical Appendix

9.1 Trust and Expected Ability to obtain Financial Aid

Table 6: Trust and Expected Ability to obtain Financial Aid from Friends or Relatives (Probit)

	I
Private Trust	0.26***
	(0.04)
Gross Income (log)	0.02
	(0.01)
Net Illiquid Wealth (log)	0.02***
	(0.00)
Male	0.02
	(0.02)
Age	-0.02***
	(0.00)
Age^2	0.00***
	(0.00)
Married	-0.01
	(0.03)
# Children	0.00
	(0.01)
Secondary Education	-0.11***
	(0.02)
Employed	0.02
	(0.03)
Risk Taking	-0.06***
	(0.02)
N	3,397

Dependent variable: Dummy is 1 if ability to get financial assistance from friends or relatives is answered with 'yes'; Variable of interest: Private Trust (self-reported)
Control variables: log gross income, log net illiquid wealth, male, age, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

9.2 Trust and Risky Assets

Table 7: H1b: Trust and Share of Risky Assets in Total Liquid Wealth (Logit)

		(1) all	(2) <18	(3) all	(4) <18
Private Trust	Europe	0.08	0.15		
		(0.09)	(0.18)		
	World			0.17**	0.28
				(0.08)	(0.18)
Germany		-0.03	0.02	-0.01	0.03
		(0.02)	(0.02)	(0.02)	(0.02)
France		0.06**	0.19***	0.06***	0.19***
		(0.03)	(0.05)	(0.02)	(0.03)
Ireland		0.00	0.03	0.02	0.04
		(0.02)	(0.02)	(0.02)	(0.02)
Gross Income (ln)		0.07***	0.06***	0.08***	0.12***
		(0.01)	(0.02)	(0.01)	(0.02)
Net Illiquid Wealth (ln)		0.01***	0.01**	0.01***	0.01**
		(0.00)	(0.00)	(0.00)	(0.00)
Male		-0.01	0.00	0.01	0.03
		(0.01)	(0.02)	(0.01)	(0.02)
Age		0.00	0.01	0.00	0.00
		(0.00)	(0.01)	(0.00)	(0.01)
Age^2		0.00	0.00	0.00	0.00
		(0.00)	(0.00)	(0.00)	(0.00)
years in country		0.00	0.01	0.00	0.00
		(0.00)	(0.01)	(0.00)	(0.01)
years in country ^2		0.00	0.00	0.00	0.00
		(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.02	-0.02	-0.02*	-0.02
		(0.01)	(0.02)	(0.01)	(0.03)
# Children		-0.01	-0.01	0.00	0.00
		(0.01)	(0.02)	(0.01)	(0.01)
Secondary Education		-0.02	-0.01	-0.02*	0.00
		(0.01)	(0.02)	(0.01)	(0.02)
Employed		-0.01	0.01	0.01	0.02
		(0.01)	(0.02)	(0.01)	(0.02)
Risk Taking		0.05***	0.07***	0.07***	0.10***
		(0.01)	(0.02)	(0.01)	(0.02)
N		1,308	454	2,111	807

Dependent variable: share of risky assets in liquid wealth; Variables of interest: Private Trust
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

9.3 Complete Baseline Regression Results

Table 8: H1: Trust and Net Liquid Wealth (OLS): Complete results

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.59	-3.43***						
		(0.60)	(1.01)						
	World			-0.81*	-1.81***				
				(0.41)	(0.65)				
Private Trust	Europe					2.44***	2.55**		
						(0.63)	(1.16)		
	World							2.20***	2.47***
								(0.52)	(0.83)
Germany		-1.02**	-1.35**	-0.92***	-0.94*	-1.00**	-1.37**	-0.89***	-0.94*
		(0.41)	(0.64)	(0.32)	(0.56)	(0.40)	(0.65)	(0.32)	(0.55)
France		0.93**	1.32**	0.72***	1.17**	0.90**	1.27**	0.81***	1.24**
		(0.37)	(0.58)	(0.28)	(0.49)	(0.37)	(0.58)	(0.28)	(0.48)
Ireland		-0.96***	-0.50	-0.86***	-0.68	-1.37***	-1.36**	-1.09***	-1.10**
		(0.35)	(0.58)	(0.28)	(0.51)	(0.36)	(0.65)	(0.29)	(0.54)
Gross Income (ln)		0.87***	0.93***	0.76***	0.83***	0.85***	0.96***	0.75***	0.87***
		(0.12)	(0.20)	(0.08)	(0.14)	(0.12)	(0.20)	(0.08)	(0.14)
Net Illiquid Wealth (ln)		0.16***	0.15***	0.16***	0.13***	0.15***	0.15***	0.15***	0.13***
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Male		0.08	0.38	0.07	0.28	0.12	0.38	0.10	0.27
		(0.19)	(0.31)	(0.14)	(0.21)	(0.19)	(0.32)	(0.14)	(0.21)
Age		-0.23***	-0.31*	-0.25***	-0.25**	-0.25***	-0.33**	-0.26***	-0.27**
		(0.07)	(0.16)	(0.05)	(0.11)	(0.07)	(0.16)	(0.05)	(0.11)
Age^2		0.00***	0.00*	0.00***	0.00**	0.00***	0.00**	0.00***	0.00**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		-0.05**	0.06	-0.05***	0.01	-0.06**	0.01	-0.05***	-0.02
		(0.02)	(0.07)	(0.02)	(0.05)	(0.02)	(0.08)	(0.02)	(0.05)
Years in country ^2		0.00	0.00	0.00***	0.00	0.00**	0.00	0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.15	-0.22	-0.04	-0.02	-0.08	-0.24	-0.05	-0.05
		(0.21)	(0.34)	(0.15)	(0.23)	(0.21)	(0.34)	(0.15)	(0.23)
# Children		-0.19	-0.27	-0.13	-0.13	-0.20	-0.38	-0.11	-0.13
		(0.16)	(0.24)	(0.10)	(0.14)	(0.16)	(0.24)	(0.10)	(0.14)
Secondary Education		-0.73***	-0.66*	-0.83***	-0.86***	-0.63***	-0.51	-0.75***	-0.72***
		(0.19)	(0.34)	(0.14)	(0.23)	(0.19)	(0.36)	(0.14)	(0.23)
Employed		0.60***	0.20	0.42***	-0.02	0.65***	0.30	0.44***	0.01
		(0.20)	(0.33)	(0.14)	(0.22)	(0.20)	(0.33)	(0.14)	(0.22)
Risk Taking		0.54***	0.37	0.59***	0.31*	0.52***	0.32	0.57***	0.30*
		(0.16)	(0.26)	(0.12)	(0.18)	(0.15)	(0.26)	(0.12)	(0.18)
Constant		1.62	-0.55	3.07**	1.89	4.97**	5.17	5.84***	5.36**
		(1.91)	(3.54)	(1.38)	(2.44)	(1.93)	(3.57)	(1.43)	(2.48)
N		1,308	454	2,111	807	1,308	454	2,111	807

Dependent variable: log liquid wealth; Variables of interest: Public/Private Trust (ln)
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Significance at * p<.1, ** p<.05, *** p<.01

Table 9: H1: Trust and Precautionary Motive to Save (Probit): Complete results

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.25	-0.63**						
		(0.19)	(0.32)						
	World			-0.24*	-0.23				
				(0.14)	(0.23)				
Private Trust	Europe					0.29	-0.49		
						(0.22)	(0.44)		
	World							0.42**	0.14
								(0.18)	(0.31)
Germany		-0.28***	-0.15	-0.29***	-0.15	-0.28***	-0.15	-0.29***	-0.14
		(0.06)	(0.10)	(0.05)	(0.09)	(0.06)	(0.10)	(0.05)	(0.09)
France		-0.48***	-0.40***	-0.49***	-0.36***	-0.48***	-0.39***	-0.48***	-0.35***
		(0.05)	(0.09)	(0.04)	(0.08)	(0.05)	(0.09)	(0.04)	(0.08)
Ireland		-0.25***	-0.14	-0.26***	-0.14	-0.28***	-0.09	-0.27***	-0.15
		(0.05)	(0.09)	(0.04)	(0.09)	(0.05)	(0.11)	(0.04)	(0.09)
Gross Income (ln)		0.01	-0.02	-0.01	-0.02	0.00	-0.02	-0.01	-0.02
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Net Illiquid Wealth (ln)		0.01***	0.02***	0.01***	0.01**	0.01***	0.02***	0.01***	0.01**
		(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Male		-0.01	-0.01	0.00	0.00	0.00	-0.01	0.00	-0.01
		(0.03)	(0.05)	(0.02)	(0.04)	(0.03)	(0.05)	(0.02)	(0.04)
Age		-0.01	-0.07***	-0.01	-0.06***	-0.01	-0.08***	-0.01*	-0.06***
		(0.01)	(0.03)	(0.01)	(0.02)	(0.01)	(0.03)	(0.01)	(0.02)
Age^2		0.00	0.00**	0.00	0.00***	0.00	0.00***	0.00	0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.00	0.03**	0.01*	0.03***	0.00	0.03**	0.00	0.03***
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		0.00	0.00	0.00	-0.00**	0.00	0.00	0.00	-0.00**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.06*	-0.09	-0.03	-0.05	-0.05	-0.10*	-0.04	-0.05
		(0.03)	(0.06)	(0.03)	(0.04)	(0.03)	(0.06)	(0.03)	(0.04)
# Children		0.01	0.04	0.00	0.02	0.01	0.03	0.00	0.02
		(0.03)	(0.04)	(0.02)	(0.03)	(0.03)	(0.04)	(0.02)	(0.03)
Secondary Education		-0.06**	-0.04	-0.05**	-0.01	-0.06*	-0.06	-0.04*	-0.01
		(0.03)	(0.06)	(0.02)	(0.04)	(0.03)	(0.06)	(0.02)	(0.04)
Employed		0.03	0.05	0.03	0.05	0.04	0.06	0.04	0.05
		(0.03)	(0.05)	(0.02)	(0.04)	(0.03)	(0.05)	(0.02)	(0.04)
Risk Taking		-0.01	0.02	-0.01	-0.03	-0.02	0.02	-0.02	-0.03
		(0.03)	(0.04)	(0.02)	(0.03)	(0.03)	(0.04)	(0.02)	(0.03)
N		1,308	454	2,111	807	1,308	454	2,111	807

Dependent variable: Dummy is 1 if motive to save for precautionary reasons has highest priority; Variables of interest: Public/Private Trust
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 10: H2a: Trust and Home owner with a Mortgage (Probit): Complete results

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.54***	0.22						
		(0.21)	(0.40)						
	World			-0.12	0.05				
				(0.15)	(0.29)				
Private Trust	Europe					1.35***	0.90		
						(0.25)	(0.57)		
	World							1.30***	1.22***
								(0.20)	(0.42)
Germany		0.12***	0.19**	0.11***	0.19***	0.15***	0.22***	0.10***	0.21***
		(0.03)	(0.07)	(0.03)	(0.07)	(0.04)	(0.08)	(0.04)	(0.08)
France		0.18***	0.29***	0.14***	0.25***	0.22***	0.33***	0.18***	0.29***
		(0.04)	(0.07)	(0.03)	(0.05)	(0.05)	(0.08)	(0.03)	(0.06)
Ireland		0.37***	0.55***	0.30***	0.51***	0.30***	0.48***	0.23***	0.41***
		(0.04)	(0.07)	(0.03)	(0.07)	(0.04)	(0.09)	(0.04)	(0.08)
Gross Income (ln)		0.18***	0.21***	0.19***	0.20***	0.17***	0.20***	0.18***	0.20***
		(0.03)	(0.05)	(0.02)	(0.03)	(0.03)	(0.05)	(0.02)	(0.03)
Male		-0.03	0.06	0.00	0.06	-0.02	0.07	0.01	0.07
		(0.03)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Age		0.08***	0.10***	0.08***	0.12***	0.07***	0.10***	0.07***	0.12***
		(0.01)	(0.04)	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	(0.03)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.02***	0.01	0.02***	0.00	0.02***	0.00	0.02***	0.00
		(0.00)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.14***	0.13*	0.11***	0.14**	0.16***	0.14*	0.12***	0.14***
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
# Children		0.12***	0.13**	0.03*	0.03	0.13***	0.14**	0.04**	0.04
		(0.03)	(0.06)	(0.02)	(0.03)	(0.03)	(0.06)	(0.02)	(0.03)
Secondary Education		-0.14***	-0.13*	-0.08***	-0.04	-0.11***	-0.11	-0.06**	-0.02
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Employed		-0.04	0.09	-0.04	0.06	-0.04	0.08	-0.03	0.06
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Risk Taking		-0.03	-0.06	-0.03	-0.04	-0.04	-0.06	-0.04	-0.04
		(0.03)	(0.06)	(0.02)	(0.04)	(0.03)	(0.06)	(0.02)	(0.04)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Dummy is 1 if household is owner with a mortgage and 0 if renter; Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 11: H2b: Trust and LTV Ratio (Tobit): Complete results

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.46***	0.25						
		(0.13)	(0.21)						
	World			-0.05	0.13				
				(0.10)	(0.16)				
Private Trust	Europe					0.82***	0.46		
						(0.15)	(0.30)		
	World							0.71***	0.56**
								(0.13)	(0.23)
Germany		0.08*	0.16**	0.08**	0.16***	0.08**	0.16**	0.08**	0.15**
		(0.04)	(0.07)	(0.04)	(0.06)	(0.04)	(0.07)	(0.04)	(0.06)
France		0.09**	0.15**	0.09***	0.17***	0.10**	0.15**	0.11***	0.18***
		(0.04)	(0.06)	(0.03)	(0.05)	(0.04)	(0.06)	(0.03)	(0.05)
Ireland		0.26***	0.39***	0.23***	0.38***	0.21***	0.34***	0.19***	0.32***
		(0.04)	(0.06)	(0.03)	(0.06)	(0.04)	(0.07)	(0.03)	(0.06)
Gross Income (ln)		0.08***	0.09***	0.08***	0.08***	0.07***	0.08***	0.07***	0.07***
		(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Male		0.00	0.05	0.01	0.05*	0.00	0.06*	0.01	0.05*
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Age		0.05***	0.05**	0.05***	0.06***	0.04***	0.05***	0.05***	0.06***
		(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.01***	0.01	0.02***	0.01*	0.01***	0.01	0.01***	0.01
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.06**	0.00	0.05**	0.02	0.07***	0.01	0.05***	0.02
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
# Children		0.06***	0.06**	0.02	0.02	0.06***	0.06**	0.02*	0.02
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Secondary Education		-0.09***	-0.10**	-0.06***	-0.02	-0.07***	-0.08*	-0.05***	-0.02
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Employed		-0.01	0.06	-0.02	0.04	-0.01	0.06	-0.01	0.04
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Risk Taking		0.00	0.01	0.00	0.03	0.01	0.02	0.00	0.03
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both at time of acquisition);
Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

9.4 Robustness Regression Results

Table 12: H1: Trust and Liquid Wealth (OLS): Robustness: Native Spouse

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.85	-3.47***						
		(0.61)	(1.00)						
	World			-0.81**	-1.76***				
				(0.41)	(0.65)				
Private Trust	Europe					2.07***	2.07*		
						(0.65)	(1.19)		
	World							1.92***	2.19***
								(0.53)	(0.84)
Spouse		0.74***	0.85**	0.63***	0.67***	0.51**	0.68*	0.52***	0.59**
		(0.22)	(0.37)	(0.16)	(0.25)	(0.23)	(0.38)	(0.16)	(0.25)
Germany		-0.89**	-1.20*	-0.82**	-0.82	-0.92**	-1.25*	-0.81**	-0.82
		(0.41)	(0.64)	(0.32)	(0.56)	(0.41)	(0.65)	(0.32)	(0.55)
France		1.03***	1.38**	0.78***	1.21**	0.95***	1.32**	0.85***	1.27***
		(0.37)	(0.58)	(0.28)	(0.48)	(0.37)	(0.58)	(0.28)	(0.48)
Ireland		-0.95***	-0.58	-0.85***	-0.72	-1.33***	-1.30**	-1.05***	-1.08**
		(0.35)	(0.58)	(0.28)	(0.51)	(0.37)	(0.65)	(0.29)	(0.54)
Gross Income (ln)		0.81***	0.83***	0.72***	0.76***	0.81***	0.87***	0.72***	0.80***
		(0.12)	(0.21)	(0.09)	(0.14)	(0.12)	(0.21)	(0.08)	(0.14)
Net Illiquid Wealth (ln)		0.15***	0.15***	0.15***	0.13***	0.14***	0.14***	0.14***	0.12***
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Male		0.07	0.31	0.06	0.22	0.11	0.32	0.08	0.22
		(0.19)	(0.31)	(0.14)	(0.21)	(0.19)	(0.32)	(0.14)	(0.21)
Age		-0.23***	-0.28*	-0.25***	-0.24**	-0.25***	-0.31*	-0.27***	-0.26**
		(0.07)	(0.16)	(0.05)	(0.11)	(0.07)	(0.16)	(0.05)	(0.11)
Age^2		0.00***	0.00*	0.00***	0.00**	0.00***	0.00**	0.00***	0.00**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		-0.05**	0.05	-0.05***	-0.01	-0.06***	0.00	-0.05***	-0.02
		(0.02)	(0.07)	(0.02)	(0.05)	(0.02)	(0.08)	(0.02)	(0.05)
Years in country ^2		0.00	0.00	0.00***	0.00	0.00*	0.00	0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.33	-0.54	-0.18	-0.26	-0.21	-0.50	-0.17	-0.26
		(0.21)	(0.37)	(0.16)	(0.25)	(0.21)	(0.37)	(0.16)	(0.25)
# Children		-0.19	-0.28	-0.14	-0.13	-0.20	-0.38	-0.12	-0.13
		(0.16)	(0.24)	(0.10)	(0.14)	(0.16)	(0.24)	(0.10)	(0.14)
Secondary Education		-0.71***	-0.62*	-0.82***	-0.85***	-0.63***	-0.51	-0.75***	-0.72***
		(0.19)	(0.34)	(0.14)	(0.22)	(0.19)	(0.36)	(0.14)	(0.23)
Employed		0.62***	0.25	0.47***	0.03	0.67***	0.33	0.48***	0.05
		(0.20)	(0.32)	(0.15)	(0.22)	(0.20)	(0.33)	(0.14)	(0.22)
Risk Taking		0.53***	0.37	0.58***	0.31*	0.51***	0.32	0.57***	0.30
		(0.16)	(0.26)	(0.12)	(0.18)	(0.15)	(0.26)	(0.12)	(0.18)
Constant		1.99	0.20	3.55**	2.51	5.01***	5.37	5.98***	5.64**
		(1.90)	(3.55)	(1.38)	(2.44)	(1.93)	(3.57)	(1.43)	(2.47)
N		1,308	454	2,111	807	1,308	454	2,111	807

Dependent variable: log liquid wealth; Variables of interest: Public/Private Trust (log)
Control variables: native spouse, log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Significance at * p<.1, ** p<.05, *** p<.01

Table 13: H2a: Trust and Home Owner with Mortgage (Probit): Robustness: Native Spouse

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.42**	0.21						
		(0.21)	(0.40)						
	World			-0.11	0.07				
				(0.15)	(0.29)				
Private Trust	Europe					1.15***	0.87		
						(0.26)	(0.58)		
	World							1.11***	1.14***
								(0.20)	(0.42)
Spouse		0.15***	0.05	0.17***	0.09	0.11***	0.02	0.14***	0.06
		(0.04)	(0.08)	(0.03)	(0.06)	(0.04)	(0.08)	(0.03)	(0.06)
Germany		0.13***	0.20**	0.12***	0.21***	0.15***	0.22***	0.11***	0.21***
		(0.04)	(0.08)	(0.03)	(0.07)	(0.04)	(0.08)	(0.04)	(0.08)
France		0.18***	0.30***	0.14***	0.25***	0.22***	0.33***	0.17***	0.29***
		(0.04)	(0.07)	(0.03)	(0.05)	(0.05)	(0.08)	(0.03)	(0.06)
Ireland		0.37***	0.55***	0.30***	0.51***	0.31***	0.48***	0.24***	0.42***
		(0.04)	(0.07)	(0.03)	(0.07)	(0.04)	(0.09)	(0.04)	(0.08)
Gross Income (ln)		0.16***	0.20***	0.17***	0.19***	0.15***	0.20***	0.16***	0.20***
		(0.03)	(0.05)	(0.02)	(0.04)	(0.03)	(0.05)	(0.02)	(0.04)
Male		-0.03	0.06	0.00	0.05	-0.02	0.07	0.01	0.06
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Age		0.08***	0.10***	0.08***	0.12***	0.07***	0.10***	0.07***	0.12***
		(0.01)	(0.04)	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	(0.03)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.02***	0.01	0.02***	0.00	0.02***	0.00	0.02***	0.00
		(0.00)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.11***	0.11	0.08***	0.11*	0.14***	0.13*	0.10***	0.12**
		(0.04)	(0.08)	(0.03)	(0.06)	(0.04)	(0.08)	(0.03)	(0.06)
# Children		0.12***	0.14**	0.03*	0.03	0.13***	0.14**	0.03*	0.04
		(0.03)	(0.06)	(0.02)	(0.03)	(0.03)	(0.06)	(0.02)	(0.03)
Secondary Education		-0.13***	-0.13*	-0.08***	-0.04	-0.11***	-0.11	-0.06**	-0.02
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Employed		-0.03	0.09	-0.02	0.07	-0.03	0.08	-0.02	0.07
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Risk Taking		-0.04	-0.06	-0.04	-0.04	-0.04	-0.06	-0.04*	-0.04
		(0.03)	(0.06)	(0.02)	(0.04)	(0.03)	(0.06)	(0.02)	(0.04)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Dummy is 1 if household is owner with a mortgage and 0 if renter; Variables of interest: Public/Private Trust
Control variables: native spouse, log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 14: H2b: Trust and LTV Ratio (Tobit): Robustness: Native Spouse

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.39***	0.25						
		(0.13)	(0.21)						
	World			-0.04	0.14				
				(0.09)	(0.16)				
Private Trust	Europe					0.72***	0.46		
						(0.15)	(0.31)		
	World							0.60***	0.53**
								(0.13)	(0.23)
Spouse		0.09***	0.01	0.11***	0.04	0.07**	0.00	0.09***	0.03
		(0.03)	(0.04)	(0.02)	(0.03)	(0.03)	(0.05)	(0.02)	(0.03)
Germany		0.09**	0.17**	0.09**	0.17***	0.09**	0.16**	0.08**	0.15**
		(0.04)	(0.07)	(0.04)	(0.06)	(0.04)	(0.07)	(0.04)	(0.06)
France		0.09**	0.15**	0.09***	0.17***	0.10**	0.15**	0.11***	0.18***
		(0.04)	(0.06)	(0.03)	(0.05)	(0.04)	(0.06)	(0.03)	(0.05)
Ireland		0.26***	0.39***	0.23***	0.38***	0.22***	0.34***	0.20***	0.32***
		(0.04)	(0.06)	(0.03)	(0.06)	(0.04)	(0.07)	(0.03)	(0.06)
Gross Income (ln)		0.07***	0.08***	0.07***	0.07***	0.07***	0.08***	0.07***	0.07***
		(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Male		-0.01	0.05	0.01	0.05	0.00	0.06*	0.01	0.05*
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Age		0.04***	0.05**	0.05***	0.06***	0.04***	0.05***	0.05***	0.06***
		(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.01***	0.01	0.01***	0.01	0.01***	0.01	0.01***	0.01
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.04*	0.00	0.03	0.01	0.05**	0.01	0.04*	0.02
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
# Children		0.06***	0.06**	0.02	0.02	0.06***	0.06**	0.02	0.02
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Secondary Education		-0.09***	-0.09**	-0.06***	-0.02	-0.07***	-0.08*	-0.05***	-0.02
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Employed		-0.01	0.06	-0.01	0.04	-0.01	0.06	-0.01	0.04
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Risk Taking		0.00	0.01	0.00	0.03	0.01	0.02	0.00	0.03
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both at time of acquisition);
Variables of interest: Public/Private Trust
Control variables: native spouse, log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 15: H1: Trust and Liquid Wealth (OLS): Robustness: Ordinal Trust Scale

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.23	-1.26***						
		(0.21)	(0.39)						
	World			-0.20	-0.54**				
				(0.14)	(0.23)				
Private Trust	Europe					0.56*	0.11		
						(0.28)	(0.44)		
	World							0.33**	0.35
								(0.16)	(0.26)
Germany		-0.92**	-0.87	-0.86***	-0.77	-0.91**	-1.33**	-0.82**	-0.77
		(0.42)	(0.66)	(0.32)	(0.55)	(0.41)	(0.66)	(0.33)	(0.56)
France		0.89**	1.09*	0.77***	1.35***	0.85**	1.27**	0.71**	1.21**
		(0.37)	(0.58)	(0.28)	(0.49)	(0.37)	(0.59)	(0.28)	(0.49)
Ireland		-0.87**	0.03	-0.76***	-0.29	-0.83**	-0.70	-0.95***	-0.77
		(0.37)	(0.63)	(0.29)	(0.52)	(0.37)	(0.61)	(0.28)	(0.52)
Gross Income (ln)		0.87***	0.94***	0.76***	0.85***	0.87***	0.96***	0.76***	0.86***
		(0.12)	(0.20)	(0.08)	(0.14)	(0.12)	(0.20)	(0.08)	(0.14)
Net Illiquid Wealth (ln)		0.16***	0.15***	0.16***	0.13***	0.16***	0.15***	0.16***	0.13***
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Male		0.07	0.36	0.07	0.27	0.08	0.34	0.08	0.26
		(0.19)	(0.31)	(0.14)	(0.21)	(0.19)	(0.32)	(0.14)	(0.21)
Age		-0.23***	-0.32**	-0.24***	-0.26**	-0.24***	-0.34**	-0.26***	-0.28**
		(0.07)	(0.16)	(0.05)	(0.11)	(0.07)	(0.16)	(0.05)	(0.11)
Age^2		0.00***	0.00**	0.00***	0.00**	0.00***	0.00**	0.00***	0.00**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		-0.05**	0.07	-0.04***	0.02	-0.05**	0.04	-0.06***	-0.01
		(0.02)	(0.07)	(0.02)	(0.05)	(0.02)	(0.07)	(0.02)	(0.05)
Years in country ^2		0.00	0.00	0.00***	0.00	0.00	0.00	0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.16	-0.26	-0.05	-0.05	-0.12	-0.29	-0.04	-0.04
		(0.21)	(0.34)	(0.15)	(0.23)	(0.21)	(0.34)	(0.15)	(0.23)
# Children		-0.19	-0.29	-0.12	-0.12	-0.20	-0.37	-0.13	-0.14
		(0.16)	(0.24)	(0.10)	(0.14)	(0.16)	(0.24)	(0.10)	(0.14)
Secondary Education		-0.74***	-0.76**	-0.83***	-0.86***	-0.68***	-0.66*	-0.80***	-0.78***
		(0.19)	(0.35)	(0.14)	(0.23)	(0.19)	(0.36)	(0.14)	(0.23)
Employed		0.61***	0.24	0.42***	-0.01	0.63***	0.29	0.44***	0.03
		(0.20)	(0.33)	(0.15)	(0.22)	(0.20)	(0.33)	(0.15)	(0.22)
Risk Taking		0.55***	0.40	0.59***	0.30*	0.52***	0.31	0.57***	0.28
		(0.16)	(0.26)	(0.12)	(0.18)	(0.16)	(0.26)	(0.12)	(0.18)
Constant		2.02	2.27	3.63***	3.00	2.08	2.83	3.97***	3.49
		(1.82)	(3.40)	(1.35)	(2.39)	(1.81)	(3.44)	(1.35)	(2.39)
N		1,308	454	2,111	807	1,308	454	2,111	807

Dependent variable: log liquid wealth; Variables of interest: Public/Private Trust (dummy is 1 for high trust country)
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Significance at * p<.1, ** p<.05, *** p<.01

Table 16: H2a: Trust and Home Owner with Mortgage (Probit): Robustness: Ordinal Trust Scale

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.11***	0.11						
		(0.04)	(0.08)						
	World			0.01	-0.05				
				(0.03)	(0.05)				
Private Trust	Europe					0.13**	0.05		
						(0.06)	(0.11)		
	World							0.24***	0.21***
								(0.03)	(0.06)
Germany		0.10***	0.17**	0.11***	0.19***	0.13***	0.19***	0.16***	0.25***
		(0.04)	(0.08)	(0.03)	(0.07)	(0.03)	(0.07)	(0.04)	(0.08)
France		0.21***	0.33***	0.14***	0.26***	0.16***	0.29***	0.15***	0.28***
		(0.05)	(0.08)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Ireland		0.34***	0.51***	0.30***	0.53***	0.40***	0.56***	0.23***	0.42***
		(0.04)	(0.08)	(0.04)	(0.07)	(0.04)	(0.07)	(0.04)	(0.07)
Gross Income (ln)		0.18***	0.21***	0.19***	0.20***	0.18***	0.20***	0.18***	0.20***
		(0.03)	(0.05)	(0.02)	(0.03)	(0.03)	(0.05)	(0.02)	(0.03)
Male		-0.02	0.06	0.00	0.06	-0.02	0.06	0.01	0.06
		(0.03)	(0.07)	(0.03)	(0.05)	(0.03)	(0.07)	(0.03)	(0.05)
Age		0.07***	0.10***	0.08***	0.12***	0.08***	0.10***	0.07***	0.12***
		(0.01)	(0.04)	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	(0.03)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.02***	0.01	0.02***	0.01	0.03***	0.01	0.02***	-0.01
		(0.00)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.15***	0.12*	0.11***	0.14**	0.15***	0.13*	0.13***	0.15***
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.06)
# Children		0.12***	0.13**	0.03*	0.04	0.13***	0.14**	0.04**	0.04
		(0.03)	(0.05)	(0.02)	(0.03)	(0.03)	(0.06)	(0.02)	(0.03)
Secondary Education		-0.14***	-0.13*	-0.08***	-0.04	-0.12***	-0.12	-0.07***	-0.02
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.08)	(0.03)	(0.05)
Employed		-0.05	0.09	-0.03	0.06	-0.05	0.08	-0.02	0.07
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Risk Taking		-0.04	-0.07	-0.03	-0.04	-0.03	-0.06	-0.04*	-0.04
		(0.03)	(0.06)	(0.02)	(0.04)	(0.03)	(0.06)	(0.02)	(0.04)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Dummy is 1 if household is owner with a mortgage and 0 if renter; Variables of interest: Public/Private Trust (dummy is 1 for high trust country)
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 17: H2b: Trust and LTV Ratio (Tobit): Robustness: Ordinal Trust Scale

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.10***	0.09**						
		(0.02)	(0.04)						
	World			0.03**	0.03				
				(0.02)	(0.03)				
Private Trust	Europe					0.07*	0.02		
						(0.04)	(0.06)		
	World							0.17***	0.10***
								(0.02)	(0.04)
Germany		0.04	0.13*	0.08**	0.15**	0.10**	0.17**	0.11***	0.18***
		(0.04)	(0.07)	(0.04)	(0.06)	(0.04)	(0.07)	(0.04)	(0.06)
France		0.10**	0.15**	0.08**	0.17***	0.10**	0.15**	0.09***	0.18***
		(0.04)	(0.06)	(0.03)	(0.05)	(0.04)	(0.06)	(0.03)	(0.05)
Ireland		0.22***	0.34***	0.21***	0.36***	0.29***	0.40***	0.19***	0.33***
		(0.04)	(0.07)	(0.03)	(0.06)	(0.04)	(0.06)	(0.03)	(0.06)
Gross Income (ln)		0.08***	0.09***	0.08***	0.08***	0.08***	0.08***	0.07***	0.07***
		(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Male		0.00	0.05	0.01	0.05*	0.00	0.06	0.01	0.05*
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Age		0.04***	0.05**	0.05***	0.06***	0.05***	0.05***	0.04***	0.06***
		(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.01***	0.01	0.01***	0.01	0.02***	0.01	0.01***	0.01
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.06**	0.00	0.05**	0.02	0.06**	0.01	0.06***	0.03
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
# Children		0.06***	0.06**	0.02	0.02	0.06***	0.06**	0.02*	0.02
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Secondary Education		-0.09***	-0.09**	-0.06***	-0.02	-0.09***	-0.09**	-0.05***	-0.02
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Employed		-0.01	0.06	-0.01	0.04	-0.02	0.06	-0.01	0.04
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Risk Taking		0.00	0.01	0.00	0.03	0.01	0.02	0.00	0.03
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both at time of acquisition);
Variables of interest: Public/Private Trust (dummy is 1 for high trust country)
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 18: H2b: Trust and LTV Ratio (Tobit): Robustness: Current Values

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.37***	0.15						
		(0.10)	(0.17)						
	World			-0.02	0.09				
				(0.08)	(0.13)				
Private Trust	Europe					0.70***	0.42*		
						(0.12)	(0.24)		
	World							0.61***	0.52***
								(0.10)	(0.18)
Germany		0.04	0.11**	0.05*	0.11**	0.04	0.11**	0.04	0.10**
		(0.03)	(0.06)	(0.03)	(0.05)	(0.03)	(0.06)	(0.03)	(0.05)
France		0.05	0.10*	0.06**	0.12***	0.06*	0.10*	0.07***	0.12***
		(0.03)	(0.05)	(0.02)	(0.04)	(0.03)	(0.05)	(0.02)	(0.04)
Ireland		0.18***	0.30***	0.17***	0.29***	0.14***	0.26***	0.13***	0.24***
		(0.03)	(0.05)	(0.03)	(0.05)	(0.03)	(0.06)	(0.03)	(0.05)
Gross Income (ln)		0.07***	0.07***	0.06***	0.05***	0.06***	0.06***	0.06***	0.05***
		(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Male		-0.01	0.04	0.00	0.04	0.00	0.05*	0.01	0.04*
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Age		0.04***	0.03**	0.04***	0.04***	0.03***	0.03**	0.04***	0.04***
		(0.01)	(0.02)	(0.00)	(0.01)	(0.01)	(0.02)	(0.00)	(0.01)
Age^2		-0.00***	-0.00**	-0.00***	-0.00***	-0.00***	-0.00**	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.01***	0.01	0.01***	0.01**	0.01***	0.01	0.01***	0.01
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	-0.00*	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.04**	0.00	0.03**	0.01	0.05***	0.01	0.03**	0.01
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
# Children		0.03**	0.04*	0.01	0.01	0.04**	0.04*	0.01	0.01
		(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)
Secondary Education		-0.07***	-0.08**	-0.05***	-0.02	-0.06***	-0.07*	-0.03**	-0.01
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Employed		-0.01	0.05	-0.02	0.02	0.00	0.04	-0.01	0.02
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Risk Taking		0.00	0.02	0.00	0.03	0.01	0.03	0.00	0.03*
		(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both present values); Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 19: H1b: Trust and Liquid Wealth (OLS): Robustness: Civic Indicator

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Civic Indicator	Europe	1.68***	0.94						
		(0.62)	(1.27)						
	World			1.97***	2.04**				
				(0.46)	(0.82)				
Passive	Europe					2.33	5.14		
						(2.62)	(4.92)		
	World							0.54	1.25
								(1.80)	(3.28)
Active	Europe					1.05	-2.93		
						(2.57)	(4.51)		
	World							3.11**	2.63
								(1.45)	(2.45)
Germany		-0.91**	-1.33**	-0.77**	-0.86	-0.92**	-1.37**	-0.77**	-0.86
		(0.41)	(0.65)	(0.32)	(0.55)	(0.41)	(0.65)	(0.32)	(0.55)
France		0.90**	1.27**	0.76***	1.20**	0.91**	1.35**	0.72***	1.18**
		(0.37)	(0.59)	(0.28)	(0.49)	(0.37)	(0.59)	(0.28)	(0.49)
Ireland		-1.10***	-0.87	-0.98***	-0.92*	-1.12***	-1.05	-0.95***	-0.89
		(0.36)	(0.62)	(0.28)	(0.53)	(0.37)	(0.67)	(0.29)	(0.55)
Gross Income (ln)		0.86***	0.95***	0.75***	0.85***	0.87***	0.96***	0.75***	0.85***
		(0.12)	(0.21)	(0.08)	(0.14)	(0.12)	(0.21)	(0.08)	(0.14)
Net Illiquid Wealth (ln)		0.15***	0.15***	0.15***	0.13***	0.15***	0.15***	0.15***	0.13***
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Male		0.08	0.34	0.08	0.25	0.08	0.35	0.08	0.25
		(0.19)	(0.32)	(0.14)	(0.21)	(0.19)	(0.32)	(0.14)	(0.21)
Age		-0.25***	-0.34**	-0.27***	-0.29**	-0.26***	-0.34**	-0.26***	-0.29**
		(0.07)	(0.16)	(0.05)	(0.11)	(0.07)	(0.16)	(0.05)	(0.11)
Age^2		0.00***	0.00**	0.00***	0.00**	0.00***	0.00**	0.00***	0.00**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		-0.05**	0.03	-0.05***	-0.01	-0.06**	0.01	-0.05***	-0.01
		(0.02)	(0.08)	(0.02)	(0.05)	(0.02)	(0.08)	(0.02)	(0.05)
Years in country ^2		0.00*	0.00	0.00***	0.00	0.00*	0.00	0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.09	-0.28	-0.04	-0.06	-0.09	-0.26	-0.05	-0.07
		(0.21)	(0.34)	(0.15)	(0.23)	(0.21)	(0.35)	(0.15)	(0.23)
# Children		-0.19	-0.37	-0.11	-0.14	-0.20	-0.37	-0.11	-0.14
		(0.16)	(0.24)	(0.10)	(0.14)	(0.16)	(0.24)	(0.10)	(0.14)
Secondary Education		-0.66***	-0.62*	-0.71***	-0.69***	-0.66***	-0.62*	-0.71***	-0.69***
		(0.19)	(0.36)	(0.14)	(0.23)	(0.19)	(0.36)	(0.14)	(0.23)
Employed		0.64***	0.30	0.47***	0.03	0.64***	0.30	0.46***	0.03
		(0.20)	(0.33)	(0.14)	(0.22)	(0.20)	(0.33)	(0.15)	(0.22)
Risk Taking		0.51***	0.31	0.54***	0.27	0.51***	0.30	0.54***	0.27
		(0.16)	(0.26)	(0.12)	(0.18)	(0.16)	(0.26)	(0.12)	(0.18)
Constant		2.39	2.92	3.75***	3.41	2.42	3.14	3.69***	3.39
		(1.80)	(3.43)	(1.34)	(2.39)	(1.81)	(3.44)	(1.34)	(2.39)
N		1,308	454	2,111	807	1,308	454	2,111	807

Dependent variable: log liquid wealth; Variables of interest: Civic Indicator (member in voluntary organizations), Passive (passive member), Active (active member: does voluntary work)
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior.
Countries: Austria, Germany, France, Ireland
Columns: 1-4 binary civic indicator and 5-8 inactive, passive and active. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Significance at * p<.1, ** p<.05, *** p<.01

Table 20: H2a: Trust and Home Owner with Mortgage (Probit): Robustness: Civic Indicator

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Civic Indicator	Europe	0.60***	0.37						
		(0.12)	(0.27)						
	World			0.46***	0.56***				
				(0.09)	(0.20)				
Passive	Europe					2.05***	2.57**		
						(0.47)	(1.04)		
	World							2.17***	2.25***
								(0.34)	(0.78)
Active	Europe					-0.87*	-1.73*		
						(0.47)	(1.00)		
	World							-0.94***	-0.78
								(0.28)	(0.62)
Germany		0.15***	0.21***	0.13***	0.22***	0.15***	0.21**	0.13***	0.22***
		(0.04)	(0.08)	(0.04)	(0.08)	(0.04)	(0.08)	(0.04)	(0.08)
France		0.19***	0.31***	0.15***	0.27***	0.24***	0.38***	0.20***	0.31***
		(0.04)	(0.07)	(0.03)	(0.06)	(0.05)	(0.08)	(0.03)	(0.06)
Ireland		0.34***	0.51***	0.26***	0.44***	0.31***	0.45***	0.22***	0.37***
		(0.04)	(0.08)	(0.03)	(0.07)	(0.04)	(0.09)	(0.03)	(0.08)
Gross Income (ln)		0.16***	0.20***	0.18***	0.20***	0.17***	0.21***	0.18***	0.20***
		(0.03)	(0.05)	(0.02)	(0.03)	(0.03)	(0.05)	(0.02)	(0.03)
Male		-0.02	0.07	0.01	0.06	-0.02	0.07	0.01	0.06
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Age		0.07***	0.10***	0.07***	0.12***	0.07***	0.10***	0.07***	0.11***
		(0.01)	(0.04)	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	(0.03)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00**	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.03***	0.01	0.02***	0.00	0.02***	0.00	0.02***	0.00
		(0.00)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.17***	0.13*	0.12***	0.13**	0.17***	0.14*	0.13***	0.14***
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.06)
# Children		0.13***	0.13**	0.03**	0.04	0.12***	0.14**	0.03*	0.04
		(0.03)	(0.06)	(0.02)	(0.03)	(0.03)	(0.05)	(0.02)	(0.03)
Secondary Education		-0.11***	-0.12	-0.06**	-0.02	-0.12***	-0.12*	-0.06**	-0.02
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Employed		-0.04	0.08	-0.03	0.07	-0.04	0.09	-0.03	0.07
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Risk Taking		-0.04	-0.06	-0.04*	-0.04	-0.04	-0.07	-0.04*	-0.04
		(0.03)	(0.06)	(0.02)	(0.04)	(0.03)	(0.06)	(0.02)	(0.04)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Dummy is 1 if household is owner with a mortgage and 0 if renter; Variables of interest: Civic Indicator (member in voluntary organizations), Passive (passive member), Active (active member: does voluntary work)
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 binary civic indicator and 5-8 inactive, passive and active. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 21: H2b: Trust and LTV Ratio (Tobit): Robustness: Civic Indicator

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Civic Indicator	Europe	0.37***	0.25*						
		(0.07)	(0.14)						
	World			0.27***	0.29***				
				(0.06)	(0.11)				
Passive	Europe					1.25***	0.77		
						(0.29)	(0.55)		
	World							1.38***	0.97**
								(0.22)	(0.41)
Active	Europe					-0.51*	-0.24		
						(0.29)	(0.52)		
	World							-0.64***	-0.24
								(0.18)	(0.33)
Germany		0.10**	0.17**	0.10***	0.16***	0.10**	0.16**	0.09***	0.15**
		(0.04)	(0.07)	(0.04)	(0.06)	(0.04)	(0.07)	(0.04)	(0.06)
France		0.10**	0.14**	0.10***	0.17***	0.12***	0.15**	0.13***	0.18***
		(0.04)	(0.06)	(0.03)	(0.05)	(0.04)	(0.06)	(0.03)	(0.05)
Ireland		0.25***	0.36***	0.21***	0.33***	0.23***	0.33***	0.19***	0.30***
		(0.04)	(0.07)	(0.03)	(0.06)	(0.04)	(0.07)	(0.03)	(0.06)
Gross Income (ln)		0.07***	0.08***	0.08***	0.07***	0.07***	0.08***	0.08***	0.07***
		(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Male		0.00	0.06	0.01	0.05*	-0.01	0.06	0.01	0.05*
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Age		0.04***	0.05***	0.05***	0.06***	0.04***	0.05***	0.05***	0.06***
		(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.01***	0.01	0.01***	0.01	0.01***	0.01	0.01***	0.01
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.07***	0.01	0.05***	0.02	0.07***	0.01	0.05***	0.02
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
# Children		0.06***	0.06**	0.02*	0.02	0.06***	0.06**	0.02	0.02
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Secondary Education		-0.07***	-0.08**	-0.05***	-0.01	-0.07***	-0.08**	-0.05***	-0.01
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Employed		-0.01	0.06	-0.01	0.04	0.00	0.06	-0.01	0.04
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Risk Taking		0.00	0.02	0.00	0.03	0.00	0.02	0.00	0.03
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both at time of acquisition); Variables of interest: Civic Indicator (member in voluntary organizations), Passive (passive member), Active (active member: does voluntary work)
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior
Countries: Austria, Germany, France, Ireland
Columns: 1-4 binary civic indicator and 5-8 inactive, passive and active. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 22: H1: Trust and Liquid Wealth (OLS): Robustness: Uninsurable Risk

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	-0.76	-3.38***						
		(0.60)	(1.02)						
	World			-0.78*	-1.77***				
				(0.41)	(0.66)				
Private Trust	Europe					2.26***	2.23*		
						(0.64)	(1.19)		
	World							2.17***	2.39***
								(0.53)	(0.84)
Germany		-1.00**	-1.26*	-0.90***	-0.92	-1.00**	-1.23*	-0.87***	-0.89
		(0.42)	(0.67)	(0.33)	(0.58)	(0.41)	(0.67)	(0.33)	(0.57)
France		0.89**	1.22**	0.70**	1.08**	0.85**	1.19**	0.78***	1.16**
		(0.37)	(0.58)	(0.28)	(0.49)	(0.37)	(0.59)	(0.28)	(0.49)
Ireland		-1.01***	-0.60	-0.91***	-0.77	-1.42***	-1.35**	-1.13***	-1.15**
		(0.36)	(0.59)	(0.28)	(0.52)	(0.37)	(0.66)	(0.29)	(0.54)
Gross Income (ln)		0.85***	0.81***	0.72***	0.77***	0.84***	0.83***	0.71***	0.81***
		(0.12)	(0.21)	(0.09)	(0.14)	(0.12)	(0.21)	(0.09)	(0.14)
Illiquid Assets (ln)		0.16***	0.14***	0.15***	0.13***	0.14***	0.13***	0.14***	0.12***
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Male		0.07	0.52	0.03	0.30	0.10	0.49	0.06	0.28
		(0.20)	(0.33)	(0.14)	(0.22)	(0.20)	(0.33)	(0.14)	(0.22)
Age		-0.25***	-0.36**	-0.26***	-0.29**	-0.26***	-0.38**	-0.27***	-0.30***
		(0.07)	(0.16)	(0.05)	(0.11)	(0.07)	(0.16)	(0.05)	(0.11)
Age^2		0.00***	0.00**	0.00***	0.00**	0.00***	0.00**	0.00***	0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
years in country		-0.04*	0.08	-0.04**	0.02	-0.05**	0.03	-0.05***	0.00
		(0.02)	(0.08)	(0.02)	(0.05)	(0.02)	(0.08)	(0.02)	(0.05)
years in country ^2		0.00	0.00	0.00**	0.00	0.00*	0.00	0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		-0.10	-0.06	0.04	0.08	-0.04	-0.06	0.02	0.05
		(0.21)	(0.35)	(0.15)	(0.24)	(0.21)	(0.35)	(0.15)	(0.24)
# Children		-0.18	-0.29	-0.12	-0.13	-0.20	-0.38	-0.10	-0.13
		(0.16)	(0.24)	(0.10)	(0.14)	(0.16)	(0.24)	(0.10)	(0.14)
Secondary Education		-0.60***	-0.37	-0.71***	-0.66***	-0.55***	-0.26	-0.65***	-0.53**
		(0.20)	(0.36)	(0.15)	(0.24)	(0.20)	(0.37)	(0.14)	(0.24)
Employed		0.72	1.77	0.46	0.75	0.77	2.06	0.53	0.74
		(0.87)	(1.27)	(0.64)	(0.90)	(0.87)	(1.28)	(0.64)	(0.91)
Risk Taking		0.51***	0.37	0.56***	0.29	0.50***	0.31	0.55***	0.28
		(0.16)	(0.26)	(0.12)	(0.18)	(0.16)	(0.26)	(0.12)	(0.18)
Self-Employed		0.87**	1.07*	0.72***	0.80**	0.79**	1.10**	0.68***	0.79**
		(0.34)	(0.55)	(0.24)	(0.36)	(0.34)	(0.55)	(0.24)	(0.36)
Constant		1.67	1.01	3.49**	2.81	4.82**	6.33*	6.11***	6.13**
		(1.92)	(3.62)	(1.40)	(2.49)	(1.95)	(3.66)	(1.44)	(2.53)
Sector FE		✓	✓	✓	✓	✓	✓	✓	✓
N		1,308	454	2,111	807	1,308	454	2,111	807

Dependent variable: log liquid wealth; Variables of interest: Public/Private Trust (ln)
Control variables: log gross income, log net illiquid wealth, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior, dummy for self-employed, dummies for sector of occupation (suppressed due to possible confidential issues)
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public (H1a) and 5-8 Private (H1b) Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Significance at * p<.1, ** p<.05, *** p<.01

Table 23: H2a: Trust and Home Owner with Mortgage (Probit): Robustness: Uninsurable Risk

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.55***	0.31						
		(0.21)	(0.36)						
	World			-0.06	0.03				
				(0.15)	(0.27)				
Private Trust	Europe					1.32***	0.85		
						(0.25)	(0.54)		
	World							1.29***	1.24***
								(0.20)	(0.42)
Germany		0.15***	0.21***	0.12***	0.23***	0.17***	0.23***	0.11***	0.24***
		(0.04)	(0.08)	(0.04)	(0.08)	(0.04)	(0.09)	(0.04)	(0.08)
France		0.16***	0.26***	0.12***	0.22***	0.19***	0.29***	0.16***	0.26***
		(0.04)	(0.07)	(0.03)	(0.05)	(0.05)	(0.08)	(0.03)	(0.06)
Ireland		0.37***	0.54***	0.30***	0.51***	0.30***	0.47***	0.23***	0.41***
		(0.04)	(0.09)	(0.03)	(0.07)	(0.04)	(0.10)	(0.04)	(0.08)
Gross Income (ln)		0.17***	0.17***	0.17***	0.17***	0.16***	0.17***	0.17***	0.17***
		(0.03)	(0.05)	(0.02)	(0.04)	(0.03)	(0.05)	(0.02)	(0.04)
Male		-0.02	0.02	0.00	0.03	-0.01	0.03	0.01	0.04
		(0.04)	(0.06)	(0.03)	(0.05)	(0.04)	(0.06)	(0.03)	(0.05)
Age		0.07***	0.09**	0.08***	0.11***	0.07***	0.10***	0.07***	0.11***
		(0.01)	(0.04)	(0.01)	(0.03)	(0.01)	(0.04)	(0.01)	(0.03)
Age^2		-0.00***	-0.00**	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.02***	0.00	0.02***	0.00	0.02***	0.00	0.02***	0.00
		(0.00)	(0.02)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.13***	0.07	0.11***	0.10*	0.15***	0.08	0.12***	0.10*
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
# Children		0.12***	0.13**	0.04**	0.04	0.13***	0.13**	0.04**	0.05
		(0.03)	(0.05)	(0.02)	(0.03)	(0.03)	(0.05)	(0.02)	(0.03)
Secondary Education		-0.13***	-0.15**	-0.07**	-0.07	-0.11***	-0.13*	-0.05**	-0.06
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Employed		0.23*	0.52***	0.15	0.40**	0.20	0.52***	0.15	0.37**
		(0.13)	(0.16)	(0.11)	(0.18)	(0.13)	(0.16)	(0.11)	(0.19)
Risk Taking		-0.04	-0.05	-0.03	-0.04	-0.04	-0.04	-0.04*	-0.04
		(0.03)	(0.05)	(0.02)	(0.04)	(0.03)	(0.05)	(0.02)	(0.04)
Self-Employed		0.23***	0.21*	0.21***	0.23***	0.21***	0.20*	0.20***	0.23**
		(0.06)	(0.11)	(0.05)	(0.09)	(0.06)	(0.11)	(0.05)	(0.09)
Sector FE		✓	✓	✓	✓	✓	✓	✓	✓
N		1,030	330	1,635	559	1,030	330	1,635	559

Dependent variable: Dummy is 1 if household is owner with a mortgage and 0 if renter; Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior, dummy for self-employed, dummies for sector of occupation (suppressed due to possible confidential issues)
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

Table 24: H2b: Trust and LTV Ratio (Tobit): Robustness: Uninsurable Risk

		(1) all	(2) <18	(3) all	(4) <18	(5) all	(6) <18	(7) all	(8) <18
Public Trust	Europe	0.45***	0.27						
		(0.13)	(0.21)						
	World			-0.01	0.12				
				(0.10)	(0.15)				
Private Trust	Europe					0.75***	0.48		
						(0.15)	(0.30)		
	World							0.66***	0.59***
								(0.13)	(0.23)
Germany		0.09**	0.16**	0.09**	0.18***	0.09**	0.16**	0.08**	0.16***
		(0.04)	(0.07)	(0.04)	(0.06)	(0.04)	(0.07)	(0.04)	(0.06)
France		0.07*	0.15**	0.08***	0.17***	0.08**	0.15**	0.10***	0.17***
		(0.04)	(0.06)	(0.03)	(0.05)	(0.04)	(0.06)	(0.03)	(0.05)
Ireland		0.26***	0.39***	0.23***	0.38***	0.21***	0.34***	0.20***	0.32***
		(0.04)	(0.06)	(0.03)	(0.06)	(0.04)	(0.07)	(0.03)	(0.06)
Gross Income (ln)		0.08***	0.09***	0.07***	0.06***	0.07***	0.08***	0.07***	0.06***
		(0.01)	(0.03)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Male		0.00	0.02	0.00	0.03	0.00	0.03	0.01	0.03
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Age		0.04***	0.05***	0.05***	0.06***	0.04***	0.06***	0.05***	0.06***
		(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Age^2		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Years in country		0.01***	0.00	0.01***	0.01	0.01***	0.00	0.01***	0.01
		(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Years in country ^2		-0.00***	0.00	-0.00***	0.00	-0.00***	0.00	-0.00***	0.00
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Married		0.06**	-0.02	0.05**	0.00	0.06***	-0.01	0.05***	0.00
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
# Children		0.06***	0.06**	0.02*	0.02	0.07***	0.07**	0.02*	0.03
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Secondary Education		-0.08***	-0.11***	-0.05**	-0.05	-0.07***	-0.10**	-0.04**	-0.04
		(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	(0.02)	(0.03)
Employed		0.19**	0.22	0.11	0.18*	0.16*	0.17	0.11	0.15
		(0.09)	(0.14)	(0.08)	(0.11)	(0.09)	(0.14)	(0.08)	(0.11)
Risk Taking		0.00	0.02	0.00	0.03	0.01	0.02	0.00	0.03
		(0.02)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Self-Employed		0.12***	0.04	0.13***	0.12**	0.10**	0.04	0.12***	0.11**
		(0.04)	(0.07)	(0.03)	(0.05)	(0.04)	(0.07)	(0.03)	(0.05)
Sector FE		✓	✓	✓	✓	✓	✓	✓	✓
N		1,036	338	1,646	562	1,036	338	1,646	562

Dependent variable: Leverage ratio: Value of mortgage divided by value of household main residence (both at time of acquisition); Variables of interest: Public/Private Trust
Control variables: log gross income, male, age, years in country, married, number of children, dummy for secondary education, dummy for currently employed, risk taking behavior, dummy for self-employed, dummies for sector of occupation (suppressed due to possible confidential issues)
Countries: Austria, Germany, France, Ireland
Columns: 1-4 Public and 5-8 Private Trust. The first two use only immigrants from Europe while the latter include non-European immigrants. For each specification (all) uses the full sample while (<18) uses only immigrants who arrived before age 18.
Estimates are reported as margins at means; Significance at * p<.1, ** p<.05, *** p<.01

9.5 Sample Summary Statistics (unweighted)

1	Reference	Assets / Income	AT 2014Q4 / 2013							DE 2014Q3 / 2013							FR 2014Q4 / 2014							IE 2013Q2 / 2012Q1-2013Q3						
			Natives	Non-Natives	I	II	III	IV	V	Natives	Non-Natives	I	II	III	IV	V	Natives	Non-Natives	I	II	III	IV	V	Natives	Non-Natives	I	II	III	IV	V
					DE	TR	PL	HR	OAS			PL	RU	TR	KZK	RO			NAF	PT	OAS	IT	DE			GB	PL	OAS	LT	USA
2	**N**		2,686	240	60	25	20	15	14	4,016	411	68	42	33	29	25	10,511	1,234	593	113	106	75	57	4,319	978	406	149	102	47	39
3	**Married**		47	54	40	72	50	73	50	65	67	63	64	85	x	60	55	62	61	72	68	64	63	53	54	54	53	75	62	62
4	**hh size**		2.0	2.2	1.9	3.0	1.8	2.5	2.3	2.3	2.5	2.2	2.2	3.2	3.2	2.0	2.4	2.5	2.6	2.5	2.6	2.0	2.2	2.7	2.7	2.7	2.7	2.9	2.9	2.9
			(1.2)	(1.3)	(1.1)	(1.7)	(1.0)	(1.2)	(1.4)	(1.1)	(1.3)	(1.1)	(1.0)	(1.3)	(1.2)	(0.7)	(1.3)	(1.4)	(1.6)	(1.2)	(1.3)	(1.0)	(1.1)	(1.5)	(1.4)	(1.5)	(1.1)	(1.3)	(1.2)	(1.5)
5	**Age**		53.0	51.6	51.9	43.7	58.2	50.3	43.0	56.2	51.2	51.8	52.7	42.7	42.9	56.5	54.3	57.2	57.9	57.3	52.7	65.7	59.2	49.4	40.1	47.9	32.8	35.3	32.7	42.1
		At immigration		22.6	21.8	16.0	29.5	21.4	29.6		21.1	21.2	32.2	14.7	24.6	26.5		18.3	17.3	16.0	18.5	16.9	14.0		22.9	19.1	25.8	26.2	25.0	21.5
		Years in country		28.9	30.1	27.7	28.8	28.9	13.4		30.1	30.6	20.5	28.1	18.3	30.0		38.8	40.6	41.1	33.9	48.8	45.3		17.3	28.8	7.1	9.1	7.7	20.5
6	**Education**	*Secondary (or less)*	83	74	70	100	80	93	36	67	70	84	71	91	48	52	57	55	57	83	46	67	40	65	51	59	62	19	55	23
		Tertiary	17	26	30	0	20	7	64	33	30	16	29	9	52	48	43	45	43	17	54	33	60	35	49	41	38	81	45	77
7	**Employment**	*Employed*	45	40	38	52	20	53	57	48	54	50	63	52	86	44	50	43	40	45	57	31	49	43	59	46	68	75	68	41
		Unemployed	3	10	8	20	15	20	7	3	5	x	x	18	x	0	4	7	9	3	4	3	2	11	16	15	23	7	21	15
		Self-employed	6	7	7	4	5	7	14	9	8	12	x	x	x	x	10	11	9	14	13	5	9	12	9	12	3	8	2	21
		Retired	40	35	38	16	55	20	7	36	27	32	26	9	x	44	32	34	36	35	25	59	39	20	8	17	1	1	0	10
		Other	6	8	8	8	5	0	14	4	6	x	x	x	x	x	4	5	6	4	2	3	2	14	9	10	6	10	9	13
8	**Income**		42.4	39.4	42.7	42.1	35.6	37.2	37.6	72.8	57.0	45.9	44.3	48.5	49.6	46.7	71.0	71.5	58.8	53.4	63.6	117.0	92.3	60.7	51.3	59.9	36.0	60.1	36.3	71.1
			(30.5)	(29.5)	(32.9)	(37.2)	(28.2)	(23.8)	(19.8)	(93.0)	(73.3)	(43.2)	(41.9)	(29.8)	(39.2)	(25.6)	(118.1)	(185.0)	(83.3)	(63.5)	(92.9)	(520.0)	(90.9)	(86.0)	(57.3)	(74.4)	(17.5)	(47.2)	(18.5)	(75.0)
9	**Real Assets**	*HMR*	297.6	460.0	279.1	180.0	373.3	130.0	280.0	332.5	265.7	294.6	188.7	213.6	176.4	225.0	298.7	381.8	375.1	268.1	435.8	283.6	578.7	207.2	210.4	208.4	199.4	212.4	113.0	281.0
		Other	45.9	29.2	43.2	60.0	25.4	5.1	0.0	70.9	12.7	4.3	0.0	x	x	x	119.6	70.2	63.2	37.1	39.5	231.5	57.1	84.0	24.2	40.9	0.7	2.6	0.1	21.0
10	**Financial Assets**	*Liquid*																												
		Risky	5.9	2.8	5.9	0.4	2.0	1.4	0.6	23.3	6.4	x	0.0	x	x	x	59.5	64.6	21.8	5.0	36.1	70.7	124.0	7.6	6.8	9.0	0.0	17.0	0.0	18.9
		Non-risky	26.8	18.6	17.0	13.0	13.5	9.8	13.4	60.4	27.9	18.4	9.9	4.9	9.6	19.5	39.8	40.7	31.5	17.2	29.6	33.5	54.7	26.1	16.5	23.2	5.0	8.5	5.5	38.4
		Illiquid	5.8	4.7	5.9	10.4	0.6	4.0	3.7	154.3	85.6	80.6	16.5	31.8	63.5	85.0	115.0	95.6	76.8	24.2	117.7	51.4	271.2	17.2	14.5	25.3	2.0	1.0	0.1	37.6
11	**Liabilities**	*Mortgage*	88.6	116.0	130.5	105.0	144.5	?	138.3	147.0	133.4	95.0	134.5	103.0	135.3	117.6	167.1	174.6	165.7	116.1	179.1	243.1	135.7	209.7	205.5	179.0	163.4	247.1	122.7	270.7
		Other	2.8	0.7	0.0	0.0	0.5	?	0.0	4.6	3.5	x	8.8	8.4	x	x	10.0	6.4	8.7	8.6	3.1	3.7	8.1	7.9	6.5	5.1	1.9	13.0	0.9	28.1
12	**Housing**	*Owner (outright)*	14	9	12	4	10	0	14	30	23	16	21	24	31	12	23	18	14	27	23	7	18	37	25	44	5	13	13	31
		Owner (mortgage)	38	21	34	4	20	7	0	34	21	18	17	9	10	36	52	44	37	45	46	69	53	42	17	32	1	8	2	23
		Renter	48	70	53	92	70	93	86	35	56	66	62	67	59	52	25	38	49	27	31	24	30	21	58	25	95	79	85	46

1: Assets: AT, DE, IE fieldwork midpoint, FR 31.12.2014 / Income: IE last twelve months; 2: number of hhs; 3: %; 4: persons per hh; 5: years; 6, 7: %; 8: Income from all sources, thousand Euros; 9: "Other" excludes business wealth, thousand Euros; 10: thousand Euros; 11: %; 12: thousand Euros
Standard deviations in parentheses; GB excludes Northern Ireland; NAF (North Africa) comprises: Algeria, Egypt, Libya, Morocco, Tunisia; OAS (Other Asia) comprises: China, Taiwan, Hong Kong, South Korea, Japan, India, Pakistan, Thailand, Malaysia, Singapore, Philippines
DE: The Bundesbank's data and confidentiality protection provision requires the following adjustments: x suppressed; AT: ? missing data; summary statistics of the HFCS immigrant sample before applying sample selection criteria (see section 4.3)

Table 25: Households in the unrestricted HFCS immigrant sample