CENTER FOR
ECONOMIC
BEHAVIOR &
INEQUALITY

CEBI WORKING PAPER SERIES

Working Paper 02/24

A FLYING START

INTERGENERATIONAL TRANSFERS, WEALTH ACCUMULATION, AND ENTREPRENEURSHIP OF DESCENTANTS

Elin Colmsjö

ISSN 2596-447X

CEBI
Department of Economics
University of Copenhagen
www.cebi.ku.dk

A FLYING START

INTERGENERATIONAL TRANSFERS, WEALTH ACCUMULATION, AND ENTREPRENEURSHIP OF DESCENDANTS

Elin Colmsjö

March 2025

Abstract

Wealth is highly correlated across generations. This study explores how intergenerational *inter vivos* transfers influence the long-run wealth accumulation of individuals by supporting ownership of housing and private businesses early in the life cycle. In Denmark, a specific tax scheme encourages parents to make transfers by selling housing at a discounted price to their children. The policy makes it possible to identify a large portion of untaxed wealth transfers in the administrative data. Using exogenous variation in transfer amounts, I find that larger transfers lead to significant gains in recipient housing wealth and business ownership over the next ten years. Greater credit access and lower interest rates, stemming from parents' financial contributions, underpin the effects. Benefits of transfers are more pronounced when received at younger ages, indicating the importance of their timing in the life cycle for lifelong wealth building.

Keywords: Intergenerational transmission; wealth; inter vivos transfers; entrepreneurship; credit

JEL codes: D31; G51; J62

I INTRODUCTION

There is remarkable persistence in wealth inequality across generations. In the United States, half of individuals who start in the bottom quintile of the wealth distribution remain there in adulthood, while fewer than 1% rise to the top (Carroll and Hoffman, 2017).[1] Conversely, children from wealthy families are more likely to own homes, establish successful businesses, and accumulate financial assets. However, the role of financial (versus human or social capital) transfers in maintaining these patterns remains contested.[2] To what extent do parents support wealth accumulation of their children by simply making financial transactions? The empirical evidence is inconclusive, primarily because intra-family gifts are rarely observed in data. Consequently, most research has focused on inheritances, leaving the effects of earlier *inter vivos* transfers largely unexplored.[3] Such transfers may have a greater impact on recipients' wealth than inheritances, as they alleviate credit constraints and enable key investments early in the life cycle.

In this study, I use Danish administrative registers to explore how parents' inter vivos transfers influence the long-run wealth accumulation of descendants. Specifically, I examine how transfers affect investments in the two largest components of wealth: housing and private business wealth. Prior studies have encountered two key challenges in estimating the impact of transfers on recipients' wealth accumulation. First, the size and timing of transfers are rarely captured in the data, as the majority of such transactions remain unregistered in most countries. Second, the absence of quasi-experimental settings makes it difficult to disentangle the effects of parents' financial support from additional family investments in social or human capital. I address these challenges by exploiting a unique Danish policy environment, which allows me to identify parents' large untaxed wealth transfers tied to initial home purchases of their children. In this setting, I document the average effect of receiving transfers and the marginal effect of larger transfers on housing and private business investments. To isolate the impact of direct financial support from broader productivity transfers, I implement an instrumental variable (IV) strategy, using exogenous variation in transfer amounts induced by a policy reform.

I begin by showing that Danish parents give their children a "flying start" by making substantial wealth transfers through a gift tax benefit scheme when they enter the housing market. Since 1982, a legal rule permits individuals to forward-sell housing to immediate family members at a discount, with the discounted amount considered a tax-free gift. The rule creates a popular channel for intergenerational transfers, which can be precisely traced in timing and size using linked administrative data. The direct effect of a transfer is visible as an

[1] Similar patterns of dynastic wealth persistence are well-documented across European economies, including in Scandinavian welfare states. Intergenerational correlations in wealth and wealth ranks are estimated to range from 0.28 (Conley and Glauber, 2008) to 0.37 (Charles and Hurst, 2003) in the US, 0.3–0.4 in Sweden (Adermon, Lindahl, and Waldenström, 2018), and 0.24 in Denmark (Boserup, Kopczuk, and Kreiner, 2014).

[2] The estimated contribution of inherited (versus "self-made") wealth to aggregate wealth ranges from 20% to 80% depending on whether transfers are assumed to be consumed or invested (Zucman, 2023).

[3] During the past half century, inter vivos have grown substantially more than end-of-life bequests (Piketty and Zucman, 2015), indicating a change in the timing of intergenerational transfers.

immediate jump in recipients' net wealth in the year they enter the housing market.[4]

Before receiving the transfer, the wealth trajectories of recipients closely resemble those of other housing market entrants. However, recipients differ in some key aspects: they have higher savings before homeownership, wealthier parents, are less likely to be female, and are more likely to reside in a major city. To ensure that these pre-existing differences do not bias the treatment effects, I match transfer recipients to a control group based on age, gender, education, parental wealth, and urban area status one year before their first housing purchase. Using this matched sample, I analyze differences in wealth trajectories between transfer recipients and non-recipients in an event-study setting.[5]

Beyond the immediate increase in wealth from the transfer itself, I find that recipients accumulate significantly more wealth through housing and business ownership over the next 10 years, compared to non-recipients. Firstly, transfers result in a significant increase in housing wealth accumulation. Recipients purchase higher-value housing upon entry, leading to greater returns, and are more likely to purchase additional properties over time. Secondly, recipients of transfers are more likely to become business owners. Business ownership increases by 1 percentage point following the transfer, corresponding to a 55% increase in reference to the average business ownership of the treated population. The rise in business ownership is driven by the creation of new firms rather than the intergenerational transfer of existing businesses. The new firms started by recipients experience faster growth in terms of revenues and assets, and tend to take on more leverage. This suggests that the wealth transfer not only helps the establishment of new firms but also supports sustained growth and financial stability of these firms.

To document the intensive margin impact of transfers, I focus exclusively on transfer recipients and analyze how variations in transfer amounts affect key outcome variables. Increasing the transfer amount by DKK 100,000 ($15,300) leads to a 10-year average rise in housing wealth of DKK 260,000 ($39,800) and a 0.3 percentage point (15%) increase in the likelihood of business ownership.

Larger transfers may coincide with additional parental investments in social or human capital, potentially confounding the housing or business investments of descendants. To address this concern, I use the maximum tax-free transfer allowed in a forward sale (referred to as the *transfer cap*) as an instrument for actual transfers. I combine this approach with a policy reform that introduced exogenous variation in the cap. In the process of forward-selling a dwelling, the maximum tax-free discount family members can receive is determined by a government-listed reference value tied to the property. Consequently, the transfer cap varies with the difference between the reference value and the market price of a given dwelling. Prior to 2000, the reference

[4]The average transfer size in my sample equals 700,000 DKK (USD $107,000) in 2020 levels.

[5]One limitation is that I do not observe wealth transfers beyond those made through the tax benefit scheme. In Denmark, transfers and inheritances exceeding a publicly listed exemption threshold are subject to a gift tax ranging from 15% to 36%. Kolodziejczyk and Leth-Petersen, 2013 confirm that general (taxed) wealth transfers from parents to children at the time of housing market entry are relatively rare. Additionally, I find evidence that households strategically time transfers to remain within tax-free limits.

value was estimated such that the maximum tax-free discount was constant at approximately 15% of the market price. A change in the legal definition and measurement of the reference value in 2000 generated sudden substantial variation in the transfer cap across dwellings, with tax-free discounts varying from 0 to 70% across households. This setting makes it possible to analyze the trajectory of recipients who received larger transfers due to a sudden increase in their transfer cap, ensuring that the larger transfers do not reflect the selection of parents who invest more in their children overall.[6]

Using the IV approach, I find that the baseline effects are not driven by selection. Instrumenting realized transfers with the transfer cap does not significantly alter the estimated transfer treatment coefficients, suggesting that the observed effects stem from relaxed financial constraints rather than confounding factors associated with larger transfers. However, the dynamic IV estimates are smaller than the OLS estimates in the long run, indicating that selection into transfers does not affect business entry but increases the likelihood of sustained business ownership. This indicates that targeted recipients are more successful entrepreneurs, which is consistent with existing theoretical models relating bequests to entrepreneurship (Cagetti and De Nardi, 2006).

I investigate whether relaxed credit constraints link parents' financial transfers to their children's housing wealth and business ownership. First, recipients extract the full value of the illiquid wealth transfer by taking on debt. Second, larger transfers lead to lower interest rates for recipients. For a loan amount of 1 million dkk (or $153,000), the reduction in the interest rate translates to approximately $300 in lower annual interest expenses.

The key takeaway from my study is that inter vivos transfers significantly influence the life trajectories of recipients by lowering the financial barriers associated with early investments in durable goods, such as housing and private businesses. Credit constraints that prevent individuals from purchasing durables are more binding at younger ages. As transfers alleviate such constraints, their impact on lifelong financial optimization is likely amplified when received earlier in the life cycle. To test the latter, I conduct a final exercise where I evaluate the impact of transfer timing. By estimating the event-study regressions across age brackets, I find that the effect of inter vivos transfers on housing wealth and business ownership is largest for individuals aged 18-25, after which the effect declines substantially with age. [7]

My findings are relevant for ongoing policy debates. An increasing number of advanced economies are mirroring this goal by increasing emphasis on inclusive growth policy.[8] My findings indicate that reforms targeting the financial barriers associated with financial investments

[6]To avoid selection bias related to parents purchasing properties based on the difference between the reference value and market price, I restrict the sample to individuals whose parents already owned the property at the time of the reform.

[7]The effect of transfers turns positive and significant again for groups aged 46-50,

[8]In recent years, there have been an increased emphasis on financial policy aimed at broadening the ownership of housing, businesses or financial assets. Proposed policies include targeted home ownership subsidies, individual development accounts, matched savings plans and robust retirement provision plans (Shiro et al., 2022).

of young adults may be fruitful in facilitating greater mobility of wealth across generations.[9] Moreover, I show that the timing of transfers is key in this process. This result, combined with the documented upward trend in the gifts-to-bequests ratio (Piketty and Zucman, 2015) may help explain the strengthening of wealth correlations of parents and children over the past half century.

This paper contributes to the growing literature on intergenerational wealth correlations, mobility, and the transmission of ability, behavior, and financial resources within dynasties (Charles and Hurst, 2003; De Nardi, 2004; Pfeffer and Killewald, 2018; Adermon, Lindahl, and Waldenström, 2018; Palomino et al., 2022). Existing evidence on the role of direct transfers in this area falls into two main categories: one assesses the contribution of transfers to dynastic wealth persistence (Boserup, Kopczuk, and Kreiner, 2016; Boserup, Kopczuk, and Kreiner, 2018; Black et al., 2020; Fagereng, Mogstad, and Rønning, 2021; Benetton, Kudlyak, and Mondragon, 2022; Black et al., 2022; Daysal, Lovenheim, and Wasser, 2023), while the other attempts to estimate the effects of transfers on spending-saving behavior and financial outcomes (Andersen and Nielsen, 2011; Hwang, 2020; Druedahl and Martinello, 2022; Nekoei and Seim, 2023). Importantly, both fields are subject to continued disagreement around the role of inherited wealth in influencing financial behavior and outcomes [10].

The findings of this paper complement the previous literature in three ways. First, my study identifies the size and timing of large *untaxed* intergenerational transfers, which has been a major challenge in preexisting works.[11] Second, by utilizing exogenous variation in transfer amounts, I provide a causal interpretation of these transfers, addressing the endogeneity of parents' financial support. Third, I evaluate the importance of the *timing* of intergenerational transfers within the life cycle by analyzing the impact of receiving transfers at different ages—an aspect that, to my knowledge, has not been previously explored.

Furthermore, my results contribute to the existing literature on intergenerational transfers in the context of financial frictions and entrepreneurship. Numerous studies explore the role of wealth, borrowing, or liquidity constraints in influencing the decision to enter entrepreneurship (see Fazzari, Hubbard, and Petersen, 1987; Evans and Jovanovic, 1989a; Gentry and Hubbard,

[9] In line with the evidence of Carroll and Hoffman, 2017 and Carroll and Cohen-Kristiansen, 2022, wealth mobility is highest among the families that own some risky asset, such as real estate, financial assets or a private business or farm.

[10] For example, Adermon, Lindahl, and Waldenström, 2018, Boserup, Kopczuk, and Kreiner, 2018, Black et al., 2020 and Fagereng, Mogstad, and Rønning, 2021 conclude that intergenerational transfers appear to account for a large share of wealth correlations across generations. Meanwhile, Black et al., 2022 highlight that the aggregate amount of bequests and gifts account for a very small share of individuals' total inflows, and Druedahl and Martinello, 2022 and Nekoei and Seim, 2023 show that unexpected bequests seem to have little impact on the long run behavior of individuals

[11] Existing studies using direct transfer data include Poterba, 2001 and Brandsaas, 2018, who observe transfer timing from survey data but cannot observe transfer size nor follow the long-run outcomes of recipients. Andersen, Johannesen, and Sheridan, 2020 directly observe both the timing and size of credit card transactions within social networks; however, these transactions are small in size, implying that their direct impact on financial outcomes or opportunities is limited. Black et al., 2022 and Fagereng, Mogstad, and Rønning, 2021 use Norwegian register data on gifts and bequests. However, these transfers are likely limited due to the imposition of a gift tax. Finally, most similar to my study is the work by Wold et al., 2024, who use Norweigan data to estimate transfers through discounted forward sales.

2000). Cagetti and De Nardi, 2006 predict, using a quantitative life cycle model, that bequests targeting high-ability individuals result in persistently increased or expanded entrepreneurial activity. Holtz-Eakin, Joulfaian, and Rosen, 1993 and Andersen and Nielsen, 2012 empirically confirm this, finding that inheritance bequests substantially increase individuals' entry into entrepreneurship. Hurst and Lusardi, 2004 further find that both past and anticipated inheritances predict current business entry, indicating that transfers provide more than just liquidity. This evidence stands in contrast to my findings, which illustrate that estimated impact of transfers do not seem to capture intergenerational transfers of ability or productivity. More recent evidence shows an increase in entrepreneurial activities resulting from windfall gains from lotteries (Bermejo et al., 2022) or stock returns (Chodorow-Reich et al., 2024), aligning with my results.

The remainder of the paper is organized as follows. Section II provides an overview of the Danish institutional context and the identification approach for inter vivos transfers. Section III describes the data sources and primary outcome variables. Section IV outlines the two empirical strategies used to estimate the effects of receiving transfers. Section V presents the estimation results, including a discussion of mechanisms and age-related heterogeneity. Section VI concludes.

II INSTITUTIONAL CONTEXT

The following section provides an overview of the Danish institutional landscape for inheritance taxation, followed by an explanation of how I identify intergenerational transfers through a gift tax benefit scheme in the Danish housing markets. Finally, I outline the conditions under which individuals are legaly obliged to register their business for tax purposes.

II.A The Danish tax framework for inheritances and gifts

The existing tax policy framework generally limits large intergenerational transfers in Denmark. Individuals are allowed to receive tax-free transfers from their immediate family members up to a specified amount each year[12]. Transfers exceeding the exemption amount are subject to a gift tax of 15% (36.25% for relatives outside the closest family), which is equivalent to the tax rate for end-of-life bequests (Inheritance law, § 22, 1995).[13] The tax, which is paid by the giver, introduces a transfer constraint which is particularly binding in scenarios where transfers

[12]Immediate family includes children, step-children, parents, step-parents, grandparents and spouses cohabiting for +2 years. The reference amount was DKK 58.700 (USD$ 8.980) in 2010, and is adjusted yearly to account for inflation.

[13]The tax framework for end-of-life bequests is similar to that of gifts. Following the death of a deceased person, the estate duty is determined based on the total value of assets left behind. If the total value of the inherited estates exceeds a specific amount, the close family members are subject to a 15% inheritance tax (Inheritance law, Chapter V, 1995).

are needed to support large purchases, such as housing market entries.[14] Financial gifts are registered in a digital system governed by the Danish tax authorities, where taxes must be paid on the same date as the gift is transferred. Non-compliance with the tax obligation leads to significant fines in less serious cases and imprisonment for more severe instances, if discovered.

II.B Identifying inter vivos transfers through a tax benefit scheme

The size and timing of intergenerational transfers are largely governed by tax incentives (Escobar, Ohlsson, and Selin, 2023). Building on this insight, I identify inter vivos wealth transfers through a gift tax benefit scheme in the Danish housing markets. Since 1982, a legal framework, referred to as the "the helping rule", has permitted forward sales of family-owned property below or above market value in Denmark (Inheritance law, §6, 1982). Specifically, the rule allows parents to forward-sell housing to their children at ± 15% of a government-listed reference value attached to the unit (P^{REF}). The difference between the market value (P^M) and the purchase price (P^P) is considered a tax-free gift, equal to the inter vivos transfer for recipient i at time t:

$$Transfer_{i,t} = P^M_{i,t} - P^P_{i,t} \tag{1}$$

The transfer cap, $T^{max}_{i,t}$, represents the maximum tax-free transfer amount tied to a specific unit, and is obtained by replacing the purchase price in equation (1) with the minimum forward selling price following from the rule:

$$T^{max}_{i,t} = P^M_{i,t} - 0.85 \times P^{REF}_{i,t} \tag{2}$$

where the lowest possible forward price $P^P_{i,t}$ is equal to $0.85 \times P^{REF}_{i,t}$, corresponding to a 15% discount of the publicly listed reference value. An important implication of the rule is that the transfer cap decreases in the distance between the market and the reference value tied to the dwelling. Thus, dividing both sides of equation (2) by $P^M_{i,t}$ yields a linear relationship between the normalized transfer cap (τ^{max}_{it}) and the reference-to-market value ratio (RTM):

$$\tau^{max}_{it} = \frac{T^{max}_{i,t}}{P^M_{i,t}} = 1 - 0.85 \times \underbrace{\frac{P^{REF}}{P^M_{i,t}}}_{RTM} \tag{3}$$

Figure 1 theoretically depicts the relationship between the transfer cap and the reference-to-market value ratio, as outlined in equation (3). Whenever the government listed reference value matches the value of the market for a given dwelling, such that RTM= 1, the maximum tax-free contribution parents are allowed to make equals 15%, representing the foundation of the policy rule. Furthermore, when RTM $\neq$ 1, the maximum parental contribution is linearly increasing as the RTM declines (i.e. distance between the reference value and the market price

[14] Kolodziejczyk and Leth-Petersen, 2013 confirm in their study that general (taxed) wealth transfers from parents to children at housing market entries in Denmark is limited.

increases). Section V.A illustrates and discusses the empirical representation of the policy-based relationship governed by the rule, and examines the responsiveness of inter vivos transfers to the size of the tax benefit scheme.

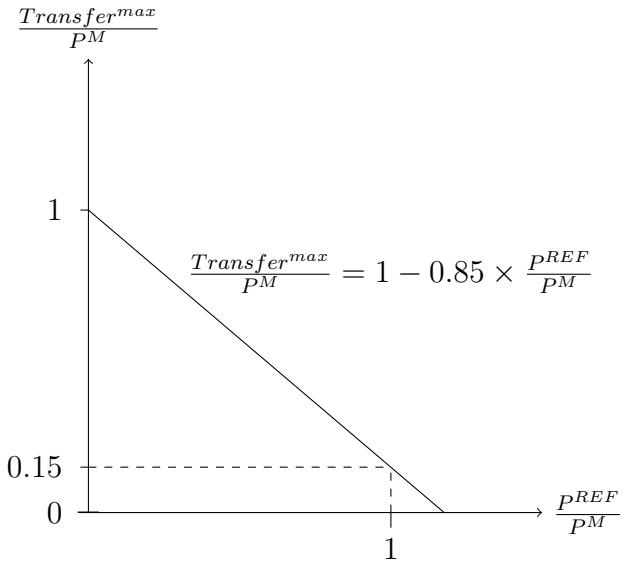


Figure 1: Theoretical illustration of the helping (15%) rule

II.C Registration of private businesses

In the analysis of firm balance sheets, only firms that are listed in the official firm registry are observable. In Denmark, new businesses are required to register for VAT if their taxable turnover exceeds 50,000 DKK ($7,650) within a 12-month period. For businesses with a taxable turnover below this threshold, VAT registration is voluntary. In addition, entrepreneurs have the option to register a personally owned small business and obtain a Central Business Register (CVR) number without the need to register for VAT or fulfill other obligations.

III DATA

I utilize Danish administrative population, housing, income and firm registers from Statistics Denmark to identify parental transfers and estimate their long-run effect on housing and business wealth. A unique personal (firm) identification number, CPR (CVR), is assigned to all Danish citizens (enterprises). The population registry also list the corresponding id of parents, allowing me to map dynastic links for all individuals born after 1962. Subsequently, I link this data to other public administrative registers providing information on housing and business ownership, as well as annual income, wealth, debt, interest rate payments as well as demographic variables.

III.A Recipients of inter vivos transfers

I define my sample of recipients of family transfers (treated) as those entering the housing market through a forward sale from their parents, involving a positive discount ($Transfer_{i,t} > 0$).[15] To identify these trades in the data, I utilize the property ownership registry which includes information on all housing units in Denmark as well as their year-specific owner.

I begin by identifying all individuals who entered the housing market in Denmark between 1995 and 2020. An individual is classified as having entered the housing market if their personal identifier appears linked to a living unit in the ownership registry for a given year. Additionally, I label an entry as an intra-family forward sale if the previous owner of the unit is a parent of the entrant. All other entrants are classified as general entrants and are thus treated as controls, with an assumed transfer amount of zero at the point of entry.

Next, I obtain price information for each individual property transaction associated with the sample of entries. Transfer amounts are calculated as the difference between the property's market price ($P^M_{i,t}$) and the price paid by the child ($P^P_{i,t}$), as defined in equation (1). Here, $P^M_{i,t}$ represents the price the unit would command if sold in the open housing market. For controls, where no discount applies, $P^M_{i,t} = P^P_{i,t}$. Since the market price for discounted forward sales is not directly observed in the data, I impute these market prices following the method of Andersen et al., 2021. A detailed description of this imputation procedure can be found in Online Appendix A.

III.B Main variables

The analysis focuses on two key outcomes: individual housing wealth and business ownership. The latter also include details on firm outcomes. The variables used in the analysis are obtained as follows:

Housing wealth. Housing wealth is calculated as the sum of the market values of all owned dwellings, multiplied by individuals' ownership share in each property. Market prices are estimated using the method outlined in Online Appendix .

Business ownership. Individuals are defined as business owners if they are registered as self-employed in the employment register and have at least one employee besides themselves in their firm.

Firm balance sheet information and number of employees. I match individuals with their corresponding firm id (CVR) for all newly registered establishments during my sample period. Data on individual ownership of firms is only available after 2000, allowing me to observe firm-owner pairs 2001-2020. As described in Section II.C, registering a business for VAT is mandatory if its taxable turnover is above than 50,000 DKK (approximately $7.645) within a

[15] Forward sales involving a negative or no discount (implying transfers from children to their parents) are excluded from the analysis.

12-month period. For this sample, I obtain balance sheet information from the firm registers, which includes revenues, total asset holdings, liabilities, and the number of employees of each firm.

III.C Other variables

Net wealth. Net wealth is calculated as the sum of deposits, savings, and assets (stocks and housing) minus any liabilities (mortgage and non-mortgage debt). Data on debt, stocks, and deposits is obtained from the tax-income register (SKAT). Importantly, the definition of net wealth in the Danish registers does not incorporate private business wealth, as the wealth tax was abolished in 1997. To infer the total wealth holdings of individuals, it is therefore necessary to observe the wealth data of their owned enterprises.

Liabilities. Data on debt is directly obtained from SKAT, and corresponds to the outstanding amount in December each year. I focus on total leverage which includes mortgage debt, debt from financial institutions, pension funds, insurance and financing companies, debit card schemes, as well as student loans.

Interest rates. To calculate interest rates at the individual level, I utilize aggregate interest payment data from SKAT, as well as the register for individual loans, which list end-of-year outstanding debt amounts and interest payments for all bank loans from 2004 to 2020. The interest rate for individual i in year t is estimated following Kreiner, Leth-Petersen, and Willerslev-Olsen, 2020 as $r_{i,t} = \frac{R_{i,t}}{D_{i,t}}$, where $R_{i,t}$ represents the total interest payments and $D_{i,t}$ denotes the outstanding balance at the end of each year. The analysis is restricted to interest rates ranging from 0.5% to 15%, for accounts with an outstanding debt of at least 10,000 DKK (USD $1,530). Using this definition, I calculate both the overall interest rate and the non-mortgage interest rate.

Education. I categorize individuals into 5 education categories based on the highest level of completed studies: i) primary and lower secondary, ii) high school, iii) tertiary and college (BA), iv) college (MA), and v) Ph.D.

Disposable income. Disposable income is obtained directly from SKAT, and corresponds to the yearly individual income after tax.

Marital status. I categorize individuals as married or single depending on if they were registered as married in December in a given year.

Parental income and wealth. I obtain information about the income and wealth of parents for each individual, and then construct annual quintiles based on these measures.

IV EMPIRICAL DESIGN

The following section outlines the two empirical designs used to estimate the effect of intergenerational transfers on the long-run financial outcomes of descendants. First, I outline a matching procedure used to identify a group of relevant controls. Next, I estimate the effect of transfers using two types of variation. The first exploits (conditional) randomness in the timing of transfers to estimate the average effect of inter vivos transfers on recipients, compared to non-recipients. The second focuses solely on transfer recipients, utilizing variation in the transfer amount to infer effects.

IV.A Sample selection

Matched sample. The main treated sample consists of individuals aged 18-50 with at least one living parent who entered the housing market through a discounted forward sale during the years 1995-2020. Table 1 lists the averages of key variables one year prior to housing market entry for the full population of entrants (column 1) and transfer recipients (column 3). Between 1995-2020, 806.840 individuals aged 18-50 entered the housing market. Out of these, 38910 entered through a discounted forward sale from their parents. Compared to the average housing market entrant, transfer recipients have more savings and financial wealth, lower salary income, wealthier parents, are less likely to be female, and are more likely to reside in a big city. To ensure that the control group is similar in terms of observable characteristics, I conduct a matching procedure where I match transfer recipients to a group of controls based on the year, age, education, gender, urban location, and parental wealth one year prior to housing market entry. The key observables of the matched controls are shown in column 2 of Table 1.

Timeline. I follow the outcomes of entrants described in Section III.B in the 6 years before and 10 years after their first home purchase, resulting in a maximum span of 16 event years per individual in the sample. The analysis considering the effect on firm performance are limited to years 2001-2020 due to limited data availability before 2001. All monetary variables are expressed in thousands of DKK and are inflated to 2020 levels. Whenever expressed in $USD, I adopt the 2020 exchange rate ($\frac{DKK}{\$USD} = 6.54$).

IV.B Extensive margin: Event study design

Using the matched sample, I employ a dynamic two-way fixed effects (TWFE) design with a treated and a never-treated group to estimate the average effect of receiving an inter vivos transfer on the outcomes of recipients:

$$y_{i,t} = \sum_{j=-6, j\neq -1}^{10} \theta_j D_{i,t-j} + \alpha_i + \gamma_j + \epsilon_{i,t} \tag{4}$$

where $y_{i,t}$ denotes the relevant dependent variable of individual i at time t. $D_{i,t-j}$ is an indicator for the transfer treatment, which is estimated for each year j since the event. θ_j accordingly captures the treatment coefficients of interest, signaling the additional effect on $y_{i,t}$ from receiving a transfer upon housing market entry. I exclude the year prior housing market entry $j = -1$ from the specification, such that the treatment coefficients θ_j are relative to that year.

To account for time-invariant variation in my sample, I include individual fixed effects α_i. This ensures that the results are not influenced by individual-specific, time-invariant characteristics such as gender, IQ, or genetic traits. γ_j denotes time-since-entry fixed effects. $\epsilon_{i,t}$ is an error term assumed to be independently identically distributed (iid).

The average treatment effect on the treated (ATT) is recovered as a weighted average of the post-treatment coefficients θ_j from specification (4), where ω_j correspond to treatment weights, equalling the share of treated units in each event year:

$$ATT = \sum_{j=1}^{10} \omega_j \times \theta_j \tag{5}$$

Identifying assumptions. The identification of θ_τ in Equation (4) hinges on the assumptions of (1) parallel trends and (2) no anticipation. The prior posits that, in the absence of the transfer, treated and control units would have followed comparable trajectories over time. This implies that, on average, unobserved time-varying characteristics do not systematically differ between treated and controls. I assess the validity of this assumption by including a set of lead indicators in the main specification to test whether pre-trends show any significant difference in outcomes between treated and controls prior to treatment. Results from F-tests on the pre-event coefficients are presented in the Online Appendix Table 1.

The second assumption, that there is no anticipation of treatment, implies that intra-family transfers (treatment) should be unexpected by recipients and that the variation in transfer timing should be effectively random, conditional on fixed effects and controls. This is a strong assumption, as recipients often benefit from additional parental investments, such as social and human capital, which can influence their financial behavior and outcomes. Accordingly, the following sections address the identification of treatment effects by utilizing plausibly exogenous variation in transfer amounts.

IV.C Intensive margin: IV design

Transfers from parents to their children may be correlated with unobserved factors that could confound the results. For example, transfers might reflect the financial need of the recipient, which could be linked to factors like financial literacy potentially influencing business ownership and housing wealth. To address this concern, I conduct a second estimation focused solely on recipients of inter vivos transfers, using transfer amounts as the treatment variation. While

the event study estimates the extensive margin by exploiting variation in transfer timing, this approach estimates the marginal effect of receiving larger transfers.

New data structure. Since recipients receive transfers at a single point in time, I construct a cross-sectional dataset where each observation represents a transfer amount and the corresponding individual outcome over the 10 years following the transfer. Specifically, for the two main outcomes, I use the average 10 year housing wealth and create a dummy variable equal to one if the individual was a business owner during the post-treatment period.

Baseline specification. I estimate the effect of receiving larger transfers using the following specification:

$$\bar{y}_{i,j\geq 0} = \lambda_{at} + \mu_{t,j=0} + \theta_1(\text{Transfer}_i) + \gamma_1 \bar{X}_i + \epsilon_{1,i} \tag{6}$$

where $\bar{y}_{i,j\geq 0}$ is the relevant outcome variable in the 10 years following the transfer, and Transfer_i denotes the transfer amount received by individual i. λ_{at} denotes year-age fixed effects λ_{at}, $\mu_{t,j=0}$ are entry-year fixed effects, and X_i is a vector of time-varying controls including average educaton, marital status and income in event years $10 \geq j \geq 0$.

Although the intensive margin analysis is restricted to recipients only, selection concerns with respect to θ_1 persist. Specifically, recipients of larger transfers may differ from those receiving smaller transfers due to unobserved factors, such as more binding constraints, which could simultaneously influence the financial outcome variables in the long run. To mitigate these concerns, I conduct a quasi-experiment in an attempt to randomize transfers across recipients, outlined in the following section.

IV approach: Policy variation in transfer amounts

To address the endogeneity of transfer amounts that may bias θ_1 in specification (6), I conduct an additional analysis using an IV approach. Specifically, I use the transfer cap as an instrument for realized transfers. The transfer cap can be derived for each dwelling based on the helping-rule underpinning tax-free transfers of discounted forward sales within the family, as outlined in Section II.B.

To reinforce the exogeneity of the instrument, I leverage a policy reform in 2000 that introduced exogenous variation in the transfer cap. Equation (3) show that the transfer cap for dwelling (recipient) i at time t is a function of the reference value of housing (P^{REF}). Importantly, P^{REF} has undergone changes over time, as illustrated by the timeline in Figure 2.

From 1982 to 2000, the reference value (P^{REF}) for a given property was determined through case-based assessments aimed at estimating a "cash value" of the property. This resulted in P^{REF} being close to the market value ($P^{REF} \approx P^{M}$), which limited the size of tax-free transfers

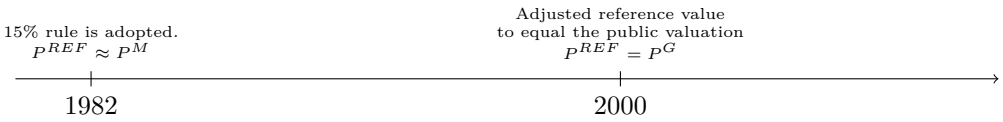


Figure 2: Timeline of events

through the tax benefit scheme. However, in 2000, P^{REF} was redefined to equal the publicly listed tax assessment value (P^G), which is used for property taxation (CIR nr 45 af 28/03/2000, §2, 2000). The method used by the tax authorities to calculate P^G was based primarily on the division of land value areas and local sales prices. Importantly, this approach was later publicly criticized for its lack of precision. According to the National Audit Office assessment in 2011, the land value areas were only accurately delineated in 17 out of 98 municipalities, leading to inconsistent assessments (Statsrevisorerne and Rigsrevisionen, 2012).[16] This change introduced significant variation in the transfer cap across properties, as P^G was often either higher or lower than the actual market value. Inserting the corresponding values of P^{REF} into the expressions of equation (3), I obtain the (normalized) transfer cap before and after the reform as:

$$\tau_{it}^{max} \begin{cases} \approx 0.15 & \text{if year} \leq 2000 \\ = 1 - 0.85\frac{P_{i,t}^G}{P_{i,t}^M} & \text{if year} > 2000 \end{cases} \tag{7}$$

where $\frac{P^G}{P^M}$ is the ratio of the tax assessment value and the market price, tied to the property.

Figure 9 illustrates the policy variation in transfer amounts induced by the reform, relating the (share and level) transfer cap to realized transfer amounts. Panel a shows that, in the years 1995-2000, the transfer cap as a share of the market price ($\tau_{it}^{\max}$) was constant around 0.15, implying that parents could contribute with 15% of the dwelling market price. As a result, there was limited variation in the transfer contributions associated with intra-family sales (Transfer_i), as can be seen in the level-plot of panel c. Panel b shows that, in the years 2000-2020, there was significant variation in $\tau_{it}^{\max}$, which also induced variation in the transfer contributions across households, as shown in panel d. From 1995 to 2000, the median transfers from parents to children associated with housing market entries remained somewhat constant at around 250,000 DKK ($36,000). However, post-2000, this figure rose substantially, peaking at 750,000 DKK ($109,000) in 2005.

2SLS specifications

I restrict the sample for the 2SLS estimations to individuals whose parents already owned unit in 2000, who entered the housing market after the reform. This restriction helps to avoid any selection effects arising from the larger tax benefit associated with forward selling hosing to family member. This reduces the sample to $N = 5,093$ transfer recipients.

[16] In 2011, 41% of single-family homes were overvalued, and 34% were undervalued by more than 15% relative to their sales price.

The first stage regression model is specified as follows:

$$\text{Transfer}_{i,j=0} = \theta_2 T^{max}_{i,j=0} + \psi_2 T^{max}_{i,t=2000} + \epsilon_{2,i} \tag{8}$$

where the dependent endogenous variable $\text{Transfer}_{i,\tau=0}$ represents the transfer amount received by individual i in entry year $j = 0 > 2000$. $T^{max}_{i,j=0}$ denotes the transfer cap (instrument) associated with the traded unit in the year of the sale. Furthermore, to account any pre-existing differences in the transfer cap prior to the reform, I control for the transfer cap tied to the unit in year 2000, $\theta_2 T^{max}_{i,t=2000}$. The parameter θ_2 hence captures the relationship between the transfer cap and realized transfers received upon housing market entry. The second stage regression model is then specified as:

$$\bar{y}_{i,j\geq 0} = \lambda_{at} + \mu_{t,j=0} + \theta_3(\widehat{\text{Transfer}}_i) + \psi_2 T^{max}_{i,t=2000} + \gamma_3 \bar{X}_{i,j\geq 0} + \epsilon_{3,i} \tag{9}$$

where $\bar{y}_{i,j\geq 0}$ is the relevant outcome variable in the 10 years following the transfer for individual i. The variable $\widehat{\text{Transfer}}_i$ denotes the predicted values of the transfer amount from the first stage regression. The coefficient θ_3 is the 2SLS estimator, which captures the causal effect of the transfer amount on $\bar{y}_{i,j\geq 0}$.

The unbiased estimation of θ_3 relies on the relevance and exclusion restrictions of the instrument. The relevance condition implies that the transfer size significantly increases with the transfer cap. This is tested by estimating θ_2 in equation (8). The exclusion restriction requires that, conditional on $\psi_2 T^{max}_{i,t=2000}$, the transfer cap is unrelated to the outcome variables except through their effects on the transfer amount.

V RESULTS

This section presents the results from the main estimations, relating inter vivos transfers to long run housing wealth and business ownership of recipients. I first introduce the descriptive evidence of transfers channeled through the gift tax benefit scheme. Subsequently, I present the results from the main estimations, which are divided into two main parts. The first part introduces the extensive margin results from the event study regressions of specification (4), along with the regression results of the intensive margin using specification (6). The second part presents the results from the 2SLS analysis of specification (8) and (9), where transfer amounts are randomized across the restricted sample using the transfer cap as an instrument. Finally, I examine the plausibility of credit constraints as an explanation for the observed treatment effects on housing wealth and business ownership, and discuss heterogeneity in the treatment effects by age.

V.A Inter vivos transfers channeled through the housing market

The tax benefit scheme for intergenerational transfers described in Section II.B, has a significant impact on dynastic wealth flows in Denmark. Online Appendix Figure 1 shows that 5-8% of individuals in my sample entered the housing market through a discounted forward sale in years 1995-2020, and accordingly received a substantial illiquid inter vivos transfer from their parents. The popularity of intra-family sales increased rapidly between 1995 and 2006, then declined during the financial crisis, and began to recover after 2010.

Turning to tax-free transfer amounts, Online Appendix Figure 2 shows that realized transfers (normalized by the market value of the dwelling) closely follows the policy relationship governing the 15% rule as illustrated in Figure 1. The transfer contribution decreases linearly as the RTM approaches 1, indicating that the transfer cap is binding and that parents adjust their financial contributions accordingly.

Finally, Figure 3 depicts the average development in net wealth across event years, illustrating the impact of inter vivos transfers at housing market entry. General entrants ("No transfer") have zero net wealth holdings in the decade before becoming homeowners and start accumulating wealth shortly after entry. In contrast, recipients of transfers have slightly positive net wealth prior to entry and experience an average jump of 700,000 DKK (USD $107,000) at event year $j = 0$, illustrating the direct effect of the transfer on net wealth. Over the subsequent 10 years, recipients of transfers show a u-shaped mean net wealth development: their net wealth initially decreases by 100,000 DKK (USD $15,300) before rising again five years after entry. Importantly, the net wealth measure solely captures deposits, financial assets and housing wealth, meaning that any discrepancy in wealth arising from business ownership is not included in the figure. Additional insights about the effects on business assets are presented in the next section.

V.B Effects on housing wealth and business ownership

Event study and baseline model

Housing Wealth. Figure 4 presents the treatment coefficients for housing wealth over event years. Effects are shown for both the full sample (circles) and a restricted sample of individuals who continue to live in the same unit they purchased in event year $t = 0$ (diamonds). The results indicate a significant impact of inter vivos transfers on housing wealth accumulation. At the point of entry, recipients experience a substantial increase in gross housing wealth of 750,000 DKK ($114,000), corresponding to the size of the transfer. In the following years, housing wealth grow by an additional 500,000 DKK ($76,500) over the following 10 years, compared to controls.

The positive effect on housing wealth accumulation is driven by two main factors: a *wealth effect*, where recipients purchase more expensive properties upon receiving the transfer, and an

investment effect, where recipients are more likely to acquire new or additional properties over time. A comparison between the two estimation results in Figure 4 suggests that approximately 65% of the total effect on housing wealth stems from the direct impact of the transfer and the higher appreciation rate of the purchased unit. Furthermore, Figure 5 shows that the likelihood of owning more than one property increases by 3 percentage points after the transfer, representing a 50% relative increase. This suggests that the transfer plays a key role in helping recipients advance in their housing careers.

Turning to effects on the intensive margin, panel a of Figure 8 illustrates a sharp positive relationship between the transfer size and the average 10-year housing wealth following entry. Interestingly, for transfers smaller than 350,000 (USD $53,517), there is no clear relationship between the transfer size and housing wealth. For larger transfers, the relationship turns positive. Table 3 (column 1) shows that raising transfers by $1 increases the average housing wealth over the following 10 years by $2.6. Hence, subtracting the transfer amount itself, the return to transfers is approximately 160%.

Business Ownership. Recipients of inter vivos transfers exhibit a higher likelihood of becoming business owners. As illustrated in Figure 6, business ownership increases by 0.5 percentage points in the entry year and continues to rise to a steady state level of +1 percentage points during the subsequent ten years following the transfer. In reference to the average business ownership of the treatment group, this corresponds to an average increase by 55%. A joint significance test of pre-treatment coefficients indicates no signs of pre-trends (F-statistic = 0.13, p-value = 0.99). Turning to the effects of larger transfers, panel b of Figure 8 show a positive relationship between the transfer size and business ownership. Table 4 (column 1) show that increasing transfers by 100,000 dkk (USD $15,300) increases the propensity to be a business owner in the 10 years after entry by 0.3 percentage points.

Firm Performance and number of employees. The effect of transfers on business ownership is driven by the registration of new companies rather than intergenerational transfers of preexisting businesses. Figure 7 presents the estimation results for key outcomes of the new firms. Using the full sample of treated and control firms, panel a shows that recipients of transfers increase the number of individuals they employ by an average of 0.1 worker, representing a 90% increase relative to the baseline average number of workers employed per individual. In particular, employment increases dynamically over the 10 years following the transfer.

Moreover, using matched balance sheet data for these new firms, panel b examines a sample of all business owners in the treatment period and shows that new firms exhibit faster growth in terms of revenues (31%), assets (142%), and leverage (145%) compared to firms owned by non-recipients. This suggests that transfers may provide a strong foundation for sustained business growth and financial stability.

2SLS Results

First stage. To assess the endogeneity of the treatment effects presented above, Table 2 reports the first-stage regression results from equation (8), using the transfer cap as an instrument for realized transfers. The coefficient is 0.95 and significant at the 0.1% level, indicating that, on average, a \$1 increase in the transfer cap leads to a \$0.95 increase in realized transfers.[17] The large and significant first-stage coefficient confirms that the relevance condition discussed in Section IV.C is satisfied.

Second stage: Housing wealth. The second-stage results, shown in column 4 of Table 3 indicate that instrumenting realized transfers with the transfer cap does not alter the positive and significant relationship between transfers and housing wealth or business ownership. An exogenous increase in transfers by USD \$1 raises housing wealth by USD \$2.9. In fact, this figure is slightly larger than the corresponding OLS estimate for the full sample, suggesting that selection into transfers bias the estimate slightly downwards.

Second stage: Business ownership. Furthermore, I find a causal positive effect of transfers on business ownership, as shown in column 4 of Table 4. Increasing transfers by 100,000 dkk (USD \$15,300) raises business ownership in the post-treatment period by an average of 0.3 percentage points. The effect is statistically indistinguishable from the full sample OLS estimate. This suggests that the baseline effect of transfers on business ownership represent a causal impact of transfers, rather than confounding factors associated with greater parental support.

Dynamic IV results. To estimate the causal *dynamic* effect of transfers, I use the IV specification of equation (9), but replace the dependent variable $\bar{y}_{i,j\geq 0}$ with the corresponding time-varying outcome, $y_{i,t}$. To illustrate how selection influences the relationship between transfers and the outcome variables, I estimate results both for the full-population sample of recipients (where selection may be present) and for the restricted sample who were exposed to the reform.

The dynamic impact of receiving larger transfers is shown in Figure 10. *IV* corresponds to the 2SLS results using the restricted sample, and *OLS* correspond to the OLS results from the full sample. For housing wealth (panel a), the effect of transfers is the same in both samples, with slightly larger estimates in the OLS sample in the long run (+8 years after the transfer). Interestingly, for business ownership (panel b), the effect is identical across the two estimations in the first two years, but then drops significantly for the instrumented results in event year 3 to 10. This indicates that the causal impact of larger transfers increases entry into business ownership, while the impact on persistence in business ownership is less pronounced.

[17] The high correlation between the instrument and realized transfer amounts is likely due to the sample period. Specifically, the sample is restricted to individuals who resided in a parent-owned unit in the year 2000, when the baseline transfer cap was relatively low. This likely led most households to maximize their transfers up to the legal limit, explaining the strong first-stage relationship.

V.C Mechanisms

The role of credit constraints

Life-cycle models predict that unexpected wealth shocks lead individuals to re-optimize their consumption paths, enabling higher risk-taking and long-term investments, including business ownership (Merton, 1969). Increased liquidity from wealth shocks may enable individuals to overcome credit constraints, thereby increasing the likelihood of business ownership or additional housing investments (Evans and Jovanovic, 1989b). I explore the possibility that the causal impact of transfers on housing wealth and business ownership stem from relaxed credit constraints by examining the effects of transfers on borrowing and interest rates, using specification (6) and (9).

Borrowing. If individuals are credit constrained at the point when they receive the transfer, they should increase their borrowing following the illiquid wealth shock, to increase their available liquid resources. Panel a of Table 5 confirms this prediction: For a \$1 increase in transfers, recipients increase their debt by \$1, implying they extract 100% of the illiquid transfer.

Interest rates. Panel B of Table 5 shows the effect of wealth transfers on the average interest rate faced by individuals in the post-entry period. An increase in transfers by 100,000 dkk (\$15,300) reduces the interest rate on individuals' total debt by 0.04 percentage points for the full sample, and by 0.03 percentage points when using the IV specification on the restricted sample. This suggests that recipients of larger transfers can both increase their debt levels and reduce the cost of borrowing.

To illustrate the magnitude of the reduced interest rate, consider the average transfer and debt in our sample. Recipients of transfers face an approximately $0.03 \times 7 \approx 0.2$ percentage point lower interest rate on their loan. Given an average loan amount of 1 million dkk (or \$153,000), this reduction in the interest rate corresponds to about \$300 in lower annual interest expenses.

The effect of inter vivos transfers across the life cycle

Prior literature on intergenerational wealth flows has primarily focused on the role of bequests in determining wealth accumulation or spending-saving behavior of recipients (Druedahl and Martinello, 2022; Nekoei and Seim, 2023). However, bequests are typically received at later stages of the life cycle, where their effects might differ from those of earlier financial support. As discussed in Section V.C, credit constraints likely underpin these effects. Given that such constraints are generally more binding earlier in the life cycle, it raises the question of whether intergenerational transfers have different impacts on recipients' lifetime optimization depending on the timing of the transfer.

To address this question, I explore the heterogeneity in treatment effects by age to evaluate the impact of inter vivos transfers across the life cycle. This is done by estimating effects of transfers on housing wealth and business ownership using the IV specification of equation (9) for six age categories in my sample, considering only treated and control individuals entering the housing market within the relevant age group.

The results, shown in panels a and b of Figure 11, indicate substantial variation in the causal impact of transfers on housing wealth and business ownership across the life cycle. Transfer recipients aged 18-25 experience an average increase in housing wealth by 500,000 ($76,500) and an increase in business ownership by 1.5 percentage points (28%) relative to entrants in the same age group. Beyond this age range, treatment effects decline substantially as individuals grow older, dropping to 200,000 ($30,600) for housing wealth and to null for business ownership among recipients aged 31-35. While effects on housing wealth remain significant for all age categories, and even increases slightly for older age groups[18], the effects on business ownership turns insignificant after individuals reach age 31-35.

The results show that the timing of inter vivos transfers plays an important role in shaping the economic outcomes of recipients, with earlier transfers leading to more significant impacts on housing wealth and business ownership. This finding supports the idea that transfers, aside from influencing the immediate (level) financial standing of recipients, also affect the slope of their economic advancement. Accordingly, economic models of overlapping generations that incorporate dynastic wealth flows should adopt a dynamic, rather than static, perspective of transfers when explaining intergenerational correlations in net worth.

VI CONCLUSION

This study have used Danish administrative data to examine how intergenerational wealth transfers affect wealth accumulation of individuals through investments in housing and business ownership. In addition to the direct jump in wealth arising from parental transfers, recipients experience significant increases in their housing wealth, business ownership and business wealth over the 10 years following a transfer. Recipients invest in higher-value homes and are more likely to engage in additional property investments, leading to substantial growth in housing equity. Additionally, transfers lower barriers to entrepreneurship, resulting in more business startups and sustained business growth. Randomizing transfer amounts does not influence the main treatment effects, indicating that the baseline estimates are not driven by confounding variables associated with recipients of larger transfers. However, a dynamic IV analysis shows that while transfers have a causal effect on business entry, the long-term effect is much smaller. This suggests that individuals who receive larger transfers may be more successful entrepreneurs, leading to more persistent business ownership.

[18]Note that the positive impact observed in higher ages may be related to credit constraints as this group captures individuals who did not own a home before they turned 46-50.

The effects of transfers on investments in housing and private business wealth diminish with age. One explanation to this may be that credit constraints are more binding earlier in the life-cycle. I find evidence in favor of relaxed credit constraints explaining the treatment effects on individual investments and wealth accumulation: transfers lead to increased borrowing and lower interest rates.

The results illustrate that early financial transfers alter individual life trajectories by lowering the barriers associated with investments in durable goods, granting recipients access to opportunities that would otherwise have been out of reach. This implies that the documented shift towards earlier transfers (Piketty and Zucman, 2015) is likely to play an important role in shaping dynastic wealth disparities and intergenerational wealth correlations, particularly at the top.

REFERENCES

Adermon, Adrian, Mikael Lindahl, and Daniel Waldenström (2018). "Intergenerational wealth mobility and the role of inheritance: Evidence from multiple generations". In: *The Economic Journal* 128.612, F482–F513.

Andersen, Asger Lau, Niels Johannesen, Mia Jørgensen, and José-Luis Peydró (2021). *Monetary Policy and Inequality*. Working Paper.

Andersen, Asger Lau, Niels Johannesen, and Adam Sheridan (2020). "Bailing out the kids: new evidence on informal insurance from one billion bank transfers". In: *Available at SSRN 3624022*.

Andersen, Steffen and Kasper Meisner Nielsen (2011). "Participation constraints in the stock market: Evidence from unexpected inheritance due to sudden death". In: *The Review of Financial Studies* 24.5, pp. 1667–1697.

— (2012). "Ability or finances as constraints on entrepreneurship? evidence from survival rates in a natural experiment". In: *The Review of Financial Studies* 25.12, pp. 3684–3710.

Benetton, Matteo, Marianna Kudlyak, and John Mondragon (2022). "Dynastic Home Equity". In: *Available at SSRN 4158773*.

Bermejo, Vicente J, Miguel A Ferreira, Daniel Wolfenzon, and Rafael Zambrana (2022). "How do Cash Windfalls Affect Entrepreneurship? Evidence from the Spanish Christmas Lottery". In: *Journal of Financial and Quantitative Analysis*, pp. 1–47.

Black, Sandra E, Paul J Devereux, Fanny Landaud, and Kjell G Salvanes (2022). *The (un) importance of inheritance*. Tech. rep. National Bureau of Economic Research.

Black, Sandra E, Paul J Devereux, Petter Lundborg, and Kaveh Majlesi (2020). "Poor little rich kids? The role of nature versus nurture in wealth and other economic outcomes and behaviours". In: *The Review of Economic Studies* 87.4, pp. 1683–1725.

Boserup, Simon Halphen, Wojciech Kopczuk, and Claus Thustrup Kreiner (2014). "Stability and persistence of intergenerational wealth formation: Evidence from Danish wealth records of three generations". In.

— (2016). *Intergenerational wealth formation over the life cycle: Evidence from Danish wealth records 1984-2013*. Tech. rep. Working Paper, University of Copenhagen.

— (2018). "Born with a silver spoon? Danish evidence on wealth inequality in childhood". In: *The Economic Journal* 128.612, F514–F544.

Brandsaas, Eirik Eylands (2018). "Illiquid homeownership and the bank of mom and dad". In.

Cagetti, Marco and Mariacristina De Nardi (2006). "Entrepreneurship, frictions, and wealth". In: *Journal of political Economy* 114.5, pp. 835–870.

Carroll, Daniel R and Ross Cohen-Kristiansen (2022). "An Update on Wealth Mobility". In: *Economic Commentary* 2022-17.

Carroll, Daniel R and Nicholas Hoffman (2017). "New Data on Wealth Mobility and Their Impact on Models of Inequality". In: *Economic Commentary* 2017-09.

Charles, Kerwin Kofi and Erik Hurst (2003). "The correlation of wealth across generations". In: *Journal of political Economy* 111.6, pp. 1155–1182.

Chodorow-Reich, Gabriel, Plamen T Nenov, Vitor Santos, and Alp Simsek (2024). *Stock Market Wealth and Entrepreneurship*. Tech. rep. National Bureau of Economic Research.

Conley, Dalton and Rebecca Glauber (2008). "All in the family?: Family composition, resources, and sibling similarity in socioeconomic status". In: *Research in Social Stratification and Mobility* 26.4, pp. 297–306.

Daysal, N Meltem, Michael F Lovenheim, and David N Wasser (2023). *The intergenerational transmission of housing wealth*. Tech. rep. National Bureau of Economic Research.

De Nardi, Mariacristina (2004). "Wealth inequality and intergenerational links". In: *The Review of Economic Studies* 71.3, pp. 743–768.

Druedahl, Jeppe and Alessandro Martinello (2022). "Long-run saving dynamics: Evidence from unexpected inheritances". In: *Review of Economics and Statistics* 104.5, pp. 1079–1095.

Escobar, Sebastian, Henry Ohlsson, and Håkan Selin (2023). "Giving to the children or the tax-man?: Lessons from a Swedish inheritance tax loophole". In: *European Economic Review*, p. 104382.

Evans, David S and Boyan Jovanovic (1989a). "An estimated model of entrepreneurial choice under liquidity constraints". In: *Journal of political economy* 97.4, pp. 808–827.

— (1989b). "An Estimated Model of Entrepreneurial Choice under Liquidity Constraints". In: *Journal of Political Economy* 97.4, pp. 808–827.

Fagereng, Andreas, Magne Mogstad, and Marte Rønning (2021). "Why do wealthy parents have wealthy children?" In: *Journal of Political Economy* 129.3, pp. 703–756.

Fazzari, Steven, R Glenn Hubbard, and Bruce C Petersen (1987). *Financing constraints and corporate investment*.

Gentry, William M and R Glenn Hubbard (2000). *Entrepreneurship and household saving*.

Holtz-Eakin, Douglas, David Joulfaian, and Harvey S Rosen (1993). *Entrepreneurial decisions and liquidity constraints*.

Hurst, Erik and Annamaria Lusardi (2004). "Liquidity constraints, household wealth, and entrepreneurship". In: *Journal of political Economy* 112.2, pp. 319–347.

Hwang, Yebin (2020). "Does Inheritance Promote the Accumulation of Financial Knowledge?" In: *Available at SSRN 3746669*.

Kolodziejczyk, Christophe and Søren Leth-Petersen (2013). "Do First-Time House Buyers Receive Financial Transfers from Their Parents?" In: *The Scandinavian Journal of Economics* 115.4, pp. 1020–1045.

Kreiner, Claus Thustrup, Søren Leth-Petersen, and Louise Charlotte Willerslev-Olsen (2020). "Financial trouble across generations: Evidence from the universe of personal loans in Denmark". In: *The Economic Journal* 130.625, pp. 233–262.

Law, Danish (1982). *Cirkulære om værdiansættelsen af aktiver og passiver i dødsboer m.m. og ved gaveafgiftsberegning*. Tech. rep. CIR nr 185 af 17/11/1982.

— (1995). *Lov om afgift af dødsboer og gaver*. Tech. rep. LOV nr 426 af 14/06/1995.

Merton, Robert C (1969). "Lifetime portfolio selection under uncertainty: The continuous-time case". In: *The Review of Economics and Statistics*, pp. 247–257.

Nekoei, Arash and David Seim (2023). "How do inheritances shape wealth inequality? Theory and evidence from Sweden". In: *The Review of Economic Studies* 90.1, pp. 463–498.

Palomino, Juan C, Gustavo A Marrero, Brian Nolan, and Juan G Rodríguez (2022). "Wealth inequality, intergenerational transfers, and family background". In: *Oxford Economic Papers* 74.3, pp. 643–670.

Pfeffer, Fabian T and Alexandra Killewald (2018). "Generations of advantage. Multigenerational correlations in family wealth". In: *Social Forces* 96.4, pp. 1411–1442.

Piketty, Thomas and Gabriel Zucman (2015). "Wealth and inheritance in the long run". In: *Handbook of income distribution*. Vol. 2. Elsevier, pp. 1303–1368.

Poterba, James (2001). "Estate and gift taxes and incentives for inter vivos giving in the US". In: *Journal of Public Economics* 79.1, pp. 237–264.

Shiro, Ariel Gelrud, Christopher Pulliam, John Sabelhaus, and Ember Smith (June 2022). *Stuck on the Ladder: Intragenerational Wealth Mobility in the United States*. Accessed from Brookings Institution website. Brookings Institution.

Statsrevisorerne and Rigsrevisionen (2012). *Beretning om den offentlige ejendomsvurdering*. København.

Wold, Ella Getz, Knut Are Aastveit, Eirik Eylands Brandsaas, Ragnar Enger Juelsrud, and Gisle James Natvik (2024). *The Housing Channel of Intergenerational Wealth Persistence*. Working Paper 16/2023. Norges Bank.

Zucman, Gabriel (2023). *Inherited vs. Self-Made Wealth, Econ 133 – Global Inequality and Growth Lecture 19*. Lecture notes, University of California, Berkeley.

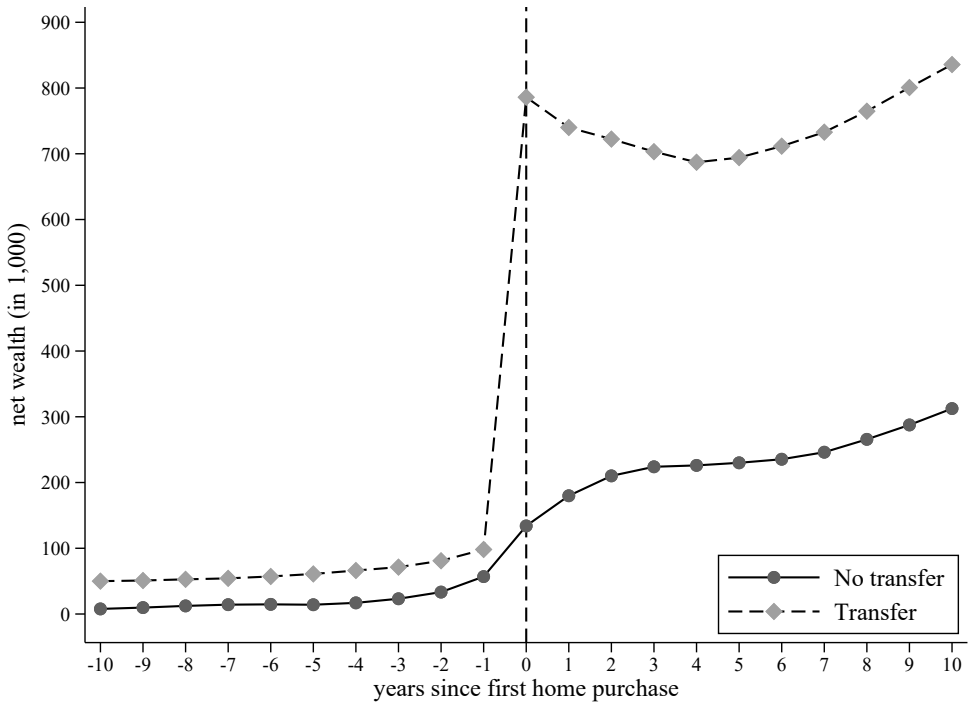


Figure 3: Net wealth (The flying start)

Notes: This figure shows the average net wealth for treated (Transfer) and controls (No transfer) 10 years before and after housing market entry. Net wealth is calculated as the sum of financial assets, deposits and housing wealth, minus liabilities, expressed in Danish kroner. Treated individuals are those who entered the housing market through a discounted intra-family forward sale. Controls are general entrants matched to the treated group based on age, year, gender, education, parental wealth, and urban area status in event year $j = -1$. The sample includes ages 18-50, years 1995-2020. Data is obtained from Danish administrative registers (Statistics Denmark).

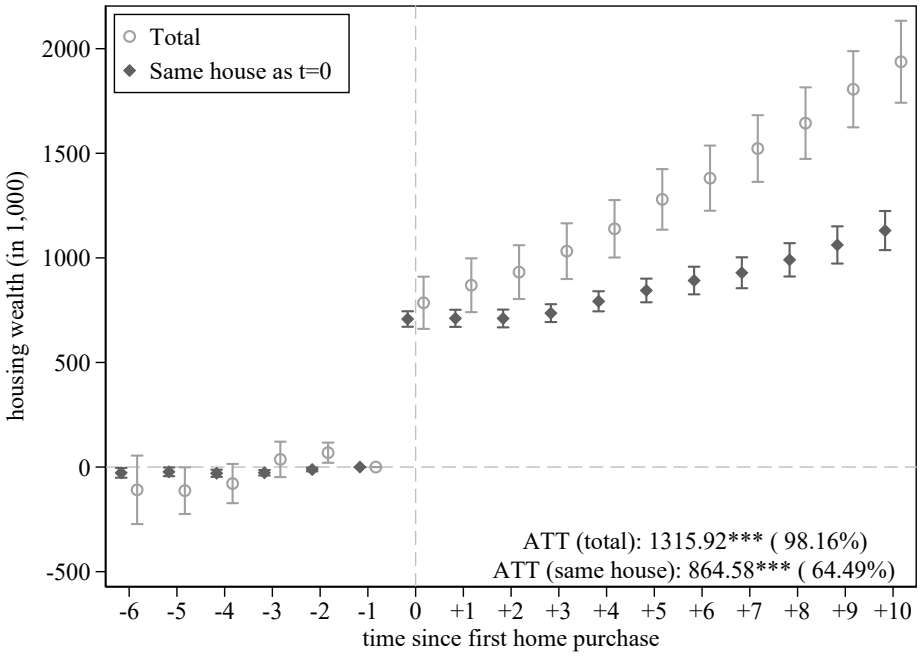


Figure 4: Effects on housing wealth

Notes: This figure shows the main estimation results from specification (4) for the main sample with 95% CIs, with housing wealth in Danish kroner as dependent variable. Circles capture the total effect on housing wealth. Diamonds show the effect on housing wealth for individuals who remain in the same apartment they purchased at time $t = 0$. Treated individuals are those who entered the housing market through a discounted intra-family forward sale. Controls are general entrants matched to the treated group based on age, year, gender, education, parental wealth, and urban area status in event year $j = -1$. The regression includes individual fixed effects. Included controls are education, marital status, income and property ownership share. The ATT, reported in the bottom right corner of each panel, is calculated as a weighted average of post-treatment period coefficients, with weights equal to the share of treated units in each event year. ***, **, * indicate statistical significance at the 0.1%, 1%, and 5% levels, respectively. Data is obtained from Danish administrative registers (Statistics Denmark).

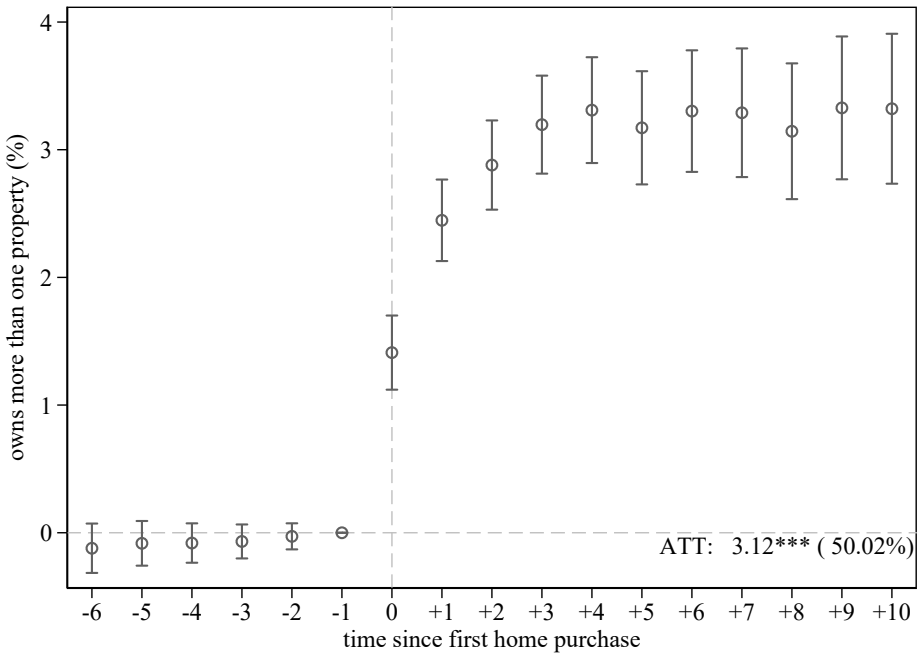


Figure 5: Effect on propensity to own more than one property

Notes: This figure shows the main estimation results from specification (4) for the main sample with 95% CIs. The dependent variable is a dummy variable which equals 100 if the individual owns more than one property. Treated individuals are those who entered the housing market through a discounted intra-family forward sale. Controls are general entrants matched to the treated group based on age, year, gender, education, parental wealth, and urban area status in event year $j = -1$. The regression includes year-age fixed effects and individual fixed effects. Included controls are education, marital status, income and property ownership share. The ATT, reported in the bottom right corner, is calculated as a weighted average of post-treatment period coefficients, with weights equal to the share of treated units in each event year. ***, **, * indicate statistical significance at the 0.1%, 1%, and 5% levels, respectively. Data is obtained from Danish administrative registers (Statistics Denmark).

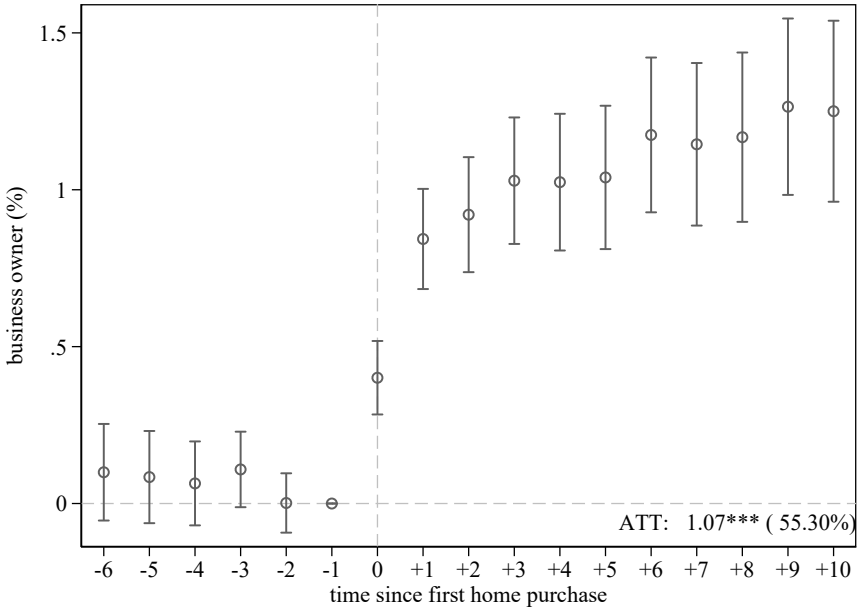
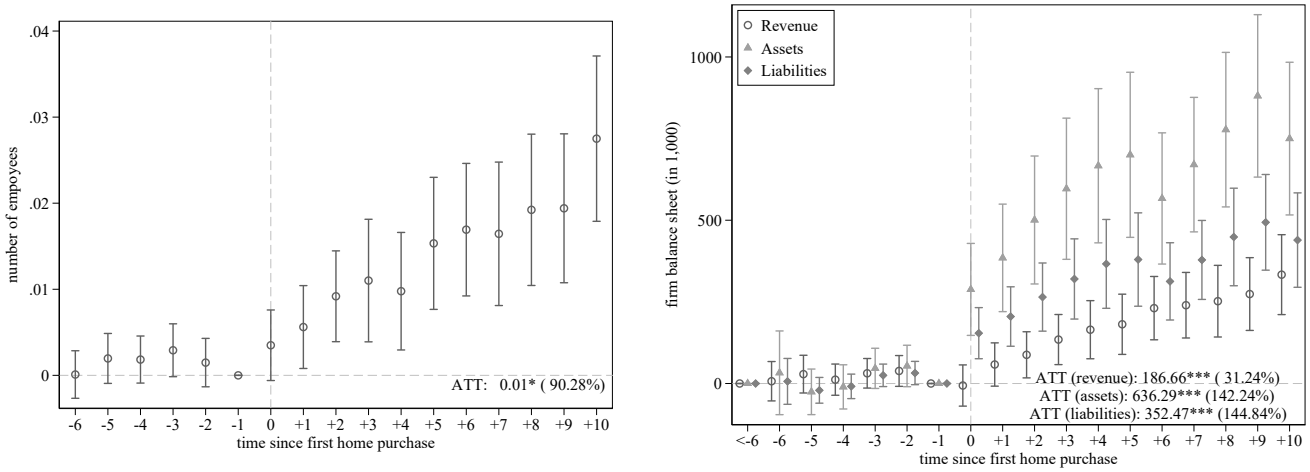


Figure 6: Main results, business ownership

Notes: This figure reports the main estimation results from specification (4) for the full sample with 95% CIs. The dependent variable is business ownership, defined as owning a firm with at least one (additional) employee. Treated individuals are those who entered the housing market through a discounted intra-family forward sale. Controls are general entrants matched to the treated group based on age, year, gender, education, parental wealth, and urban area status in event year $j = -1$. The regression includes year-age fixed effects and individual fixed effects. Included controls are education, marital status, income and property ownership share. The ATT, reported in the bottom right corner of each panel, is calculated as a weighted average of post-treatment period coefficients, with weights equal to the share of treated units in each event year. ***, **, * indicate statistical significance at the 0.1%, 1%, and 5% levels, respectively. Data is obtained from Danish administrative registers (Statistics Denmark).

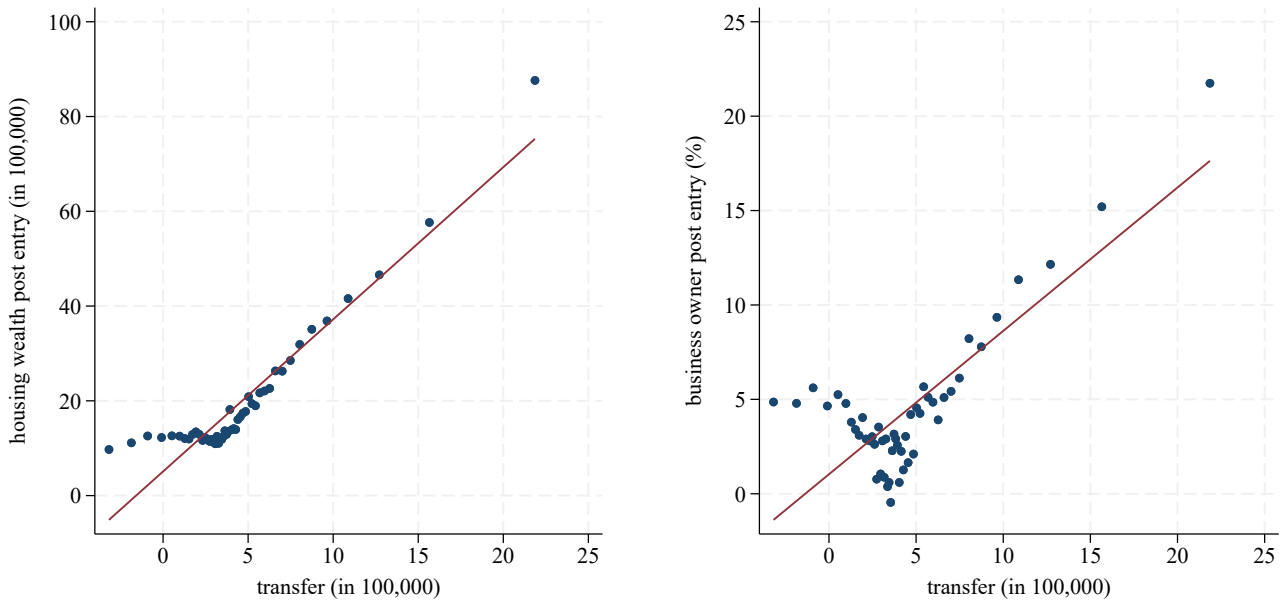


(a) Number of employees

(b) Firm performance

Figure 7: Effects on firm outcomes

The figure presents the main estimation results from specification (4) for the full sample with 95% CIs. Panel a shows the effect on the number of employees hired. Panel b depicts the effect on firm revenues, assets and liabilities, expressed in Danish kroner. ***, **, * indicate statistical significance at the 0.1%, 1%, and 5% levels, respectively. Data is obtained from Danish administrative registers (Statistics Denmark).

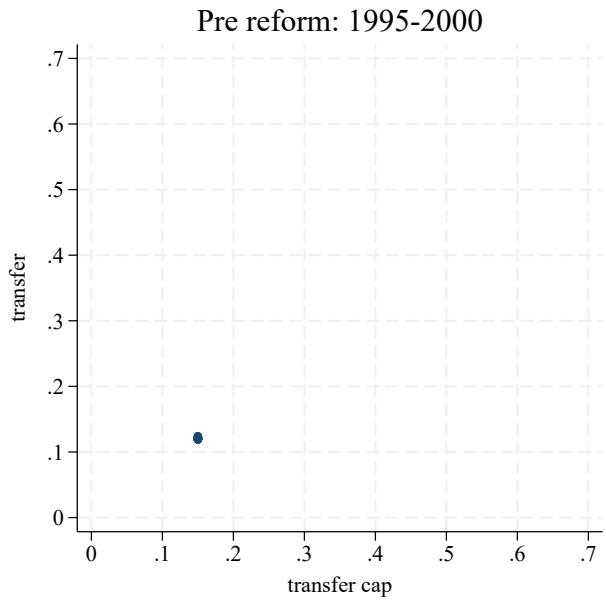


(a) Housing wealth

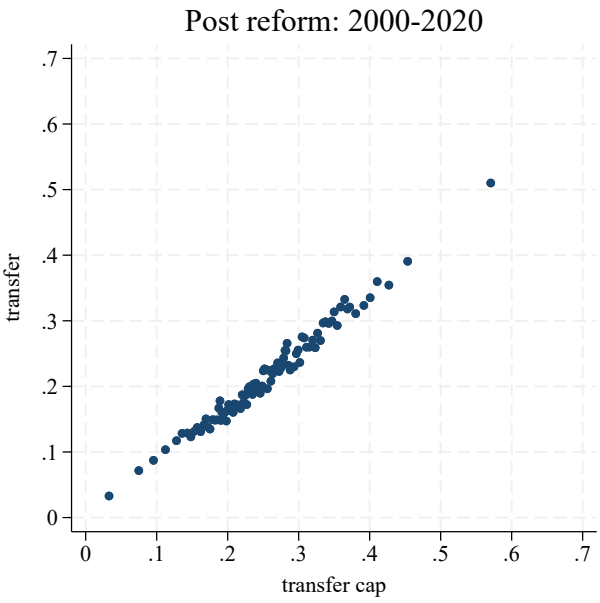
(b) Business ownership

Figure 8: Relationship between transfer size and outcome variables

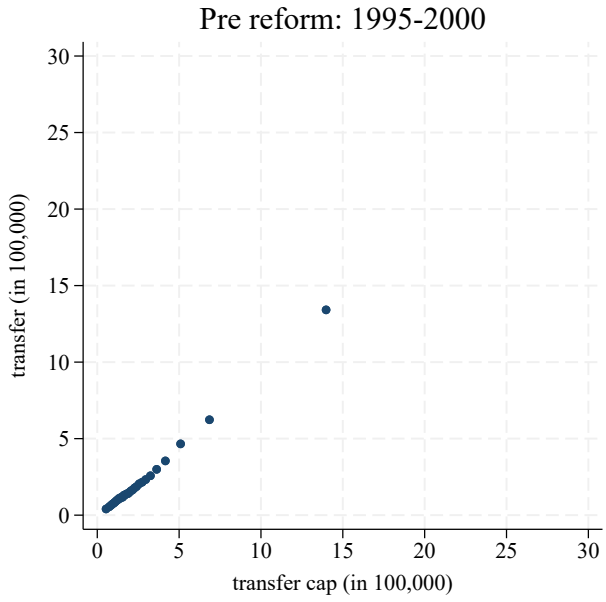
The figure shows the correlation between transfer size and the main outcome variables. Panel a presents the correlation between realized transfers and housing wealth, while panel b depicts the correlation with business ownership. ***, **, and * indicate statistical significance at the 0.1%, 1%, and 5% levels, respectively. The data come from Danish administrative registers (Statistics Denmark).



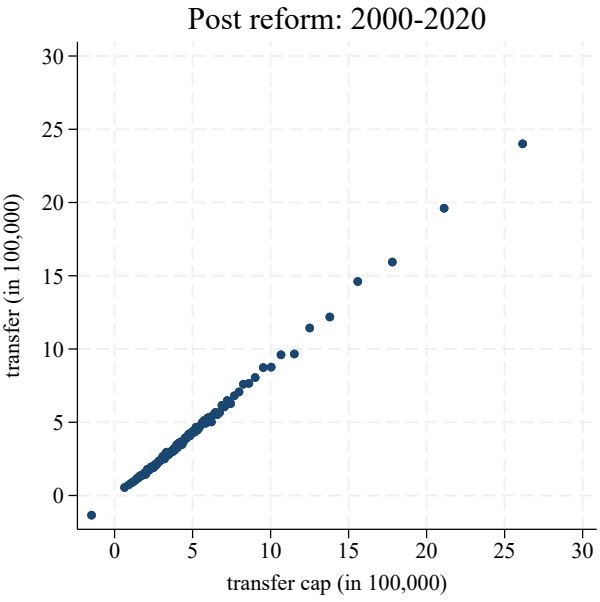
(a) Transfer cap (share of P^M)



(b) Transfer cap (share of P^M)



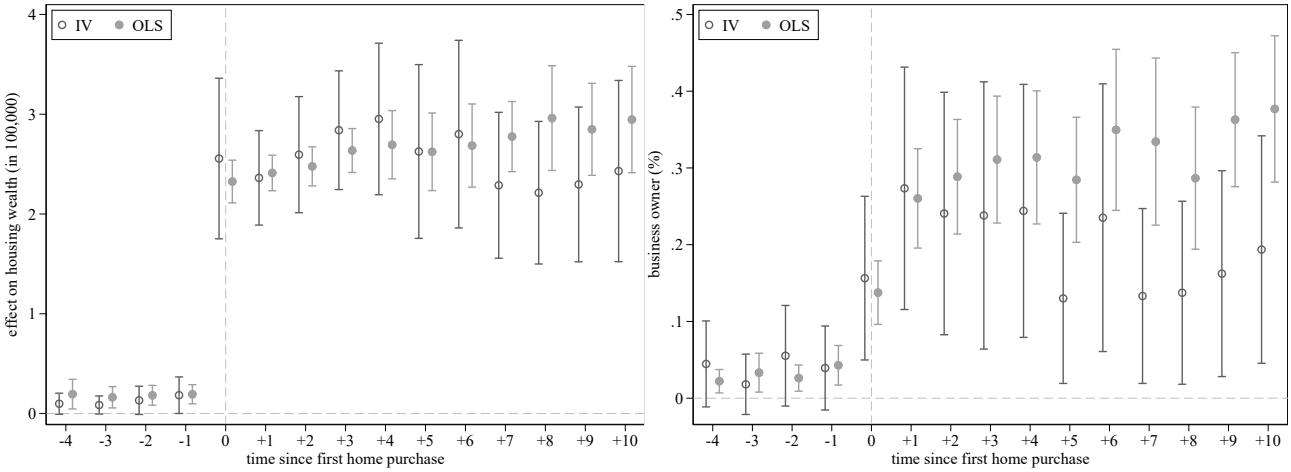
(c) Transfer cap (levels)



(d) Transfer cap (levels)

Figure 9: Policy variation in the instrument before and after reform

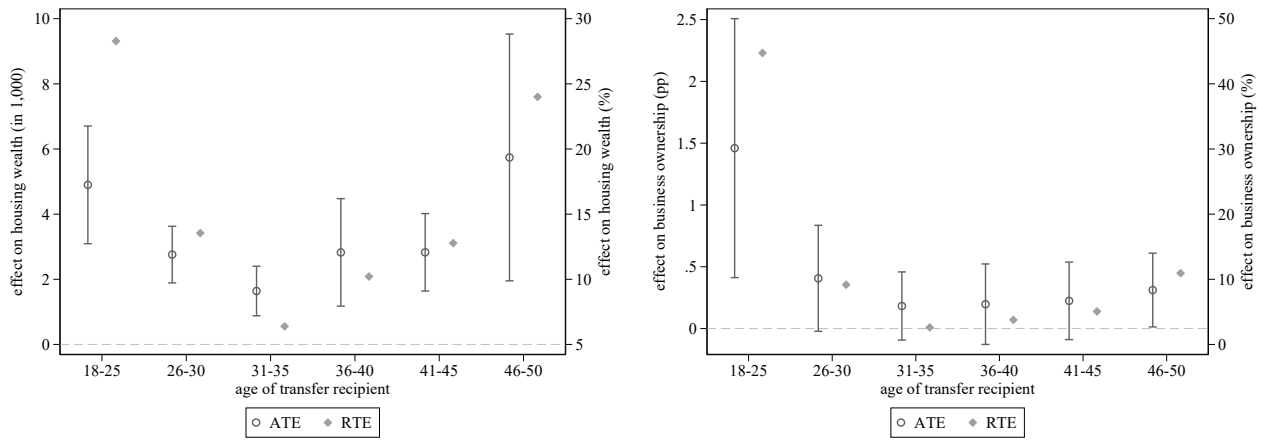
Notes: This figure shows binscatter plots of the relationship between the transfer cap and realized transfers. Panels (a) and (b) display the relationship with both variables normalized by the market price, while panels (c) and (d) show the relationship using the level variables. The sample includes 62,594 observations. The data come from Danish administrative registers (Statistics Denmark).



(a) Housing wealth (b) Business ownership

Figure 10: Dynamic IV results

Notes: This Figure reports the 2sls results from estimations of specification (8) separately for each event year in relation to the transfer. 95% confidence intervals are reported alongside the treatment effects. Panel a shows the causal effect of receiving 100,000 dkk larger transfers on for housing wealth in each event year, expressed in 100,000 dkk. Panel b shows the corresponding results for business ownership. The IV estimates (unfilled circles) reports the 2sls results from estimations of specification (8) on the restricted sample. The OLS result (filled circles) plots the uninstrumented estimates based on the full sample of entrants. Data is obtained from Danish administrative registers (Statistics Denmark).



(a) Housing wealth (b) Business ownership

Figure 11: Effects of transfers over the life-cycle

Notes: This Figure reports the effect of receiving 100,000 dkk larger transfers on housing wealth (panel a) and business ownership (panel b). Results are shown as average (cicles) and relative (diamonds) effects from estimations of specification (8) across entry-age brackets. 95% confidence intervals are reported alongside the treatment effects. Data is obtained from Danish administrative registers (Statistics Denmark).

	Population	Matched controls	Transfer recipients
	(1)	(2)	(3)
Age	29.51	30.20	30.20
Female (d)	0.49	0.44	0.44
Has college degree (d)	0.35	0.37	0.37
Big city	0.39	0.49	0.49
Parent in top income 20%	0.25	0.31	0.37
Parent in top wealth 20%	0.25	0.45	0.45
Salary income	288.24	286.78	245.55
Net wealth	12.38	56.94	98.20
Housing wealth	35.48	42.14	82.10
Financial wealth	108.88	137.80	207.18
Interest rate (%)	7.71	7.32	6.61
Debt outstanding	123.60	104.47	138.77
Business owner (d)	0.01	0.01	0.01
Own stocks (d)	0.19	0.24	0.27
House market price	1701.09	1862.94	2246.30
Parent transfer sum			712.76
Number of individuals	806,840	38,910	38,910
Number of observations (full sample)		622,560	622,560

Table 1: Descriptive averages

Notes: The table presents averages of financial and demographic variables across three samples in event year $t = -1$: all entrants, the matched control sample, and transfer recipients. Variables are observed at an annual frequency. The sample is limited to individuals aged 18-50 during the years 1995-2020. Firm assets and revenues are available for the period 2000-2020. All financial variables are expressed in thousands of DKK and are inflated to 2020 levels. Interest rates are estimated following Kreiner, Leth-Petersen, and Willerslev-Olsen, 2020 as end-of-year aggregate interest rate payments divided by outstanding debt. Data is obtained from Danish administrative registers (Statistics Denmark).

Dependent variable: Realized transfers	(1)
Transfer cap	0.957***
	(0.018)
N	5093

Standard error in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2: Results 2SLS, first stage

Notes: The table presents the results from the first stage regression of specification (8). The dependent variable is the realized wealth transfer associated with an intra-family forward sale. The instrument (regressor) is the transfer cap $Transfer_{it}^{max}$ equalling the level of maximum transfers associated with a particular dwelling. Obs: 62594. Data is obtained from Danish administrative registers (Statistics Denmark).

	Full sample	IV sample		
	(1)	(2)	(3)	(4)
Outcome: Housing wealth	OLS	OLS	OLS	2SLS
Transfer	2.572***	3.080***	2.854***	2.901***
	(0.015)	(0.557)	(0.493)	(0.508)
N	40666	5093	5093	5093
R^2	0.340	0.375	0.486	0.452
Individual controls	Yes	No	Yes	Yes
Time and Age FE	Yes	No	Yes	Yes
IV	No	No	No	Yes

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3: Effects on housing wealth

Notes: The table presents estimation results from regression specifications (6) and (9), capturing the effect of transfers. The dependent variable is the average 10-year housing wealth after receiving the transfer, expressed in 100,000 dkk. Column (1) shows OLS results for the full sample of transfer recipients. Columns (2) and (3) show OLS results for the restricted IV sample. Column (4) presents results from the regression on the restricted sample using the instrumented transfer amount with the transfer cap T_i^{max}. Both transfers and housing wealth are expressed in 100,000 dkk. The data come from Danish administrative registers (Statistics Denmark).

	Full sample	IV sample		
	(1)	(2)	(3)	(4)
Outcome: Business ownership	OLS	OLS	OLS	2SLS
Transfer	0.310***	0.392***	0.263***	0.298***
	(0.033)	(0.089)	(0.078)	(0.090)
N	40665	5093	5093	5093
R^2	0.176	0.040	0.199	0.161
Individual controls	Yes	No	Yes	Yes
Time and Age FE	Yes	No	Yes	Yes
IV	No	No	No	Yes

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Effects on business ownership

Notes: The table presents estimation results from regression specifications (6) and (9), capturing the effect of transfers. The dependent variable is a dummy which is equal to one if the individual was ever a business owner in the 10 years after the transfer. Column (1) shows OLS results for the full sample of transfer recipients. Columns (2) and (3) show OLS results for the restricted IV sample. Column (4) presents results from the regression on the restricted sample using the instrumented transfer amount with the transfer cap T_i^{max}. Both transfers and housing wealth are expressed in 100,000 dkk. The data come from Danish administrative registers (Statistics Denmark).

	Full sample	IV sample		
Panel a	(1)	(2)	(3)	(4)
Outcome: Total debt	OLS	OLS	OLS	2SLS
Transfer	1.093***	1.193***	0.936***	1.015***
	(0.074)	(0.225)	(0.187)	(0.220)
N	40665	5093	5093	5093
R^2	0.274	0.124	0.334	0.297
Panel b	(1)	(2)	(3)	(4)
Outcome: Interest rate	OLS	OLS	OLS	2SLS
Transfer	-0.037***	-0.039***	-0.033***	-0.033***
	(0.003)	(0.006)	(0.005)	(0.006)
N	39207	5014	5013	5013
R^2	0.472	0.051	0.177	0.083
Individual controls	Yes	No	Yes	Yes
Time and Age FE	Yes	No	Yes	Yes
IV	No	No	No	Yes

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5: Credit channel: Effects on debt and interest rate

Notes: The table presents estimation results from regression specifications (6) and (9), capturing the effect of transfers on credit variables. Panel a shows results when the dependent variable is the average 10-year total debt expressed in 100,000 dkk. Panel b shows the corresponding results for the interest rate. Interest rates are estimated following Kreiner, Leth-Petersen, and Willerslev-Olsen, 2020 as end-of-year aggregate interest rate payments divided by outstanding debt. Column (1) shows OLS results for the full sample of transfer recipients. Columns (2) and (3) show OLS results for the restricted IV sample. Column (4) presents results from the regression on the restricted sample using the instrumented transfer amount with the transfer cap T_i^{max}. Transfers are expressed in 100,000 dkk. The data come from Danish administrative registers (Statistics Denmark).