

Wealth transfers and homeownership in Malta

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Outline

Motivating facts

Data and descriptive statistics

Econometric analysis

Robustness checks

Conclusion



Motivating Facts

- The high population growth which Malta experienced in recent years led to an **increasing demand for limited land, driving property prices upwards.**
 - Consequently, **homeownership is becoming a challenging prospect** for many residents, especially for younger ones.
 - This is especially relevant in Malta, with **strong cultural preferences for homeownership.**
- In a context of strong familiar ties, **financial support from family members can play a crucial role** in addressing these challenges.



Our study

With our paper we aim at addressing two main **research questions**:

1. Is receiving a **transfer associated with a higher likelihood of homeownership**?
2. For households receiving transfers, **does it enable them to afford higher-value properties**?

→ Our research can be of strong interest for **policymakers aiming to improve homeownership rates and housing affordability in Malta**.



Related Literature

A large literature studies the relationship between transfers and homeownership:

- **Fessler, et al. (2010)** find that 20% of households have inherited real estate wealth, with wealth being higher among inheriting households than among non-heirs (Austrian Housing Wealth Survey).
- **Mathä, et al. (2023)** obtain that the **probability of homeownership** among households is **positively related** to private wealth transfers (LU-HFCS).
- **Guiso and Jappelli (2002)** find that transfers reduce the saving period required to purchase a house, and **allow households to purchase houses of higher value** (Italian SHIW).



Preview of Results

- A **large share of Maltese households received a transfer close to the time of home acquisition**, and this is especially true for younger ones.
- Household who receive transfers have **higher odds of being homeowners**.
 - The effect is particularly pronounced **for young people**, whose odds of being homeowners are 4.4 times higher if they receive a transfer, compared to their peers who don't receive any.
 - The **larger the transfer**, the more pronounced the effect, with the odds increasing more than fivefold for households receiving amounts exceeding €94,000.
- Moreover, **transfers allow households to access properties of higher prices**.
 - Households receiving transfers have properties which are on average 44.9% more expensive.
 - A 1% increase in transfer value is associated with a 1.6% increase in HMR value



Data: The Household Finance and Consumption Survey

- The **HFCS** a Euro-area wide **database** containing information on assets, liabilities, income, consumption and socio-demographic characteristics at the **household level**.
- The survey is conducted every 3/4 years, with data available for **2010, 2013, 2017 and 2020**.
 - We use all four waves in our study.
- Section on **intergenerational transfers and gifts**:
 - Received a transfer (Y/N);
 - Transfer year;
 - Transfer value;
 - Transfer type (money, dwelling, other);
 - Whether it was a gift or an inheritance.



Stylised fact I: % of households with transfers

All transfers received			
	Homeowners	Others	All households
Any transfer	38.3	18.4	34.2
Age category			
20-30	14.4	9.1	13.8
30-40	22.5	9.9	21.1
40-50	25.1	16.9	24.2
50-65	28.5	45.4	30.3
Above 65	9.6	18.7	10.6
Type of transfer			
Money	41.7	67.7	44.5
Dwelling	48.7	20.2	45.6
Others	9.6	12.1	9.9
Source: Authors' calculations based on 2010, 2014, 2017 and 2021 MT-HFCS data.			



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Above 65	9.6	18.7	10.6	
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Money	41.7	67.7	44.5	
Dwelling	48.7	20.2	45.6	
Others	9.6	12.1	9.9	
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Stylised fact II: Transfers size

	Renters & other	Homeowners	All households
p10	1,300	3,500	3,100
p25	4,000	11,300	10,200
p50	11,900	36,200	32,200
p75	34,000	103,500	94,600
p90	88,000	210,700	198,500

Note: Results are weighted to national totals and are reported in 2020 values.

Source: Authors' calculations based on 2010, 2014, 2017 and 2021 MT-HFCS data.



Stylised fact II: Transfers size

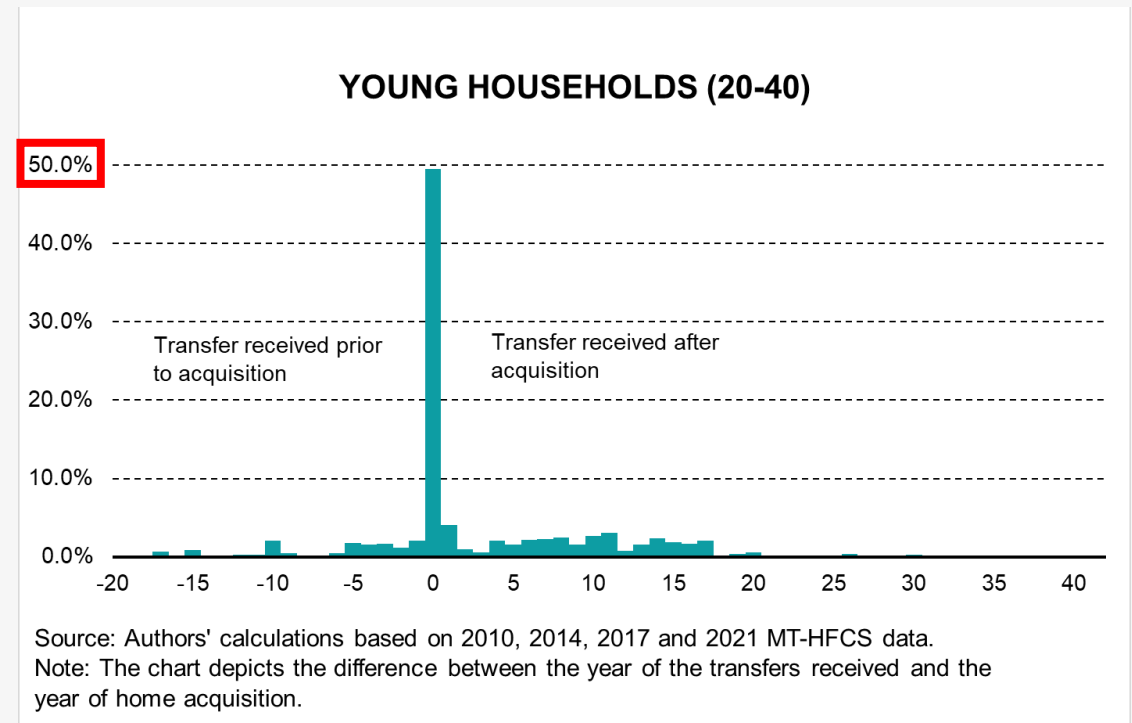
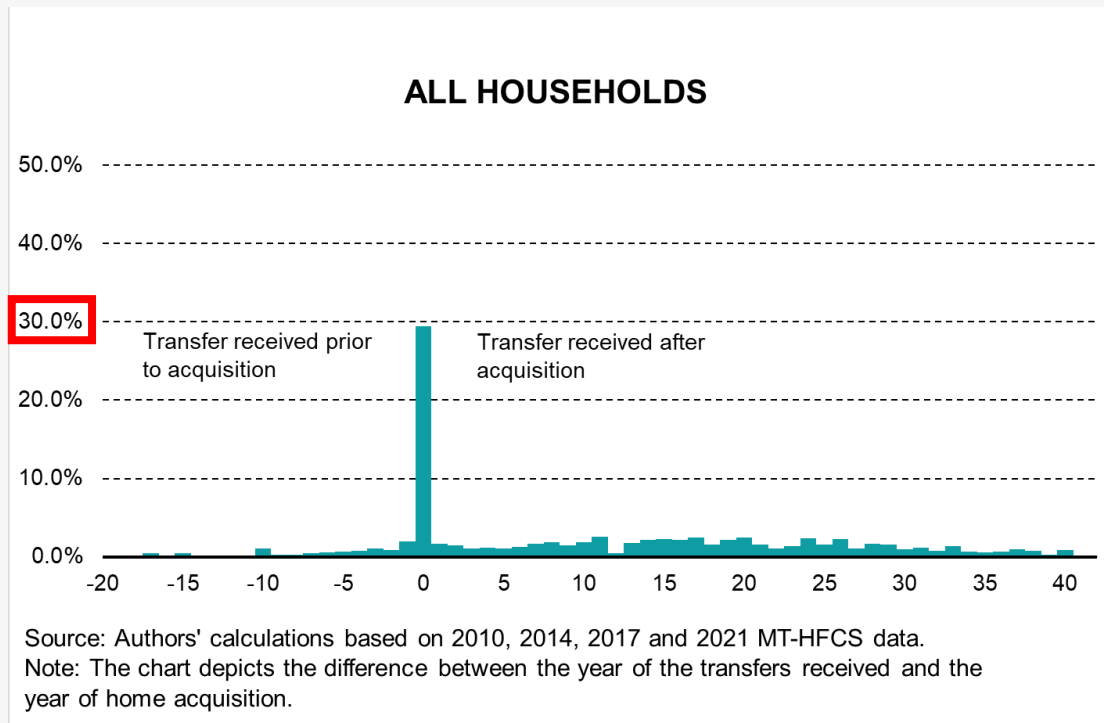
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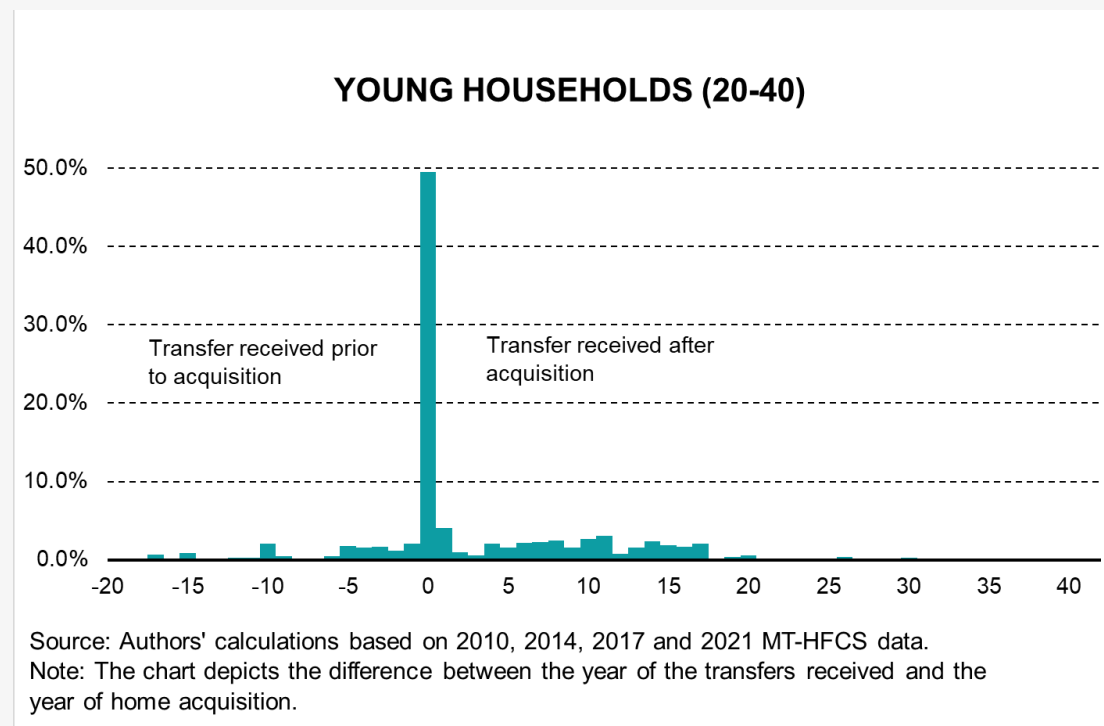
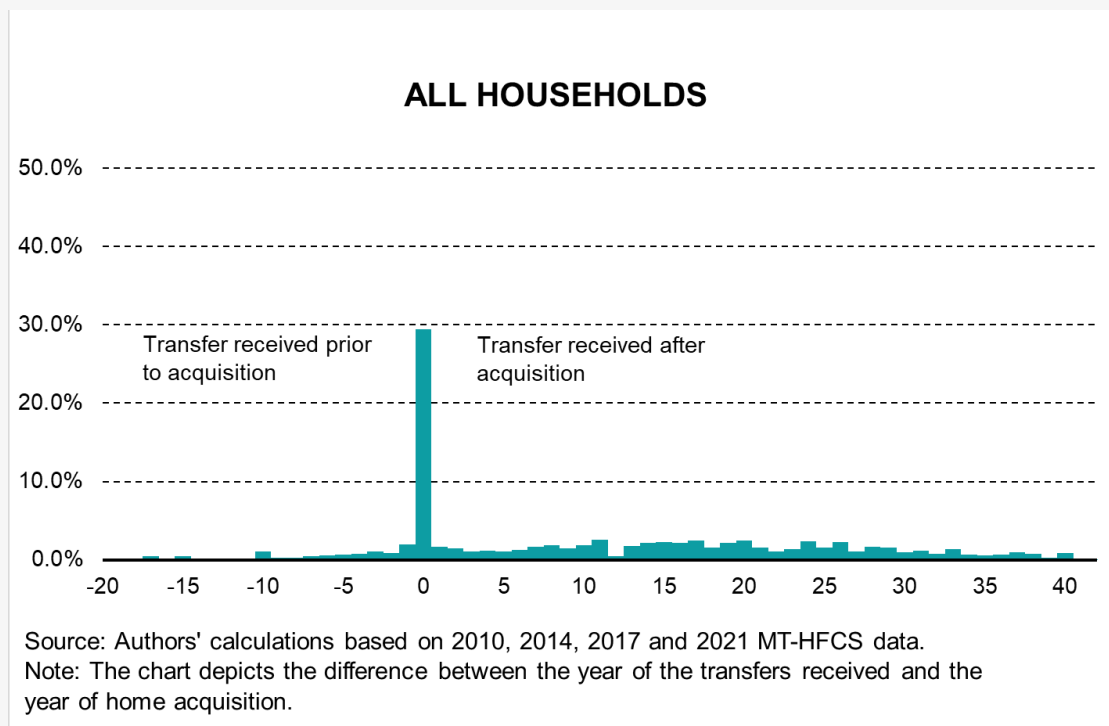
Source: Authors' calculations based on 2010, 2014, 2017 and 2021 MT-HFCS data.



Stylised fact III: Transfers timing



Stylised fact III: Transfers timing



Stylised fact IV: Age at time of home acquisition

All Households	Age at Year of HMR Acquisition
p25	23
p50	29
p75	37
p90	47

Source: Authors' calculations based on 2010, 2014, 2017 and 2021 MT-HFCS data.



Evidence collected so far

- Around 1 out of every 3 Maltese HHs have **received a transfer in their life**, and this share, as well as the amount, is much **higher among homeowners** than renters.
- A large share of households **received them close to their time of home acquisition**, especially among young households.

→ **Hypothesis:** there is a link between receiving a transfer and homeownership.

To test it econometrically, we restrict our attention to ***transfers of interest:***

- ***Restriction 1:*** larger than 32,000€
- ***Restriction 2:*** received between [-5,3] years relative to home acquisition
- ***Restriction 3:*** received by young households [20-40 years old] (***only for Models 1,2***)



Econometric Specification: 1st class of models

- Estimate the relationship between **transfers' and the probability of homeownership** using a Logit Model

$$homeownership_{i,t} = \alpha_{i,t} + \beta * transfer_{i,t} + \delta X_{i,t} + \theta_t + \varepsilon_{i,t}$$

Where:

- ***homeownership_{i,t}***: is a dummy variable indicating homeownership status
- **β** : is our coefficient of interest, capturing the effect of receiving a *transfer_{i,t}*
- ***transfer_{i,t}***: can either be a dummy variable for having received a transfer, or the transfer size in bins.
- **$X_{i,t}$** : is the set of controls, including age, gender, education level, civil status, employment status, household size, income and financial assets.



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- ***transfer*_{*i,t*}**: can either be a dummy variable for having received a transfer, or the transfer size in bins → **Only for young households**
- ***X*_{*i,t*}**: is the set of controls, including age, gender, education level, civil status, employment status, household size, income and financial assets.



Results: 1st class of models

HOMEOWNERSHIP REGRESSION RESULTS		
Dependent Variable: Homeownership dummy variable		
	Model 1	Model 2
Past Transfers (dummy)	4.407*** (2.028)	
Small Transfer [<10K]		1.016 (0.593)
Medium Transfer [10K-32K]		1.889 (0.921)
Large Transfer [32K-94K]		3.515* (2.431)
Very large Transfer [>94K]		5.533*** (3.009)
Married	3.870*** (1.335)	3.696*** (1.305)
Income (5th quantile)	3.934* (2.935)	4.143* (3.113)
Constant	1.296 (0.756)	1.304 (0.764)
Survey Year FE	Yes	Yes
Characteristics of the reference person	Yes	Yes
Pseudo R2	0.155	0.157
Observations	788	788

*** p<0.01, ** p<0.05, * p<0.1



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Econometric Specification: 2nd class of models

- Estimates the relationship between **transfers and property prices** using a standard OLS

$$\log(\text{house value}_{i,\delta}) = \alpha_{i,t} + \beta * \text{transfer}_{i,\tau} + \delta X_{i,t} + \theta_t + \varepsilon_{i,t}$$

Where:

- *house price*_{*i,δ*}: captures the HMR' price at time of acquisition in logs.
- *β*: is our coefficient of interest, capturing the effect of receiving a *transfer*_{*i,t*}
- *transfer*_{*i,τ*}: can either be a dummy variable for having received a transfer, or the transfer value in logs
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- *transfer*_{*i,τ*}: can either be a dummy variable for having received a transfer, or the transfer value in logs → **Adult households are included as well**
- *X*_{*i,t*}: is the set of controls, including age, gender, education level, civil status, employment status, household size, income and financial assets.



Results: 2nd class of models

MAIN RESIDENCE VALUE REGRESSION RESULTS		
	Dependent Variable: HMR Value (Log)	
	Model 4	Model 5
Past Transfers (dummy)	0.449*** (0.073)	
Transfer Value		0.016** (0.007)
Secondary Education	0.153*** (0.053)	0.156*** (0.053)
Tertiary Education	0.348*** (0.061)	0.336*** (0.061)
Married	0.240*** (0.078)	0.245*** (0.081)
Self-Employed	0.191*** (0.069)	0.198*** (0.069)
Income (3rd quantile)	0.181* (0.093)	0.179* (0.095)
Income (4th quantile)	0.284*** (0.101)	0.276*** (0.103)
Income (5th quantile)	0.396*** (0.104)	0.387*** (0.105)
Constant	11.733*** (0.117)	11.762*** (0.117)
R-squared	0.100	0.084
Survey Year FE	Yes	Yes
Characteristics of the reference person	Yes	Yes
Observations	2,303	2,303

*** p<0.01, ** p<0.05, * p<0.1



Robustness Checks

We conducted a series of tests to verify that our results do not depend on:

1. **Transfer size:** from €32,200 (median) → €10,000 (p25)
2. **Transfer timing:** from [-5,3] → [-3,0]
3. **Age:** HH age from [18-40] → [18-65] years old (only for models 1,2)

Moreover, we tackled a **potential source of endogeneity:**

4. If **voluntary gifts** are anticipated by the household this may cause **reverse causality**.



Limitations and Possible Extensions

- Investigate in more detail the mechanisms behind the **mortgage channel**
- Consider whether transfers help households become homeowners at a **younger age**
- **HFCS Panel Component**: making a use of it would allow to better isolate causality
- Extending the study to other **European Countries**: this would allow to overcome the data numerosity limitations which limits the scope of our analysis



Conclusion

- **Transfer** seem to play a **key role for home acquisition**, especially for **young households**.
 - The odds of being a homeowner, for young households receiving a transfer are 4.4 times higher compared to their peers not receiving any transfer.
 - Larger transfers have a stronger effects, with transfers above 94k showing 5.5 higher odds.
- Young and adult households receiving transfers possess **properties of higher value**.
 - With those receiving a transfer on average being able to afford a house whose value is 44.9% higher compared to the reference group.
 - A 1% increase in transfer size corresponds to an increase in the HMR value of 1.6%.
- **Robustness checks** show that those results **do not depends on our assumptions**, as well as potential sources of **endogeneity**



Thank you for your attention!



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Robustness Check I: Transfer Value

ROBUSTNESS CHECKS: ALTERNATIVE THRESHOLD	
Dependent Variable: Homeownership dummy variable	
	Model 1
Past Transfers (dummy)	3.647*** (1.302)
Married	3.584*** (1.250)
Income (3rd quantile)	2.098 (1.084)
Income (4th quantile)	2.172 (1.132)
Income (5th quantile)	4.357** (3.245)
Constant	1.266 (0.727)
Survey Year FE	Yes
Characteristics of the reference person	Yes
Pseudo R2	0.155
Observations	788

*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: ALTERNATIVE THRESHOLD	
Dependent Variable: HMR Value (Log)	
	Model 4
Past Transfers (dummy)	0.314*** (0.071)
Transfer Value	
Secondary Education	0.151*** (0.053)
Tertiary Education	0.342*** (0.061)
Married	0.238*** (0.079)
Self-Employed	0.195*** (0.069)
Income (3rd quantile)	0.186** (0.094)
Income (4th quantile)	0.281*** (0.102)
Income (5th quantile)	0.393*** (0.105)
Constant	11.688*** (0.120)
Survey Year FE	Yes
Characteristics of the reference person	Yes
R-squared	0.092
Observations	2,303

*** p<0.01, ** p<0.05, * p<0.1



Robustness Checks II: Transfer Timing

ROBUSTNESS CHECKS: ALTERNATIVE TIME RESTRICTION		
	Dependent Variable: Homeownership dummy variable	
	Model 1	Model 2
Past Transfers (dummy)	3.819*** (1.771)	
Small Transfer [<10K]		0.763 (0.454)
Medium Transfer [10K-32K]		1.146 (0.586)
Large Transfer [32K-94K]		3.013 (2.120)
Very large Transfer [>94K]		4.208*** (2.299)
Married	3.875*** (1.337)	3.888*** (1.375)
Income (3rd quantile)	1.880 (0.964)	1.862 (0.971)
Income (4th quantile)	2.049 (1.060)	2.012 (1.055)
Income (5th quantile)	3.901* (2.902)	3.848* (2.881)
Constant	1.337 (0.773)	1.382 (0.806)
Survey Year FE	Yes	Yes
Characteristics of the reference per	Yes	Yes
R-squared	0.150	0.150
Observations	788	788

*** p<0.01, ** p<0.05, * p<0.1

ROBUSTNESS CHECKS: ALTERNATIVE TIME RESTRICTION		
	Dependent Variable: HMR Value (Log)	
	Model 4	Model 5
Past Transfers (dummy)	0.480*** (0.074)	
Transfer Value		0.016** (0.007)
Secondary Education	0.151*** (0.053)	0.157*** (0.054)
Tertiary Education	0.345*** (0.061)	0.336*** (0.061)
Married	0.239*** (0.078)	0.245*** (0.081)
Self-Employed	0.192*** (0.069)	0.201*** (0.069)
Income (3rd quantile)	0.182* (0.093)	0.180* (0.094)
Income (4th quantile)	0.285*** (0.101)	0.277*** (0.103)
Income (5th quantile)	0.399*** (0.104)	0.387*** (0.105)
Constant	11.669*** (0.119)	11.697*** (0.120)
Survey Year FE	Yes	Yes
Characteristics of the referen	Yes	Yes
R-squared	0.102	0.084
Observations	2,303	2,303

*** p<0.01, ** p<0.05, * p<0.1



Robustness Checks III: Age

ROBUSTNESS CHECKS: RELAXING THE AGE RESTRICTION		
Dependent Variable: Homeownership dummy variable		
	Model 1	Model 2
Past Transfers (dummy)	2.193*** (0.599)	
Small Transfer [<10K]		0.278*** (0.079)
Medium Transfer [10K-32K]		0.391*** (0.112)
Large Transfer [32K-94K]		1.135 (0.424)
Very large Transfer [>94K]		2.917*** (1.077)
Tertiary Education	1.559* (0.367)	1.506* (0.367)
Married	2.887*** (0.619)	3.132*** (0.700)
Self-Employed	2.249** (0.898)	2.273** (0.915)
Income (3rd quantile)	1.393 (0.335)	1.286 (0.317)
Income (4th quantile)	1.644* (0.420)	1.542* (0.406)
Income (5th quantile)	2.864*** (0.953)	2.633*** (0.900)
Constant	0.890 (0.243)	1.040 (0.298)
Survey Year FE	Yes	Yes
Characteristics of the reference	Yes	Yes
Pseudo R2	0.136	0.152
Observations	2,835	2,835

*** p<0.01, ** p<0.05, * p<0.1



Robustness Checks III: Transfer type (1)

ROBUSTNESS CHECKS: EXCLUDING VOLUNTARY GIFTS	
Dependent Variable: Homeownership dummy variable	
	Model 1
Past Transfers (dummy)	2.404* (1.246)
Married	4.150*** (1.421)
Income (3rd quantile)	2.007 (1.026)
Income (4th quantile)	2.162 (1.130)
Income (5th quantile)	4.271* (3.244)
Constant	1.330 (0.749)
Survey Year FE	Yes
Characteristics of the reference person	Yes
R-squared	0.136
Observations	788
*** p<0.01, ** p<0.05, * p<0.1	



Robustness Checks III: Transfer type (2)

ROBUSTNESS CHECKS: EXCLUDING VOLUNTARY GIFTS		
	Dependent Variable: HMR Value (Log)	
	Model 4	Model 5
Past Transfers (dummy)	0.536*** (0.088)	
Transfer Value		0.017** (0.008)
Secondary Education	0.167*** (0.053)	0.162*** (0.053)
Tertiary Education	0.338*** (0.061)	0.329*** (0.061)
Married	0.264*** (0.080)	0.257*** (0.081)
Self-Employed	0.198*** (0.069)	0.201*** (0.069)
Income (3rd quantile)	0.191** (0.093)	0.180* (0.094)
Income (4th quantile)	0.292*** (0.101)	0.278*** (0.103)
Income (5th quantile)	0.404*** (0.104)	0.386*** (0.105)
Constant	11.648*** (0.120)	11.693*** (0.120)
Survey Year FE	Yes	Yes
Characteristics of the reference	Yes	Yes
R-squared	0.099	0.084
Observations	2,303	2,303
*** p<0.01, ** p<0.05, * p<0.1		



Annex A: Odds Ratios (1)

The Odds Ratio for our study is constructed as the ratio of:

- Odds of Homeownership for People Receiving a Transfer = $\frac{p_{tr}}{1 - p_{tr}}$
- Odds of Homeownership for People Not Receiving a Transfer (Reference Category) = $\frac{p_{no}}{1 - p_{no}}$

$$\rightarrow \text{Odds Ratio} = \frac{\text{Odds for People Receiving a Transfer}}{\text{Odds for People Not Receiving a Transfer}} = \frac{p_{tr}(1 - p_{no})}{p_{no}(1 - p_{tr})}$$

Where p_{tr} represents the probability of homeownership for people receiving a transfer, and p_{no} represents the probability of homeownership in the reference category of people not receiving a transfer.



Annex A: Odds Ratios (2)

Imagine Rolling a Die:

- You want to compare the **odds of rolling an even number** (2, 4, or 6) versus **rolling a number greater than 4** (5 or 6).

- Odds of rolling an even number = $\frac{3}{6-3} = \frac{3}{3} = 1$

- Odds of rolling a number greater than 4 = $\frac{2}{6-2} = \frac{2}{4} = 0.5$

- Odds Ratio = $\frac{\text{Odds of rolling an even number}}{\text{Odds of rolling a number greater than 4}} = \frac{1}{0.5} = 2$

→ The odds of rolling an even number are **twice as high** as the odds of rolling a number greater than 4.



Annex B: HFCS Variables Used

Real Assets Section:

- Question HB0500 - **% of ownership of household main residence**
- Question HB0600 - **way of acquiring property**
- Question HB0700 - **year of property acquisition**
- Question HB0800 - **property value at the time of its acquisition**

Intergenerational Transfers and Gifts Section:

- Question HH0100 – **any substantial gift or inheritance received**
- Question HH020\$x - **gift/inheritance \$x: year gift/inheritance received**
- Question HH040\$x - **gift/inheritance \$x: value**
- Question HH030\$x - **gift/inheritance \$x: what kind of assets received**
- Question HH060\$x - **gift/inheritance \$x: from whom received**



Annex C: Methodological aspects

Addressing an inconsistency in the HB0600 and HH0100 variables

Table B1
CROSS TABULATION - PROPERTY ACQUISITION AND TRANSFER RECEIVED
(ORIGINAL DATA)
(percentage)

		HH0100 any substantial gift or inheritance received	
		Yes	No
HB0600 way of acquiring property	Purchased	25.09	74.91
	Own construction	36.62	63.38
	Inherited	47.46	52.54
	Gift	46.91	53.09
	50% inherited, 50% purchased	67.59	32.41
	Total	30.41	69.59

Source: Authors' calculations based on 2010, 2014, 2017 and 2021 MT-HFCS data.



Table B2
CROSS TABULATION - PROPERTY ACQUISITION AND TRANSFER RECEIVED
(AFTER ADJUSTMENTS)
(percentage)

		HH0100 any substantial gift or inheritance received	
		Yes	No
HB0600 way of acquiring property	Purchased	25.09	74.91
	Own construction	36.62	63.38
	Inherited	100	0
	Gift	100	0
	50% inherited, 50% purchased	100	0
	Total	36.77	63.23

Source: Authors' calculations based on 2010, 2014, 2017 and 2021 MT-HFCS data.

