Does Homeownership Promote Wealth Accumulation?*

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Abstract

It is well known that homeowners are richer than renters, even after controlling for observable household characteristics. This is often used as an argument for policies that foster homeownership. However, the causal link between homeownership and wealth is difficult to establish due to many potential sources of endogeneity. Utilizing the Household Finance and Consumption Survey for the Euro area, we correct for endogeneity by using inheriting the household's main residence as an instrument. The exclusion restriction is that conditional on the total amount of inheritance, inheriting a home affects the wealth position of the household only through homeownership. For the sample of inheritors we find that the local average treatment effect for households that inherit a home and stay homeowners is negative. Owning a home reduces riches due to sizable reductions in the net holdings of financial and other real wealth of the treated households.

JEL Classifications: E21, D14, D31, C26.
Keywords: Homeownership, Wealth accumulation, Inheritance, Instrumental variables.

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1 Introduction

What is the impact of homeownership on wealth accumulation? Is owning a home beneficial for the net wealth position of the household? Conventional wisdom has it that homeownership is an important channel for accumulating wealth.[1] For example, it can act as a commitment device to accumulate and keep wealth due to the binding nature of mortgage plans or the illiquid nature of housing (Boehm and Schlottmann 2004, Di et al. 2007). This paper challenges the prevailing view. Analyzing data from the Eurosystem Household Finance and Consumption Survey (HFCS), we show that homeownership can have a *negative* effect on household wealth.

Evaluating the role of homeownership for wealth accumulation is a challenging task. Homeowners are different from renters in various ways. They have higher income, are more likely to be self-employed, to be married, and to have children. Even after controlling for such observables, homeownership correlates positively with net wealth.[2] Households also differ in unobserved characteristics that benefit the wealth accumulation of homeowners. These could be related to their degree of risk aversion, their ability to make forward-looking decisions, to plan future expenditures or to make transfers to their children.

We employ an instrumental variables approach with a plausible exclusion restriction to deal with the endogeneity of homeownership status and unobserved heterogeneity. The idea is that if some people inherit a home and keep it, while others of the same characteristics inherit other forms of wealth of the same amount, then the overall differences in their net wealth positions will be a direct consequence of the inherited homeownership. The proposed identification scheme relies on the argument that inheriting the household main residence *conditional* on the total amount of inheritance affects wealth accumulation only through homeownership.

In contrast to a widely held belief that homeownership is a vehicle for wealth creation (e.g., Herbert et al. 2013), we document a large and significant negative causal link between owning a home and household wealth. We further investigate the operating mechanism of this result by exploring the effect of homeownership on different wealth components. We find that inherited homeownership has no significant effect on the accumulation of business wealth, while it affects negatively financial and real wealth.

The existing treatment effects literature concentrates on documenting externalities of homeownership. It is found to have positive effects on socioeconomic outcomes such as the economic success of children raised in owned homes (e.g., Green and White 1997 and Haurin et al. 2002), and on citizenship and community building (DiPasquale and Glaeser 1999). However, Engelhardt et al. (2010) point out that after properly controlling for endogeneity, the size of these externalities

[1] See Oliver and Shapiro (1990), Sherraden (1991), Retsinas and Belsky (2002) and Dietz and Haurin (2003) among others. Not all economists agree with this widely held view; indeed there is a recent controversial debate about the role of homeownership for wealth creation, see e.g. Shiller (2013).

[2] We also show that homeownership correlates positively with the non-residential components of wealth. For details, see Table A.5 in the Online Appendix.

is small.

The household finance literature is interested in homeownership because a large share of household wealth is held in the form of housing. Thus, policies targeting homeownership are viewed as engines for wealth accumulation. This conventional view has not been tested extensively. There are few studies that aim to document the effect of owning a home on wealth accumulation. Di et al. (2007) and Turner and Luea (2009) both find a positive effect of homeownership on wealth accumulation. On the other hand, papers on household portfolio choices argue that the presence of illiquid housing amplifies the degree of risk aversion of households which reduces the demand for financial assets (Grossman and Laroque 1990, Heaton and Lucas 2000, Flavin and Yamashita 2002, Yamashita 2003, Cocco 2005, Chetty and Szeidl 2007, and Chetty and Szeidl 2014). Our empirical results support these predictions.

2 Data and Background Analysis

The Eurosystem Household Finance and Consumption Survey (HFCS) contains cross-sectional household-level data from 15 Euro area countries which are collected in a harmonized way for 62,000 households in 2009/2010. We restrict the sample to the eight largest countries of the Euro area: Austria, Belgium, Italy, Germany, Greece, the Netherlands, Portugal, and Spain.[3] The focus of the study is on household wealth and its composition, the level of inheritance and the homeownership status. Therefore, the sample is restricted to households with positive levels of inheritance, income and net wealth, and with a reference person of age 35 years or more. The total number of observed households is 8,524.[4]

We measure the net wealth position of a household by including all financial assets, real estate, stakes or ownership in businesses, and valuables net of total debt. We partition household net wealth into four mutually exclusive categories. Net own housing wealth consists of the value of an own home used as a primary residence minus the amount of mortgage debt on that home. Net financial wealth is all financial wealth minus all debt that is not in the form of mortgages. Net real wealth consists of cars, valuables and other real estate net of mortgage debt for these other properties. Business wealth is the net value of the own stakes in business ventures. We assign homeownership status to households which own at least 50 percent of the household primary residence (*Homeowners* in Table 1). In all other cases, households are considered *Renters*. Households with (partially) inherited main residence are called *Home inheritors*. If households have not received any part of the main residence as an inheritance, we refer to them as *Non-home inheritors*.

Table 1 shows averages of various variables for renters and homeowners which are further di-

[3] France is excluded from the analysis because French households do not properly report different types of inheritance.

[4] Detailed information on sample sizes and population characteristics in each country is provided in Table A.3 in the Online Appendix.

vided into home inheritors (47 percent of the households in the sample) and non-home inheritors.[5] Homeowners are richer than renters, and home inheritors have a slightly lower net wealth position compared to the average household in their ownership category.[6]

Table 1: Wealth and Inheritance by Homeownership Status

	Homeowners			*Renters*		
	All	Non-home inheritors	Home inheritors	All	Non-home inheritors	Home inheritors
Wealth						
Total net wealth	443,957	492,305	403,796	161,099	161,945	150,801
	(18,926)	(23,929)	(27,531)	(25,478)	(27,095)	(52,410)
	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]
Net own housing wealth	209,049	212,391	206,272	3,602	492	41,203
	(5,915)	(8,005)	(8,258)	(823)	(385)	(9,976)
	[0.99]	[0.99]	[1.00]	[0.09]	[0.01]	[0.98]
Net real wealth	106,275	125,580	90,240	75,855	77,075	61,122
	(6,547)	(8,764)	(9,688)	(20,771)	(22,572)	(21,683)
	[0.90]	[0.93]	[0.88]	[0.84]	[0.83]	[0.91]
Net financial wealth	68,214	98,366	43,170	63,378	66,209	29,135
	(3,372)	(5,756)	(3,511)	(8,921)	(9,496)	(8,943)
	[0.89]	[0.94]	[0.85]	[0.95]	[0.97]	[0.75]
Business wealth	60,418	55,967	64,113	18,265	18,169	19,341
	(11,765)	(11,749)	(19,119)	(5,759)	(5,868)	(32,220)
	[0.15]	[0.15]	[0.14]	[0.13]	[0.12]	[0.15]
Inheritance	184,885	93,726	260,600	59,009	59,426	53,956
	(10,556)	(6,173)	(18,905)	(6,255)	(6,924)	(11,527)
N	7,576	3,674	3,902	948	822	126

Notes: *Standard errors (in parentheses) are below the estimates. Fractions of households with positive holdings of wealth components and inheritance [in parentheses] are placed below the standard errors.*

Regarding the portfolio composition, both homeowners with or without home inheritance hold close to half of their assets in their primary residence. Net real wealth accounts for around 25 percent of their assets, while net financial and business wealth contribute around 30 percent to the total wealth of owner households. Renters with (without) home inheritance hold 41 (48) percent of their portfolios in real assets. The rest of their net wealth positions predominantly consist of financial assets. Most of the renters with home inheritance own some fraction of the household residence. Inheritance plays a major role for the wealth position of the households in our sample. Inherited assets account for around 40 percent of the net wealth position of homeowners and renters.[7]

[5] The country-specific homeownership rates vary from 70 percent in the Netherlands to 97 percent in Italy in our sample of households with positive income and inheritance and head's age above or equal to 35 years. For representative estimates of homeownership rates in Europe, see Kaas et al. (2015).

[6] The average net wealth of home inheritors and non-home inheritors is roughly equal if we do not condition on the homeownership status. For more details, see Table A.2 in the Online Appendix.

[7] Various household characteristics for homeowners and renters are presented in Table A.1 in the Online Appendix.

3 The Effect of Homeownership on Household Wealth

To study the relationship between homeownership and wealth we estimate

$$w_i = \alpha X_i + \gamma h_i + \epsilon_i \ , \tag{1}$$

where w_i is the log of net wealth of household i, X_i represents a vector of relevant household characteristics, h_i is a dummy variable for homeownership, and ϵ_i is the error term.

The coefficient γ represents the effect of homeownership on net household wealth. If homeownership is correlated with the unobserved components of the wealth equation summarized in ϵ_i, then γ is not consistently estimated by ordinary least squares (OLS). As we argue in the introduction, there are different potential reasons for this. The endogeneity of homeownership in the wealth equation (1) may lead to a significant upward bias in the estimation of γ. Instrumental variables techniques are applied to deal with this issue.

3.1 Inheriting the Main Residence

The instrumental variable proposed in this paper is inheriting the household main residence. Inherited wealth can come in various forms such as inherited homes, financial and real assets, or shares in existing businesses. Inheriting a residence (or parts of it) is an almost definitive path to becoming a homeowner. The inherited homeownership status, however, might not have a direct impact on wealth accumulation *apart from* the general effect of inheritance on wealth. That is, inherited homeownership can act as an exclusion restriction if it is true that after *controlling* for the impact of the total amount of inheritance on wealth, inherited housing does not have an independent effect on wealth. If, however, home inheritances are given in a very selective manner, for instance, only to the poorest child or to the eldest son, then the validity of the exclusion restriction might be violated. Then, inheriting a home might have a direct channel of influence on household wealth. It is difficult to test for such effects in our dataset.[8]

3.2 Identification and Interpretation of the Causal Effect

Recall that the definition of homeownership adopted here is that 50 percent of the household main residence should be owned. Only three percent of home inheritors are not homeowners due to the fact that they do not own more than half of their main residence. Thus, the large majority of the households with inherited residences are homeowners. Clearly, the instrument is highly correlated with homeownership status even when we control for the inherited amount and household charac-

[8]Table A.2 in the Online Appendix presents the wealth composition and basic characteristics of the households which inherited their main residence versus households which received inheritance in other forms.

teristics.[9] The validity of the instrument rests on the assumption that inheriting the main residence affects net wealth *only* through homeownership when we condition on the inherited amount and household characteristics.

The treatment effect describes the causal link between homeownership and wealth for a particular subpopulation. The instrument exogenously moves into homeownership the group of households which inherit their main residence. Thus, the effect is local and is known in the literature as the local average treatment effect (LATE). We argue that the conditions for a valid identification of LATE are satisfied in our case.[10] First, the instrument should be as good as randomly assigned (independence). Indirect evidence for that is that observable characteristics of home inheritors and non-home inheritors do not differ substantially. Second, the instrument should affect wealth only through homeownership. It is natural to think that what matters for the wealth position of a household is the total amount of the inheritance and not its composition. To address this, we control for the amount of inheritance in all our regressions. Third, the condition of monotonicity should be satisfied. That is, for households whose homeownership status is affected by the instrument (inherited home), the effect of the instrument on the ownership status should be monotonic, i.e. inheriting a home increases the chances of all affected households to become homeowners.

The interpretation of the estimated effect of homeownership on wealth accumulation can be described as follows. LATE captures the causal link between homeownership and wealth for the group of *compliers*, that is, households which become homeowners due to the inherited home but would not be homeowners had they received the inheritance in some other form.

3.3 Empirical Results

The household characteristics used in the analysis are age, marital status and education of the household head as well as his/her status as a self-employed person with employees. We further control for the total amount of inheritance and gross household income (both in logs), the number of young (below 3 years old) and older children (between ages 3 and 18) and a dummy variable for nuclear families, namely households consisting of two adult parents with children. Table A.3 in the Online Appendix reveals that there is substantial heterogeneity in terms of wealth, its composition and household characteristics across countries. We include country dummies in all empirical specifications.

We estimate several specifications of equation (1). Results are presented in Table 2. Specifications (1) and (2) utilize OLS, while specifications (3) and (4) use the instrumental variable approach (TSLS) as described above. In both cases we compare a specification in which we control only for the total value of inheritance [(1) and (3)] with a specification in which we also control

[9] See the first stage regressions in the Online Appendix, Table A.4. The corresponding *p*-value on the instrumental variable coefficient is very close to zero (1.343e-20).

[10] The identification conditions for LATE are derived in Imbens and Angrist (1994).

for household characteristics [(2) and (4)]. The basic message of the OLS specifications is that net wealth of homeowners is 91 percent larger than for renters even when we control for inheritance, household characteristics and cross-country differences in net wealth levels (specification (2)).[11]

The instrumental variables estimation reverses this finding. The estimates for the effect of homeownership on wealth differ across specifications depending on whether we control for household characteristics. In both specification (3) and (4) it is large, negative and significant but its magnitude is smaller in specification (4). In our view, specification (4) which features a set of household characteristics is the most informative one when judging the sign and the magnitude of the causal effect. It finds reliable evidence for a negative effect of homeownership on wealth accumulation. The penalty related to a 10 percentage points increase in the probability of homeownership is estimated to be an 18 percent reduction of net wealth.[12]

Table 2: Homeownership and Total Net Wealth

	Dependent variable: *Total net wealth*			
	OLS		TSLS	
	(1)	(2)	(3)	(4)
Homeowner	1.328***	1.245***	-3.975***	-1.779***
	(0.089)	(0.078)	(0.588)	(0.415)
Total value of inheritance	0.343***	0.267***	0.729***	0.477***
	(0.019)	(0.017)	(0.059)	(0.037)
Household characteristics	No	Yes	No	Yes
Country-specific effects	Yes	Yes	Yes	Yes
R-squared	0.416	0.554	-	-
N	8,524	8,524	8,524	8,524

Notes: *Standard errors (in parentheses). Significance levels:* * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

One might argue that owning a home adds somewhat mechanically the value of the property to the household net wealth. Alternatively, we can estimate the effect of homeownership on the non-housing wealth of households. The estimates of this exercise confirm the negative effect of homeownership on wealth and are presented in Table A.5 in the Online Appendix.

We further explore the effect of homeownership on the components of non-housing wealth.

[11] In the presence of heteroscedasticity in transformed models, Manning (1998) advocates a correction procedure for computing the marginal effects in log models with normal residuals. We use this correction when interpreting the coefficients.

[12] We perform several robustness checks to further validate the result. First, we reduce the data sample to four core countries of the Euro zone: Germany, the Netherlands, Spain and Italy. Second, we estimate the effect of homeownership on wealth by excluding either the top 20 percent of wealthiest home inheritors in each country or the poorest 20 percent of non-home inheritors. In this way we try to bridge the gap between the two types of inheritors in terms of inherited amounts. The results solidify the negative effect of homeownership. See Tables A.6-A.8 in the Online Appendix.

Results are presented in Table 3.[13] Homeownership leads to sizable reductions in the holdings of both net financial and net real wealth.

Table 3: Homeownership and Components of Total Net Wealth

	Dependent variable: *Net financial wealth*		*Net real wealth*		*Business wealth*	
	OLS (1)	TSLS (2)	OLS (3)	TSLS (4)	OLS (5)	TSLS (6)
Homeowner	-0.053	-6.692***	-0.017	-7.907***	-0.232	-0.554
	(0.341)	(2.033)	(0.275)	(1.417)	(0.178)	(1.087)
Total value of inheritance	0.074	0.535***	0.326***	0.875***	0.234***	0.256***
	(0.064)	(0.145)	(0.069)	(0.108)	(0.052)	(0.086)
Household characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country-specific effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.134	-	0.230	-	0.270	-
N	8,524	8,524	8,524	8,524	8,524	8,524

Notes: *Standard errors (in parentheses). Significance levels:* * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4 Conclusion

We examine the causal effect of homeownership on net wealth for a sample of European households. We find a significant negative link between these two variables. The joint analysis of homeownership status and household wealth is an important prerequisite for studying wealth inequality and policies related to household savings and inheritance.

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[13]The components of net wealth might take non-positive values. Therefore, we apply on the dependent variables the inverse hyperbolic sine transformation (IHS). For more details, see e.g. Burbidge et al. (1988).

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Online Appendix for
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A Imputed Samples and Standard Errors

The HFCS data is distributed in five imputed samples (implicates). Each sample features a different realization of imputations for missing values. We produce point estimates from the data by averaging over the separate estimates from each of the five imputed samples. Standard errors for the descriptive statistics and the regression coefficients are obtained by computing bootstrapped variances for each implicate using the first 100 of the supplied replicate weights and by combining the within and between implicate variances.[1]

For each of the five imputed datasets in the HFCS ($M = 5$ denotes the total number of implicates), we first run the bootstrapped OLS and TSLS procedures using the first 100 replicate weights. Denote the resulting point estimates as $\hat{\beta}_m$ and their corresponding variances as $\hat{\nu}_m$, where m is the implicate used. The point estimates are then averaged across the five imputations to get the final point estimates, $\hat{\beta} = \frac{1}{M}\sum_{m=1}^{M}\hat{\beta}_m$.

The variances and the standard errors are computed in three steps. First, we compute the between-imputation variances $\hat{V}_B$ by averaging $\hat{\nu}_m$ across imputations, that is,

$$\hat{V}_B = \frac{1}{M}\sum_{m=1}^{M}\hat{\nu}_m.$$

Second, we obtain the within-imputation variances $\hat{V}_W$ by computing $\tilde{\beta}_m = (\hat{\beta}_m - \hat{\beta})^2$ and aggregating according to the formula

$$\hat{V}_W = \frac{1}{M-1}\sum_{m=1}^{M}\tilde{\beta}_m.$$

Finally, we obtain the estimated variances by combining V_B and V_W according to the rule

$$\hat{V} = \hat{V}_B + (1 + 1/M)\hat{V}_W.$$

For statistical inference, the degrees of freedom are derived as $df = (M-1)\left(1 + \frac{\hat{V}_W}{(1+1/M)\hat{V}_B}\right)^2$.

[1]For further details, see Rubin, D.B. (2004): *Multiple Imputation for Nonresponse in Surveys*, vol. 81, John Wiley & Sons.

B Additional Tables

Table A.1: Household Characteristics by Homeownership Status

	Homeowners			*Renters*		
	All	Non-home inheritors	Home inheritors	All	Non-home inheritors	Home inheritors
Household Characteristics						
Age	58.67	58.04	59.18	56.42	56.32	57.54
	(1.26)	(1.84)	(1.92)	(3.65)	(3.99)	(9.31)
Married	0.65	0.71	0.60	0.45	0.44	0.56
	(0.02)	(0.03)	(0.02)	(0.04)	(0.04)	(0.14)
Tertiary education	0.27	0.38	0.18	0.37	0.39	0.14
	(0.01)	(0.02)	(0.02)	(0.03)	(0.04)	(0.06)
Self-employed with employees	0.05	0.06	0.04	0.04	0.03	0.14
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.08)
Total gross household income	46,460	56,863	37,819	41,265	42,608	25,012
	(1,207)	(2,434)	(1,540)	(3,397)	(3,686)	(4,696)
Number of children	0.39	0.44	0.34	0.32	0.33	0.24
	(0.02)	(0.03)	(0.02)	(0.06)	(0.06)	(0.08)
N	7,576	3,674	3,902	948	822	126

Notes: *Standard errors (in parentheses) are below the estimates.*

Table A.2: Wealth and Inheritance by Inheritor Type

	Inheritors	
	Non-home inheritors	Home inheritors
Wealth		
Total net wealth	395,610	396,807
	(19,335)	(26,729)
	[1.00]	[1.00]
Net own housing wealth	150,377	201,712
	(5,638)	(8,003)
	[0.71]	[0.99]
Net real wealth	111,372	89,436
	(8,756)	(9,508)
	[0.90]	[0.88]
Net financial wealth	88,954	42,782
	(5,228)	(3,412)
	[0.95]	[0.84]
Net business wealth	44,907	62,877
	(8,525)	(18,538)
	[0.14]	[0.14]
Inheritance	83,687	254,892
	(4,837)	(18,360)
Household Characteristics		
Age	57.54	59.14
	(2.04)	(1.89)
Married	0.63	0.60
	(0.02)	(0.02)
Tertiary education	0.38	0.18
	(0.02)	(0.02)
Self-employed with employees	0.05	0.04
	(0.01)	(0.01)
Total gross household income	52,691	37,466
	(2,187)	(1,514)
Number of children	0.41	0.34
	(0.03)	(0.02)
N	4,496	4,028

Notes: *Standard errors (in parentheses) are below the estimates. Fractions of households with positive holdings of wealth components and inheritance [in parentheses] are placed below the standard errors.*

Table A.3: Wealth, Inheritance and Household Characteristics by Country

	Characteristics by country:							
	Austria	Belgium	Germany	Spain	Greece	Italy	The Netherlands	Portugal
Wealth								
Total net wealth	496,114	516,638	371,129	467,436	199,606	421,616	344,586	196,639
	(85,243)	(35,430)	(28,948)	(31,397)	(11,663)	(28,680)	(44,939)	(13,787)
	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]	[1.00]
Net own housing wealth	205,480	228,509	145,771	189,604	109,539	244,224	175,106	86,894
	(20,440)	(11,735)	(7,912)	(9,136)	(6,457)	(12,011)	(25,347)	(5,610)
	[0.73]	[0.85]	[0.74]	[0.94]	[0.98]	[1.00]	[0.74]	[0.89]
Net real wealth	79,220	88,585	87,883	161,718	71,447	102,736	37,003	71,801
	(11,642)	(8,793)	(12,294)	(14,011)	(6,628)	(10,925)	(14,230)	(7,897)
	[0.91]	[0.90]	[0.86]	[0.89]	[0.84]	[0.97]	[0.94]	[0.85]
Net financial wealth	73,297	168,430	77,652	56,952	9,690	36,818	120,267	23,205
	(16,215)	(22,875)	(5,095)	(7,818)	(1,573)	(6,085)	(18,410)	(2,488.57)
	[0.97]	[0.96]	[0.96]	[0.86]	[0.65]	[0.81]	[0.92]	[0.89]
Business wealth	138,118	31,115	59,824	59,162	8,930	37,839	12,210	14,738
	(80,658)	(8,915)	(20,458)	(11,193)	(2,068)	(12,559)	(7,090)	(3,432)
	[0.17]	[0.09]	[0.14]	[0.19]	[0.11]	[0.14]	[0.09]	[0.11]
Inheritance	214,549	128,898	166,821	115,306	111,386	248,936	74,881	54,150
	(25,458)	(17,775)	(17,743)	(8,338)	(6,181)	(12,111)	(19,312)	(5,664)
Household Characteristics								
Age	56.91	60.17	57.68	58.79	55.17	59.65	56.71	60.13
	(2.27)	(2.52)	(2.68)	(1.96)	(2.76)	(2.21)	(6.00)	(2.98)
Married	0.57	0.54	0.62	0.62	0.71	0.62	0.59	0.71
	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.08)	(0.04)
Tertiary education	0.18	0.41	0.40	0.24	0.17	0.10	0.40	0.06
	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.01)	(0.05)	(0.01)
Self-employed with employees	0.05	0.02	0.04	0.09	0.04	0.03	0.04	0.05
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.03)	(0.01)
Total gross household income	53,033	56,142	55,754	33,965	27,992	34,671	52,230	19,885
	(5,221)	(4,118)	(2,399)	(1,961)	(1,727)	(1,743)	(5,859)	(1,144)
Number of children	0.37	0.35	0.38	0.30	0.45	0.42	0.46	0.39
	(0.04)	(0.04)	(0.03)	(0.03)	(0.04)	(0.03)	(0.14)	(0.04)
N	733	742	1,314	2,330	691	1,565	135	1,014

Notes: *Standard errors (in parentheses) are below the estimates. Fractions of households with positive holdings of wealth components and inheritance [in parentheses] are placed below the standard errors.*

Table A.4: First Stage Regressions

	Dependent Variable: *Homeowner*	
	(1)	(2)
Inherited main residence	0.189***	0.219***
	(0.021)	(0.024)
Total value of inheritance	0.048***	0.038***
	(0.007)	(0.007)
Age		0.004***
		(0.001)
Married		0.080***
		(0.021)
Tertiary education		-0.024
		(0.018)
Self-employed with employees		-0.032
		(0.040)
Total household lifetime income		0.050***
		(0.013)
Number of young kids		-0.007
		(0.037)
Number of old kids		0.030**
		(0.012)
Nuclear family		0.025
		(0.024)
Country-specific dummies	Yes	Yes
R-squared	0.191	0.228
N	8,524	8,524

Notes: *Standard errors (in parentheses). Significance levels:* $* \, p < 0.1$, $** \, p < 0.05$, $*** \, p < 0.01$.

Table A.5: Homeownership and Total Non-Housing Net Wealth

	Dependent variable: *Total non-housing net wealth*			
	OLS		TSLS	
	(1)	(2)	(3)	(4)
Homeowner	-0.280*	-0.482***	-10.792***	-6.525***
	(0.166)	(0.175)	(1.397)	(1.015)
Total value of inheritance	0.390***	0.235***	1.154***	0.655***
	(0.043)	(0.039)	(0.134)	(0.088)
Household characteristics	No	Yes	No	Yes
Country-specific effects	Yes	Yes	Yes	Yes
R-squared	0.051	0.144	-	-
N	8,524	8,524	8,524	8,524

Notes: *Standard errors (in parentheses). Significance levels:* $* \, p < 0.1$, $** \, p < 0.05$, $*** \, p < 0.01$.

Table A.6: Homeownership and Total Net Wealth (4 Core Countries)

	Dependent variable: *Total net wealth* Countries: DE, ES, IT, NL			
	OLS		TSLS	
	(1)	(2)	(3)	(4)
Homeowner	1.262***	1.189***	-4.438***	-2.022***
	(0.105)	(0.093)	(0.833)	(0.555)
Total value of inheritance	0.371***	0.286***	0.814***	0.525***
	(0.025)	(0.022)	(0.086)	(0.052)
Household characteristics	No	Yes	No	Yes
Country-specific effects	Yes	Yes	Yes	Yes
R-squared	0.417	0.562	-	-
N	5,344	5,344	5,344	5,344

Notes: *Standard errors (in parentheses). Significance levels:* $* p < 0.1$, $** p < 0.05$, $*** p < 0.01$.

Table A.7: Homeownership and Total Net Wealth (Bottom 20 Percent of Non-home Inheritors Excluded)

	Dependent variable: *Total net wealth* Exclude: bottom 20% non-home inheritors			
	OLS		TSLS	
	(1)	(2)	(3)	(4)
Homeowner	0.268***	0.363***	-11.348***	-8.507***
	(0.083)	(0.082)	(3.074)	(3.131)
Total value of inheritance	0.273***	0.215***	0.484***	0.403***
	(0.019)	(0.016)	(0.087)	(0.089)
Household characteristics	No	Yes	No	Yes
Country-specific effects	Yes	Yes	Yes	Yes
R-squared	0.219	0.432	-	-
N	7,618	7,618	7,618	7,618

Notes: *Standard errors (in parentheses). Significance levels:* $* p < 0.1$, $** p < 0.05$, $*** p < 0.01$.

Table A.8: Homeownership and Total Net Wealth (Top 20 Percent of Home Inheritors Excluded)

	Dependent variable: *Total net wealth* Exclude: top 20% home inheritors			
	OLS		TSLS	
	(1)	(2)	(3)	(4)
Homeowner	1.346***	1.258***	-4.354***	-2.105***
	(0.088)	(0.078)	(0.643)	(0.461)
Total value of inheritance	0.291***	0.229***	0.707***	0.463***
	(0.021)	(0.018)	(0.066)	(0.042)
Household characteristics	No	Yes	No	Yes
Country-specific effects	Yes	Yes	Yes	Yes
R-squared	0.393	0.531	-	-
N	7,713	7,713	7,713	7,713

Notes: *Standard errors (in parentheses). Significance levels:* $*\,p < 0.1$, $**\,p < 0.05$, $***\,p < 0.01$.