INTERGENERATIONAL WEALTH MOBILITY

HOW POLICY CHANGES AFFECT INTERGENERATIONAL WEALTH MOBILITY IN SWEDEN

FELIX SVENSSON

JOHAN HAGBERG

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Intergenerational wealth mobility: How policy changes affect intergenerational wealth mobility in Sweden

Abstract:

We use a life-cycle simulation model based on Swedish administrative data to quantify how wealth taxation affects intergenerational wealth mobility. We find that a 1 percentage point increase in wealth tax reduces the mean wealth gap between the Very Rich and the Non-Rich by 6.2%. However, when we assign counterfactual behavioral parameters, risk aversion, time preference, and bequest motives, from the Non-Rich group to all socioeconomic groups, the effect of the tax drops to 0.2%. This shows that persistent wealth accumulation is primarily driven by inherited behavioral traits rather than inherited wealth alone and that the effect of wealth tax on wealth accumulation gaps is limited. Even under a flat 5% wealth tax, wealth accumulation among the Very Rich remains significantly higher. This suggests that while wealth taxation can reduce absolute disparities, long-run wealth persistence is primarily driven by behavioral differences rather than taxation alone.

Keywords:

Intergenerational wealth mobility, Wealth taxes, Behavioral heterogeneity, Life-cycle simulation, Wealth accumulation

Authors:

Felix Svensson (25769)
Johan Hagberg (25776)

Tutors:

Mehran Ebrahimian, Assistant Professor, Department of Finance

Examiner:

Ramin P Baghai, Professor, Department of Finance

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1. Introduction

Wealth disparities are a longstanding characteristic of modern economies, with significant implications for social mobility and economic policy. Intergenerational wealth mobility plays a crucial role in determining long-term economic opportunity and inequality. The aim of this paper is to evaluate how policy changes regarding taxation influences intergenerational wealth mobility, using a structurally calibrated life-cycle model grounded in Swedish data.

While Sweden is often recognized as having relatively high intergenerational mobility compared to other countries (Black and Devereux, 2011), wealth persistence remains substantial. Estimates suggest that Sweden's intergenerational wealth elasticity is approximately 0.37, meaning that 37% of parental wealth differences persist into the next generation (Ebrahimian and Sodini, 2024). Although some degree of mobility exists, more than 20% of children from the lowest wealth quintile move to the top two quintiles, while 25% of children from wealthy parents fall into the lowest two quintiles, there is evidence that Sweden's wealth concentration has increased in recent decades (Ebrahimian and Sodini, 2024; Roine and Waldenström, 2008).

One driver of this trend is the shift in tax policy over the past 30 years. The abolition of Sweden's wealth tax in 2007 has been linked to rising wealth inequality, with the wealth-to-income ratio increasing to 6.85, higher than Germany (6.16) and Finland (5.11) (Black, Devereux, Landaud, and Salvanes, 2022). This trend aligns with broader international patterns, where wealthier households consistently earn higher returns on investment, exacerbating wealth disparities over time (Benhabib, Bisin, and Luo, 2015). Notably, research has shown that capital income risk and differences in asset returns contribute significantly to wealth concentration at the top, reinforcing long-term persistence (Gabaix, Lasry, Lions, and Moll, 2016).

Despite extensive research on wealth inequality, most analyses focus on wealth concentration rather than mobility. While intergenerational mobility has been explored in various national contexts, particularly in comparative studies between the United States, the United Kingdom, and the Nordic countries, there is limited research on the specific relationship between intergenerational wealth mobility and tax policy in Sweden. Black and Devereux (2011) highlight the role of inheritances, investment behavior, and tax structures in wealth transmission, yet the mechanisms through which tax policies influence intergenerational wealth persistence remain insufficiently explored. Furthermore, studies on wealth accumulation suggest that labor income, rather than inheritance, is the dominant driver of wealth for most individuals, raising questions about the relative importance of taxation in shaping wealth mobility (Black et al., 2023).

To address this gap, we build on the empirically calibrated framework by Ebrahimian and Sodini (2024), which is itself grounded in the heterogeneous-agent model developed by Benhabib, Bisin, and Luo (2011). We use this structure to simulate how counterfactual wealth tax regimes affect long-run wealth persistence in Sweden. The model incorporates key drivers of wealth accumulation (labor income, bequests, and returns on investment) and accounts for heterogeneous preferences across socioeconomic groups, including

differences in risk aversion, time preference, and bequest motives. This life-cycle simulation framework allows us to explore how tax policy interacts with behavioral traits to shape intergenerational mobility outcomes. In doing so, we aim to contribute to the limited body of research that explicitly links tax structures to intergenerational wealth dynamics in a Swedish context.

The model also incorporates portfolio choice across multiple asset classes, distinguishing between risky and risk-free investments, with returns calibrated to reflect both systematic and idiosyncratic risk. Labor income profiles and initial endowments are allowed to vary by background group, capturing the influence of human capital investment and early life transfers. Wealth accumulation is thus endogenously determined by a combination of individual decisions, inherited financial resources, and behavioral traits shaped by socioeconomic background.

Wealth evolution in our model is shaped by individual consumption-behavior, risk-taking and savings attitudes, portfolio allocation, and capital returns. These individual-level dynamics are aggregated to assess group-level outcomes, such as intergenerational wealth elasticity and mobility. Using the empirically calibrated framework developed by Ebrahimian and Sodini (2024), we simulate counterfactual wealth tax scenarios to examine how taxation may influence the persistence of wealth across generations in Sweden.

To put our work into a relevant context we will provide a short history of wealth and tax policy in Sweden. Sweden's historical trajectory in wealth distribution and taxation makes it a compelling case for studying intergenerational wealth mobility. Once among the most unequal countries in Europe, Sweden had a hierarchical society where wealth dictated political influence through property-based voting rights (Piketty, 2014).

During the 20th century, the Swedish Social Democratic Party leveraged wealth data to implement progressive taxation, significantly reducing inequality (Piketty, 2014). However, economic turmoil in the 1970s, driven in part by the oil crises, prompted a shift toward neoliberal policies inspired by Milton Friedman. This led to deregulation, privatization, and reduced state intervention (Schön, 2010). The shift accelerated in the 1990s and early 2000s, resulting in key tax policy changes:

- 1990/91: Separation of capital gains tax from labor income tax.
- 1995: Introduction of the high-income surtax (*värnskatt*).
- 2004: Abolition of the inheritance tax.
- 2007: Abolition of the wealth tax.
- 2008: Replacement of real estate tax with a lower municipal property fee.

These reforms marked a shift toward capital-friendly policies, contributing to rising wealth concentration. Empirical evidence suggests a U-shaped trend in inequality, with declining wealth disparities in the mid-20th century followed by a reversal in recent decades (Roine and Waldenström, 2008). Given this background, this paper examines the impact of tax policy changes on intergenerational wealth mobility in Sweden.

We find that wealth taxes have a moderating effect on the wealth gap between the Very Rich and the Non-Rich, as well as between the Rich and the Non-Rich. Wealth gap elasticity appears to be inversely related to tax rates, where a one percentage point increase in the wealth tax reduces the wealth gap by approximately 6.2% and 1.4% for the respective socioeconomic groups. This can be interpreted as an increase in flexibility within socioeconomic segmentation, leading to improved wealth mobility.

When testing counterfactual values for the behavioral parameters, γ (risk aversion), χ (bequest motives), and ρ (time preference), we assign them the values of the Non-Rich group. The resulting drop in the wealth gap is significant, reinforcing the conclusion by Ebrahimian and Sodini (2024): it is not only the level of inherited wealth that matters, but also the behavioral traits that drive persistent wealth accumulation.

While our model simulates clear mechanisms for wealth mobility, it also underscores the persistent challenge of addressing the wealth gap. From a policy perspective, it is difficult to directly influence the behavioral drivers of wealth accumulation. Therefore, tools such as wealth taxation may present a more feasible solution. That said, the debate remains as to whether efforts should focus on reducing wealth at the very top or instead on improving the capacity of the lower-wealth groups to accumulate wealth.

Finally, our simulations show that even under hypothetically high wealth tax rates of 5%, which are unrealistic in an empirical context, the wealth gap continues to widen over a 25-year period. This underscores the powerful compounding effect of wealth accumulation among the Very Rich.

2. Related Works

Our primary empirical foundation is Ebrahimian and Sodini (2024), who estimate preference heterogeneity using Swedish administrative data. Their model captures how inherited attitudes toward saving and risk influence long-run wealth accumulation and intergenerational persistence. We replicate and extend their framework by incorporating wealth tax policy changes into their model. In doing so, our contribution lies in adapting their preference-driven model to evaluate how taxation reshapes the distributional trajectory of wealth across generations.

An important empirical complement is Black et al. (2023, who decompose individual wealth accumulation into labor income, capital gains, and inheritances. Their findings suggest that while inherited wealth plays a role, it is far from the dominant factor, particularly for most of the population. This is consistent with Black et al. (2022), who demonstrate that the importance of inheritances for explaining the observed wealth distribution is often overstated. Instead, both papers point toward the need to understand behavioral and structural mechanisms behind lifetime accumulation. Our study contributes to this literature by structurally modeling the implications of such behavioral mechanisms, captured through preference heterogeneity, and analyzing how they interact with tax policy to shape long-run wealth dynamics. Black and Devereux (2011) offer a broader overview of the empirical literature on intergenerational mobility and its persistence across time and countries. Black et al. (2023) focus on Norway, a country which shares many structural and institutional similarities with Sweden, including a comprehensive welfare state, detailed administrative data, and relatively equal opportunity structures, making it a strong empirical reference point for our Swedish setting. Our contribution builds on these insights by applying a similar empirical foundation to Sweden and exploring how institutional design, in particular, taxation, shapes wealth mobility outcomes.

On the methodological side, our paper connects to the simulation-based literature that models wealth dynamics through structurally calibrated life-cycle models. Hubmer, Krusell, and Smith (2021) build a structural model to analyze the evolution of U.S. wealth inequality over time, incorporating heterogeneity in saving behavior, investment returns, and income risk. Their work supports our approach of using preference heterogeneity, estimated from real-world data to simulate the long-run distributional outcomes of different policy settings. Our contribution lies in applying this approach to a Swedish context, using preference parameters drawn from Swedish administrative data, rather than assumed or estimated within the model. Furthermore, our data source originates from the Swedish administrative register data first used in Calvet, Campbell, and Sodini (2007), who provide evidence of systematic heterogeneity in household investment behavior and risk exposure. Their findings justify the use of type-specific parameters in our model to capture differences in financial behavior across population subgroups. We extend this by examining how these differences affect intergenerational wealth dynamics under varying policy regimes.

Finally, our work contributes to the literature on taxation and wealth mobility. Benhabib, Bisin, and Luo (2019) develop a quantitative model of wealth distribution and social

mobility, emphasizing the role of stochastic returns and saving behavior in generating persistent inequality. Their model demonstrates that small differences in risk profiles and saving behavior can lead to large differences in mobility outcomes, highlighting the importance of incorporating behavioral heterogeneity in structural models of wealth accumulation, an approach we adopt in our own simulation framework. In addition, Benhabib, Bisin, and Zhu (2011) analytically characterize how fiscal policies, particularly capital income and estate taxation, impact the stationary distribution of wealth. We adopt a similar framework to simulate counterfactual policy environments and evaluate how tax changes affect the intergenerational wealth mobility under heterogeneous preferences. Our addition lies in applying this logic to a calibrated Swedish model developed by Ebrahimian and Sodini (2024) and evaluating how a range of realistic tax reforms influence wealth persistence across generations.

3. Data

This paper adopts the wealth accumulation model and utilizes the estimated parameters presented by Ebrahimian and Sodini (2024). Their work, which uses Swedish administrative register data to recover individual preferences and other model components, forms the direct empirical basis for our simulations. We do not access or manipulate the underlying microdata ourselves; instead, we use their complete model specification, and the summarized parameter estimates and data moments derived from their analysis as inputs for our simulation model. The methods Ebrahimian and Sodini (2024) used to obtain these parameters and data moments are summarized below, for a comprehensive explanation, readers are referred to their original paper. Our empirical method, which utilizes these parameters, is detailed in Section 4.

The data used by Ebrahimian and Sodini (2024) originates from several linked administrative registers maintained by Statistics Sweden. They have used the Wealth, Income and Demographic Registers (which contain annual information on financial assets, real estate, liabilities, labor and capital income, and household composition) and the Multi-Generation Register (which enables linkages between individuals and their biological parents, facilitating intergenerational analysis). Their study is limited to the 1999–2007 period, during which detailed, asset-level wealth data are available for the full population. In addition, income and demographic variables are observed from 1983 to 2016, allowing for long-run assessments of income potential, labor market attachment, and background characteristics.

The sample comprises more than 4 million individuals and spans multiple birth cohorts. During the observation period, Sweden maintained a wealth tax that required detailed and mandatory asset reporting, including securities, which improves the accuracy of measured household wealth. To capture intergenerational heterogeneity, individuals are classified into 108 socio-economic subgroups based on three background characteristics: Parental wealth background, parental industry sector and parental education level.

This paper focuses on variation by parental wealth background, which is constructed by ranking parents into three groups according to taxable net wealth when their children are in early adulthood. The three groups are defined as:

- Non-rich: This group consists of individuals whose parents were not subject to the wealth tax (approximately 91% of the sample).
- Rich: This category includes individuals whose parents were among the 75% lowest wealth-tax-paying households (approximately 6.8% of the sample).
- Very-rich: This group comprises individuals whose parents fell within the top 25% of wealth-tax-paying households (approximately 2.2% of the sample).

The estimation of behavioral preferences is conducted using a minimum distance estimation approach. The authors simulate life-cycle behavior (savings, consumption, and investment) under different values of the preference parameters and select the set that minimizes the distance between simulated outcomes and observed group-level moments. The empirical moments used for identification include:

- The average share of risky assets in household portfolios, used to identify risk aversion.
- The consumption-to-wealth ratio in early adulthood, used to identify the time discount factor.
- The consumption-to-wealth ratio in later adulthood, used to identify the strength of bequest motives.

The estimated preference parameters (risk aversion (γ), time discount factor (ρ), and bequest motive (χ)) are reported in summary form in Tables 4 and 5 of Ebrahimian and Sodini (2024). These parameters differ across wealth background groups and are estimated non-parametrically, allowing for heterogeneity in financial behavior based on socioeconomic origin. A short summary of the key estimated parameters from Ebrahimian and Sodini (2024) Table 5 follows below in Table 1:

Table 1: Preference Parameters by Wealth Background, with Controls

Risk Aversion (γ)				
Non-rich	10.31	10.31	10.31	10.31
Rich	-3.58	-3.38	-3.35	-3.05
Very rich	-6.87	-6.56	-6.4	-5.96
Controlling for Education	No	Yes	No	Yes
Controlling for Business Sector	No	No	Yes	Yes
Impatience (ρ)				
Non-rich	0.097	0.097	0.097	0.097
Rich	-0.039	-0.023	-0.035	-0.019
Very rich	-0.08	-0.057	-0.074	-0.05
Controlling for Education	No	Yes	No	Yes
Controlling for Business Sector	No	No	Yes	Yes
Bequest Motives (χ)				
Non-rich	14.27	14.27	14.27	14.27
Rich	5.75	5.84	5.56	5.52
Very rich	12.82	12.94	12.42	12.37
Controlling for Education	No	Yes	No	Yes
Controlling for Business Sector	No	No	Yes	Yes

Note: Table 1 illustrates how estimated preference parameters (risk aversion γ, impatience ρ, and bequest motives χ) differ by individuals' wealth background. It reports the weighted average parameter for the Non-Rich group and the estimated deviations for Rich and Very-Rich groups. These are based on weighted regressions across 108 socio-economic groups (formed by wealth background, education, and business sector), with group size as weights. Columns 2-5 detail results with varying controls for education and business sector fixed effects.

Crucially, for the simulation model employed in this paper, preference parameters (γ, ρ, χ), the structural form of the wealth accumulation equation, and all its components (namely the risk-free rate (rf), expected and realized excess returns (er_t, μ), the variance-covariance matrix of return shocks (Ω), human capital (h_t), intergenerational transfers (g_t), labor income (y_t), and direct parental transfers (p_t)) are directly taken from the data, definitions, and estimations provided in Ebrahimian and Sodini (2024). Our analysis therefore directly operationalizes their original datasets, containing pre-processed panel data including values for all our variables across all ages (time-periods) and socio-economic groups.

Although we do not have access to the underlying micro-level data, the administrative records used by Ebrahimian and Sodini (2024) offer extensive population coverage and detailed measurement of financial variables. The authors' estimation procedure is thoroughly documented and designed to ensure internal consistency between the structural model and the observed data.

One limitation of relying on summarized data moments is that it constrains the scope for model validation and sensitivity analysis. Specifically, we cannot perform robustness checks based on alternative specifications or subsamples. However, this limitation is mitigated by the breadth and precision of the underlying data, as well as the methodological rigor of the estimation procedure. By running simulations on these empirically grounded parameters, we aim to capture key features of wealth dynamics and generate policy-relevant insights on intergenerational mobility.

4. Empirical Method

Our simulation model builds on the wealth accumulation framework presented by Ebrahimian and Sodini (2024). In this model, the future wealth w_{t+1} depends on capital returns and non-capital income sources such as labor, transfers, and pensions. The original formulation is given by:

$$w_{t+1} = \left(1 + r_f + er_t + \frac{1'\Omega^{-1}\mu}{\gamma} - a_t\right) w_t + \left(er_t + \frac{1'\Omega^{-1}\mu}{\gamma} - a_t\right)(h_t + g_t) + y_t + p_t \quad (1)$$

Where:

- w_{t+1} is the wealth at time $t+1$.
- r_f is the risk-free interest rate at time t.
- er_t is the realized aggregate excess return on risky assets for a group at time t.
- Ω is the variance-covariance matrix of return shocks for risky asset classes.
- μ represents a vector of expected excess returns on risky asset classes.
- γ is the risk aversion coefficient.
- a_t is the consumption-to-wealth ratio.
- w_t is the wealth at time t.
- h_t is human capital defined as the present value of future labor earnings, including pension income, at time t.
- g_t represents the present value of future inheritance and gifts from parents at time t.
- y_t is the labor income at time t.
- p_t is the direct transfer from parents at time t.

In our simulation model, individuals make forward-looking decisions based on their expectations about the future. The vector of expected excess returns (μ) on different risky asset classes is a key parameter influencing their optimal portfolio choices and, consequently, their consumption-saving decisions (a_t). However, the actual wealth accumulated in any given period depends on the realized aggregate excess return (er_t) for that period, which reflects the actual market performance above the risk-free rate and includes unpredictable shocks. Thus, while μ guides optimal behavior, er_t (further individualized with idiosyncratic shocks in our simulation) drives the period-by-period changes in wealth. For the complete mathematical derivations of these relationships and the underlying continuous-time model, readers are referred to Ebrahimian and Sodini (2024, particularly Sections 2.5, 4, and Appendix B).

The consumption-to-wealth ratio, a_t, dictates the fraction of an individual's total resources ($w_t + h_t + g_t$) that is consumed at each time t. It incorporates the subjective time discount rate, ρ, through an effective discount rate $\rho\sim$, where:

$$\tilde{\rho} := \frac{\rho - (1-\gamma)\tilde{r}}{\gamma} \quad (2)$$

and includes the bequest motive, χ, directly in its age-dependent formula:

$$a(t;\rho,\chi) := \frac{\tilde{\rho}}{1+(\chi\tilde{\rho}-1)e^{-\tilde{\rho}(T-t)}} \tag{3}$$

Essentially, greater patience (a lower ρ) and a stronger desire to leave bequests (a higher χ) generally result in a lower a_t, thereby encouraging more saving. For the complete derivation please refer to Ebrahimian and Sodini (2024, Section 4.3 and Appendix B).

The model categorizes the population into three socioeconomic groups: Non-rich, Rich, and Very Rich. Each group is characterized by a distinct level of initial wealth w_0 and population size N. Each group is weighted, where the respective weights correspond to the number of individuals in that group, scaled to reflect millions of individuals. These group weights are used to simulate many individual agents within each group, thereby capturing heterogeneity and preserving representativeness of the Swedish wealth distribution.

As established in the model, μ represents the vector of expected excess returns on various risky asset classes. The term $er_{g,t}$ in our simulation represents the realized aggregate excess return for group g in period t. To introduce within-group variability in investment outcomes and thereby more closely replicate realistic investment scenarios, we model individual realized excess returns, $\tilde{er}_{i,t}$, by adding an idiosyncratic shock to this group-level realized excess return. Specifically, we draw individual excess returns from a normal distribution around the group's realized excess return:

$$\begin{aligned} \tilde{er}_{i,t} &= er_{g,t} + \varepsilon_{i,t} \\ \varepsilon_{i,t} &\sim \mathcal{N}(0,\sigma^2) \\ \sigma &= 0.2 \end{aligned} \tag{4}$$

This approach ensures our model captures real-world heterogeneity in investment returns and the idiosyncratic shocks that individual investors are subject to when investing. This, in turn, increases the representativeness of our results. Setting σ to 0.2 aligns with the average level of idiosyncratic risk reported in Calvet et al. (2007), where volatility of household-level portfolio returns ranges around 18–22% depending on how assets are treated.

The simulation horizon t_p covers 25 periods, corresponding to the available input risk-free rate data. This reflects an individual from the age of 25 until the age of 50. Simulating over a longer duration, for example 40 periods to represent the full working life until the standard retirement age of 65, would be informative. This extended timeframe would capture the entire period during which individuals typically accumulate wealth through their productive careers. However, extending the simulation horizon is constrained by the

available input data, as key variables such as the risk-free rate are limited to the initial 25 periods.

To assess the impact of fiscal instruments, we extend the baseline simulation by incorporating a flat wealth tax on net wealth exceeding a predefined level. A vector of wealth tax rates, $\tau_w \in \{0\%, 1\%, 2\%, 3\%, 4\%, 5\%\}$, is defined exogenously. A fixed threshold, $w_{threshold}$ = 1.5 MSEK, is established, and only wealth above this amount is subject to the tax. The tax amount for period $t+1$ (Tax_{t+1}) and the resulting post-tax wealth (w^{after}_{t+1}) are defined as:

$$\begin{aligned} \text{Tax}_{t+1} &= \tau_w \cdot \max\left(0, w^{\text{pre}}_{t+1} - w^{\text{threshold}}\right) \\ w^{\text{after}}_{t+1} &= w^{\text{pre}}_{t+1} - \text{Tax}_{t+1} \end{aligned} \tag{5}$$

As Bastani and Waldenström (2023) discuss, it is unrealistic to assume that 100% of an individual's total wealth constitutes taxable wealth under typical wealth tax regimes. Such regimes historically include numerous exemptions and specific valuation rules (e.g. using tax-assessed values for real estate or applying discounts to shares) which narrow the tax base compared to total market-value net worth. While the reasons for this discrepancy are well understood, our review of the prior literature did not identify specific empirical research quantifying the precise ratio of taxable wealth to total wealth for the relevant periods in Sweden. Consequently, due to this data limitation, our current simulation applies the wealth tax to the modelled total wealth, recognizing this as a simplifying assumption that likely overstates the actual tax base.

The simulation proceeds through nested loops: for each wealth tax rate τ_w, for each socioeconomic group g, and for each individual $i \in N_g$ within that group, wealth is updated over T_p = 25 time periods. Within each group, a representative number of individuals is simulated based on group-specific behavioral parameters.

In each period t, an individual's wealth $w_{i,t}$ evolves according to the discrete-time wealth accumulation equation derived from the continuous-time model of Ebrahimian and Sodini (2024). The future wealth $w_{i,t+1}$ is determined by:

$$w_{i,t+1} = \left(1 + r_{f,t} + \tilde{er}_{i,t} \cdot \frac{1'\Omega^{-1}\mu}{\gamma} - a_t\right) w_{i,t} + \left(\tilde{er}_{i,t} \cdot \frac{1'\Omega^{-1}\mu}{\gamma} - a_t\right)(h_{i,t} + g_{i,t}) + y_{i,t} + p_{i,t} \tag{6}$$

This equation is largely the same as equation 1, the main difference being that stochastic element for individual-specific realized excess returns has been implemented.

If the individual's pre-tax wealth $w_{i,t+1}$ exceeds the threshold $w_{threshold}$ = 1.5 million SEK, the flat wealth tax τ_w is applied to the excess wealth. This loop structure ensures that each individual's wealth path is simulated over time under every specified tax regime, allowing

the model to evaluate the long-run impact of taxation. After completing all simulations across tax scenarios, individual-level outcomes are aggregated to compute group-level statistics. For each tax rate, the model reports the average final wealth of each group. From these values, both absolute and relative wealth gaps between group pairs are calculated.

The absolute gap between two groups g_1 and g_2 is measured in MSEK and is defined as:

$$\Delta_{g_1,g_2}^{\text{absolute}} = \bar{w}_{g_1} - \bar{w}_{g_2} \tag{7}$$

The relative gap, expressed as percentages of the mean wealth level of the less wealthy group in each pairwise comparison, is defined as:

$$\Delta_{g_1,g_2}^{\text{relative}} = \left(\frac{\bar{w}_{g_1} - \bar{w}_{g_2}}{\bar{w}_{g_2}} \right) \times 100 \tag{8}$$

These results are presented both in tabular form and through visualizations. The figures include a vertical reference line at 1.5%, corresponding to the historical wealth tax rate in Sweden, to contextualize the simulated outcomes and facilitate interpretation of policy relevance.

Beyond examining final wealth gaps, we also analyze the dynamic wealth accumulation paths for each socioeconomic group under the simulated tax regimes. For each wealth tax rate τ, the average wealth trajectory over the 25-period horizon is plotted for the Non-Rich, Rich, and Very Rich groups. This visualization allows for an assessment of how different tax pressures affect not only the endpoint of wealth accumulation but also the pattern of wealth growth over the simulated lifecycle.

Furthermore, to quantify the sensitivity of wealth gaps to the tax instrument, we estimate the linear impact of changes in the wealth tax rate on the absolute wealth gaps. Specifically, we regress the calculated absolute wealth gaps on the wealth tax rate (expressed in percentage points). The slope coefficient from this ordinary least square (OLS) regression,

$$\Delta_{\text{Gap}} = \alpha + \beta \cdot \tau_w(\%) + \epsilon \tag{9}$$

is interpreted as the average change in the absolute wealth gap (in MSEK) resulting from a one percentage point increase in the wealth tax rate and can be seen as an elasticity measure for wealth gaps. This provides a straightforward measure of the marginal effect of the wealth tax on intergroup wealth disparities and is central to our analysis.

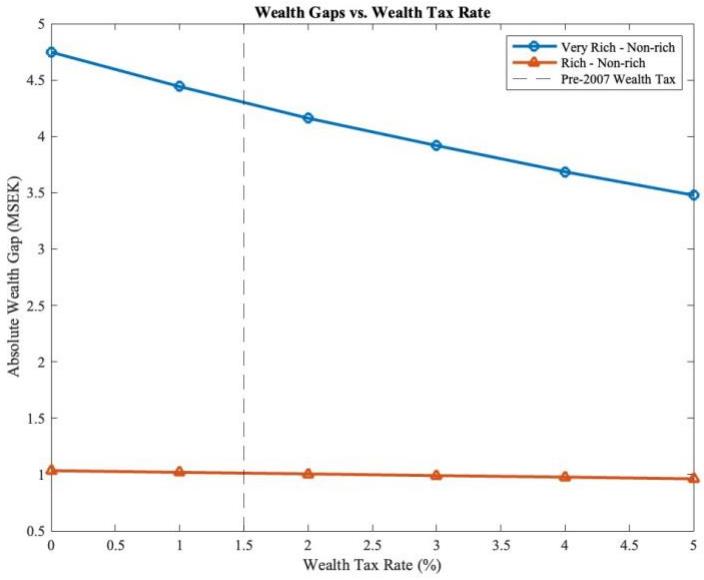
To contextualize the coefficient values, we calculate the relative wealth gap elasticity by using the counterfactual outputs for each parameter value. We average the resulting wealth gaps and then divide the estimated elasticity coefficient (from the regression) by the corresponding average wealth gap. This yields a measure of elasticity in relative terms.

5. Results

This section presents the outcomes of the simulation model introduced above. The analysis focuses on average final wealth levels, absolute wealth gaps between groups, and the extent to which wealth taxes affect these. All results are reported for the three population groups, Non-Rich, Rich, and Very Rich, over a fixed time horizon of 25 years and across tax rates ranging from 0% to 5%.

The central finding of our simulation is that increasing the wealth tax rate leads to a non-trivial reduction in the final wealth gap between socioeconomic groups. As illustrated in Figure 1, the mean absolute wealth gap between the Very Rich and the Non-Rich declines from approximately 4.7 MSEK to just under 3.5 MSEK as the tax rate increases from 0% to 5%. Similarly, the Rich–Non-Rich gap falls slightly from above 1 MSEK to just under 1 MSEK. These trends are smooth and monotonic across all group comparisons, reflecting a clear inverse relationship between the wealth tax rate and overall wealth dispersion at the top of the distribution. A vertical reference line at 1.5% marks Sweden's pre-2007 wealth tax level. Notably, even at this relatively moderate rate, the absolute wealth gaps between groups are already reduced. For illustrative visuals of the wealth gap on a relative basis, see Figures A1 and A2 in the appendix.

Figure 1: Absolute Mean Wealth Gap across Wealth Tax Rates



Note: This figure shows the absolute wealth gap for age 50 given the different tax policy regimes spanning from 0-5% wealth tax. We can see a declining curve for the Very Rich-Non-Rich while the Rich-Non-Rich gap stays flat. This is due to the threshold value of 1.5 MSEK.

We can further see in Table 2 that for every given percentage point increase in wealth tax the average wealth gap between Very Rich and Non-Rich decreases by 6.2%, and between Rich and Non-Rich by 1.4%, indicating non-trivial effects on wealth mobility.

Table 2: Wealth Gap Elasticity

	Benchmark
VR-NR, W_Gap	**-0.2514**
R-NR, W_Gap	**-0.0143**
VR-NR, Avg W_Gap %	***-6.2%***
R-NR, Avg W_Gap %	***-1.4%***

Note: This table compiles the wealth gap elasticity. It indicates the change in wealth gap between socioeconomics groups for every given percentage point increase in wealth tax, for the baseline model.

This dynamic is further reflected in the underlying average final wealth values for each group, reported in Table 3. The Very Rich group accumulate approximately 5.0643 MSEK under a 0% wealth tax, which declines to 3.7944 MSEK under a 5% tax. The Rich experience a more modest decline, from 1.3511 MSEK to 1.2782 MSEK. In contrast, the Non-Rich see almost no change in final wealth, with average values remaining virtually constant, ranging from 0.3167 to 0.3170 MSEK, across all tax rates. This asymmetry in responsiveness confirms that a flat wealth tax applied only above a threshold of 1.5 MSEK concentrates its impact on those with substantial wealth, thereby reducing the wealth gap while leaving the broader population largely unaffected.

Table 3: Absolute wealth accumulated at age 50 (MSEK)

Wealth Tax	**Non-Rich**	**Rich**	**Very Rich**
0%	0.3170	1.3511	5.0643
1%	0.3167	1.3361	4.7586
2%	0.3168	1.3224	4.4779
3%	0.3168	1.3070	4.2351
4%	0.3170	1.2941	4.0025
5%	0.3167	1.2782	3.7944

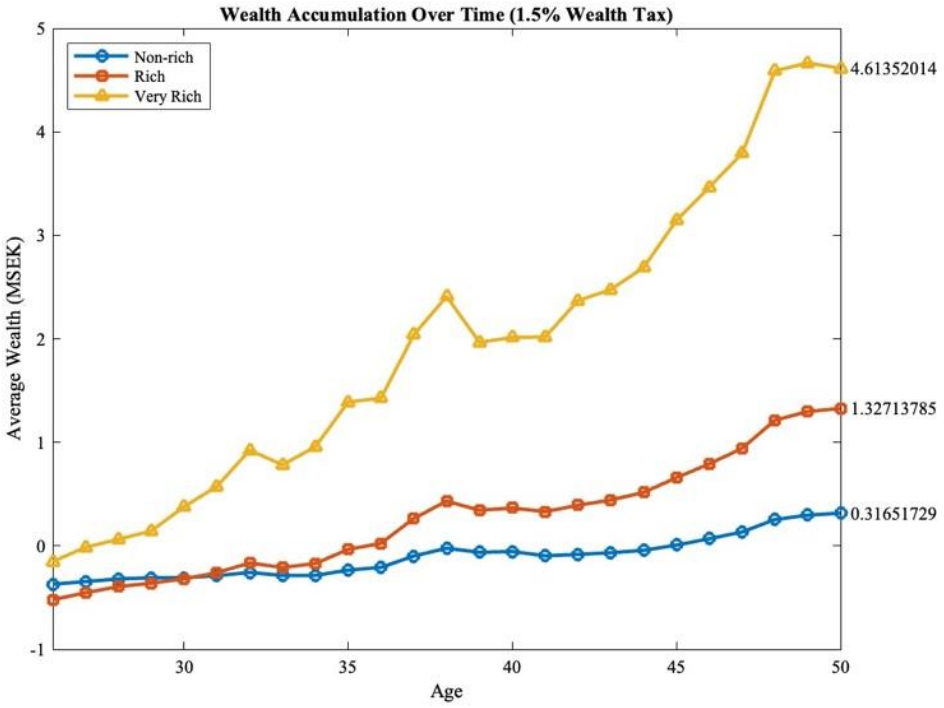
Note: Absolute wealth accumulated at age 50 given wealth tax between 0-5%.

Table 3 also illustrates that the Non-Rich group is effectively unaffected by the tax threshold of 1.5 MSEK, as their average wealth remains well below this cutoff across all tax rates. This insulates them from the impact of the policy and explains why their average

final wealth remains virtually unchanged regardless of the level of taxation. In contrast, the Rich group accumulates average wealth levels narrowly below the threshold, hovering between 1.2 and 1.3 MSEK. Although they are close to the threshold, their exposure to the tax remains limited, resulting in only a modest decline in accumulated wealth.

Furthermore, our model indicates that even with a flat wealth tax applied above 1.5 MSEK and set at a rate of 1.5%, wealth gaps between groups continue to diverge over time. However, as demonstrated in Appendix Figure A3, the pace of divergence is significantly slower under higher tax regimes. This pattern points to a clear moderating effect of tax policy on the long-run concentration of wealth at the top.

Figure 4: Wealth accumulated at age 50 (1.5% Wealth Tax)



Note: Absolute wealth accumulated between age 25-50 with a wealth tax level of 1.5%

A closer look at Figure 4 reveals that in year 0, all three groups begin with negative net wealth due to initial indebtedness. This reflects realistic starting conditions, where individuals often incur debt early in life, such as student loans or mortgages. Interestingly, the Rich group starts with a lower net wealth than the Non-rich. One possible explanation is that the Rich have greater expected future income, which enables them to take on more debt to invest in education, housing, or other forms of human capital, but this would require further investigation to be confirmed.

While the analysis above primarily focuses on the effects of wealth taxation on absolute wealth levels and group-level disparities, the simulated wealth trajectories also offer insight into economic mobility over the life cycle. Specifically, the results suggest that

although the wealth tax compresses the absolute gap between groups, it does not substantially alter the relative positioning of individuals across the distribution over time.

The Very Rich continue to accumulate wealth at a significantly faster pace than both the Rich and the Non-Rich, even under higher tax rates. For an overview of outcomes under varying tax levels, see Figure A3 in the appendix. This reflects a low degree of upward mobility among lower-wealth groups, as the gap in final outcomes persists despite policy interventions. The Non-Rich, in particular, see virtually no improvement in their average final wealth, indicating limited opportunity for meaningful economic advancement within the simulated time horizon.

These patterns are closely tied to the behavioral parameters embedded in the model. The differences in risk aversion (γ), bequest motives (χ) and time preference (ρ) play a key role in shaping long-run accumulation, strengthening the results of Ebrahimian and Sodini (2024). Individuals with lower risk aversion, greater bequest motives and patience, traits concentrated among the Very Rich in the simulation, are more likely to benefit from compounding returns over time. As a result, wealth positions tend to remain stable, reinforcing persistence at the top and limiting catch-up dynamics for those below.

Taken together, the results point to a broader implication: while wealth taxation above a threshold can slow the pace of wealth concentration and reduce disparities in absolute terms, it does not, on its own, generate high levels of mobility across the wealth distribution. Additional mechanisms, such as policies aimed at improving access to capital, education, or investment opportunities, may be necessary to facilitate more dynamic movement between economic positions over time.

6. Extensions and Robustness

In this section, we outline the implications of extending the model by focusing on counterfactual scenarios involving parameter and threshold variations. Drawing from the findings of Ebrahimian and Sodini (2024), wealth accumulation is influenced not only by the level of inherited wealth but also by inherited behavior. Accordingly, we test the elasticity of the wealth gap in response to wealth taxes across different socioeconomic groups, applying the logic that "less favorable" accumulation conditions, i.e., Non-Rich group parameter values may alter the effects for especially the Very-Rich category.

6.1. Counterfactual Parameters

As shown in Table 4, setting the risk aversion parameter (γ) to the Non-Rich group's level results in a substantially smaller wealth gap elasticity. Specifically, we observe a wealth gap elasticity of 2.9%, meaning the wealth gap decreases by 2.9% following a one percentage point increase in the wealth tax, compared to a 6.9% reduction in the base case. This suggests that higher risk aversion among the Very Rich reduces the potential for wealth accumulation, thus compressing the overall wealth gap and limiting the marginal effect of taxation.

Turning to the bequest motive parameter (χ), we observe a similar but less pronounced effect. When setting bequest motive to Non-Rich level for all wealth groups we observe a decrease in the relative wealth gap elasticity between Very Rich-Non-Rich to 5.1% compared to the benchmark value of 6.2%. The wealth tax still yields a marginal impact on the wealth gap when bequest motives are aligned across groups. A comparable pattern is seen for the time preference parameter (ρ): in the counterfactual scenario with uniform time preference parameter, wealth taxes continue to have a non-trivial effect. Here, the elasticity of the wealth gap between the Very Rich and Non-Rich is 4% per percentage point increase in wealth tax.

Finally, when all parameters are simultaneously set to Non-Rich levels, we find a minimal effect of wealth taxes on the gap between the Very Rich and the Non-Rich. In this scenario, the elasticity drops to just 0.2%, underscoring the critical role of behavioral parameters in shaping wealth inequality. These findings reinforce the conclusions of Ebrahimian and Sodini (2024) regarding the importance of inherited behavior in driving wealth dynamics.

This highlights the role of behavioral parameters in driving heterogeneity in the wealth accumulation process across groups. In particular, the risk aversion parameter, γ, plays a central role in shaping wealth trajectories. When combined with the intertemporal preference parameter, ρ, these factors lead to more pronounced fluctuations in wealth among the Very Rich. This group exhibits both higher risk tolerance and greater patience, enabling them to pursue more aggressive investment strategies and defer consumption, which in turn results in a steeper accumulation path. These dynamics align with the findings of Ebrahimian and Sodini (2024), who emphasize the importance of heterogeneous investment behavior in explaining long-term wealth mobility.

Table 4: Parameter Counterfactuals on Wealth Gap Elasticity

	Benchmark	γ set to NR	χ set to NR	ρ set to NR	γ χ ρ set to NR
VR-NR, W_Gap	**-0.2514**	-0.0751	-0.1185	-0.0572	-0.0009
R-NR, W_Gap	**-0.0143**	-0.0018	-0.0084	-0.0022	0.0001
VR-NR, Avg W_Gap %	***-6.2%***	*-2.9%*	*-5.1%*	*-4.0%*	*-0.2%*
R-NR, Avg W_Gap %	***-1.4%***	*-0.3%*	*-1.2%*	*-1.9%*	*-0.4%*

Note: Counterfactual analysis of wealth gap elasticity at age 50. Parameters γ (risk aversion), χ (bequest motives), and ρ (time discount rate) are tested individually and jointly, with all set to Non-Rich levels to assess their isolated and combined effects.

6.2. Counterfactual Tax Cutoffs

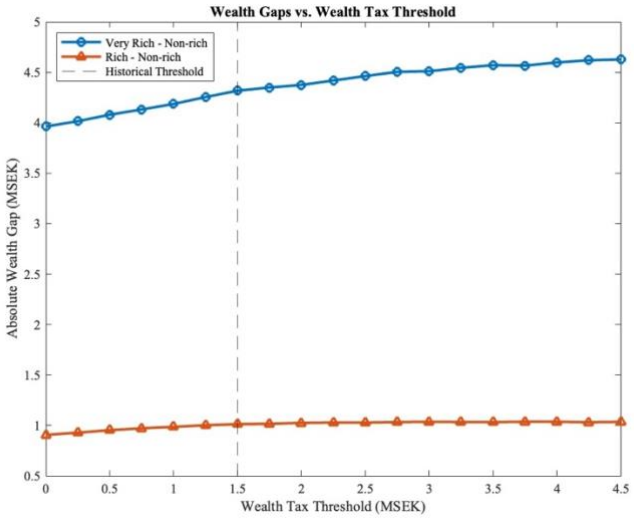
The following counterfactual scenario in Table 5 tests the impact of varying threshold values for the application of the wealth tax. Thresholds range from 0 MSEK, increasing in increments of 0.5 MSEK up to 1.5 MSEK, as well as a high-threshold case of 4.5 MSEK. As expected, the higher the threshold, the smaller the impact on reducing the wealth gap. This outcome is intuitive: the higher the cutoff, the fewer individuals are affected by the tax. For instance, if everyone were subject to a 1.5% wealth tax (i.e., a 0 MSEK threshold), the elasticity of the wealth gap would be 11.1% per percentage point increase in the tax. In contrast, with a threshold of 4.5 MSEK, the corresponding elasticity drops to just 1.6%. Figure 5 provides a visual illustration of these effects across different threshold levels. For visuals on relative developments, see Figure 6.

Table 5: Counterfactual Analysis of Wealth Tax Cut Offs

	Benchmark	T:0	T:0.5	T:1	T:1.5	T:4.5
VR-NR, W_Gap	**-0.2535**	-0.4162	-0.3591	-0.3031	-0.2535	-0.0731
R-NR, W_Gap	**-0.0138**	-0.0705	-0.0480	-0.0274	-0.0138	-0.0001
VR-NR, Avg W_Gap %	***-6.2%***	*-11.1%*	*-9.1%*	*-6.6%*	*-6.2%*	-1.6%
R-NR, Avg W_Gap %	***-1.4%***	*-7.8%*	*-5.0%*	*-2.7%*	*-1.4%*	0.0%

Note: Wealth tax thresholds range from 0 to 4.5 MSEK. The baseline is set at 1.5 MSEK, reflecting the historical wealth tax threshold previously used in Sweden. Wealth taxes set to between 0-5%.

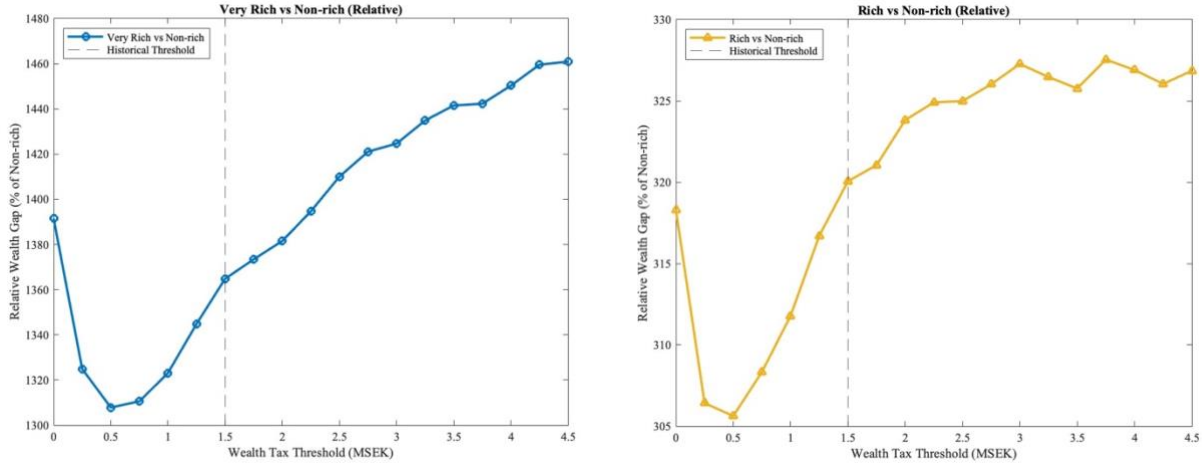
Figure 5: Visual Representation of Counterfactual Wealth Tax Cutoffs



Note: The upward-sloping curve illustrates the diminishing impact of the wealth tax as the threshold increases. This reflects the reduced number of individuals subject to the tax at higher cutoff levels, thereby limiting its effect on narrowing the wealth gap. The curve visualizes how broader tax coverage (i.e., lower thresholds) leads to stronger wealth gap elasticity, whereas higher thresholds result in a more concentrated and less impactful tax burden. Wealth tax set to 1.5%.

Further analyzing the relative measure of the wealth gap in Figure 6, we observe a noticeable drop when the wealth tax threshold increases from 0.0 to 0.5 MSEK. This is reasonable, as the average wealth level of the Non-Rich group is around 0.3 MSEK. Once they are exempt from the tax, while it still applies to higher wealth groups, the relative wealth gap narrows. However, beyond this point, as the threshold continues to rise, fewer and richer individuals are subject to the tax, leading to a bottoming out of the effect.

Figure 6: Relative Wealth Gaps at Varying Wealth Tax Thresholds



Note: Counterfactual estimates of different wealth tax thresholds, ranging from 0 to 4.5 MSEK, presented on a relative basis for wealth gap levels. Wealth tax set to 1.5%.

6.3. Robustness test

To reinforce our results, we conduct a robustness test on the calibrated parameter in our extended model, σ, representing shocks in excess returns. By testing various values of σ, we anticipate similar trends, which are confirmed in Table 6. Our baseline model uses σ = 0.2. As expected, the results show that the lower the value of σ, the smaller the impact of wealth taxes on wealth gap elasticity. This outcome is driven by the reduced presence of outliers in the right tail of the wealth distribution, which are otherwise disproportionately affected by higher taxes. The effect becomes especially clear in the extreme case of σ = 1, a value that is not realistic but used here for illustrative purposes to highlight the trend. As can be observed in Figure A4 the relative developments of wealth gaps follow the same overall trend as our original model no matter the adjustments to σ. This in turn indicates that our model is robust across a wide range of return shock assumptions. While the magnitude of the tax impact varies with σ, the relationship between tax policy and wealth concentration remains consistent. This supports the internal validity of our findings and suggests that our conclusions regarding the role of taxation in shaping intergenerational wealth mobility are not unduly sensitive to the assumed level of return volatility.

Table 6: Robustness Test on σ (Shocks in Excess Returns)

	Benchmark(σ = 0.2)	σ = 0.1	σ = 0.2	σ = 0.3	σ = 1.0
VR-NR, W_Gap	**-0.2535**	-0.2220	-0.2535	-0.2960	-0.6173
R-NR, W_Gap	**-0.0138**	-0.0038	-0.0138	-0.0284	-0.1338
VR-NR, Avg W_Gap %	***-6.2%***	*-5.3%*	*-6.2%*	*-7.5%*	-21.1%
R-NR, Avg W_Gap %	***-1.4%***	*-0.4%*	*-1.4%*	*-3.0%*	-20.3%

Note: Robustness test of the model by changing calibrated parameter σ (shocks in excess returns).

Since σ is the only parameter we estimated ourselves, it is also the only one requiring robustness testing in this paper. For additional robustness tests and a detailed explanation of the calibration approach, we refer readers to the robustness section in Ebrahimian and Sodini (2024).

6.4. Further Research

A promising avenue for future research involves refining the simulation framework to distinguish more clearly between total wealth and taxable wealth. This could be achieved by incorporating estimated discounts or exemptions based on historical Swedish wealth tax rules. Drawing on comparative data from countries with existing wealth taxation, such as Norway (Thoresen et al., 2022), researchers could approximate a more realistic taxable wealth base.

Introducing this distinction would likely reduce the quantitative magnitude of simulated wealth tax effects, as the tax would apply to a narrower subset of total wealth. However, the qualitative direction of the results is expected to remain stable. Even when applied to a reduced base, wealth taxes would continue to primarily affect high-wealth individuals. As such, the core finding, that wealth taxation contributes to lowering wealth inequality, would likely hold.

Another interesting direction for future research would be to simulate a broader set of tax policies to compare their effects. This could include real estate taxes, inheritance taxes, and various forms of progressive income taxation. Additionally, exploring combinations of tax policies, such as lowering income taxes while increasing capital or wealth taxes, could provide valuable insights into the trade-offs and synergies of different fiscal strategies.

7. Conclusion

We conclude that wealth taxes have a non-trivial effect on intergenerational wealth accumulation and can contribute to increased economic mobility. However, this effect is significantly determined by key behavioral parameters (risk aversion, time preference, and bequest motives) which shape the underlying dynamics of wealth accumulation. While wealth can be inherited, the persistence of wealth across generations is primarily driven by the behavioral characteristics of heirs.

From a policy perspective, this suggests that although wealth taxation can play a role in increasing mobility, it is not a comprehensive solution. More impactful long-term outcomes may be achieved by investing in human capital and the knowledge that facilitates wealth creation. Rather than solely focusing on reducing the wealth of the richest, policies that empower the Non-Rich to accumulate wealth more effectively may offer a sustainable path toward greater mobility. That said, implementing such measures poses its own set of complex challenges.

In light of the research conducted prior to this paper, our findings align with and further strengthen the conclusions of Ebrahimian and Sodini (2024), particularly their conclusion that: ”it is not just about the money that individuals receive from their parents, but also what they do with it... ”

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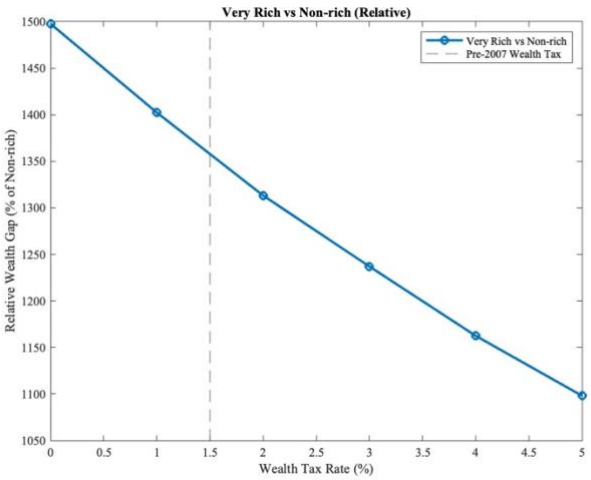
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Appendices

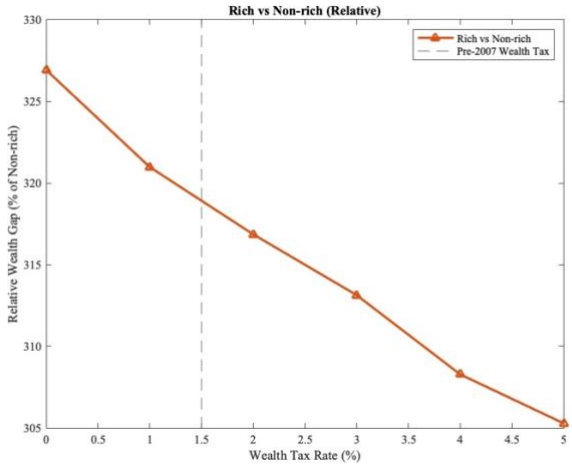
To better understand the magnitude and proportionality of the changes presented in Figure 1 in the results, Figures A1 and A2 present the same comparisons in relative terms. These graphs show the mean wealth gap as a percentage of the less wealthy group in each pair.

Figure A1: Relative wealth gap of Very Rich vs Non-Rich



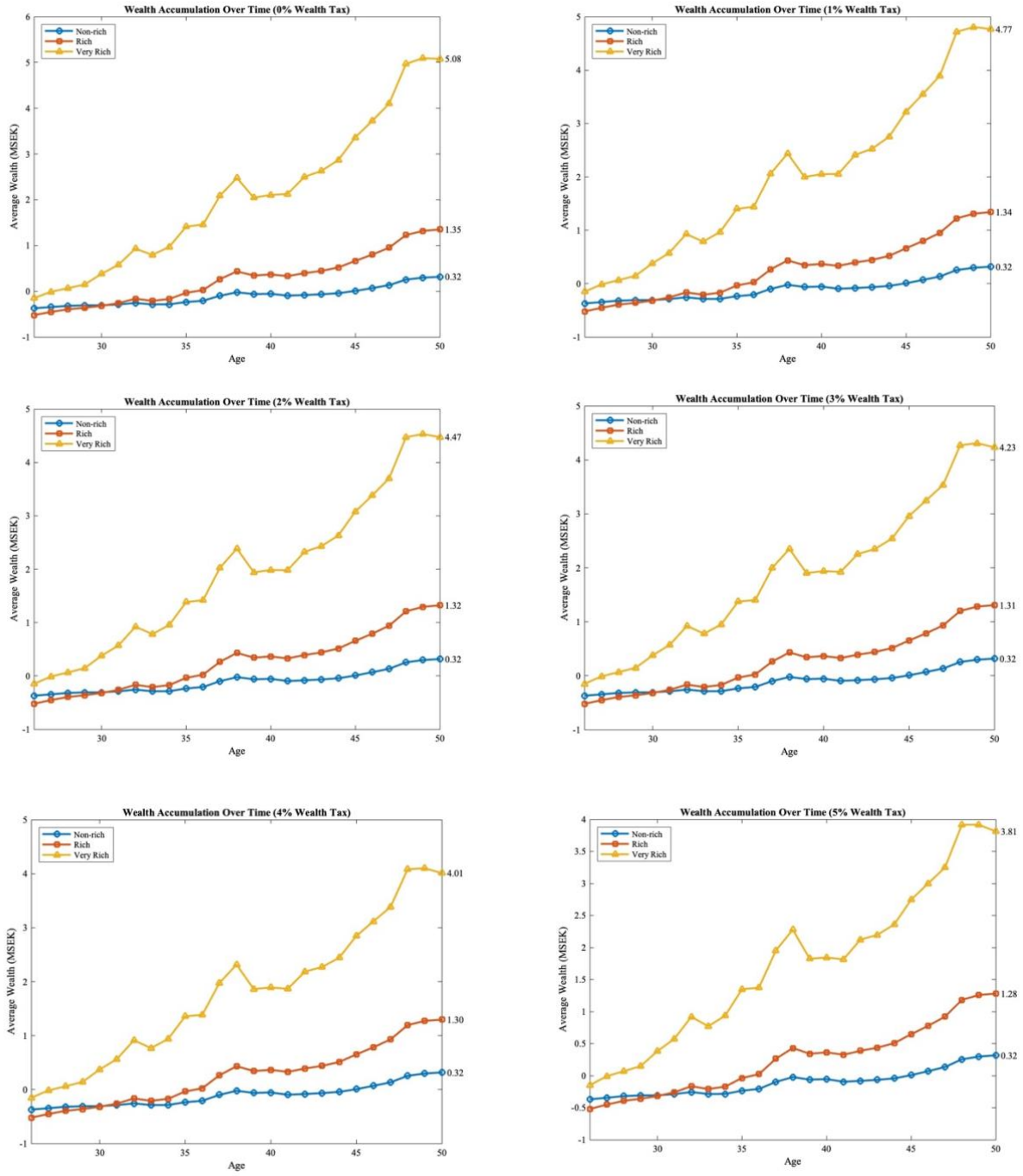
Note: Figure A1 shows the wealth gap between the Very Rich and Non-rich as a share of the Non-Rich's average wealth. The relative gap decreases steeply, suggesting that the tax burden meaningfully tempers the accumulation of wealth at the top without proportionally burdening the bottom. At the incremental increase in tax rates, the gap declines from roughly 1500% to just under 1100%.

A2: Relative wealth gap of Rich vs Non-Rich



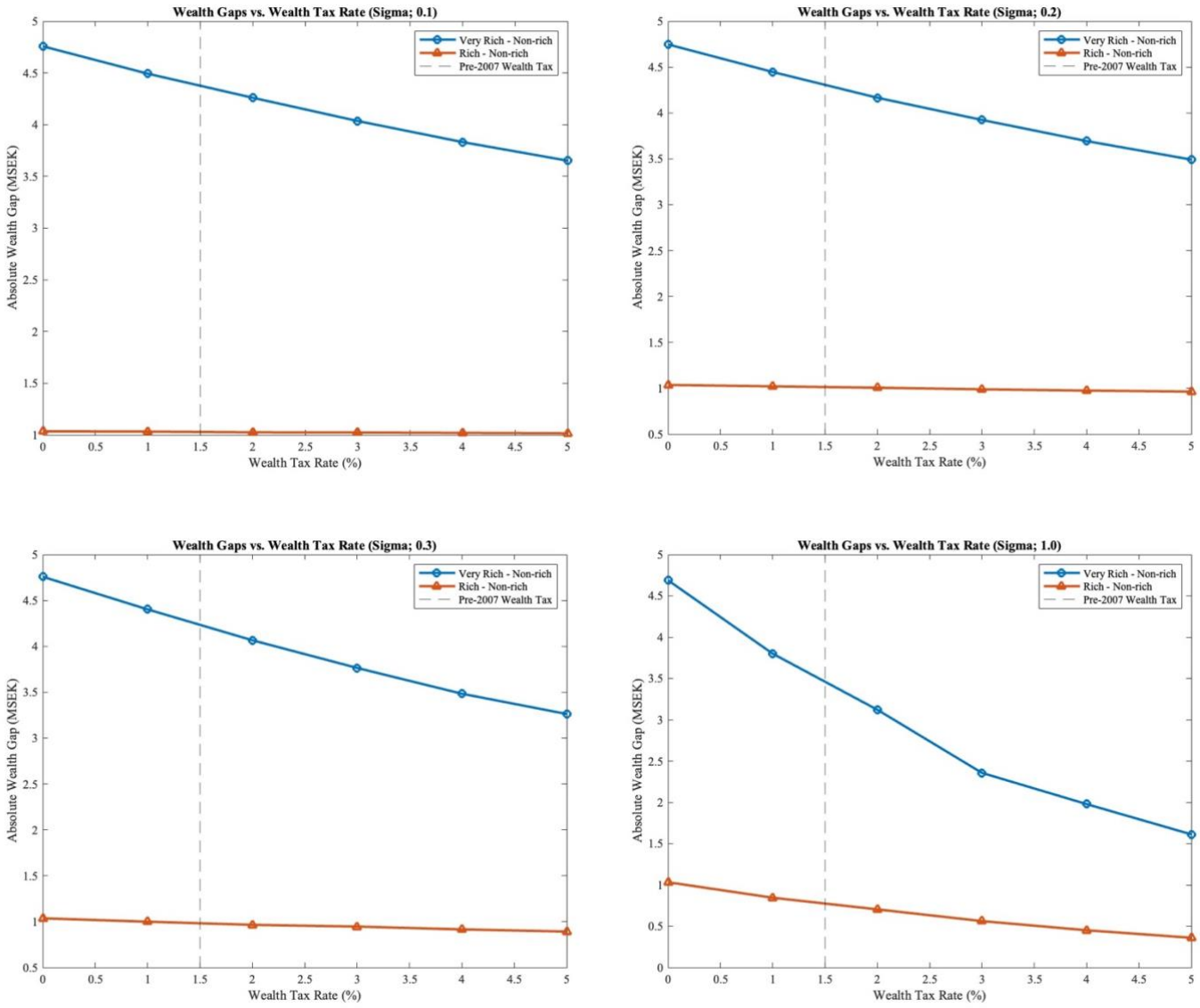
Note: Figure A2 presents the relative wealth gap between the Rich and the Non-Rich. It follows a consistent downward trajectory, decreasing from approximately 326% to 305% as the wealth tax rate increases. This trend confirms that the tax instrument affects wealth accumulation across the entire wealth distribution, not just at the top.

Figure A3: Absolute Wealth Projections Under 0–5% Wealth Tax Rates



Note: Displays the projected wealth trajectory over a 25-year period, from age 25 to 50. This timeframe represents the influence of inherited background from one's parents through to the most decisive phase of an individual's professional career. The tax cut off value is set to 1.5 MSEK.

Figure A4: Robustness Test on Calibrated σ (Shocks in Excess Returns)



Note: Extension of the robustness test for market shocks (σ), with values ranging from 0.1 to 1. The benchmark model uses σ = 0.2.

Appendix A5: Use of AI

Throughout this paper, OpenAI's language model ChatGPT-4o and Google Gemini 2.5 Pro have been used for two main purposes: (1) assisting with syntax for MATLAB visuals and tables, and (2) serving as advanced grammar tools to identify synonyms, correct spelling, and streamline language.