A flying start

Intergenerational transfers, wealth accumulation, and entrepreneurship of descendants

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The role of transfers

- Strong persistence in wealth inequality across generations
  - High-wealth children more likely to own private businesses or financial assets
- An open question: What is the role of financial transfers?
  - Existing conclusions rely on **late-life** inheritances
- The missing link $\rightarrow$ **Early-life ("inter vivos") transfers**
  - Increased relative to inheritances over time (Piketty and Zucman, 2015)
  - Likely to influence investment and savings decisions - received in ages when:
    - Preferences are more elastic to wealth shocks
    - Credit constraints are more binding
- Still limited empirical evidence:
  1. Inter vivos transfers are rarely observed
  2. Difficult to distinguish effect of transfers from individual or family traits

This project

Research question: *How do parents' inter vivos transfers shape adult children's wealth accumulation?*

This project:

1. **New approach to detect transfers via housing market entries in Denmark:**
   - Forward sales of housing from parents to children
     - 5% of all housing market entries
     - Large transfer size $\rightarrow \approx \$100,000$ on average

2. **Estimates how transfers shape financial life-trajectories**
   - Main outcomes:
     - Business ownership
     - Stock market participation (financial investments)
     - Savings rate

From Transfers to Wealth Accumulation

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- ...matter depending on *how they are used* Nekoei and Seim, 2023

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This paper: Transfers can *shift* trajectories by changing investments (r) or savings (s)

$$\frac{\partial A_{t+1}}{\partial T_t} = \underbrace{s \cdot (1 + r)}_{\text{Direct effect}} + \underbrace{T \cdot (1 + r) \cdot \frac{\partial s}{\partial T}}_{\text{Savings response}} + \underbrace{T_t \cdot s \cdot \frac{\partial r}{\partial T_t}}_{\text{Investment response}}$$

- Evidence from windfalls:
  - Entrepreneurship Holtz-Eakin, Joulfaian, and Rosen, 1994; Andersen and Nielsen, 2012; Bermejo et al., 2022; Kerr, Kerr, and Nanda, 2022
  - Portfolio choice Briggs et al., 2023; Chodorow-Reich et al., 2024; Andersen and Nielsen, 2011a

Preview of Findings

1. Inter vivos transfers give children a flying start

- Directly: Transfers mechanically raise recipients' wealth
- By supporting investments and consumption - Effects from $100,000 transfer:
  - Business ownership ↑ 1.2 pp (31%)
  - Stock market participation ↑ 2.4 pp (17%)
  - Consumption ↑

2. Timing and liquidity of transfers matters

- Lifted credit constraints is a key mechanism
- Differ in effects compared to windfall estimates (lotteries, inheritance):
  - **Larger** effect on business ownership
  - **Smaller** effect on stock market participation

Institutional context & Data

Identifying transfers from a tax benefit scheme

- **Intra-family sale:** Forward sale of housing within the family

1. Gift taxes of 15-36% applies otherwise.

Identifying transfers from a tax benefit scheme

- **Intra-family sale:** Forward sale of housing within the family

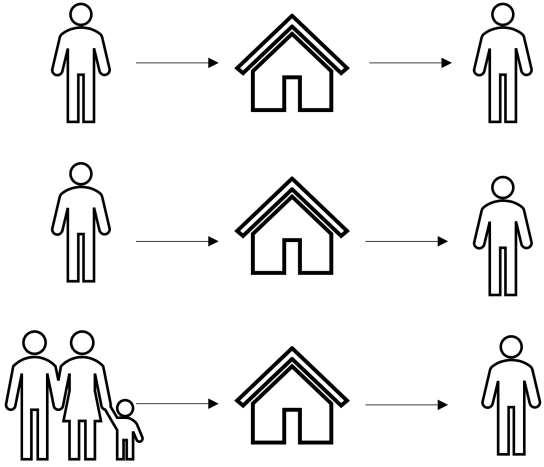
- **"The helping rule"**: Allows for housing to be sold at a discount to immediate family members, tax-free[1]

$$Transfer = P^M - P^P$$

1. Gift taxes of 15-36% applies otherwise.

Danish Administrative Registers

- **Data:** Danish administrative registers covering all entrants 1995-2020
  1. Identify trades from parents to children
  2. Obtain prices for each traded property (P^M , P^P)
     - *Transfer* $= P^M - P^P$
  3. Link to business ownership, stock ownership, income, wealth



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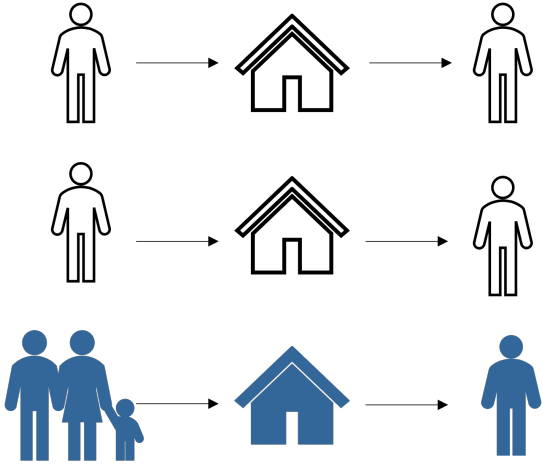

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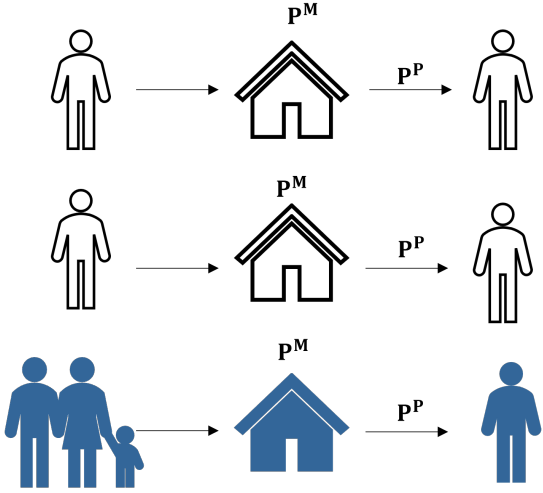

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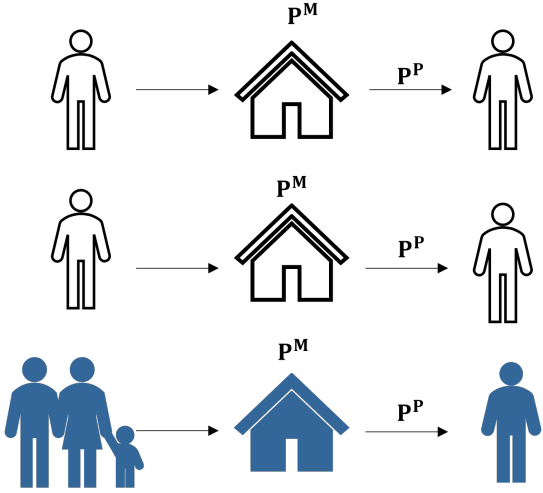

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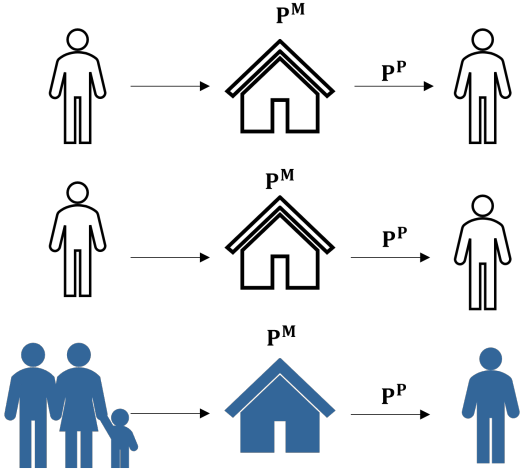


	No transfer (1)	Transfer (2)
Age	29	29
Market price (P^M)	16.8	18.7
Mortgage share (%)	79	54
Transfer amount		6.5
Nr of entries	722,660	33,009

values in 100,000 DKK

Wealth transfer

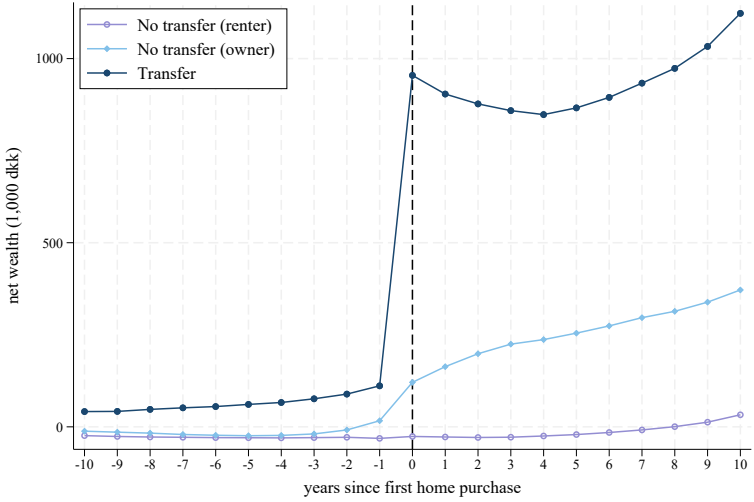


Figure 1: Increase in net wealth (transfer treatment)

Empirical Strategy

Empirical approach

Two methods to estimate effect of transfers:

1. **Event-study (Two Way Fixed Effects)**
   - **Treatment group:** 30,000 entrants of discounted forward sales
   - **Controls:** Matched entrants by education, gender, cohort, and location ▸ Descriptive table

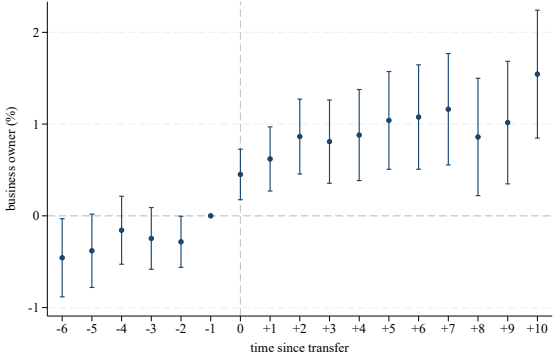
2. **Intensive margin → Effect of *larger* transfers**
   - Transfer recipients only
   - Assess selection: quasi-experimental variation in amounts

▸ Specifications

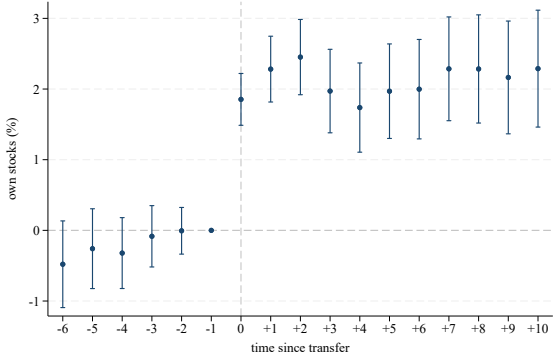
Results

Results: Extensive margin

- Transfers trigger a positive investment response
  - **Business ownership:** 31% increase over 10 years
  - **Financial investments:** 17% jump in stock market participation, no dynamic effect
    - Translates into higher growth in financial assets Financial assets
  - Overall decline in savings rate Dynamic



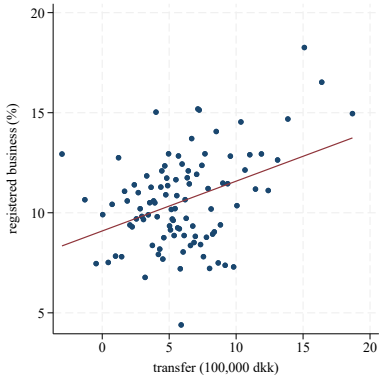
(a) Business ownership



(b) Stock market participation

Results: Intensive Margin

- Larger transfers → more business ownership and stock market participation in next 10 years



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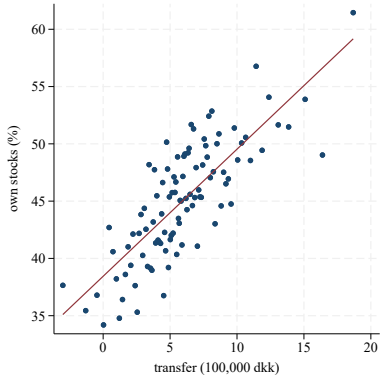

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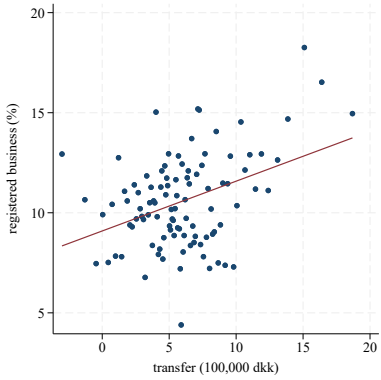

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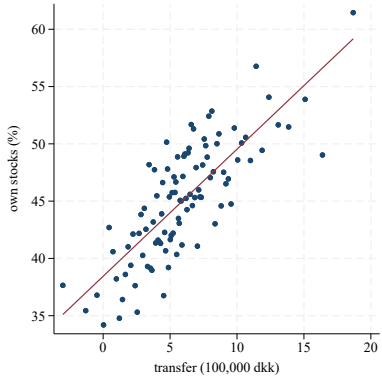


(b) Stock market participation

Recipients of (larger) transfers may differ from other entrants
Separate selection from transfer effect → Need exogenous variation in transfer size

Quasi-experiment

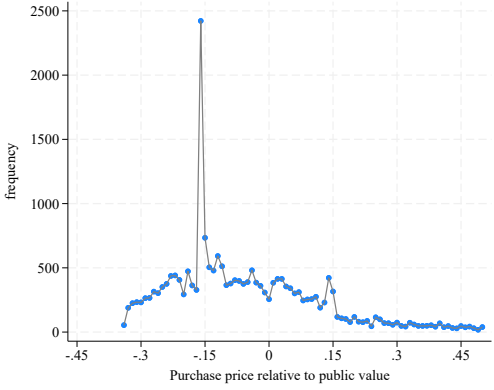
Identification: Transfer cap

- **Parents are limited in how much they can transfer:** Transfer cap on tax-free amount

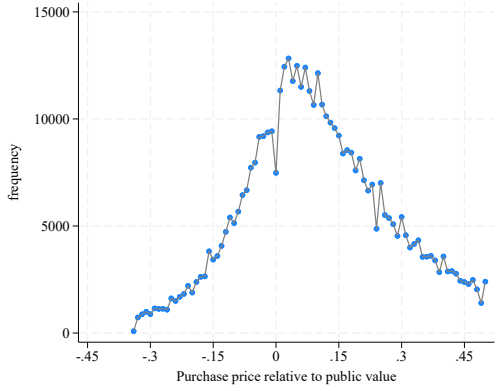
$$\text{Realized transfer} = P^M - P^P$$

$$\text{Transfer cap} = P^M - 0.85P^G$$

  - Clear bunching at minimum forward selling price for intra-family sales
- **Plausibly random amount:** P^G strongly criticized for imprecise estimation of P^M Report



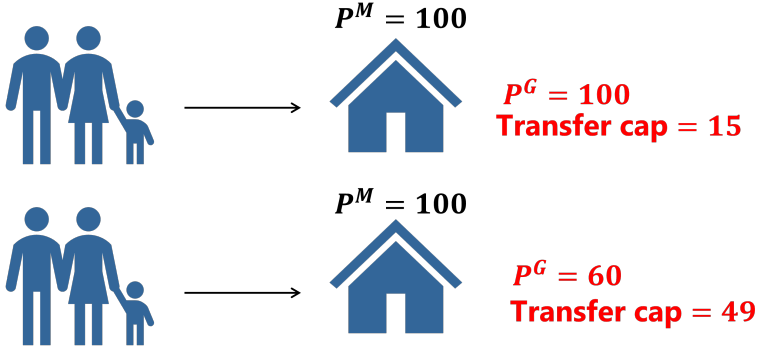
(a) Forward sales within family



(b) General sales

Identification: Transfer cap (2)

- **Idea:** Use transfer cap as an instrument for transfer amounts
  - Transfer cap removes any correlation with observable family traits ▸ Balance test
- **Experiment:** Compare two recipients, where one receives larger transfer due to a lower P^G
  - Limit sample to parents who purchased in the past



Results: IV

- Randomizing transfer amounts reduces but maintains treatment effects

Table 1: Effects of DKK 100,000 ($15,300) ↑ in Transfers

	Business ownership (1)	Stock ownership (2)	Savings rate (3)
Transfer (OLS)	0.210***	0.309***	-0.012***
	(0.058)	(0.064)	(0.002)
Transfer (IV)	**0.157****	**0.145***	**-0.015*****
	(0.079)	(0.087)	(0.002)
Outcome mean	5.129	19.144	0.021
Observations	23,297	23,297	23,297

Standard errors in parentheses

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

Credit constraints

- Investment responses are driven by recipients of larger transfers ▸ By size
  - Suggests that the wealth gain allows recipients to overcome financial barriers
- Recipients liquidate the transfer in two ways:
  1. More likely to sell the dwelling in the open markets in following years ▸ Sold dwelling
  2. Extract equity from the housing asset ▸ Debt
- Safe liquid wealth holdings increases
  - 70% of increase is risk-free, 30% in stocks and funds
  - Relaxes buffer-stock saving motives

→ Supports that lifted credit constraints is a key channel

Compared to windfall effects

Effect of inter vivos on:

- ...business ownership is **stronger**
- ...stock market participation is **weaker**

Table 2: Effects of receiving $160,000 in 2000 levels

	Inter vivos	**Inheritance**	**Lottery**
Business ownership	+2.32 pp (45%)	+0.95 pp (45%)	young ≈+3.4 pp (34%) old ≈-5.3 pp (53%)
		Andersen and Nielsen, 2012	d'Astous et al., 2025
Stock ownership	+2 pp (10%)	+18 pp (43%)	≈+20 pp
		Andersen and Nielsen, 2011b	Briggs et al., 2021
Age	Young	Old	
Liquid	No	Yes	Yes
Family	Yes	Yes	No

Conclusion

- Large untaxed inter vivos transfers observed through housing market entries in Denmark
  - Policy cap provides quasi-experimental variation
- **The flying start:** Transfers support wealth accumulation of recipients

$$\frac{dA_{t+1}}{dT_t} = \underbrace{s \cdot (1+r)}_{\text{Direct effect } (+)} + \underbrace{T_t \cdot (1+r) \cdot \frac{ds}{dT_t}}_{\text{Savings response } (-)} + \underbrace{T_t \cdot s \cdot \frac{dr}{dT_t}}_{\text{Investment response } (+)}$$

  - Directly (+): Mechanical rise in wealth
  - By raising investments (+): More business creation, financial investments
  - Effect on wealth is partly offset by higher consumption (-)
- **Timing and liquidity of transfers matters**
  - Credit constraints mediate some of the effects
  - Investment responses differ from windfall estimates
- **Policy implication:** Inter vivos may generate different social returns than inheritances
  - Motivates life-cycle–based taxation of transfers

Thank you!

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Appendix

Empirical specifications

1) Extensive: Two-Way-Fixed-Effects specification using matched sample

$$y_{i,t} = \underbrace{\alpha_i}_{\text{individual FE}} + \underbrace{\alpha_t}_{\text{year FE}} + \underbrace{\gamma_j}_{\text{event-time FE}} + \sum_{\substack{j=-6 \\ j\neq -1}}^{10} \theta_j \underbrace{D^j_{i,t}}_{\text{transfer treatment}} + \varepsilon_{i,t}$$

2) Intensive: Cross-sectional sample of transfer recipients only

$$\Delta \bar{y}_{i,j\in\{0,10\}} = \underbrace{\alpha_t}_{\text{year FE}} + \underbrace{\theta_1(\mathit{Transfer}_i)}_{\text{Transfer size}} + \beta_1 X_i + \epsilon_{1,i}$$

- X_i: vector of controls incl. parental purchase year and market value at purchase

back

Imputing market value of housing

- Market prices not observed in years when
  1. Dwellings are not traded
  2. Dwellings are sold as intra-family sales

To impute P^M, I use local sales prices of similar dwellings:

- Divide dwellings into groups based on type i in zip k in year t
  - Types are based on information about the unit (apartment/house), number of rooms, size, building year etc.
- Calculate m2 price by group based on the traded units in each group
  $\rightarrow \bar{p}_{ikt} = \frac{\sum_{u \in ikt} \text{SalesPrice}_{u,t}}{\sum_{u \in ikt} \text{sqm2}_u}$
- Obtain the imputed market price as $P^M_{u,t} = \bar{p}_{ikt} \times \text{sqm2}_u$

back

Descriptive statistics: Main sample

- Recipients are similar to general entrants pre-transfer, but have wealthier parents

Table 3: Descriptive means

	Population	No transfer (controls)	Transfer (treated)
Age	29.08	29.48	29.47
Female (d)	0.49	0.47	0.47
College degree (d)	0.36	0.40	0.40
Big city	0.41	0.57	0.57
Parent in top wealth 10%	**0.11**	**0.12**	**0.27**
Business owner (d)	0.04	0.04	0.05
Own stocks (d)	0.19	0.21	0.26
Savings rate	0.05	0.04	0.03
Transfer amount			6.54
No. individuals	644,953	30,806	30,806

Note: Nominal values are listed in 100,000 DKK.

back

Effects on firm outcomes

	All	Farming	Construction	Restaurant	Communication	Finance/ Real est.	Research/ Analytical	Teaching/ Medical	Recreational
Transfer × Post	0.437***	0.056**	-0.070*	-0.019	0.052	0.044**	0.137**	-0.052	0.058
	(0.142)	(0.027)	(0.042)	(0.039)	(0.036)	(0.020)	(0.057)	(0.054)	(0.039)
Outcome mean	1.291	0.060	0.109	0.140	0.110	0.017	0.195	0.104	0.127
Observations	737,649	737,649	737,649	737,649	737,649	737,649	737,649	737,649	737,649

Standard errors in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

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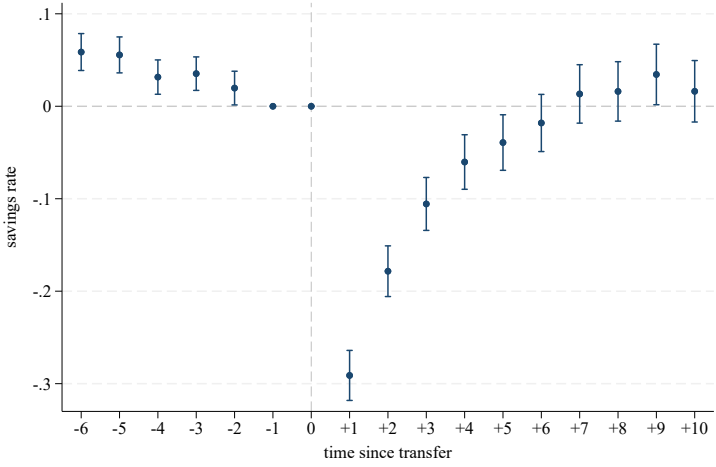
Effect on savings rate



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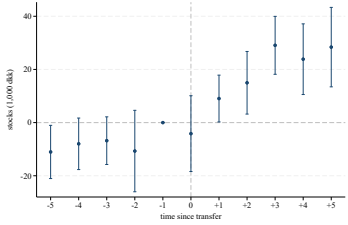
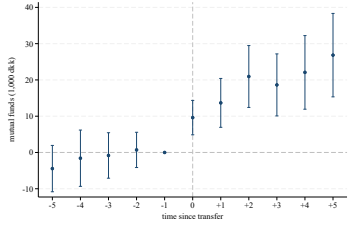
Effect on financial assets

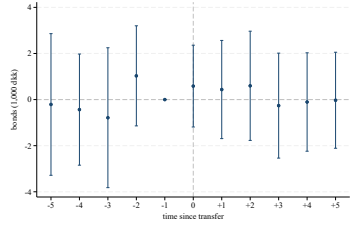
- Increased contributions in stocks and mutual funds during 5 years post-transfer
- No impact on bonds



(a) Stocks



(b) Mutual funds



(c) Bonds

back

Why $P^G \neq P^M$

From the National Audit Office Report (2011):

> *"SKAT's assessments are primarily based on the division into land value areas and on information about local sales prices"*
>
> *"The land value areas are only correctly divided in 17 out of 98 municipalities. This means that the Tax Authorities risks assessing two identical plots of land differently."*
>
> *"41% of single-family homes sold in 2011 were overvalued [...] 34% were undervalued, meaning the assessment was more than 15% above/below the sales price."*

back

Balance Test

- The transfer cap removes selection based on observables

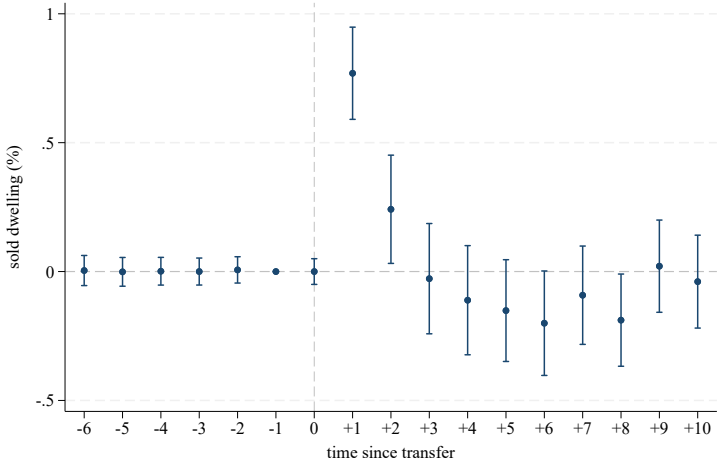
	Self-employed (1)	Parent business owner (2)	Parental wealth (3)
Transfer	0.188***	0.304***	0.0925***
	(0.027)	(0.043)	(0.004)
Transfer Cap	0.0425	0.0630	-0.00222
	(0.039)	(0.058)	(0.0056)
Observations	23,297	23,297	23,297

Standard errors in parentheses

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

back

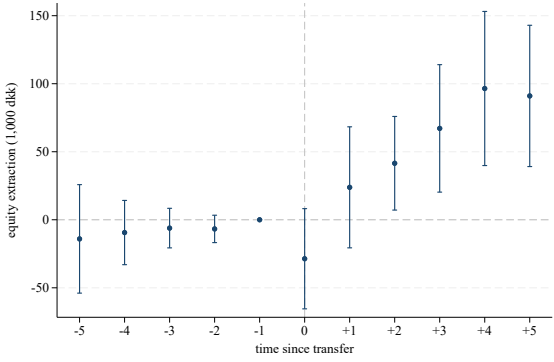
Probability to sell dwelling



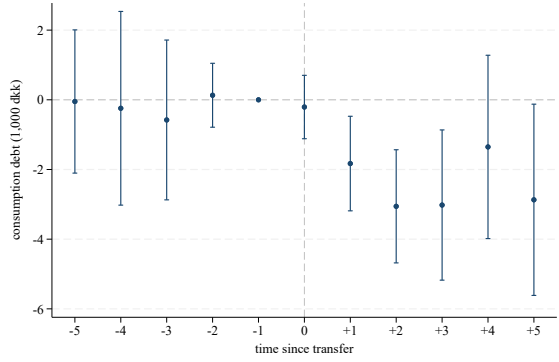
back

Effects on debt

- Recipients increase secured debt, but reduces consumption debt (payment plans)



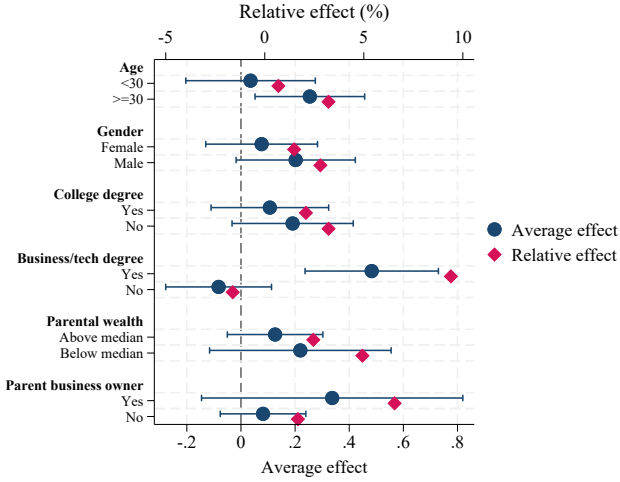
(a) Equity extraction



(b) Consumption loans

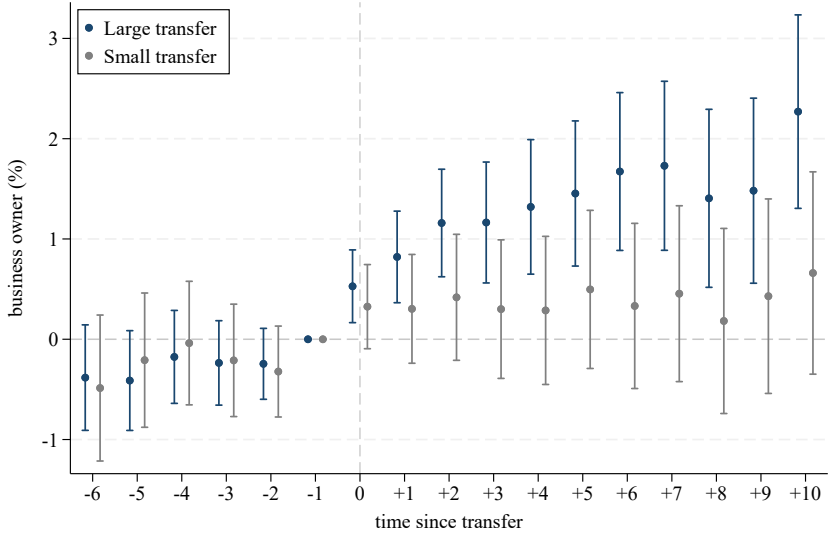
back

Heterogeneity in the investment response



back

By transfer size



Note: Large/small transfer is above/below DKK 373,000 (USD $57,000)

back