



Real Estate Inheritance and Wealth Inequality in Italy: An Empirical Analysis and Microsimulation of Tax Policy

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**Real Estate Inheritance and Wealth Inequality in Italy: An Empirical Analysis
and Microsimulation of Tax Policy**
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To a future where the lottery of birth is less decisive

Abstract

In a context of rising economic inequality and stagnant growth in Italy, this thesis provides a rigorous empirical investigation into the role of real estate inheritance in shaping the distribution of wealth. The study is twofold: first, it conducts a detailed descriptive analysis of the socio-economic landscape of wealth and inheritance using the 2022 Bank of Italy's Survey on Household Income and Wealth (SHIW); second, it develops and implements a static microsimulation model to quantify the potential first-order redistributive impact of a revenue-neutral inheritance tax reform.

The empirical analysis confirms that wealth in Italy is highly concentrated (Gini coefficient of 0.659), far more so than income (0.365). Inheritor households, representing 15% of the population, possess on average 41% more wealth than the national mean. A central finding is that inherited real estate acts as a "wealth floor," compressing the lower tail of the distribution and having a counter-intuitive equalizing effect on overall wealth inequality measures.

The microsimulation exercise evaluates the effects of replacing Italy's current lenient inheritance tax system with thirteen international alternatives. The results demonstrate that the tax-free allowance is the single most critical determinant of a system's redistributive capacity. Reforms modelled on regimes with low allowances and progressive rates, such as Spain's, are shown to be the most potent. The most effective simulated policy—combining the Spanish tax structure with a targeted lump-sum transfer to the poorest decile of the population—is capable of reducing Italy's overall wealth Gini coefficient by a substantial 3.7%. The analysis consistently finds that the redistributive power of the reform is driven almost entirely by the use of tax revenues for transfers, rather than by the direct act of taxing wealth. The findings provide quantitative evidence that a well-designed inheritance tax reform could be a powerful tool for mitigating wealth inequality in Italy, though its implementation would face significant political and administrative challenges.

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Chapter 1

Introduction

1.1 Motivation: The Growing Importance of Wealth Inequality and Intergenerational Transfers in Italy

In recent decades, the issue of economic inequality has returned to the forefront of academic and public discourse. Spurred by seminal works such as Piketty and Goldhammer, 2014, a growing body of research has shifted focus from income disparities to the more pronounced and persistent issue of wealth inequality. Wealth, defined as the total value of a household's assets minus its liabilities, offers a distinct and crucial perspective on economic well-being and opportunity, capturing the stock of resources available to a household beyond its periodic income flow. It provides economic security, enables investment in human capital, and confers social and political influence, as discussed in OECD, 2013. Consequently, its unequal distribution has profound implications for social mobility, economic efficiency, and societal fairness.

The Italian context offers a particularly compelling case for the study of wealth inequality. Characterized by decades of sluggish economic growth and stagnant real wages (Guarascio et al., 2025), and one of the most rapidly aging populations in the world (Balachandran et al., 2020), Italy's economic landscape has created an environment where accumulated capital and inherited assets play an increasingly dominant role over labor income in determining an individual's economic trajectory. The traditional pathways to wealth accumulation through savings from employment have weakened, making the starting point—their family's wealth—a more critical determinant of their own financial success.

Within this framework, intergenerational transfers, particularly in the form of real estate, have become a central mechanism in the transmission of economic advantage across generations. Italy has historically maintained one of the highest home-ownership rates among advanced economies (OECD and Triennale de Milan, 2023), and real estate constitutes the largest single component of household wealth (Acciari et al., 2024). For many Italian families, the primary residence is not only a place to live but also the most significant asset they will ever own and, crucially, pass on. As such, the inheritance of property is no longer a peripheral issue but a primary driver shaping the contemporary distribution of wealth (Cannari and D'Alessio, 2008). The transfer of these assets ensures that wealth remains concentrated within

certain families, potentially ossifying class structures and limiting opportunities for those without a significant inheritance to look forward to.

This thesis, therefore, is motivated by the conviction that understanding the dynamics of real estate inheritance is fundamental to grasping the broader challenge of wealth inequality in Italy. By examining who inherits, what they inherit, and how these transfers affect the overall distribution of wealth, we can shed light on the persistence of inequality and evaluate potential policy interventions designed to foster a more equitable society. The analysis of inheritance tax policy, in particular, becomes a critical area of investigation in a country where such taxes are notably lower than in most other European nations.

1.2 Research Questions and Objectives

Building upon the motivations outlined in the previous section, this thesis aims to provide a rigorous empirical investigation into the role of real estate inheritance in shaping wealth inequality in Italy. The study is guided by two central research questions, which move from a detailed descriptive and correlational portrait to a policy-oriented simulation:

- *What is the current socio-demographic and economic landscape of real estate inheritance in Italy, and which household characteristics are significantly correlated with it?* This question seeks to quantify the scale of wealth inequality, create detailed profiles of inheritor and non-inheritor households, and formally test the unconditional associations between key characteristics (e.g., parental education, age, geographical location) and the status of being an inheritor.
- *What would be the potential redistributive impact of a reform of the Italian inheritance tax system?* Specifically, this question investigates the extent to which a revenue-neutral tax-and-transfer policy, leveraging increased taxation on large real estate inheritances, could mitigate the existing levels of wealth inequality.

To answer these research questions, the thesis sets out the following specific objectives:

- To conduct a comprehensive descriptive and bivariate analysis of wealth distribution and real estate inheritance in Italy using the 2022 wave of the Bank of Italy's Survey on Household Income and Wealth (SHIW). This involves quantifying aggregate inequality, profiling distinct household groups, and using appropriate statistical tests to identify significant correlations.
- To develop and implement a static microsimulation model to evaluate the first-order effects of a hypothetical inheritance tax reform. This model will simulate the impact of the policy on the overall distribution of wealth, measuring changes in key inequality indicators such as the Gini index.

1.3 Contribution to the Literature

This thesis contributes to the existing body of economic literature on wealth inequality and intergenerational transfers in several significant ways. While a substantial body of work has explored the theoretical underpinnings and empirical trends of wealth distribution, this study offers a targeted, timely, and methodologically robust analysis of the Italian case.

First, on an empirical level, this research provides an updated and granular analysis of the role of real estate in the intergenerational transmission of wealth in Italy. By utilizing the most recent available (2022) wave of the Bank of Italy's Survey on Household Income and Wealth (SHIW), it offers a contemporary snapshot of a landscape that may have shifted due to recent economic and demographic trends. This study's specific emphasis on real estate allows for a more nuanced understanding than analyses that treat inherited wealth as a single, homogenous category.

Second, the thesis makes a contribution through the depth and rigor of its descriptive approach. It moves beyond a simple presentation of summary statistics by integrating three layers of analysis: a quantification of aggregate inequality using formal indices and Lorenz curves; a detailed comparative analysis of distinct socio-economic groups based on housing tenure; and a formal bivariate analysis to statistically test the unconditional correlations between household characteristics and inheritance status. This multi-faceted descriptive framework provides a robust and comprehensive empirical foundation for the subsequent policy simulation.

Finally, and most significantly, this study contributes directly to the policy debate on inheritance taxation in Italy. The current Italian inheritance tax regime is one of the most lenient among advanced economies, yet there is a lack of recent, evidence-based research quantifying the potential redistributive effects of a reform. By simulating a specific, revenue-neutral tax-and-transfer scheme, this thesis moves beyond theoretical arguments to provide concrete, quantitative estimates of how such a policy could alter the distribution of wealth. These findings are intended to provide valuable, actionable insights for policymakers and stakeholders engaged in the discussion about tackling wealth inequality in Italy.

1.4 Structure of the Thesis

The remainder of this thesis is structured as follows.

Chapter 2 reviews the relevant theoretical and empirical literature. It covers theoretical frameworks of wealth inequality, empirical evidence on inheritance with a focus on Italy, and discusses the application of microsimulation models in policy analysis.

Chapter 3 details the data and methodology. It introduces the Bank of Italy's Survey on Household Income and Wealth (SHIW) as the data source, defines key variables, outlines the microsimulation model, and acknowledges the study's limitations.

Chapter 4 presents the initial empirical analysis, offering a descriptive portrait of wealth and inheritance in Italy. It examines the distribution of wealth, home-ownership rates, and provides a detailed profile comparing the socio-economic characteristics of inheritors and non-inheritors.

Chapter 5 is dedicated to the microsimulation of a hypothetical inheritance tax reform. It outlines Italy's current tax system and a pre-tax baseline, then simulates a revenue-neutral tax-and-transfer scheme, presenting the quantified impact on inequality measures.

Chapter 6 concludes the thesis, summarizing the main findings from the descriptive and microsimulation analyses. It then discusses policy implications and suggests avenues for future research.

Chapter 2

Literature Review

This chapter reviews the key theoretical and empirical literature that forms the foundation for this thesis. The review is structured to move from a broad theoretical understanding of wealth inequality to the specific context of this study. Section 2.1 begins by outlining the major theoretical frameworks of wealth accumulation and distribution and the standard methods for its measurement. Section 2.2 narrows the focus to the microeconomic role of intergenerational transfers. We then ground the analysis in the specific Italian context in Section 2.3 by examining recent empirical evidence on inheritance and wealth disparities in the country. Subsequently, Section 2.4 reviews the economic literature on inheritance taxation, covering both theoretical debates and empirical findings. Finally, Section 2.5 introduces the microsimulation modeling approach, which provides the methodological framework for the policy simulation in this thesis.

2.1 Theoretical Frameworks of Wealth Inequality

Capital Accumulation and Wealth Distribution

The relationship between capital accumulation and wealth distribution is a cornerstone of economic thought, rooted in the work of classical economists like Ricardo, 1817 and Marx, 1867. Marx, in particular, argued that capital accumulation inherently concentrates wealth, a prediction revisited in modern studies (Bartels et al., 2025).

The neoclassical growth model, developed by Solow, 1956, provided a crucial theoretical benchmark. In its standard formulation, the model predicts a steady state with constant capital-output ratios and income shares, implying that persistent increases in wealth inequality must be driven by mechanisms beyond basic accumulation, such as shocks or agent heterogeneity.

To address these limitations, modern macroeconomic research shifted to heterogeneous agent models where precautionary savings against idiosyncratic risk generate significant wealth dispersion. More advanced frameworks incorporating mechanisms like capital income risk (Benhabib et al., 2015) or employing continuous-time approaches to model wealth dynamics (Achdou et al., 2021) have been developed to better align with empirical data. However, a common finding is that standard

models often struggle to replicate the extreme wealth concentration observed at the very top of the distribution without such additional features (De Nardi, 2015).

Contemporary quantitative models incorporate additional features to generate more realistic outcomes. Quadrini, 1999 highlighted the role of entrepreneurship, while Benhabib et al., 2019 identified three key ingredients to match the US wealth distribution: skewed labor earnings, heterogeneous saving rates, and stochastic idiosyncratic returns to wealth.

A highly influential recent contribution is from Piketty and Goldhammer, 2014, who proposed the inequality $r > g$. They argue that if the return on capital (r) consistently exceeds the economic growth rate (g), existing wealth compounds faster than income, increasing wealth concentration. This dynamic suggests inherited wealth will become increasingly dominant. Extensive empirical work by Piketty, Saez, and Zucman supports this claim (Saez and Zucman, 2014; Piketty et al., 2019).

This framework is not without its critics. Rognlie, 2015 found that the recent rise in the U.S. capital share is almost entirely due to the housing sector, questioning the generality of the mechanism. Others, like Myles, 2014, argue that this focus on mechanistic forces overlooks the critical role of institutions and rent-seeking. This body of work collectively shows that while capital accumulation is a fundamental driver of inequality, its impact is mediated by risk, behavior, and institutional context.

Measures of Inequality

The empirical study of inequality requires a clear conceptual and methodological framework for its measurement. A primary distinction must be made between income, a flow of resources over a period, and wealth, a stock of assets at a point in time. While related, they capture different dimensions of economic well-being, with wealth typically being far more concentrated than income.

Theoretically, the most comprehensive measure of economic well-being is *full income*, defined as the level of consumption a household can sustain without depleting its net worth (Simons, 1938). In empirical research, this concept is often proxied by *equivalized disposable income*. This measure encompasses all market-based earnings and public transfers, net of taxes, and is adjusted for household size to allow for meaningful comparisons (Canberra, 2011).

Net wealth (or *net worth*), on the other hand, is defined as total assets minus liabilities. Official sources and distributional accounts specify that *personal or household wealth = (sum of financial + non-financial assets) minus (financial liabilities)*. This includes housing, business capital, stocks, bonds, pension entitlements, etc., less mortgages, loans and other debts.

To quantify the dispersion of wealth and income, a range of statistical indices are employed, each with specific properties. The most widely used summary measure is the *Gini* coefficient, derived from the Lorenz curve, which captures overall inequality in a single value ranging from 0 (perfect equality) to 1 (maximal inequality). Its scale and population independence make it a standard tool for international comparisons (Hasell, 2023).

While the Gini coefficient provides a holistic view, much of the contemporary literature focuses on the concentration of resources at the top of the distribution.

Top income and wealth shares, such as the share held by the richest 1% or 10%, are frequently used to track the evolution of economic elites. These are complemented by percentile ratios (e.g., $P90/P10$ or $P90/P50$), which measure the gap between different points of the distribution.

More complex measures include the parametric family of measures based on information entropy, the *Generalized Entropy indices* ($GE(\alpha)$), where the most used are with $\alpha = 0, 1, 2$. A key advantage of these indices is their decomposability, which allows total inequality to be partitioned into within-group and between-group components, offering deeper analytical insights.

Finally, the *Atkinson index* allows for the incorporation of an explicit inequality aversion parameter, making normative judgments about social welfare transparent.

A detailed description of all these measures can be found in Cowell, 2000.

2.2 The Role of Intergenerational Transfers

Beyond macroeconomic accumulation, the transmission of wealth is fundamentally a microeconomic process driven by intergenerational transfers. Theoretical literature offers several explanations for bequests. Foundational altruistic models (Barro, 1974); Becker and Tomes, 1979) posit that parents leave bequests because they care about their children's well-being, creating a direct link for the persistence of economic status. Alternative theories suggest more strategic motives, such as using inheritance to elicit care from children (Bernheim et al., 1985) or as part of an implicit family risk-sharing arrangement (Kotlikoff and Spivak, 1981). Other models distinguish intentional transfers from accidental bequests arising from lifespan uncertainty (Cremer et al., 2010).

Empirically, the importance of these transfers in wealth accumulation is well-documented (Gale and Scholz, 1994). However, their effect on wealth inequality is debated. Many studies for the U.S. and Scandinavian countries find an equalizing effect, as inheritances provide a larger relative wealth boost to less affluent heirs, thus reducing overall inequality measures (Elinder et al., 2018; Wolff and Gittleman, 2014).

This effect is not universal. Research by Boserup et al., 2016 shows that bequests can increase absolute wealth dispersion (while reducing relative inequality). Most relevant for this thesis, a cross-country study by Palomino et al., 2021 finds that intergenerational transfers and family background contribute to wealth inequality.

From a long-run perspective, Piketty and Zucman, 2014 show that the economic share of inherited wealth is on a rising trend after a mid-20th century decline. This resurgence, linked to the $r > g$ dynamic, suggests intergenerational transfers are becoming a more dominant factor in shaping wealth concentration in advanced economies.

2.3 Empirical Evidence on Inheritance and Wealth Distribution in Italy

The Italian case presents a unique landscape for studying wealth inequality, characterized by high aggregate wealth-to-income ratios alongside significant and growing

disparities. Foundational empirical work by Acciari et al., 2024, using novel inheritance tax data, reveals a substantial increase in wealth concentration between 1995 and 2016. Their findings show the share of total net wealth held by the richest 1% rose from 16% to 22%, while the share of the bottom 50% of the population collapsed from 11.7% to just 3.5% over the same period. This sharp divergence marks Italy as having one of the most pronounced declines in the wealth share of the lower half among developed nations.

A primary driver of this dynamic is the significant role of intergenerational transfers. Using data from the Survey of Household Income and Wealth (SHIW), Cannari and D'Alessio, 2008 establish that bequests and gifts are a cornerstone of wealth accumulation in Italy. They estimate that the share of current net worth directly attributable to transfers (in 2002) ranges from 30% to 55%, depending on the methodology, and note that this share has been increasing over time. These transfers are also highly concentrated, with the top decile of households receiving approximately three-quarters of all inherited wealth. More recent findings from Acciari et al., 2024 corroborate this, showing that the annual flow of inheritances and gifts has doubled to constitute 14% of national income, with these transfers becoming increasingly concentrated at the top of the distribution.

This high concentration of inherited wealth translates directly into low intergenerational mobility. Using SHIW data and an imputation methodology, Bloise and Raitano, 2019 provide some of the first estimates of intergenerational wealth persistence in Italy. Their findings point to a highly immobile society, with a preferred *intergenerational wealth elasticity* (IWE) of 0.451 and a *rank-rank slope* of 0.349. These figures are comparable to those found for the United States, indicating that parental wealth is a very strong predictor of a child's future economic standing.

This picture of low mobility is consistent across different measures of economic well-being, though estimates vary. Using administrative tax data to study income, Acciari et al., 2022 find that Italy is somewhat more mobile than previously estimated from survey data, but still exhibits significant persistence. Crucially, both their work and that of Bloise and Raitano, 2019 uncover stark geographical divides, with a pronounced North-South gradient where the southern regions are characterized by significantly lower mobility. This regional heterogeneity is a defining feature of inequality in Italy, suggesting that the "lottery of birth" is compounded by geography.

2.4 The Economics of Inheritance Taxation

Theoretical Justifications and Efficiency Costs

The normative debate over taxing wealth transfers is rooted in a fundamental trade-off between equity and efficiency, and different theoretical frameworks yield starkly opposing conclusions.

The theoretical case against inheritance taxation rests on seminal work in optimal capital income taxation, which treats bequests as a form of capital accumulation. In influential papers, Chamley, 1986 and Judd, 1985 used infinite-horizon models with dynamic altruism to argue that the optimal long-run tax rate on capital income is zero. The core intuition is that any constant, positive tax on capital returns creates an economic distortion that compounds over time. For an infinitely-lived dynasty,

this compounding wedge between the pre- and post-tax return to saving makes the tax exceptionally inefficient in the long run. The policy implication is to tax capital heavily in the short term (when the stock is fixed and the tax acts like a lump-sum levy) but to announce a credible commitment to phase the tax out over time.

This powerful "zero capital tax" result, however, relies on a series of strong assumptions that have been challenged by subsequent literature. The classic Atkinson and Stiglitz, 1976 theorem, for instance, suggests that if a non-linear income tax can optimally address inequality in earning ability, and if preferences are separable between labor and consumption, then there is no need for additional taxes on commodities. In this context, an inheritance can be seen as future consumption, implying no need for a separate tax. However, as Piketty and Saez, 2013 argue, this logic fails when inequality is bi-dimensional. The presence of inheritances means that lifetime resources are determined not just by earnings but also by transfers, breaking the conditions of the Atkinson-Stiglitz theorem and creating a clear role for inheritance taxation as a distinct policy instrument.

Furthermore, the desirability of wealth transfer taxation depends critically on the underlying motive for leaving a bequest, a point explored in detail by Cremer and Pestieau, 2010 and Batchelder, 2009. If bequests are purely accidental—the result of precautionary savings in a world of lifetime uncertainty—then taxing them is highly efficient, as the tax does not distort the original saving decision. Conversely, if bequests are purely altruistic, as assumed in the Chamley-Judd framework, then taxes directly distort the saving choices of parents who care about their children's welfare. A third category is "joy-of-giving" or "warm-glow" bequests, where individuals derive utility from the act of giving itself. In this case, the bequest is akin to a form of consumption for the donor and, from a tax theory perspective, should be included in the tax base. A final motive is exchange-based, where bequests are effectively payments for services; such transfers should be treated as taxable income for the recipient.

The modern "sufficient statistics" approach, developed by Piketty and Saez, 2013, synthesizes these competing arguments. This framework shows that the optimal inheritance tax rate can be expressed as a formula depending on empirically estimable parameters rather than unobservable primitives like bequest motives. The formula transparently captures the equity-efficiency trade-off: the optimal tax rate is lower when the elasticity of bequests to taxation is high (the efficiency cost), and higher when inherited wealth is highly concentrated and society has a strong preference for redistribution (the equity gain). This approach nests the Chamley-Judd result as the special case where the long-run elasticity of aggregate bequest flow (i.e., aggregate capital accumulation) to the net-of-bequest-tax rate (i.e., $1 - \text{tax on bequest}$) is infinite, but it demonstrates that for finite, realistic elasticities, the optimal tax rate is positive and can be substantial.

Empirical Effects of Inheritance Tax on Wealth Inequality

The empirical literature on the impact of inheritance taxation on wealth inequality presents a complex and often counter-intuitive picture. While inheritances themselves are highly concentrated, a significant body of research suggests that, at the moment of transfer, they tend to reduce relative measures of wealth inequality, such as the

Gini coefficient. This seemingly paradoxical result is driven by the fact that less wealthy heirs, while receiving smaller inheritances in absolute terms, receive amounts that are much larger relative to their pre-existing wealth.

Studies using administrative data from Scandinavian countries have been particularly influential in demonstrating this effect. Elinder et al., 2018, using Swedish population register data, find that inheritances mechanically reduce the Gini coefficient for wealth by approximately 7% upon receipt. This equalizing effect occurs because the distribution of inheritances is less unequal than the distribution of pre-inheritance wealth among heirs. A key legal feature contributing to this is that heirs do not inherit net debts, which truncates the lower tail of the inheritance distribution. Similarly, a comprehensive report by the OECD, 2021 notes this equalizing effect as a common finding across countries, highlighting that small inheritances can be substantial for poorer households. Evidence from the US, presented by Wolff and Gittleman, 2014 using the Survey of Consumer Finances, also concludes that wealth transfers, on net, have an equalizing effect on the wealth distribution.

However, the equalizing effect of inheritances appears to be temporary. Nekoei and Seim, 2021 provide compelling evidence from Sweden showing that this initial reduction in inequality is reversed within a decade. Their quasi-experimental analysis reveals that while the average heir depletes their inheritance, wealthy heirs tend to preserve theirs. This divergence is not driven by differences in consumption or labor supply, but rather by heterogeneous rates of return on invested capital. Wealthier heirs achieve higher returns, causing the inequality of inherited wealth itself to widen over time, ultimately contributing to greater overall wealth inequality in the long run.

The role of the tax system in this dynamic is crucial. Mechanically, Elinder et al., 2018 show that inheritance taxation, viewed in isolation, can counteract the short-term equalizing effect of transfers, as less wealthy heirs may pay more tax relative to their pre-inheritance wealth. However, the ultimate impact of the tax depends critically on how the revenue is used. If tax revenues are redistributed, for instance through lump-sum transfers, the tax system can become a powerful equalizing force. This highlights that the "pre-distribution" effect of the tax (i.e., its long-run impact on the accumulation of dynastic wealth) may be more significant than its immediate redistributive effect upon collection.

Finally, the Italian context, as detailed by Acciari et al., 2024, underscores the importance of tax policy in shaping long-term trends. They document a growing concentration of inheritances at the top, coupled with a significant decrease in the effective tax burden on the largest estates over the past two decades. This trend, running counter to the redistributive potential of inheritance tax, coincides with a period of rising wealth concentration. Cross-country evidence from Nolan et al., 2021 further situates Italy as a country where wealth transfers contribute significantly to overall inequality—accounting for roughly one-third of it, similar to Germany—and where a marginal increase in transfers would likely increase, rather than decrease, total wealth inequality.

2.5 Microsimulation Models

Microsimulation models are powerful analytical tools for evaluating the effects of public policy, particularly in the domain of taxation and social benefits. Their origin is generally traced back to the pioneering work of Orcutt, 1957, who proposed a new type of socio-economic system model based on the "micro" decision-making units of an economy, such as individuals, families, and firms. A microsimulation model is essentially a computer program that operates on a large, representative sample of micro-data. It simulates how the outcomes for each individual unit (e.g., income, tax liability, benefit entitlement) change in response to a specific policy reform. This bottom-up approach allows for detailed analysis of the distributional consequences of a policy, moving beyond simple aggregates to understand its impact on different subgroups of the population (Klevmarken, 2022). They are especially valuable for ex-ante policy evaluation, offering a virtual laboratory to test the potential effects of reforms before they are implemented.

Microsimulation models can be classified along several dimensions, with the most fundamental distinction being between *static* and *dynamic* models (Colombino, 2015). Static models operate on a cross-sectional dataset that represents a population at a single point in time. They are designed to assess the immediate, first-order or "day after" effects of a policy change, assuming the underlying demographic and economic structure of the population remains fixed. These models are computationally less intensive and are widely used for the analysis of tax and benefit reforms. A leading example is the European-wide model EUROMOD, which allows for comparative analysis across EU member states (European Commission et al., 2024). Dynamic models, in contrast, are designed to simulate the life courses of individuals over extended periods, often decades. They explicitly model demographic events such as births, deaths, marriages, and divorces, as well as economic transitions like education, employment changes, and retirement. This allows for the analysis of the long-term and intergenerational effects of policies, which is particularly relevant for pensions, wealth accumulation, and inheritance.

Another crucial classification is between *arithmetic* (or *deterministic*) models and *behavioural* models. Arithmetic models calculate the direct impact of a policy change by applying the new set of rules to the micro-data without modelling any change in individual behaviour. For example, when simulating a tax increase, an arithmetic model calculates the new tax liability for each individual based on their existing income. Behavioural models go a step further by incorporating equations that predict how individuals might alter their behaviour in response to the new policy. A common application is the modelling of labour supply responses to changes in tax rates or welfare benefits (Jia et al., 2023). While behavioural models offer a more complete picture of a policy's potential impact, they rely on estimated elasticities and behavioural assumptions that introduce a higher degree of uncertainty.

Microsimulation has become an indispensable tool for policy analysis in many countries, including Italy. Several Italian institutions maintain their own models to evaluate fiscal policy. The Bank of Italy has developed BIMic, a static tax-benefit model based on its Survey of Household Income and Wealth (SHIW), used to analyse reforms to personal income taxes and household benefits (Curci et al., 2017). Similarly, the Ministry of Economy and Finance (MEF) and Istat have developed

their own models based on administrative and survey data to assess the distributional and revenue implications of tax reforms (Miola and Manzo, 2021; Colombino, 2015). Alongside these static models, dynamic models have also been developed to address questions of long-term and intergenerational wealth transfers. The Italian Treasury Dynamic Microsimulation Model (T-DYMM) is a prime example. T-DYMM is a dynamic ageing model that projects the demographic and socio-economic evolution of the Italian population, with dedicated modules for wealth accumulation and pensions (Conti et al., 2024). Crucially, recent work by Bavaro et al., 2025 has employed T-DYMM to simulate the long-run distribution of wealth and the role of intergenerational transfers up to 2070, demonstrating the model's suitability for addressing precisely the questions central to this thesis. Finally, models such as INTAXMOD have been developed specifically to simulate inheritance taxation in the context of demographic ageing across the EU, providing another valuable methodological reference for analysing the long-term impact of tax policy on wealth transmission (Krenek et al., 2022).

Chapter 3

Data and Methodology

This chapter outlines the data and methodological framework used to investigate the role of real estate inheritance in Italy. Section 3.1 introduces the primary data source, the Bank of Italy's 2022 Survey on Household Income and Wealth (SHIW), and details its complex survey design. Section 3.2 describes the construction of the analytical sample and provides formal definitions for the key variables used throughout the thesis. Section 3.3 presents the statistical measures used to quantify inequality, while Section 3.4 describes the static microsimulation model developed to evaluate a hypothetical tax reform. Finally, Section 3.5 acknowledges and discusses the limitations of the data and methodologies used in this study.

3.1 Data Source: The Bank of Italy's Survey on Household Income and Wealth (SHIW)

The primary data source for this thesis is the **Bank of Italy's Survey on Household Income and Wealth** (SHIW), a comprehensive statistical investigation conducted by the Bank of Italy (Bank of Italy, 2025). Initiated in the 1960s with the principal aim of collecting data on the income and savings of Italian households, the survey has since expanded its scope considerably. Over the decades, it has evolved to become a crucial tool for understanding the economic and financial behavior of the Italian population, encompassing detailed information on wealth, income, consumption, and other related aspects.

The SHIW provides a rich cross-sectional and longitudinal dataset, offering a detailed snapshot of Italian households' economic conditions. The survey collects information on household composition, socio-demographic characteristics, income from various sources (labor, pensions, financial assets, and real estate), consumption patterns, and a detailed breakdown of household wealth, including real estate, financial assets, and liabilities. This granular level of detail makes the SHIW an indispensable resource for academic research, economic policy analysis, and international comparative studies. The survey is a key component of international research projects such as the Luxembourg Income Study (LIS), the Luxembourg Wealth Study (LWS), and the Eurosystem's Household Finance and Consumption Survey (HFCS), which facilitates cross-country comparisons.

The survey is conducted biennially, and for the purposes of this thesis, the most

recent available wave is from **2022** (whose most updated version was published on 10/01/2025). While the subsequent wave, pertaining to the year 2024, is expected, it has not yet been released at the time of writing. Therefore, all empirical analyses in this study are based on the 2022 dataset, which provides the most up-to-date and comprehensive picture of household wealth and inheritance in Italy.

Survey Design and Sampling

The Survey on Household Income and Wealth (SHIW) employs a complex, multi-stage sampling design to ensure its representativeness of the Italian resident population. The sample is drawn in two stages. The primary sampling units (PSUs) are the municipalities, which are stratified by geographical region and population size. Within each stratum, municipalities with over 40,000 inhabitants are all included (self-representing), while smaller municipalities are selected with a probability proportional to their size. The secondary sampling units are the households, which are randomly selected from the population registers of the chosen municipalities. A key methodological innovation was introduced starting with the 2020 survey wave. To make the sample more representative across the entire income distribution, the secondary sampling units (households) are now also stratified. Specifically, non-panel households are stratified into ten income groups within each geographical macro-area (North-East, North-West, Centre, South, and Islands). This change marks a structural shift in the survey's design, aimed at improving the accuracy of wealth and income estimates.

A key feature of the SHIW since 1989 is its panel component. To facilitate the analysis of longitudinal dynamics, approximately half of the sample in each wave consists of households that were interviewed in previous surveys. This allows researchers to track changes in income, wealth, and behavior for the same units over time.

To correct for potential biases arising from non-participation and to align the sample's characteristics with those of the overall population, a sophisticated weighting scheme is applied. Reflecting the updated design (from 2020), the final household weight ($w^{(3)}$) is the result of a multi-step process:

1. An initial *design weight* ($w^{(0)}$) is calculated based on the probability of selection at both the first stage (municipality) and the new second stage (household income stratum)
2. This weight is adjusted for unit non-response ($w^{(1)}$) by inflating it based on the response rate within each second-stage stratum.
3. A further adjustment is made to account for panel attrition and to replicate the panel's 50% optimal share ($w^{(2)}$).
4. Finally, the weights are calibrated through post-stratification ($w^{(3)}$). This process uses iterative proportional fitting (raking) to align the sample's distributions with known totals from external sources. The calibration now matches not only demographic characteristics (gender, age, geography) but also economic distributions, including income classes and outstanding debt.

Given the complexity of the sampling design—Involving stratification, clustering, and unequal weighting—the standard formulas for calculating variance and standard errors, which assume simple random sampling, are not appropriate. The Bank of Italy therefore recommends and provides the necessary tools for using a replication method for variance estimation. Specifically, the *jackknife repeated replication* (JRR) method is employed. This technique involves creating a series of "replicate" samples from the original data, re-calculating the estimates for each, and then measuring the variability across these replicate estimates to derive the correct standard error (Bank of Italy, 2024).

In this thesis, the survey design has been fully specified in the Stata 17 (StataCorp LLC, 2021) statistical software to ensure that all estimations account for these features. The following command was used to declare the dataset's survey design structure:

```
svyset [pweight = universe_wt], vce(jackknife) jkrw(pwt*) mse
```

Where:

- `[pweight = universe_wt]` specifies `universe_wt` as the final probability weight variable for each household, corresponding to $w^{(3)}$ in the methodology.
- `vce(jackknife)` instructs Stata to use the jackknife method for variance estimation.
- `jkrw(pwt*)` identifies the 314 variables containing the replicate weights provided by the Bank of Italy for the jackknife procedure.
- `mse` specifies that the variance should be calculated based on the mean squared error of the deviations of replicate estimates from the full-sample estimate, as recommended in the official documentation.

This setup ensures that all subsequent statistical analyses, from descriptive statistics to the microsimulation model, produce statistically valid standard errors and confidence intervals that accurately reflect the complexity of the SHIW sample design.

The 2022 Wave: Key Features

The 2022 wave of the SHIW, which constitutes the empirical basis for this thesis, surveyed a sample of 9,641 households, encompassing a total of 23,057 individuals. A significant portion of the sample, 4,448 households (approximately 46%), belongs to the panel component, meaning they were also interviewed in previous waves.

The survey collected a wide array of information organized into several modules, covering household composition, socio-demographic characteristics, employment and income, consumption, real and financial wealth, and debt. The questionnaire also included sections on more specific topics such as payment instruments, savings behavior, financial literacy, and expectations. For the cross-sectional analysis conducted in this thesis, the appropriate set of weights designed for this purpose has been utilized, ensuring that the estimates are representative of the Italian population in 2022 (Bank of Italy, 2022).

3.2 Definition of Key Variables and Sample Selection

This section details the process of constructing the final analytical dataset from the raw 2022 SHIW files. It outlines the data preparation steps, the sample selection criteria, and provides formal definitions for the key variables used in the subsequent analyses. A more exhaustive description of the construction of each variable is available in Appendix B.

Data Preparation

The final master dataset was constructed through a multi-step process. First, several component files from the SHIW 2022 release—including those containing household characteristics, real estate details, and derived income and wealth aggregates—were sequentially merged using the unique household identifier (`nquest`). To improve clarity, many of the original variables were renamed.

A crucial decision was made regarding the unit of analysis. While the SHIW contains data on all individuals within a household, this thesis focuses on the household as the primary economic unit. To operationalize this, the characteristics of each household are proxied by those of a single representative individual. Following the SHIW's own classification, the "head of the family" (`cfred`), defined as the main income earner, was selected to represent each household. All other individuals in the dataset were consequently dropped, resulting in a final analytical sample of 9,641 unique households.

Several key variables were then constructed. The `parent_edu` variable was created by first leveraging the panel nature of the SHIW to fill in missing parental education data for returning households from previous waves, and then taking the maximum education level between the father and mother. A categorical `birth_cohort` variable was also generated by grouping household heads based on their year of birth according to standard sociological definitions.

Finally, the dataset was cleaned to address minor inconsistencies and missing data. A missing data analysis revealed a very low incidence of missing values for key variables. The few remaining missing values were imputed; for example, the birth area for one observation was set to their residence area. To handle anomalies in the economic data, a small number of non-positive net income values (typically occurring for self-employed individuals with business losses) were set to a nominal positive value of €0.1, and the saving rate was capped at 0.99 to correct a single outlier.

Key Variables: Demographics, Wealth and Inheritance

This subsection provides a formal definition of the main variables constructed and used throughout the descriptive and bivariate analysis. They are grouped thematically to clarify their role in the study.

Core Classification Variables

The analysis relies on several key categorical variables to segment the population and create the primary groups for comparison:

- **Owner Status:** This is the principal categorical variable used for the group analysis in Chapter 4. It segments the population into three mutually exclusive groups based on how the main residence was acquired (`poss_way`): Renters, "Self-Made" Owners, and Inheritor-Owners.
- **Inheritor (Full Sample):** A binary variable equal to 1 for households that acquired their main residence through full inheritance, and 0 for all other households (a group comprising both renters and "self-made" owners). This variable is used for the bivariate analysis on the full sample.
- **Inheritor-Owner (Homeowner Subsample):** A binary variable defined only for the subsample of homeowners. It is equal to 1 for households that inherited their home and 0 for "self-made" owners who acquired it through other means. This is used in the bivariate analysis restricted to homeowners.

Socio-Demographic and Economic Variables

These variables capture the main characteristics of the household, proxied by its head:

- **Household Characteristics:** These include the number of household components (`n_comp`), the birth cohort of the household head (`birth_cohort`), the geographical area of residence (`resid_area`), and the area of birth (`birth_area`).
- **Human Capital:** This is captured by the education level of the household head (`edu`) and the highest education level attained by either parent (`parent_edu`).
- **Employment:** The working status of the household head is described by the `work_status` variable.
- **Economic Resources:** The primary measures used in this analysis are `net_income` and `net_wealth`, representing the household's disposable income and net worth, respectively. The `saving_rate`, calculated as the ratio of savings to net income, is also included.

Constructed Wealth and Housing Variables

These variables are central to the analysis of housing tenure and wealth transmission:

- **Value of Residence:** The self-reported current market value of the main residence in 2022 (`value_2022`) is used as the basis for the microsimulation and as a key component of real assets.
- **Self-Made Wealth:** This variable is constructed to isolate the portion of wealth not attributable to the inherited main residence. For inheritors, it is calculated as total net wealth minus the value of the inherited home; for all other households, it is equal to their total net wealth.
- **Inheritance Share:** Defined for inheritor households, this variable measures the economic significance of the inherited asset as the ratio of its 2022 value to the household's total net wealth.

3.3 Measurement of Inequality in this Study

To provide a comprehensive assessment of the distribution of economic resources in Italy, this study will analyze inequality in terms of both net disposable income and net wealth. A range of standard statistical measures will be employed to capture different facets of the distribution, from overall concentration to the gaps between specific points. These measures will be calculated using the survey-weighted household data to ensure the results are representative of the entire population. In practice, all numerical indices are computed in Stata using the `ineqdeco` (Jenkins, 1999b) and `ineqdec0` (Jenkins, 1999a) commands, while the Lorenz curve is generated using the `lorenz` and `lorenz graph` commands (Jann, 2016).

Lorenz Curve and Gini Coefficient A foundational tool for visualizing inequality is the **Lorenz curve**. This graph plots the cumulative percentage of the population (ranked from poorest to richest) against the cumulative percentage of total income or wealth they possess. The curve is benchmarked against a 45-degree line of perfect equality, which represents a scenario where every household has an identical share of resources (e.g., the bottom 20% of households hold 20% of the total wealth). The more the Lorenz curve bows away from this line, the greater the degree of inequality.

While the Lorenz curve provides a visual representation, the **Gini coefficient** offers a concise numerical summary. It is calculated as the ratio of the area between the line of perfect equality and the observed Lorenz curve to the area between the line of perfect equality and the line of perfect inequality. The Gini coefficient ranges from 0, signifying perfect equality, to 1, representing perfect inequality (where a single household holds all the resources). Due to its intuitive interpretation, it is the most widely used single measure of inequality and will serve as a primary indicator in this analysis.

Percentile Ratios To understand the disparities at different points of the distribution, several percentile ratios will be computed. Unlike the Gini coefficient, which summarizes the entire distribution, these ratios highlight the relative distance between the top, middle, and bottom. The key ratios used will be:

- **p90/p10:** The ratio of the income or wealth of the household at the 90th percentile to that of the 10th percentile. This measures the gap between the affluent and the poor.
- **p90/p50:** The ratio of the 90th percentile to the median (50th percentile), indicating the gap between the top and the middle of the distribution.
- **p75/p25:** The interquartile ratio, which measures the spread within the middle half of the population.
- **p10/p50:** The ratio of the 10th percentile to the median, showing the distance of the poor from the middle.

Generalized Entropy (GE) Indices The family of Generalized Entropy (GE) indices offers a more flexible approach to measuring inequality. A key feature of these indices is a sensitivity parameter, α , which determines how sensitive the measure is to differences in various parts of the distribution. This allows for a more nuanced understanding of where inequality is most pronounced. The formula for general entropy for real values of α is:

$$GE(\alpha) = \begin{cases} \frac{1}{N\alpha(\alpha-1)} \sum_{i=1}^N \left[\left(\frac{y_i}{\bar{y}} \right)^\alpha - 1 \right], & \alpha \neq 0, 1, \\ \frac{1}{N} \sum_{i=1}^N \frac{y_i}{\bar{y}} \ln \frac{y_i}{\bar{y}}, & \alpha = 1, \\ -\frac{1}{N} \sum_{i=1}^N \ln \frac{y_i}{\bar{y}}, & \alpha = 0. \end{cases}$$

where N is the number of cases (e.g., households or families), y_i is the income for case i and α is the parameter which regulates the weight given to distances between incomes at different parts of the income distribution. For large α the index is especially sensitive to the existence of large incomes, whereas for small α the index is especially sensitive to the existence of small incomes. The following GE indices will be used:

- **GE(0), or the Mean Log Deviation:** This index is most sensitive to changes at the lower end of the distribution.
- **GE(1), or the Theil Index:** This index gives equal weight to differences across the entire distribution.
- **GE(2), or half the square of the Coefficient of Variation:** This index is most sensitive to changes at the upper end of the distribution.

Atkinson Indices Finally, the Atkinson family of indices provides an explicitly normative measure of inequality. It is defined as:

$$A_\epsilon(y_1, \dots, y_N) = \begin{cases} 1 - \frac{1}{\mu} \left(\frac{1}{N} \sum_{i=1}^N y_i^{1-\epsilon} \right)^{1/(1-\epsilon)} & \text{for } 0 \leq \epsilon \neq 1 \\ 1 - \frac{1}{\mu} \left(\prod_{i=1}^N y_i \right)^{1/N} & \text{for } \epsilon = 1 \\ 1 - \frac{1}{\mu} \min(y_1, \dots, y_N) & \text{for } \epsilon = +\infty \end{cases}$$

where y_i is individual income ($i = 1, 2, \dots, N$) and μ is the mean income. These indices are based on the concept of social welfare and incorporate an "inequality aversion" parameter, ϵ , where $\epsilon > 0$. This parameter reflects a society's preference for a more equal distribution. A higher value of ϵ signifies a stronger aversion to inequality and places more weight on the well-being of the poorest individuals. The Atkinson index can be interpreted as the proportion of total income or wealth that could be sacrificed (without reducing social welfare) if the remaining resources were distributed perfectly equally. This study will report the Atkinson index for different levels of inequality aversion ($\epsilon = 0.5, 1, 2$) to illustrate how the assessment of inequality changes based on different social welfare preferences.

3.4 Microsimulation Model of Inheritance Tax Policy

To assess the potential redistributive impact of inheritance tax reform, this thesis develops and implements a static arithmetic microsimulation model. This type of model is a standard tool for the ex-ante evaluation of tax-benefit policies, designed to calculate the immediate, first-order effects of a policy change on a representative sample of the population, assuming no behavioural responses from individuals. The model is applied to the subsample of 1,307 households identified as having inherited their main residence.

The simulation is structured as a two-stage "tax-and-transfer" scheme, with the second stage incorporating four distinct redistribution scenarios. This multi-stage approach allows for a decomposition of the final change in inequality into its constituent parts.

Stage 1: Simulating Tax Revenue and the "Tax Effect" The first stage involves applying the inheritance tax rules of various international regimes to the Italian data. The key variable for this calculation is the current market value of the inherited property in 2022, as reported in the SHIW survey. The model computes the *additional* tax liability for each household, defined as the difference between the tax due under a simulated foreign regime and the tax already owed under the current Italian system:

$$\text{Additional Tax} = \max\{0, \text{Tax}_{\text{Simulated}} - \text{Tax}_{\text{Italian}}\}$$

This ensures that the simulation only measures the new revenue generated by a reform. The total additional revenue collected across all inheritor households is then aggregated. At this point, a counterfactual post-tax, pre-transfer wealth distribution is created. By comparing the Gini coefficient of this intermediate distribution to the baseline, the model isolates the pure **tax effect**—the change in inequality caused solely by the collection of the tax itself.

Stage 2: Simulating Redistribution Scenarios and the "Redistribution Effect" The second stage models the redistribution of the total revenue collected in Stage 1. To explore how different policy choices affect the final outcome, four distinct scenarios are simulated:

- **Scenario A: Lump-Sum Transfer to the Bottom Decile.** The entire revenue pool is distributed equally among all households in the bottom decile of the pre-reform net wealth distribution.
- **Scenario B: Proportional Transfer to the Bottom Decile.** The transfer to households in the bottom wealth decile is weighted by the number of household members.
- **Scenario C: Universal Lump-Sum Transfer.** The entire revenue pool is distributed equally as a "citizen's dividend" to *all* households in the population.
- **Scenario D: Universal Proportional Transfer.** The transfer to *all* households is weighted by the number of household members.

For each scenario, a final post-reform wealth distribution is generated. The **redistribution effect** is then calculated as the change from the intermediate (post-tax) Gini to this final Gini. The total impact of each policy is measured by the change from the pre-reform baseline to the final post-reform wealth distribution. The impact on both overall inequality (Gini) and structural inequality between inheritors and non-inheritors (GE(2) decomposition) is analyzed.

3.5 Limitations of the Study

While this thesis employs rigorous methods to analyze the role of real estate inheritance in Italy, it is important to acknowledge the limitations inherent in the data and the analytical approach. These limitations provide context for the interpretation of the findings and suggest avenues for future research.

Survey Data

The empirical analysis relies on the Bank of Italy's Survey on Household Income and Wealth (SHIW), and several limitations stem from the nature of this data source and the specific methodological choices made during the analysis.

First, like all household surveys, the SHIW is subject to potential biases related to sampling and data collection. Despite a sophisticated, multi-stage sampling design, achieving a perfectly representative sample of over 25 million households (corresponding to approx. 60 million citizens) resident in Italy through 9,641 household interviews is a significant challenge. Wealthier households, in particular, are often under-represented in such surveys due to lower response rates, which could lead to an underestimation of the true extent of wealth concentration.

Second, the data are self-reported, which introduces several potential sources of measurement error. Respondents may have difficulty accurately recalling past events, such as the exact year an inheritance was received or the value of the property at that time. This is the very reason that led to the decision not to use the declared value of the house in the year it was inherited in the microsimulation model, but rather the declared value of the house in 2022 (considered much less susceptible to bias). Furthermore, there is a well-documented tendency for households to under-report income and wealth, particularly from sensitive or complex sources. The valuation of non-financial assets, such as the current market value of an inherited property, is also an estimate provided by the respondent and may not reflect its true market price. This is evident in the data, for example, by a clear tendency for respondents to report real estate values as multiples of €5,000, suggesting a rounding or estimation bias rather than precise market valuations. These factors can introduce a degree of noise and potential bias into the analysis.

Finally, several analytical decisions were made to operationalize the research questions, which impose their own limitations. The key variable for intergenerational background, parental education, is proxied by the education level of the most educated parent, which, while a common approach, does not capture the full complexity of a household's educational background. The unit of analysis for this study has been simplified to the household level, represented by the "head of the family" as identified by the Bank of Italy (the main income earner), meaning that the individual

characteristics of other household members are not directly modeled. Furthermore, for the sake of analytical clarity, the definition of an "inheritor" was restricted to households that acquired their property exclusively through inheritance (100%). This resulted in the re-classification of 326 households (3.38% of the total households) that partly inherited and partly purchased their property as non-inheritors, a simplification that narrows the scope of the analysis.

Inheritance Data

Beyond the general limitations of the survey, there are specific constraints related to how the SHIW captures intergenerational transfers.

First, the scope of the data on inheritance is narrow. While the SHIW has consistently collected information on real estate inheritances since 1987, it does not provide a comprehensive picture of all wealth transfers. More detailed modules covering the full range of intergenerational transfers, including financial assets, business equity, and valuable goods, were only included in two special waves of the survey in 1991 and 2002. Consequently, this study is necessarily focused on real estate and cannot quantify the role of other forms of inherited wealth.

Second, the survey lacks crucial information about the deceased donor. The data do not specify the relationship between the inheritor and the deceased (e.g., parent, grandparent, sibling, or other relative). This information is a critical determinant of the applicable tax rate under the Italian inheritance tax system, and the one of many other countries. To overcome this limitation for the microsimulation analysis, a significant simplifying assumption was made: all inheritances are treated as vertical transfers from a parent to a child, which represents the most common scenario but does not account for other types of bequests that would be taxed differently.

Third, for analytical simplicity, this study focuses exclusively on inherited properties that serve as the household's main residence. The analysis therefore excludes any other real estate assets that may have been inherited, such as second homes or properties held for investment purposes. This choice narrows the definition of inherited wealth and means the total value of real estate transfers may be underestimated for households that have received multiple properties.

Finally, the SHIW does not provide information on the past or present use of the inherited property in the detail required by some tax laws. Several international tax regimes, notably those of France and the Brussels-Capital Region in Belgium, offer significant allowances or reduced rates if the inherited property served as the main residence for the deceased or, in some cases, for the heir. As this information is unavailable in the survey, it is impossible to determine which households would be eligible for these favorable treatments. To address this uncertainty, a two-scenario approach was adopted for these countries: one simulation assumes all inheritors are eligible for the main residence allowance, and a second assumes none are. This method provides a bounded estimate of the potential redistributive impact under these regimes.

Static and Deterministic Microsimulation Model

The microsimulation model employed in this thesis is, by design, static and arithmetic (or deterministic). While this approach provides a clear and powerful tool for estimating the first-order distributional effects of a policy change, it is essential to acknowledge its inherent limitations. The results of the simulation should be interpreted as an immediate, "day after" impact, rather than a long-term forecast, for several key reasons.

First, the **static nature** of the model means it operates on a cross-section of the population at a single point in time (the year 2022). It does not account for dynamic, life-cycle, or intergenerational processes. The model does not simulate demographic changes such as births, deaths, or changes in household structure, nor does it model the accumulation or decumulation of wealth over an individual's lifetime. Consequently, it cannot capture how a change in inheritance tax might alter the trajectory of wealth accumulation for future generations or affect the timing of bequests.

Second, the **arithmetic or deterministic nature** of the model means it assumes no behavioral responses from individuals in reaction to the new tax policy. This is a significant simplification, as a change in inheritance tax could trigger a range of behavioral adjustments. For instance, individuals planning to leave a bequest might alter their saving behavior, either by saving less due to the higher "price" of leaving an inheritance, or by saving more to ensure their heirs receive a target amount post-tax. Similarly, higher taxes could increase incentives for tax avoidance (e.g., through estate planning and trusts) or outright tax evasion. On the recipient side, heirs anticipating a smaller inheritance might increase their own savings or labor supply, while the beneficiaries of the lump-sum transfer might reduce theirs. The model does not account for any of these potential second-order effects.

Finally, the analysis is a partial equilibrium exercise. It measures the direct impact on households' net wealth but **does not capture potential general equilibrium effects**. A significant increase in inheritance taxation could, in theory, influence aggregate savings, the national capital stock, and the market prices of assets, particularly real estate. These macroeconomic adjustments are beyond the scope of this study.

Despite these limitations, the static arithmetic model serves its primary purpose effectively: to provide a clear, transparent, and quantifiable estimate of the potential first-order redistributive power of different inheritance tax structures. The findings therefore represent a valuable, albeit simplified, benchmark for understanding the direct impact of such reforms on wealth inequality in Italy.

Chapter 4

Empirical Analysis: A Portrait of Wealth and Inheritance in Italy

This chapter presents the results of the descriptive analysis, providing a statistical portrait of Italian households and setting the stage for the microsimulation exercise in the subsequent chapter. Section 4.1 begins with an overview of the entire population, quantifying the high degree of inequality in the distributions of wealth and income. Section 4.2 then segments the population into three distinct groups—Renters, "Self-Made" Owners, and Inheritor-Owners—to conduct a detailed comparative analysis of their socio-economic profiles. Finally, Section 4.3 narrows the focus exclusively to inheritor households, examining their demographic characteristics, the inequality within their own group, and the economic significance of the assets they've received.

4.1 Descriptive Analysis of the Italian Population

The analysis begins with an overview of the key socio-economic variables that characterize the households in the 2022 SHIW sample. Table 4.1 presents the summary statistics for the main continuous and binary variables used throughout this study. For brevity, the detailed frequency distributions for categorical variables—such as birth area, birth cohort, residence area, education level, parental education, and working status—are provided in Appendix A (Tables A.1 - A.7).

The sample consists of 9,641 households, with an average household size of approximately 2.4 members. A key feature of the Italian context is the high rate of homeownership, with about 75% - 79% of households owning their residence. The central variable of this thesis, the reception of a real estate inheritance, characterizes 13% - 15% of the households in the sample.

The distributions of economic resources are highly skewed, a first indication of significant inequality. The median net household income is approximately €37,400, whereas the mean is substantially higher at over €55,800, indicating that a small number of high-income households pull the average upwards. This disparity is even more pronounced for wealth. The median net wealth stands at about €204,200, while the mean is more than three times higher, exceeding €612,000. The large

gap between the mean and median for both income and wealth underscores the concentration of resources at the top of the distribution, which will be explored in detail in Subsection 4.1.1.

Table 4.1. Summary Statistics of Key Household Variables

Variable	N	Mean	SD	Min	Max	p25	Median	p75
<i>Household Characteristics</i>								
Household Size (# of comp.)	9,641	2.39	1.21	1	12	1	2	3
Is Owner (binary)	9,641	0.79	0.40	0	1	1	1	1
Is Inheritor (binary)	9,641	0.14	0.34	0	1	0	0	0
<i>Economic Variables</i>								
Net Income (€)	9,641	55,877	123,356	0.1	8.6M	22,698	37,379	59,905
Net Wealth (€)	9,641	612,220	4.6M	-348,000	341M	89,500	204,221	435,008
Savings (€)	9,641	23,813	109,943	-142,352	8.2M	2,482	10,115	24,381
Saving rate	9,641	-328.8	7,252	-362,907	0.99	0.1	0.3	0.46
<i>Inheritance Variables</i>								
Possession Year (for owners)	7,654	1994.6	16.77	1927	2022	1982	1996	2008
Value at Possession (€)	7,654	152,376	223,803	500	10M	50,000	100,000	190,000
Value in 2022 (€)	9,641	254,873	337,408	3,000	10M	110,000	180,000	300,000
"Self-made" Wealth (€)	9,641	576,330	4.6M	-457,400	341M	47,317	180,000	402,349

Source: Author's calculations on SHIW 2022 data. All monetary values are in Euros. "M" denotes millions. Statistics are calculated using sample weights. **The sample includes 133 households with negative net wealth and 125 with zero net wealth.** "Possession Year" and "Value at Possession" statistics are conditional on being a homeowner.

4.1.1 Distribution of Income and Wealth

Having established the large gap between the mean and median for both income and wealth, this section delves deeper into their distributions to formally quantify the extent of inequality. A preliminary examination reveals that both distributions are characterized by extreme positive skewness. The skewness and kurtosis statistics for net income and net wealth are reported in 4.2. The statistics for the wealth distribution are even more pronounced, formally confirming a high concentration of households at the lower end and a long tail of very high-value observations.

Table 4.2. Skewness and Kurtosis of the distribution of Income and Wealth

	Net Income	Net Wealth
Skewness	17.1	28.2
Kurtosis	788.0	1692.5

Source: Author's calculations on SHIW 2022 data.

This high degree of skew renders standard visualizations of the raw data, such as histograms or box plots, uninformative, as the extreme outliers visually compress the distribution of the vast majority of households. To effectively visualize the data while retaining all observations, a transformation of the variables is necessary.

Figure 4.1 presents side-by-side box plots of net income and net wealth on a transformed scale. For income, a standard logarithmic scale is used. For wealth, which includes negative and zero values, an inverse hyperbolic sine (asinh) transformation is applied, which functions similarly to a logarithm for large positive values while correctly handling non-positive ones (Norton, 2022).

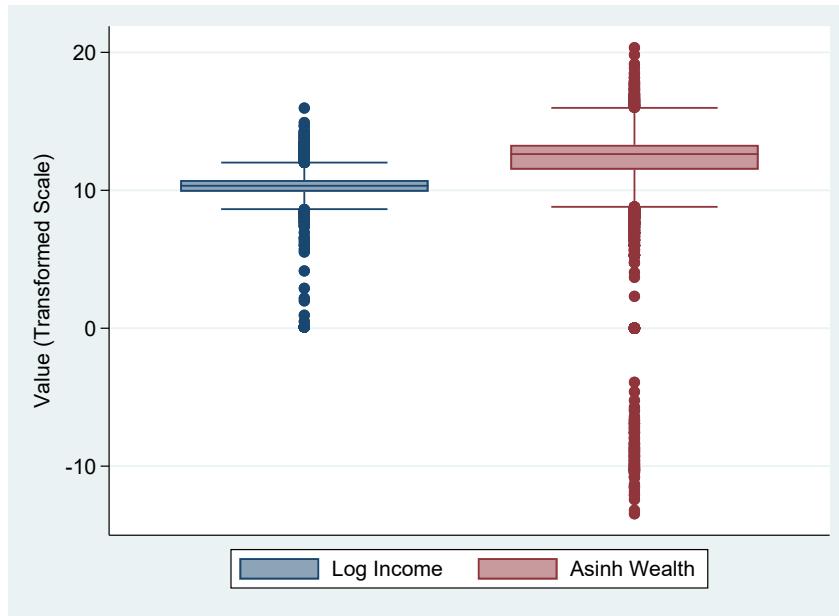


Figure 4.1. Distribution of Household Income and Wealth on a Transformed Scale

Source: Author's calculations on SHIW 2022 data. The y-axis uses a log scale for income and an inverse hyperbolic sine scale for wealth to accommodate the skewed nature of the data.

The figure clearly illustrates that wealth is far more dispersed than income. The interquartile range (the height of the box) is visibly larger for wealth, and its distribution includes a substantial number of outliers at both the high and low ends, with the latter representing households in debt.

To quantify these visual observations, Table 4.3 presents a comprehensive set of inequality indices. A methodological note is warranted: to handle the presence of non-positive net wealth values (the exact number is reported in the caption of Table 4.1), two different statistical commands were employed. For the original net wealth variable, the `ineqdec0` command was used, as it is designed to handle zero and negative values. However, this command does not compute the full range of inequality indices. Therefore, for net income and for a transformed net wealth variable—where households with non-positive wealth have had their wealth set to a nominal value of €1.01—the `ineqdeco` command was used. This dual approach allows for the inclusion of all households in the main wealth Gini calculation while still providing a broader set of indices for comparison via the transformed variable.

The results in the table are stark. The Gini coefficient for net wealth (0.659) is dramatically higher than for net income (0.365), confirming a much higher concentration of wealth. The percentile ratios reveal the scale of this disparity: the

income of a household at the 90th percentile is about 5 times that of one at the 10th percentile. For wealth, this ratio explodes to approximately 248. The other indices corroborate this finding; for instance, the GE(2) index, which is highly sensitive to values at the top of the distribution, is more than 13 times larger for wealth than for income, highlighting the role of the extremely wealthy.

Table 4.3. Inequality Indices for Income and Wealth

	Net Income	Net Wealth	Transformed Net Wealth
Gini Coefficient	0.365	0.659	0.658
p90/p10 Ratio	5.15	247.79	247.79
p90/p50 Ratio	2.19	3.58	3.58
p10/p50 Ratio	0.42	0.01	0.01
p75/p25 Ratio	2.33	6.04	6.04
GE(0)	0.257	.	1.51
GE(1)	0.261	.	1.121
GE(2)	0.525	6.955	6.944
Atk(0.5)	0.115	.	0.414
Atk(1)	0.227	.	0.779
Atk(2)	0.998	.	0.999

Source: Author's calculations on SHIW 2022 data.

This comprehensive picture of inequality is summarized visually by the Lorenz curves in Figure 4.2, which plots the cumulative share of the population against the cumulative share of net income and transformed net wealth they hold.

The figure provides a clear and intuitive confirmation of the results from the inequality indices. The Lorenz curve for transformed net wealth is bowed significantly further away from the 45-degree line of perfect equality than the curve for net income. The larger area between the wealth curve and the line of equality visually represents the higher Gini coefficient and confirms that, in Italy, wealth is distributed in a profoundly more unequal manner than income.

To formally test this visual finding, a test for Lorenz dominance was conducted using the `lorenz contrast` procedure in Stata, as detailed by Jann, 2016. This test assesses whether the Lorenz curve for one distribution is statistically significantly and consistently above the other. Dominance is established if the difference between the ordinates of the two curves is non-negative across the entire distribution. Figure 4.3 plots this difference (Net Income Lorenz curve minus Transformed Net Wealth Lorenz curve) along with its 95% confidence interval. The graph shows that the difference is positive across all population percentiles, and the confidence interval remains above the zero-line for the vast majority of the distribution. This provides strong statistical evidence that the distribution of net income Lorenz dominates that of transformed net wealth, formally confirming that wealth is more unequally distributed than income. The detailed results of the contrast test can be found in Table A.8 in Appendix A.

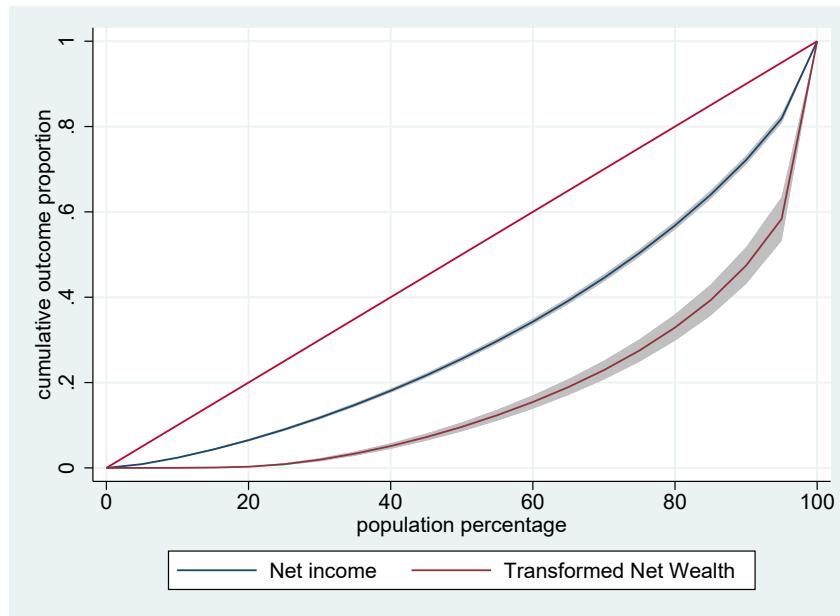


Figure 4.2. Lorenz Curves for Net Income and Transformed Net Wealth

Source: Author's calculations on SHIW 2022 data. The shaded area represents the 95% confidence interval.

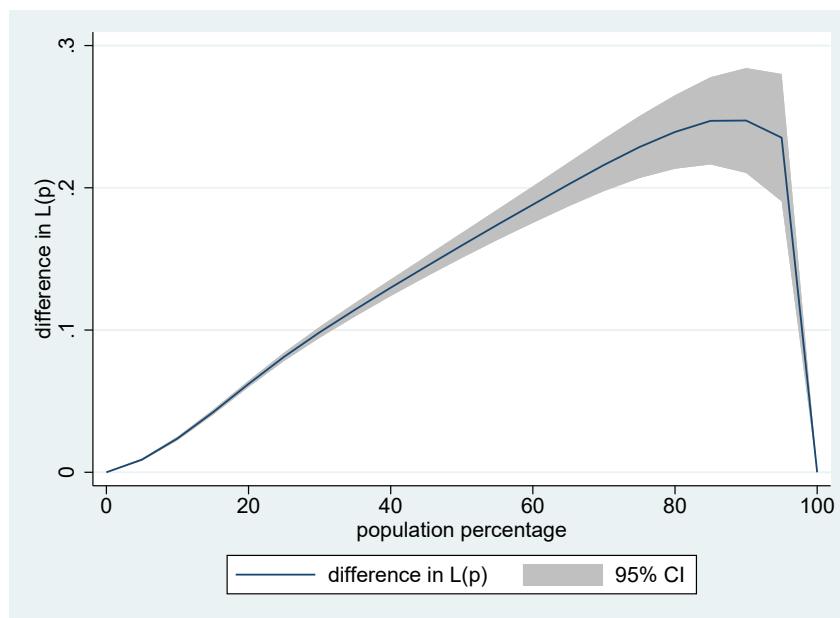


Figure 4.3. Difference between Lorenz Curves (Income - Wealth)

Source: Author's calculations on SHIW 2022 data. The shaded area represents the 95% confidence interval.

4.1.2 Distribution of Wealth vs. "Self-made" Wealth

While the previous section established that wealth is far more concentrated than income, a crucial question remains: to what extent is this high inequality driven by intergenerational transfers of real estate? To isolate this effect, this section directly compares the distribution of total net wealth with that of "self-made" wealth, which excludes the value of inherited property.

Table 4.4 presents the summary statistics for both distributions. Both variables are highly skewed and leptokurtic, but "self-made" wealth slightly more so. As expected, the mean and all percentiles of "self-made" wealth are lower than their total net wealth counterparts. The most significant drop occurs in the lower half of the distribution: the median falls from approximately €152,000 to €126,500, and the 25th percentile plummets from over €49,300 to just €15,050. This provides the first clue that inherited real estate acts as a "wealth floor," lifting many households from the bottom of the distribution.

Table 4.4. Distribution of Wealth vs. "Self-made" Wealth

	Net Wealth	'Self-made' wealth
Mean	295,822.5	265,235.7
SD	1,103,371	1,076,298
Skewness	28.21	29.20
Kurtosis	1,692.53	1,817.56
p1	-5,278	-17,158.3
p5	450	100
p10	2,200	1,300
p25	49,304.32	15,050
Median	152,051.3	126,500
p75	298,000	262,500
p90	545,150	510,000
p95	788,910.4	737,441.4
p99	2,459,000	2,203,500

Source: Author's calculations on SHIW 2022 data.

To formally quantify the inequality suggested by these distributions, Table 4.5 presents the key inequality indices. The results are revealing and perhaps counter-intuitive. Contrary to the expectation that removing unearned assets would decrease inequality, the Gini coefficient for "self-made" wealth (0.699) is substantially higher than for total net wealth (0.659).

The percentile ratios explain this result. The gap between the top and the bottom of the distribution widens dramatically when inherited real estate is excluded. The p90/p10 ratio jumps from 248 for total wealth to 392 for "self-made" wealth. The most telling statistic is the p75/p25 ratio, which nearly triples from 6.04 to 17.44. This indicates that the middle part of the "self-made" wealth distribution is stretched much further apart.

This phenomenon is consistent with the "wealth floor" hypothesis. For a significant

Table 4.5. Inequality Indices for Wealth and "Self-made" Wealth

	Net Wealth	'Self-made' wealth
Gini Coefficient	0.659	0.699
p90/p10 Ratio	247.79	392.30
p90/p50 Ratio	3.58	4.03
p10/p50 Ratio	0.01	0.01
p75/p25 Ratio	6.04	17.44
GE(2)	6.955	8.232

Source: Author's calculations on SHIW 2022 data. Note: Due to the presence of non-positive values in both variables, calculations were performed using the Stata command `ineqdec0`. Consequently, the *GE(0)*, *GE(1)*, and *Atkinson* indices are not reported.

number of households, the inherited property constitutes a large portion of their assets, lifting them far from the bottom of the distribution. This acts as a powerful equalizing force by compressing the lower tail of the total wealth distribution. When this inherited wealth is computationally removed, these households fall back to a much lower level of net worth, revealing the more extreme underlying inequality of financial and other non-inherited assets.

This counter-intuitive finding is confirmed visually by the Lorenz curves in Figure 4.4. The Lorenz curve for 'self-made' wealth (Figure 4.4a) is bowed slightly further away from the 45-degree line of perfect equality than the curve for total net wealth, visually representing its higher Gini coefficient.

To formally test this visual observation, a test for Lorenz dominance was performed. Figure 4.4b plots the difference between the two Lorenz curves. The difference is positive across the entire distribution, and the 95% confidence interval remains above zero for the majority of it. This provides strong statistical evidence that the distribution of total net wealth Lorenz dominates that of 'self-made' wealth, formally confirming that the inclusion of inherited real estate has an equalizing effect on the overall wealth distribution. The detailed results of the contrast test are available in the Appendix A (Table A.9).

4.1.3 Decomposition of Inequality by Inheritance Status

While the previous section established the high degree of overall inequality in Italy, particularly for wealth, a deeper understanding requires analyzing its sources. A powerful method for this is inequality decomposition, which partitions total inequality into two components: *within-group inequality*, which measures the disparities inside distinct population subgroups, and *between-group inequality*, which captures the inequality arising from differences in the average resources of those subgroups.

This section decomposes the distributions of net wealth and net income by inheritance status to answer a key question: how much of total inequality is attributable to the simple division between households that have inherited real estate and those that have not. The results of this decomposition are presented in Table 4.6.

The decomposition of **net wealth** reveals several crucial insights into its structure.

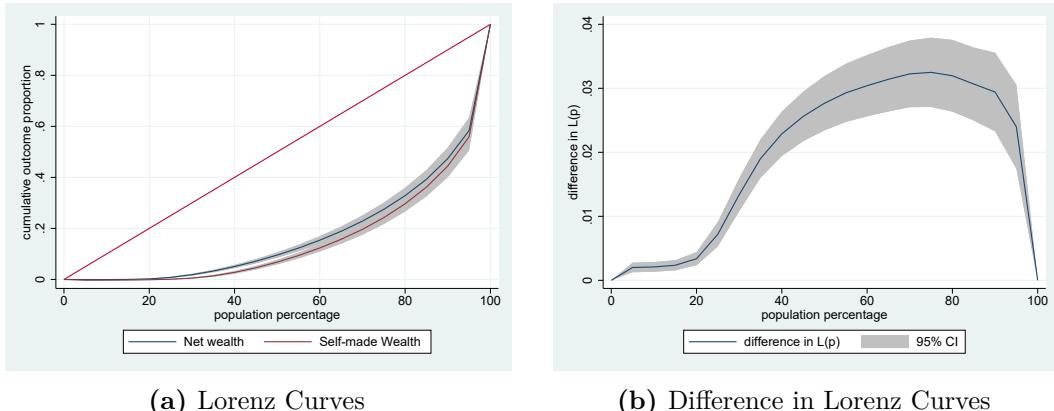


Figure 4.4. Lorenz Curve Comparison: Net Wealth vs. 'Self-made' Wealth

Source: Author's calculations on SHIW 2022 data. The shaded area represents the 95% confidence interval

The subgroup statistics confirm the significant economic advantage held by inheritors. While constituting only 15.2% of the population, they control a disproportionately large 21.4% of total net wealth. Their relative mean wealth is 1.41, indicating that, on average, an inheritor household is 41% wealthier than the national average, whereas a non-inheritor household is about 7% poorer than the average.

The analysis of within-group inequality shows that the Gini coefficient is actually higher for non-inheritors (0.664) than for inheritors (0.622). This confirms the finding from Section 4.3.2 that inheritors are a more economically homogeneous group, as the inheritance of a home provides a high "wealth floor" that reduces the extreme disparities found within the non-inheritor population, which includes both asset-rich "self-made" owners and asset-poor renters.

Most importantly, the decomposition of the Generalized Entropy index shows that the vast majority of total wealth inequality stems from the disparities *within* each group. The between-group component, which captures the gap between inheritors and non-inheritors, accounts for only **0.22%** of total inequality. This indicates that while inheriting property provides a clear advantage, it is not the primary driver of overall wealth concentration. The enormous differences between the very rich and the very poor *within* both the inheritor and non-inheritor groups account for almost all of the observed inequality.

The decomposition of **net income** provides a stark contrast. The distribution of income is far more balanced between the two groups. Inheritors' share of total income (14.5%) is nearly identical to their population share (15.2%), and their relative mean income (0.958) is slightly below the national average. Furthermore, the Gini coefficients for the two groups are very similar. Consequently, the between-group component of income inequality is practically zero, explaining only 0.03% of the total.

In summary, this decomposition analysis demonstrates that while inheritance status is a powerful marker of wealth advantage, it has a negligible association with the distribution of current income. The structure of wealth inequality and

Table 4.6. Decomposition of Inequality by Inheritance Status (2022)

	Net Income	Net Wealth
Overall Inequality		
Gini Coefficient	0.365	0.659
Generalized Entropy $GE(2)$	0.525	6.955
Subgroup Characteristics		
<i>Non-Inheritors</i>		
Population Share	84.8%	84.8%
Income/Wealth Share	85.5%	78.6%
Relative Mean	1.007	0.927
<i>Inheritors</i>		
Population Share	15.2%	15.2%
Income/Wealth Share	14.5%	21.4%
Relative Mean	0.958	1.410
Within-Group Inequality		
Gini (Non-Inheritors)	0.369	0.664
Gini (Inheritors)	0.339	0.622
Decomposition of $GE(2)$		
Within-Group Component (GE_W)	0.525	6.940
Between-Group Component (GE_B)	0.0002	0.015
Between-Group Share of Total	0.03%	0.22%

Source: Author's calculations on SHIW 2022 data. Decomposition performed using the `ineqdeco` and `ineqdec0` commands in Stata. The "Between-Group Share of Total" is calculated as $GE_B/GE(2)$.

income inequality in Italy are shaped by different forces, reinforcing the focus of this thesis on wealth as the key dimension for understanding the long-term impact of intergenerational transfers.

4.1.4 Income and Wealth Distribution by Quintiles and Inheritance Status

While the preceding analysis established the aggregate differences between inheritors and non-inheritors, a deeper understanding requires disaggregating the data. This section examines the distribution of net income, net wealth, and "self-made" wealth for both groups across the five quintiles of the national wealth distribution. This approach allows for a granular comparison, revealing how inheritance status is associated with economic outcomes not just on average, but for the poorest, middle, and richest segments of the population.

The relationship between current income and wealth quintile, presented in Table 4.7, reveals a perhaps counter-intuitive dynamic. Across nearly all wealth quintiles, non-inheritor households report higher mean and median incomes than their inheritor

counterparts. The gap is particularly noticeable in the lowest quintile, where non-inheritors earn a median income of €17,000, substantially more than the €10,068 earned by inheritors in the same wealth bracket. This pattern suggests that for non-inheritors, achieving a certain level of wealth often requires a higher concurrent income stream to facilitate the necessary saving and asset accumulation. Conversely, for inheritors, their position on the wealth ladder is less dependent on their current earnings, a finding consistent with the fact that many are older and retired.

Table 4.7. Distribution of Net Income by Wealth Quintiles and Inheritance Status

Group	Mean	SD	p10	p25	p50	p75	p90	p99
<i>Quintile 1</i>								
Inheritors	12,235.62	8,153.65	7,200.00	7,200.00	10,068.47	13,763.03	15,320.63	42,452.51
Non-Inheritors	19,462.04	11,032.80	8,160.00	11,821.95	17,000.00	25,000.00	35,043.59	55,752.85
<i>Quintile 2</i>								
Inheritors	21,245.86	10,420.03	9,640.00	13,901.57	20,516.62	25,287.04	34,222.72	56,306.27
Non-Inheritors	27,904.09	13,921.38	12,207.84	17,266.03	24,921.95	36,668.19	47,470.38	68,841.42
<i>Quintile 3</i>								
Inheritors	30,254.04	13,167.92	16,084.45	22,150.17	26,619.41	39,120.11	48,948.17	67,494.08
Non-Inheritors	32,957.19	14,859.94	16,603.14	21,974.06	30,309.41	41,528.22	52,662.72	77,207.43
<i>Quintile 4</i>								
Inheritors	36,260.48	16,273.82	19,754.70	23,536.79	33,013.67	46,659.13	57,178.40	93,568.40
Non-Inheritors	42,087.82	19,250.26	22,602.51	28,205.02	38,106.69	53,125.64	68,028.79	95,814.21
<i>Quintile 5</i>								
Inheritors	57,261.83	50,859.35	25,648.58	32,200.88	45,292.13	63,959.81	91,587.14	274,646.70
Non-Inheritors	72,655.14	75,531.35	31,235.19	41,349.37	58,825.09	81,389.26	114,411.20	353,903.10

Source: Author's calculations on SHIW 2022 data

An examination of the net wealth distribution in Table 4.8 clarifies the profound impact of inheritance, especially at the bottom of the distribution. The most dramatic divergence is found in the first quintile. While non-inheritors in this bracket are truly asset-poor with a median wealth of just €2,120, inheritors in the very same quintile hold a median wealth of €15,700. This stark contrast powerfully illustrates the "wealth floor" effect of receiving a real estate inheritance; it effectively prevents beneficiaries from occupying the lowest rungs of the wealth ladder, regardless of their other economic characteristics.

Interestingly, this gap narrows significantly in the middle of the distribution. For the second, third, and fourth quintiles, the wealth profiles of inheritors and non-inheritors are remarkably similar, with nearly identical medians and interquartile ranges. This suggests that "self-made" owners in the middle class successfully accumulate wealth—primarily through housing equity—to levels comparable to those who inherited their homes. However, the divergence reappears at the top. In the fifth quintile, inheritors are substantially wealthier on average (€1,152,956) than non-inheritors (€953,910), and the difference is even more pronounced at the 99th percentile. This indicates that while modest inheritances provide a floor, large inheritances act as a significant multiplier of advantage at the highest levels of wealth.

The underlying reason for these patterns is revealed in Table 4.9, which displays

Table 4.8. Distribution of Net Wealth by Wealth Quintiles and Inheritance Status

Group	Mean	SD	p10	p25	p50	p75	p90	p99
<i>Quintile 1</i>								
Inheritors	13,003.59	8,284.97	7,500.00	10,500.00	15,700.00	15,966.30	19,800.00	19,800.00
Non-Inheritors	3,166.19	8,142.11	0.00	450.00	2,120.00	6,000.00	11,800.00	19,302.60
<i>Quintile 2</i>								
Inheritors	70,997.56	25,936.76	34,800.00	50,800.00	70,500.00	93,000.00	105,500.00	113,269.50
Non-Inheritors	71,858.09	27,435.80	31,000.00	48,389.40	76,000.00	96,050.54	106,000.00	113,463.40
<i>Quintile 3</i>								
Inheritors	154,275.00	23,522.53	121,000.00	130,500.00	155,500.00	175,916.00	185,200.00	193,000.00
Non-Inheritors	152,531.60	22,744.03	122,000.00	131,457.10	151,700.00	172,300.00	183,469.20	194,000.00
<i>Quintile 4</i>								
Inheritors	257,923.60	42,451.14	209,944.70	224,000.00	250,132.40	294,700.00	320,300.00	338,200.00
Non-Inheritors	258,477.10	43,614.25	203,850.00	218,300.00	253,880.00	299,000.00	321,600.00	345,000.00
<i>Quintile 5</i>								
Inheritors	1,152,956.00	2,735,960.00	375,246.50	442,000.00	545,150.00	942,900.00	1,789,900.00	8,310,991.00
Non-Inheritors	953,909.60	2,221,504.00	367,000.00	416,000.00	544,166.40	770,200.00	1,358,000.00	9,639,045.00

Source: Author's calculations on SHIW 2022 data

Table 4.9. Distribution of "Self-Made" Wealth by Wealth Quintiles and Inheritance Status

Group	Mean	SD	p10	p25	p50	p75	p90	p99
<i>Quintile 1</i>								
Inheritors	-24,462.46	37,509.18	-82,500.00	-40,200.00	500.00	966.30	2,700.00	2,700.00
Non-Inheritors	3,166.19	8,142.11	0.00	450.00	2,120.00	6,000.00	11,800.00	19,302.60
<i>Quintile 2</i>								
Inheritors	-1,432.55	32,985.85	-37,000.00	300.00	3,000.00	9,500.00	18,228.92	47,021.16
Non-Inheritors	71,858.09	27,435.80	31,000.00	48,389.40	76,000.00	96,050.54	106,000.00	113,463.40
<i>Quintile 3</i>								
Inheritors	24,544.87	33,374.69	1,500.00	4,500.00	16,000.00	32,000.00	72,000.00	142,710.60
Non-Inheritors	152,531.60	22,744.03	122,000.00	131,457.10	151,700.00	172,300.00	183,469.20	194,000.00
<i>Quintile 4</i>								
Inheritors	69,662.71	63,018.08	7,985.57	17,300.00	57,993.55	113,888.00	168,723.20	205,000.00
Non-Inheritors	258,477.10	43,614.25	203,850.00	218,300.00	253,880.00	299,000.00	321,600.00	345,000.00
<i>Quintile 5</i>								
Inheritors	741,764.70	2,531,771.00	29,591.96	137,000.00	281,300.00	515,000.00	1,089,900.00	7,710,991.00
Non-Inheritors	953,909.60	2,221,504.00	367,000.00	416,000.00	544,166.40	770,200.00	1,358,000.00	9,639,045.00

Source: Author's calculations on SHIW 2022 data

the distribution of "self-made" wealth. The findings for inheritors are striking. For those in the first two wealth quintiles, their mean self-made wealth is negative (-24,462€ and -1,433€, respectively), and the median is close to zero. This is a crucial finding: it demonstrates that for a large portion of inheritors in the lower half of the wealth distribution, the inherited home constitutes virtually their entire net worth. Without this transfer, they would be among the most asset-poor households in the country. Their position in the national wealth distribution is almost entirely a function of the assets they have received rather than those they have accumulated.

In summary, the quintile-level analysis uncovers a nuanced story. Inheritance acts as a powerful buffer against poverty at the bottom of the wealth distribution and as an accelerator of fortune at the top. In the middle, while total wealth levels converge, the composition of that wealth is fundamentally different for the two groups. For non-inheritors, wealth is a direct function of their ability to generate income and save; for many inheritors, it is a legacy that provides a foundational level of economic security, largely decoupled from their own life-cycle earnings.

4.2 House-Ownership and Inheritance: A Three-Group Analysis

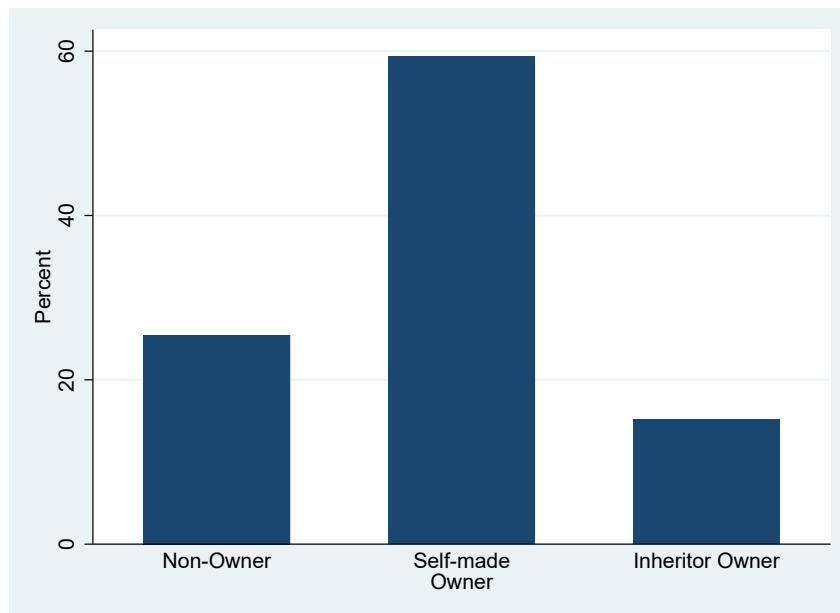
Having established the high degree of overall wealth inequality, the analysis now shifts to explore one of its primary determinants: the intersection of housing tenure and intergenerational transfers. To unpack this relationship, the sample is segmented into three distinct and mutually exclusive groups:

1. **Renters:** Households that do not own their main residence.
2. **"Self-Made" Owners:** Households that own their residence but acquired it through their own means (e.g., purchase or self-construction), without inheritance.
3. **Inheritor-Owners:** Households that own their residence, having acquired it through a full inheritance.

Figure 4.5 visually represents the distribution of the sample across these three pathways to housing tenure. The vast majority of households are owners, with "self-made" owners constituting the largest single group. Among the homeowner population, approximately 15% have acquired their property through inheritance. The detailed frequencies are available in Table A.7 in Appendix A.

This classification allows for a more nuanced comparison than a simple renter-owner or inheritor-non-inheritor binary. It effectively creates a ladder of housing and wealth acquisition, enabling an analysis of the socio-economic characteristics that distinguish each group. Table 4.10 presents summary statistics for key economic variables, while the composite Figure 4.6 provides a detailed breakdown of socio-demographic characteristics.

The results reveal a significant gradient of economic well-being. The most dramatic difference lies in net wealth: the median wealth of a renter household is less than €5,000, whereas for both groups of homeowners, it is approximately 50 times higher. This highlights that homeownership, regardless of its origin, is the

**Figure 4.5.** Distribution of Households by Housing Tenure and Inheritance Status

Source: Author's calculations on SHIW 2022 data.

Table 4.10. Summary Statistics by Housing Tenure and Inheritance Status

Variable	Renters	"Self-Made" Owners	Inheritor-Owners
<i>Household Characteristics</i>			
Number of Households	1,987	6,347	1,307
Household Size (Mean)	2.32	2.45	2.24
<i>Economic Variables (€)</i>			
Mean Net Income	31,172	64,718	50,502
Median Net Income	20,157	43,834	35,124
Mean Net Wealth	111,476	754,427	682,911
Median Net Wealth	4,920	260,500	248,000
Mean Savings	10,042	28,854	20,266
Mean Saving Rate	-1596.34	0.29	0.24
<i>Residence Characteristics (€)</i>			
Mean Value of Residence (2022)	158,559	282,993	264,746

Source: Author's calculations on SHIW 2022 data. All monetary values are in Euros.

principal dividing line in wealth accumulation. Interestingly, "Self-Made" Owners report the highest mean and median incomes, surpassing even the Inheritor-Owners, which suggests that purchasing a home often requires a higher concurrent income stream. This is also reflected in the savings behavior; while the large negative mean saving rate for renters is skewed by outliers, it points to financial precarity. In stark

contrast, both owner groups exhibit positive and substantial average saving rates.

The demographic data in Figure 4.6 adds crucial context. The profiles of the three groups are closely tied to the life cycle (Figure 4.6a). Renters are the youngest cohort, with high proportions of Generation X and Millennials. Inheritor-Owners are the oldest, dominated by the Silent Generation and Baby Boomers. "Self-Made" Owners occupy the middle ground, primarily Baby Boomers and Generation X, consistent with being in their prime earning and home-owning years. This age difference is mirrored in their working status (Figure 4.6b), where Inheritor-Owners have the largest share of retirees, and renters have the highest share of workers.

Regarding human capital (Figures 4.6c and 4.6d), the distributions of both parental and own education are remarkably similar across the three groups, indicating a broad societal trend of intergenerational educational uplift rather than a specific advantage for one group. Finally, the geographical distribution (Figure 4.6e) shows that homeowners, both self-made and inheritors, are more concentrated in the North, whereas renters have a slightly stronger relative presence in the South.

4.2.1 The Lifecycle Effect in "Self-made" Owners

To delve deeper into the financial profile of the "Self-Made" Owners, who form the largest group, they can be further disaggregated based on whether they currently hold a mortgage on their main residence. Table 4.11 presents this breakdown. The data reveals a clear lifecycle effect. Households with a mortgage are, on average, larger and have a higher median income, which is consistent with the financial requirements of servicing a home loan. They also tend to occupy more valuable properties. Conversely, their median net wealth is slightly lower than that of their mortgage-free counterparts. This is an expected result, as the outstanding mortgage principal is counted as a liability, which reduces their net worth. This subdivision underscores that while homeownership is a critical wealth-building step, the initial phase, characterized by mortgage debt, involves a different financial reality than the later phase of outright ownership.

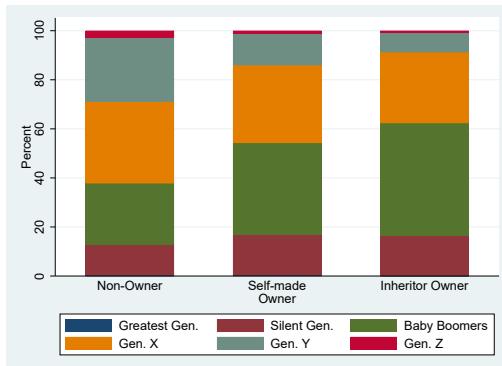
4.3 A Deeper Profile of the Inheritor Households

Having established the significant economic advantages associated with inheriting a home, this section shifts focus exclusively to the 1,307 inheritor households to create a more detailed socio-demographic portrait. By examining their characteristics, we can better understand the profile of those who benefit from the intergenerational transfer of real estate. The analysis will proceed by presenting a series of distributions for key categorical variables (Figures 4.7 - 4.10).

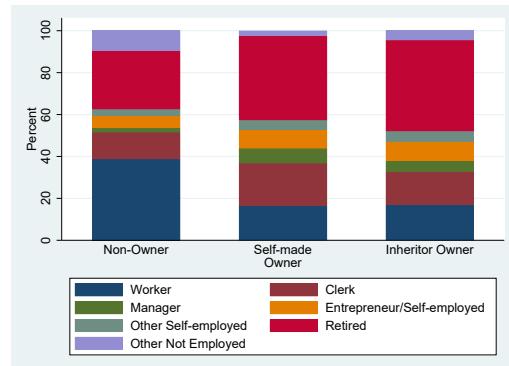
4.3.1 A Socio-Demographic Portrait of Inheritors

To understand what distinguishes households that have received a real estate inheritance, this section presents a comparative socio-demographic profile of inheritors against non-inheritors (composed of both renters and "self-made" owners).

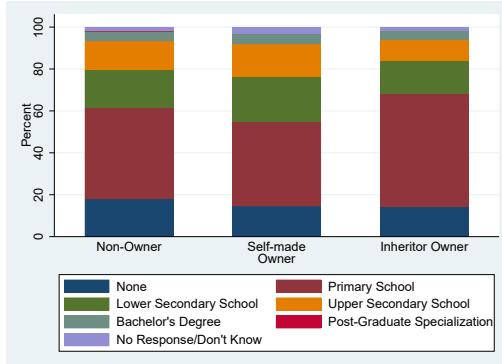
The profile is strongly linked to generational patterns and life-cycle stage. Figure 4.7 shows that real estate inheritance is a phenomenon concentrated among older



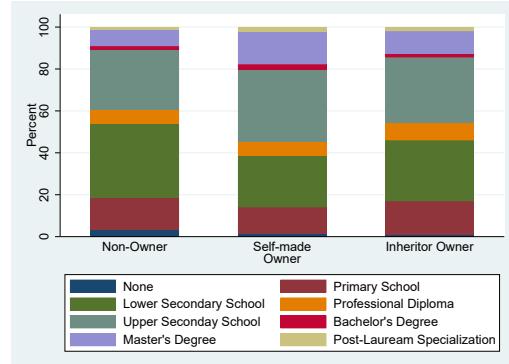
(a) Distribution of Birth Cohort



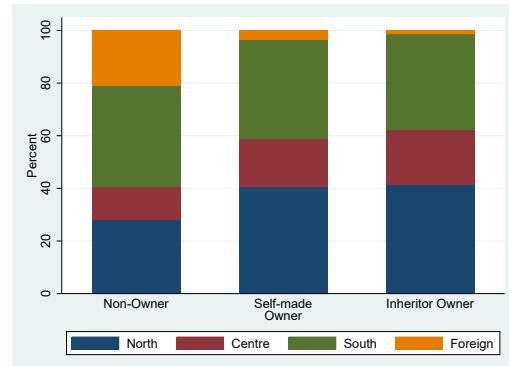
(b) Distribution of Working Status



(c) Distribution of Parental Education



(d) Distribution of Own Education



(e) Distribution of Geographical Area of Birth

Figure 4.6. Socio-Demographic Characteristics by Housing Tenure Status

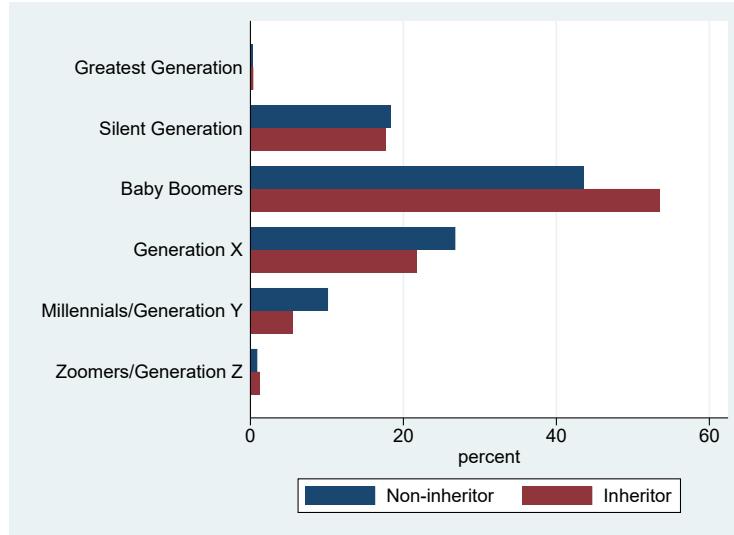
Source: Author's calculations on SHIW 2022 data. Detailed frequencies can be found in Appendix A (Tables A.10 - A.14).

Table 4.11. Summary Statistics of "Self-made Owners" by Mortgage Status

Variable	No Mortgage	Mortgage
<i>Household Characteristics</i>		
Number of Households	5,271 (83.05%)	1,076 (16.95%)
Household Size (Mean)	2.34	2.96
<i>Economic Variables (€)</i>		
Mean Net Income	63,814	69,147
Median Net Income	41,875	52,253
Mean Net Wealth	757,989	736,980
Median Net Wealth	269,500	229,750
Mean Savings	28,962	28,324
Mean Saving Rate	0.29	0.31
<i>Residence Characteristics (€)</i>		
Mean Value of Residence (2022)	278,133	306,796

Source: Author's calculations on SHIW 2022 data. All monetary values are in Euros.

generations. Over half of all inheritors are **Baby Boomers** (approx. 55%), with the **Silent Generation** also heavily represented. In contrast, the non-inheritor population, while also having a large Baby Boomer contingent, is significantly younger on average, with a much larger share of **Generation X** and **Millennials**. This is intuitive: non-inheritors are more likely to be in the earlier stages of their housing journey (renting or having recently purchased), while inheritors receive assets at a later life stage, typically after their parents have passed away.

**Figure 4.7.** Birth Cohort Distribution of Inheritors

Source: Author's calculations on SHIW 2022 data.

This age gap directly translates to differences in employment status (Figure 4.8).

The single largest category for inheritors is "Retired" (nearly 50%), a significantly higher proportion than for non-inheritors (around 42%). Conversely, non-inheritors are more likely to be in active employment categories such as "Worker" or "Clerk."

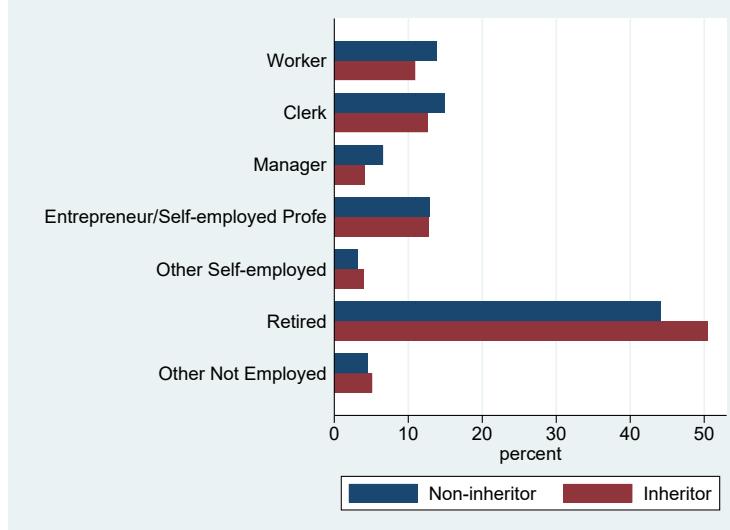


Figure 4.8. Working Status of Inheritors

Source: Author's calculations on SHIW 2022 data.

An analysis of educational attainment reveals a significant story of intergenerational upward mobility across the entire population. Figure 4.9a shows that the parents of *both* inheritors and non-inheritors predominantly had low levels of formal education, with a majority holding at most a primary school diploma. This reflects the educational norms of their time and suggests their wealth was likely accumulated through work and saving during Italy's post-war economic expansion.

In stark contrast, Figure 4.9b shows that the children's generation is far more educated. However, what is most striking is the similarity between the two groups: the educational distribution of inheritors is almost identical to that of non-inheritors. This suggests that while one generation built a foundation of material wealth, the subsequent increase in educational attainment was a widespread societal phenomenon, not a feature unique to those who would later inherit property.

Finally, the geographical distribution of the two groups by birth area, presented in Figure 4.10, is also remarkably similar. For both inheritors and non-inheritors, the highest concentration is in the South of Italy, followed by the North, and then the Centre. This reinforces that real estate inheritance is not confined to a specific region but is a widespread national phenomenon. Unsurprisingly, those born outside of Italy ("Foreign") make up a very small fraction of both groups and a negligible share of inheritors, underscoring that this form of wealth transfer is closely tied to multi-generational presence within the nation.

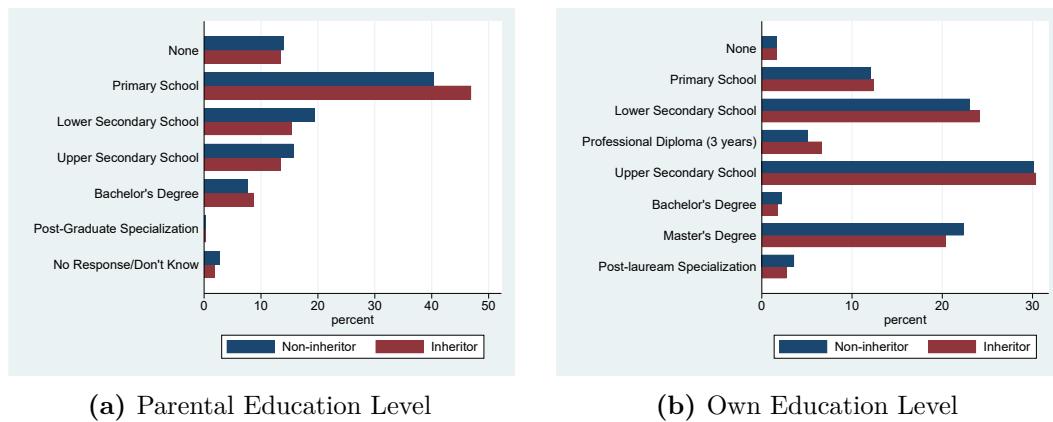


Figure 4.9. Educational Attainment of Inheritors and Their Parents

Source: Author's calculations on SHIW 2022 data.

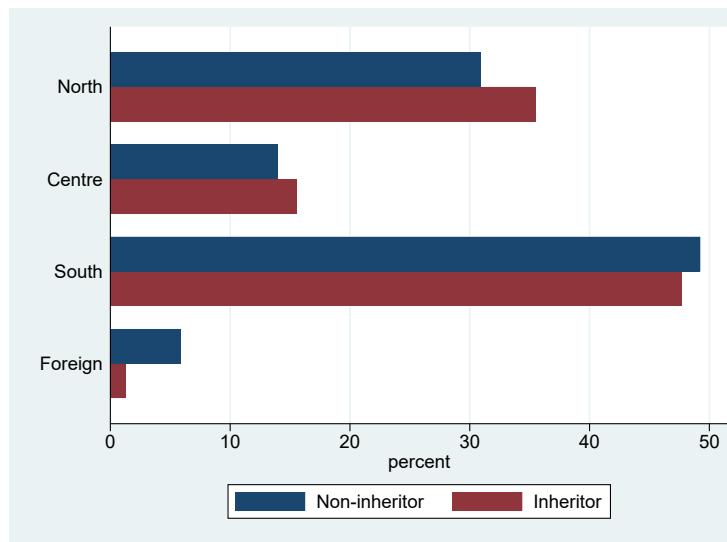


Figure 4.10. Geographical Area of Birth of Inheritors

Source: Author's calculations on SHIW 2022 data.

4.3.2 Distribution of Income and Wealth within Inheritors

This section examines the level of inequality **within** the inheritor subsample and compares it to that of the general population analyzed in Section 4.1.1. This comparison helps to understand whether the group of inheritors is more or less homogeneous than the population as a whole.

Table 4.12 presents the inequality indices calculated only for the 1,307 inheritor households. The results are revealing. For both income and wealth, the Gini coefficient is lower for the inheritor subsample (0.339 for income and 0.622 for wealth) than for the entire population (0.365 and 0.659, respectively). This indicates that inheritors are, as a group, more economically equal than the general population (4.3)

Table 4.12. Inequality Indices for Income and Wealth (Inheritor Subsample)

	Net Income	Net Wealth	Transformed Net Wealth
Gini Coefficient	0.339	0.622	0.622
p90/p10 Ratio	4.18	11.99	11.99
p90/p50 Ratio	2.04	3.12	3.12
p10/p50 Ratio	0.49	0.26	0.26
p75/p25 Ratio	2.07	3.39	3.39
GE(0)	0.202	.	0.727
GE(1)	0.223	.	1.039
GE(2)	0.377	6.143	6.143
Atk(0.5)	0.099	.	0.345
Atk(1)	0.183	.	0.516
Atk(2)	0.348	.	0.996

Source: Author's calculations on SHIW 2022 data.

The difference is particularly stark when looking at the percentile ratios for wealth. While the p90/p10 ratio for the entire population was over 247, within the inheritor group it is dramatically smaller at approximately 12. This is because the "poorest" inheritors are still homeowners with significant housing equity, which places them far above the asset-poor households that occupy the bottom of the overall wealth distribution.

The Lorenz curves presented in Figure 4.11 provide a visual confirmation of this finding. Both the income and wealth curves for the inheritor subsample lie slightly closer to the 45-degree line of perfect equality than their counterparts for the general population (see Figure 4.2). This visually demonstrates the lower Gini coefficients and the more compressed distribution of resources within this group. A formal test for Lorenz dominance confirms that the net income Lorenz curve dominates the net wealth curve for inheritors, with the results available in Appendix A (Table A.15).

In conclusion, inheritors are more homogeneous (at least from the point of view of net wealth) than the whole population. Inheritance appears to lift households to a relatively high and uniform floor of wealth, reducing the extreme disparities observed across the population as a whole.

4.3.3 The Nature and Significance of Inherited Real Estate

Having profiled the inheritor household, this final section examines the inherited asset itself. The analysis focuses first on the distribution of the market value of these properties and then on their significance as a component of the household's total net wealth.

The 2022 market value of inherited homes is, much like overall wealth, highly right-skewed. Table 4.13a details this distribution. While the median value is a substantial €150,000, the mean is significantly higher at over €201,800, confirming a long tail of very valuable properties. The distribution covers a wide range: while the bottom 10% of inherited properties are valued at €50,000 or less, the top 1%

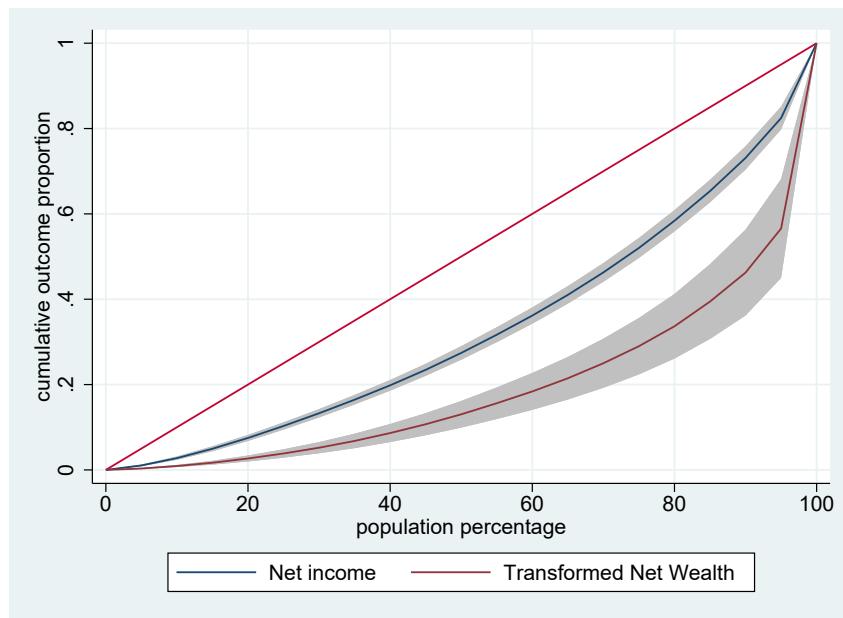


Figure 4.11. Lorenz Curves for Net Income and Net Wealth (Inheritor Subsample)

Source: Author's calculations on SHIW 2022 data. The shaded area represents the 95% confidence interval.

are worth €1,000,000 or more.

Table 4.13b quantifies the inequality within the distribution of these inherited assets. The Gini coefficient stands at 0.443. While high, this is considerably lower than the Gini for overall net wealth (0.659), which suggests that the value of inherited homes is more evenly distributed than total wealth. The p90/p10 ratio of 7 confirms this; the top is much closer to the bottom compared to the explosive ratios seen for total wealth.

To better visualize this skewed distribution, Figure 4.12 presents a histogram of the log-transformed values. The plot reveals a roughly normal distribution centered around the value of a typical family home, but with a clear right tail representing the high-value estates identified in the percentile data.

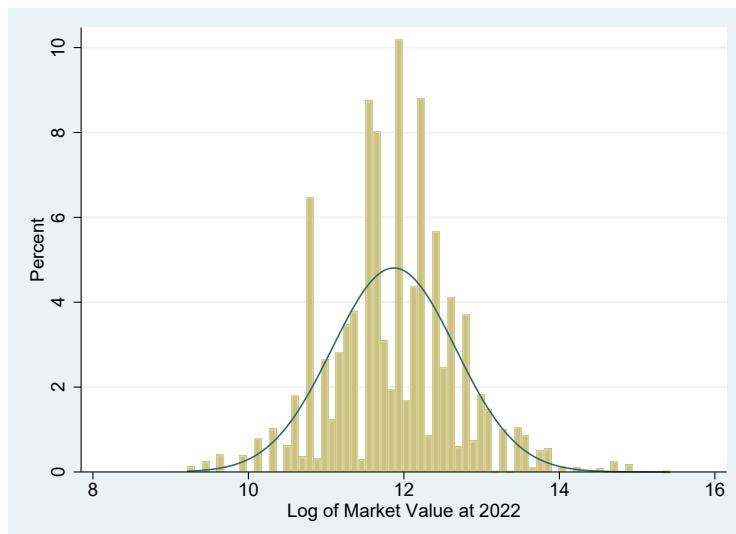
To understand the economic impact of these transfers, we now turn to the "inheritance share," defined as the ratio of the inherited home's value to the household's total net wealth. This measure reveals how central the inheritance is to the family's balance sheet. The analysis is performed from two perspectives, with detailed tables available in Appendix A (Tables A.16 - A.17).

The analysis is performed from two perspectives, as shown in Figure 4.13. First, a micro-level view examines the share's importance **within the subsample of inheritors** (Figure 4.13a). The results are striking: for the least wealthy inheritors (the bottom deciles), the inherited home constitutes nearly their entire net worth, with the share often exceeding 90%. For the wealthiest inheritors, while the absolute value of the home is high, its share of their total wealth is smaller, as they also possess significant financial and other assets. This shows that for many, the inherited home is not just an asset, but the primary foundation of their economic security.

Table 4.13. Descriptive Statistics for Inherited Real Estate

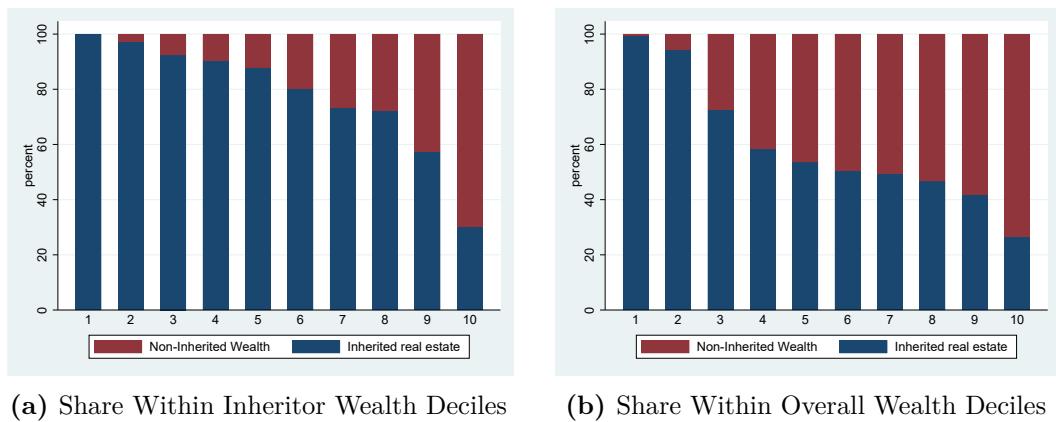
(a) Distribution		(b) Inequality Indexes	
	2022 Market Value		2022 Market Value
Mean	201,803.2	Gini Coefficient	0.443
SD	243,943.2	p90/p10 Ratio	7.00
Skewness	6.13	p90/p50 Ratio	2.33
Kurtosis	58.58	p10/p50 Ratio	0.33
p10	50,000	p75/p25 Ratio	2.67
p25	90,000	GE(0)	0.344
Median	150,000	GE(1)	0.389
p75	240,000	GE(2)	0.730
p90	350,000	Atk(0.5)	0.166
p95	500,000	Atk(1)	0.291
p99	1,000,000	Atk(2)	0.481

Source: Author's calculations on SHIW 2022 data.

**Figure 4.12.** Distribution of the Log-Transformed Value of Inherited Homes (2022) with a Normal Distribution overlay

Source: Author's calculations on SHIW 2022 data.

Second, a macro-level view assesses the role of inherited real estate in shaping the **overall wealth distribution** (Figure 4.13b). The pattern is similar: inherited wealth constitutes a larger share of total wealth for the lower-middle deciles of the general population compared to the top deciles. This reinforces the finding from Section 4.1.2 that inheritance acts as a "wealth floor," having its most significant relative impact on households that would otherwise have fewer assets.



(a) Share Within Inheritor Wealth Deciles

(b) Share Within Overall Wealth Deciles

Figure 4.13. Average Inheritance Share by Wealth Deciles

Source: Author's calculations on SHIW 2022 data.

4.4 Bivariate Correlation Analysis

Having detailed the distributions of wealth and the characteristics of different household groups, the analysis now moves to formally test the unconditional relationships between inheritance status and key socio-economic variables. This section uses bivariate tests to identify which household characteristics are statistically associated with the probability of having inherited a home, providing a preliminary look at the correlates of real estate inheritance.

A methodological note is warranted. To correctly account for the complex survey design of the SHIW, standard t-tests and chi-squared tests are not appropriate. Therefore, for continuous variables, the difference in means is assessed by regressing the variable on a binary indicator for inheritance status using the `svy: regress` command in Stata. The coefficient on the inheritor dummy represents the average difference between the two groups, and its t-statistic provides a test of significance. For categorical variables, the association is tested using the *Rao-Scott corrected F-statistic*, which is the appropriate design-adjusted equivalent of the Pearson chi-squared test (Rao and Scott, 1984).

The Full Sample: Inheritors vs. Non-Inheritors

The first analysis compares inheritors to all other households in the sample, a group that includes both renters and "self-made" owners. Table 4.14 presents the results for the continuous variables.

The results show several significant unconditional differences. Inheritor households tend to be smaller, have substantially higher net wealth (on average, €142,782 more), and a much higher saving rate. Interestingly, there is no statistically significant difference in their average net income or the market value of their residence when compared to the entire non-inheritor group.

Table 4.15 presents the results of the association tests for the categorical variables. Here, the associations are very strong. There is a highly significant relationship between being an inheritor and the household head's birth cohort, birth area,

Table 4.14. Differences in Means of Continuous Variables (Full Sample)

Variable	Difference	t-statistic	p-value
# of Household Components	-0.295***	-4.75	0.000
Net Income (€)	-1,855	-1.46	0.146
Net Wealth (€)	142,782**	2.41	0.017
Saving Rate	232.62***	4.88	0.000
Residence Market Value (2022, €)	9,991	0.94	0.346

Source: Author's calculations on SHIW 2022 data. The "Difference" is the coefficient from a survey-adjusted regression of the variable on an inheritor dummy. Significance levels:
*** p<0.01, ** p<0.05, * p<0.1.

parental education, and a quite strong relationship with the working status. The only characteristic that shows no significant association is the head's own education level (p-value of 0.361).

Table 4.15. Tests of Association for Categorical Variables (Full Sample)

Variable	F-statistic	p-value
Birth Cohort	8.74	0.000
Birth Area	8.18	0.000
Education	1.10	0.361
Parental Education	5.54	0.000
Working Status	2.40	0.034

Source: Author's calculations on SHIW 2022 data. Statistics are from the design-adjusted Rao-Scott F-test.

The Homeowner Subsample: Inheritor-Owners vs. "Self-Made" Owners

The analysis is now restricted to the 7,654 homeowners to compare those who inherited their home against those who acquired it through other means. This comparison is more direct, as it removes the confounding effect of renters.

The results in Table 4.16 are markedly different from the full sample analysis. Within the homeowner group, inheritors have significantly lower average net income than their "self-made" counterparts. This aligns with the descriptive finding that purchasing a home often requires a higher concurrent income stream. Furthermore, the large wealth gap observed previously disappears; there is no statistically significant difference in the average net wealth or residence value between the two types of owners. This suggests that while inheritance is a key pathway to home-ownership, "self-made" owners eventually catch up in terms of total wealth.

The associations among categorical variables also shift (Table 4.17). Parental education remains a very strong correlate, as does birth cohort. However, the association with birth area is no longer significant. Interestingly, both the household

Table 4.16. Differences in Means of Continuous Variables (Homeowner Subsample)

Variable	Difference	t-statistic	p-value
# of Household Components	-0.348***	-5.61	0.000
Net Income (€)	-8,028***	-5.74	0.000
Net Wealth (€)	40,321	0.64	0.525
Saving Rate	-0.035*	-1.80	0.073
Residence Market Value (2022, €)	-16,320	-1.39	0.165

Source: Author's calculations on SHIW 2022 data. Significance levels: *** p<0.01, ** p<0.05, * p<0.1.

head's own education and working status are now marginally significant. These bivariate results highlight several strong correlations, but also reveal that these relationships can change depending on the sample definition, which would have motivated a multivariate analysis to disentangle these effects.

Table 4.17. Tests of Association for Categorical Variables (Homeowner Subsample)

Variable	F-statistic	p-value
Birth Cohort	3.49	0.006
Birth Area	1.53	0.213
Education	2.04	0.059
Parental Education	6.48	0.000
Working Status	2.09	0.060

Source: Author's calculations on SHIW 2022 data. Statistics are from the design-adjusted Rao-Scott F-test.

Chapter 5

Microsimulation of Inheritance Tax Reform

Having analyzed the characteristics of inheritor households, this chapter moves from description to policy evaluation. It employs the static microsimulation model detailed in Section 3.4 to quantify the potential first-order redistributive impact of replacing Italy's current inheritance tax system with a range of international alternatives.

To establish a benchmark for the analysis, Section 5.1 begins by outlining the current Italian inheritance tax regime, while Section 5.2 recaps the pre-reform baseline level of wealth inequality. Section 5.3 presents the core results of the first simulation stage, detailing the revenue and direct tax effect of each international regime. Section 5.4 analyzes the second stage, presenting the final inequality outcomes for each of the four redistribution scenarios. The chapter concludes with Section 5.5, a comparative analysis of all findings, and Section 5.6, which discusses the key policy implications of the analysis.

5.1 The Current Inheritance Tax System in Italy

The Italian inheritance and gift tax system, governed by Decree Law No. 262 of 2006 (Italian Government, 2006), is characterized by a structure of rates and allowances that vary significantly based on the relationship between the deceased and the beneficiary. The system is defined by four main categories:

- A rate of **4%** on the value exceeding a **€1 million** allowance for each beneficiary, applicable to transfers between spouses and direct-line relatives (ascendants and descendants).
- A rate of **6%** on the value exceeding a **€100,000** allowance for transfers between siblings.
- A rate of **6%** on the total value transferred, with no allowance, for other relatives up to the fourth degree and relatives-in-law up to the third degree.
- A rate of **8%** on the total value transferred, with no allowance, for all other individuals.

An additional allowance of €1.5 million is provided for beneficiaries with a recognized severe disability.

As discussed in the methodological limitations (Section 3.5), the SHIW dataset does not contain information on the specific relationship between the heir and the deceased. Consequently, for the purpose of this microsimulation, a simplifying assumption has been made: all inheritances are modeled as vertical transfers from a parent to a child. This means that the baseline Italian tax liability for all households in the simulation is calculated using the first and most favorable regime: a **4% flat tax on the value of the inherited property exceeding the €1 million threshold**.

This high threshold makes the Italian system one of the most lenient among advanced economies. Its practical effect is that a vast majority of inheritances are completely exempt from taxation. Applying this rule to the inheritor households in the 2022 SHIW sample reveals the very narrow scope of the current tax base.

Counterfactual Estimates of Taxpayers under Different Scenarios (2022)

Under the main simplifying assumption that all inheritances are from parent to child, only about **30,000** households among the 3.8 million inheritor households (**0.8%**) would be liable for any inheritance tax.

A sensitivity analysis using a more varied, hypothetical distribution of heir types (80% parent-child, 15% siblings, 5% other relatives) reveals a much broader tax base. In this scenario, the number of taxpayers would be composed of approximately 23,000 parent-child heirs, 442,000 siblings, and 196,000 other relatives.

This results in a total of approximately **661,000** tax-paying households, meaning the share of inheritance events triggering a tax payment rises dramatically to **17.0%**.

This low number of taxpayers serves as the starting point for the subsequent policy simulations, which explore how alternative tax structures could broaden the tax base and generate revenue for redistribution.

5.2 The Baseline Scenario: Pre-Reform Wealth Inequality

Before evaluating the impact of potential policy reforms, it is essential to establish a clear baseline measure of wealth inequality in Italy. This baseline serves as the benchmark against which the redistributive effects of all subsequent simulations will be measured. The pre-reform scenario is based on the distribution of household net wealth in 2022, as captured by the SHIW data.

A detailed descriptive analysis of this distribution, including a decomposition by inheritance status, was presented in Subsections 4.1.1 and 4.1.3. As established in that chapter, wealth in Italy is highly concentrated. The overall Gini coefficient for household net wealth stands at **0.659**, indicating a profound level of inequality.

Table 5.1 summarizes the key features of this pre-reform landscape, recapping the main findings from the decomposition analysis (more details can be found in Tables

4.3 and 4.6). It highlights not only the high overall inequality but also the significant disparities both within and between the groups of inheritors and non-inheritors.

Table 5.1. Baseline Wealth Inequality Scenario (2022)

Indicator	Value
<i>Overall Population</i>	
Gini Coefficient	0.6593
<i>Subgroup Inequality (Within-Group Gini)</i>	
Non-Inheritors	0.6641
Inheritors	0.6225
<i>Between-Group Disparity (Relative Mean Wealth)</i>	
Non-Inheritors	0.927
Inheritors	1.410

Source: Author's calculations on SHIW 2022 data.

The baseline scenario is thus defined by three key characteristics: a high overall level of wealth concentration; a substantial economic advantage for inheritor households, who on average possess over 40% more wealth than the typical household; and the fact that the vast majority of this inequality arises from disparities *within* each of the two groups. This detailed picture of the pre-reform distribution provides the necessary starting point for assessing the potential of different tax systems to alter these outcomes.

5.3 Step 1: Simulating Revenue Generation and the Direct Tax Effect

With the baseline scenario established, the analysis now turns to the core exercise of this thesis. This process is modeled in two distinct stages: first, the generation of revenue through the application of a new tax law, and second, the redistribution of that revenue. This section addresses the first stage by simulating the replacement of the current Italian inheritance tax with systems modeled on those of various other countries.

The goal is to quantify two key metrics: the potential additional revenue each system could generate, and the immediate, first-order impact of these tax payments on wealth inequality. To isolate this latter effect, we calculate an **intermediate Gini coefficient**. This measure reflects a counterfactual wealth distribution where the simulated tax liability has been subtracted from inheritor households, but the revenue has *not yet* been distributed. The change from the baseline Gini (0.6593) to this intermediate Gini represents the pure **tax effect**—that is, the change in inequality caused solely by the collection of the tax itself. The revenue collected and the tax effects for each regime are presented in the subsections below.

5.3.1 Simulating Flat-Rate Regimes

The first set of policy scenarios involves tax systems whose main feature is the use of a single flat tax rate on the value of an inheritance exceeding a specified allowance. While this approach differs from the progressive-rate structures analyzed later, the complexity of the systems can vary. The Irish regime is a straightforward example, whereas the UK regime, like the Italian one, incorporates significant distinctions based on the heir's relationship to the deceased, albeit primarily through its allowance structure rather than through different tax rates. Two such regimes are simulated: that of Ireland and the United Kingdom.

The Irish Regime

The Irish inheritance tax system (Capital Acquisitions Tax) is structured around different tax-free thresholds depending on the relationship to the donor. For transfers from a parent to a child (Group A), the allowance in 2022 was **€335,000**. The value of any inheritance exceeding this threshold is subject to a flat tax rate of **33%** (The Revenue Commissioners, 2025). This represents a significantly lower threshold and a much higher tax rate than the Italian system for direct heirs. The simulation of this regime yields a substantial €45.7 billion in additional revenue, as shown in Table 5.2.

Table 5.2. Irish Regime: Stage 1 Results

Indicator	Value
Additional Revenue Collected	€45.7 billion
Intermediate Gini (Post-Tax)	0.657
Change in Gini (Tax Effect)	-0.35%

Source: Author's calculations on SHIW 2022 data.

The United Kingdom Regime

The inheritance tax system in the United Kingdom is also characterized by a substantial tax-free allowance, known as the "nil-rate band," which was set at £325,000 in 2022 (equivalent to approximately €381,127). An additional "residence nil-rate band" of £175,000 (€205,222) is available if the main home is passed to a direct descendant, bringing the total potential allowance to £500,000 (€586,350 in 2022), provided the total estate is valued at less than £2 million. Any portion of the inheritance above the applicable threshold is taxed at a high flat rate of **40%** (His Majesty's Revenue and Customs, 2025).

This structure makes the UK system more generous than the Irish one in terms of its allowance. Consequently, as shown in Table 5.3, it generates less revenue.

5.3.2 Simulating Progressive-Rate Regimes

In contrast to the flat-rate systems, the second and larger group of policy scenarios involves regimes characterized by progressive tax structures. In these systems, the

Table 5.3. United Kingdom Regime: Stage 1 Results

Indicator	Value
Additional Revenue Collected	€30.1 billion
Intermediate Gini (Post-Tax)	0.658
Change in Gini (Tax Effect)	-0.19%

Source: Author's calculations on SHIW 2022 data.

marginal tax rate increases as the value of the inheritance rises, meaning that wealthier heirs not only pay more tax in absolute terms but also face a higher tax rate on the upper portions of their inheritance.

This approach is common across Continental Europe and parts of Asia and is designed to enhance the redistributive power of the tax. The specific design of these systems varies considerably, however, in terms of their allowances, the number and width of their tax brackets, and the steepness of their rate progression. Some systems, like the Spanish one, introduce additional complexity by making the final tax liability dependent on the heir's pre-existing wealth. The following simulations explore this variety, modeling the systems of France, Belgium, Spain, Finland, Japan, South Korea, and Ecuador to assess their differing impacts on revenue generation and inequality reduction.

The Belgian Regime

Belgium's inheritance tax system is complex, with tax laws set at the regional level. This simulation models the regime of the **Brussels-Capital Region**, which, like many progressive systems, features multiple tax brackets. For direct-line heirs, the first **€15,000** of the inheritance is exempt from taxation.

A key feature of the Brussels regime is the application of different tax rates depending on the property's use. A set of reduced rates applies if the inherited property was the main residence of the deceased for at least five years prior to their death (Federal Public Service Finance, 2025). As this information is not available in the SHIW dataset (a limitation discussed in Subsection 3.5), two distinct scenarios are simulated to provide a bounded estimate of the policy's potential impact:

- **Scenario A** assumes all households are eligible for the **reduced rates**.
- **Scenario B** assumes no households are eligible, and the higher, **standard rates** are applied to all.

Scenario A: Reduced Rates for Main Residence This scenario represents the lower bound of the potential tax revenue. The results in Table 5.4 show that even this more lenient version of the Belgian system generates a substantial €75.8 billion.

Scenario B: Standard Rates This scenario provides an upper-bound estimate. As detailed in Table 5.5, applying the standard rates generates significantly more revenue, increasing the total to nearly €90 billion.

Table 5.4. Belgian Regime (Scenario A): Stage 1 Results

Indicator	Value
Additional Revenue Collected	€75.8 billion
Intermediate Gini (Post-Tax)	0.6582
Change in Gini (Tax Effect)	-0.17%

Source: Author's calculations on SHIW 2022 data.

Table 5.5. Belgian Regime (Scenario B): Stage 1 Results

Indicator	Value
Additional Revenue Collected	€89.8 billion
Intermediate Gini (Post-Tax)	0.6585
Change in Gini (Tax Effect)	-0.12%

Source: Author's calculations on SHIW 2022 data.

A noteworthy, albeit counterintuitive, detail emerges when comparing the tax effects. Despite generating over €14 billion more in revenue, Scenario B produces a smaller direct reduction in the Gini coefficient (-0.12%) compared to Scenario A (-0.17%). This suggests that the additional revenue in Scenario B is disproportionately collected from inheritors in the upper-middle of the wealth distribution, who lose their main residence protection under the standard rates. While this approach is highly effective for revenue generation, the distributional incidence of this broader tax base is less progressively targeted at the very top of the wealth spectrum. Consequently, its immediate impact on the overall Gini coefficient is slightly diluted.

The Ecuadorian Regime

The inheritance tax system in Ecuador provides a distinct example of a progressive structure from South America. The system, which uses the U.S. dollar, is defined by a series of eight tax brackets with marginal rates that increase from 0% to a top rate of 35%. A unique and highly significant feature of the law is a **50% reduction of the final computed tax liability** for direct-line heirs, a provision that applies to all inheritors in this simulation (Servicio de Rentas Internas, 2025). This final step substantially lessens the burden of what is otherwise a steeply progressive tax.

As shown in Table 5.6, the system generates €32.0 billion in additional revenue, an amount comparable to the UK flat-rate system.

The Finnish Regime

The inheritance tax system in Finland applies a moderate allowance and a clear bracket-based tax calculation. For direct descendants (Category I heirs), the system provides a tax-free allowance for the first **€19,999** of the inheritance.

Table 5.6. Ecuadorian Regime: Stage 1 Results

Indicator	Value
Additional Revenue Collected	€32.0 billion
Intermediate Gini (Post-Tax)	0.6587
Change in Gini (Tax Effect)	-0.088%

Source: Author's calculations on SHIW 2022 data.

The value exceeding this threshold is taxed according to a progressive structure. This structure is defined by a lump-sum tax amount for reaching a given bracket, plus a marginal tax rate applied only to the portion of the value that falls within that bracket. The marginal rates for children range from 7% for the lowest bracket to a top rate of **19%** for inheritances valued at €1 million or more (Finnish Tax Administration, 2025).

Table 5.7. Finnish Regime: Stage 1 Results

Indicator	Value
Additional Revenue Collected	€80.8 billion
Intermediate Gini (Post-Tax)	0.6596
Change in Gini (Tax Effect)	+0.04%

Source: Author's calculations on SHIW 2022 data.

The regime's relatively low allowance brings a very broad base of inheritances into the tax system, resulting in the collection of a substantial €80.8 billion in additional revenue (Table 5.7).

Notably, the direct tax effect is a slight increase in the Gini coefficient (+0.04%). This is because the very low allowance taxes a broad swathe of 'upper-middle' inheritors, while the moderate 19% top rate is not steep enough to proportionally compress the very top of the distribution. This compresses the middle of the inheritor group downwards more than the top, momentarily increasing measured inequality before the highly redistributive potential of the generated revenue is considered.

The French Regime

The French inheritance tax system is a prominent example of a European progressive-rate model. For direct descendants, the system provides a tax-free allowance of **€100,000**. The value of the inheritance exceeding this amount is then subject to a series of seven marginal tax brackets, with rates climbing from 5% to a top rate of 45% for estates valued over €1.8 million.

Similar to the Belgian case, the French system includes a special provision for the main residence. An abatement of **20%** on the market value of the property is granted if the home served as the main residence for both the deceased and the heir at the time of death (Directorate for Legal and Administrative Information, 2025).

Given that this information is not available in the SHIW data, the simulation is again performed under two scenarios:

- **Scenario A** assumes all inheritors qualify for the **20% main residence abatement**.
- **Scenario B** assumes no inheritors qualify, and the tax is calculated on the full market value.

Scenario A: With Main Residence Abatement This scenario represents the most generous application of French law. As shown in Table 5.8, this version of the regime generates €60.0 billion in additional revenue.

Table 5.8. French Regime (Scenario A): Stage 1 Results

Indicator	Value
Additional Revenue Collected	€60.0 billion
Intermediate Gini (Post-Tax)	0.6582
Change in Gini (Tax Effect)	-0.17%

Source: Author's calculations on SHIW 2022 data.

Scenario B: Without Main Residence Abatement This scenario provides an upper-bound estimate. Without the 20% abatement, the tax base is larger, leading to a sharp increase in revenue to €90.4 billion (Table 5.9).

Table 5.9. French Regime (Scenario B): Stage 1 Results

Indicator	Value
Additional Revenue Collected	€90.4 billion
Intermediate Gini (Post-Tax)	0.658
Change in Gini (Tax Effect)	-0.18%

Source: Author's calculations on SHIW 2022 data.

The Japanese Regime

The Japanese inheritance tax system is frequently noted for its high top marginal rates, making it one of the most stringent in the world. The system first provides a basic allowance calculated as **30 million JPY plus 6 million JPY per legal heir**. As the precise number of heirs is unknown, this simulation assumes a single heir for each inheritance, a common household structure among the inheritor sample. This results in a total allowance of 36 million JPY (approximately €260,820 in 2022).

The taxable value exceeding this allowance is then subject to a steeply progressive structure of eight tax brackets (National Tax Agency, 2025). The marginal rates

begin at 10% and rise sharply to a top rate of **55%** for the portion of an inheritance valued over 600 million JPY (about €4.35 million).

Table 5.10. Japanese Regime: Stage 1 Results

Indicator	Value
Additional Revenue Collected	€40.8 billion
Intermediate Gini (Post-Tax)	0.6577
Change in Gini (Tax Effect)	-0.24%

Source: Author's calculations on SHIW 2022 data.

Despite its high top rates, the system's impact is moderated by its relatively generous initial allowance. The simulation generates €40.8 billion in additional revenue (Table 5.10).

The South Korean Regime

South Korea's inheritance tax system is another example of a steeply progressive structure, featuring five tax brackets with marginal rates escalating from 10% to a top rate of **50%** for the portion of an inheritance exceeding 3 billion KRW (approximately €2.2 million).

The complexity of the system lies in its various deductions. According to the *Inheritance Tax and Gift Tax Act* (Korea Legal Research Institute, 2025), a "blanket deduction" of **500 million KRW** (approx. €368,000) is available. However, a separate, significant deduction is outlined for heirs who have lived with the deceased. A deduction on the full value of the main residence is allowed, up to a limit of **600 million KRW** (approx. €442,000), if the heir lived in the home with the parent for at least 10 continuous years.

As the cohabitation history is not available in the SHIW data, two scenarios are modeled to capture the range of potential impacts:

- **Scenario A** assumes heirs are eligible for both the standard deduction and the main residence deduction, for a total allowance of **1.1 billion KRW** (approx. €810,000).
- **Scenario B** applies only the standard **500 million KRW** blanket deduction.

Scenario A: Reduced Tax-Base for Main Residence The larger allowance significantly narrows the tax base, leading to a much lower revenue of €12.5 billion (Table 5.11).

Scenario B: Standard Deduction This more stringent application generates €31.0 billion in additional revenue (Table 5.12), comparable to the more moderate UK regime.

Table 5.11. South Korean Regime (Scenario A): Stage 1 Results

Indicator	Value
Additional Revenue Collected	€12.5 billion
Intermediate Gini (Post-Tax)	0.6587
Change in Gini (Tax Effect)	-0.09%

Source: Author's calculations on SHIW 2022 data.

Table 5.12. South Koera Regime (Scenario B): Stage 1 Results

Indicator	Value
Additional Revenue Collected	€31.0 billion
Intermediate Gini (Post-Tax)	0.658
Change in Gini (Tax Effect)	-0.19%

Source: Author's calculations on SHIW 2022 data.

The Spanish Regime

The Spanish national inheritance tax system stands out due to its unique complexity, incorporating the heir's pre-existing wealth directly into the final tax calculation (Spanish Parliament, 1987). It is important to note that this simulation models only the national law, disregarding the significant variations that exist across Spain's autonomous communities, many of which offer more generous terms.

The calculation, as modeled for this thesis, involves a three-stage process. First, a standard allowance of **€15,957** is applied for direct descendants (Group II). Second, the remaining taxable amount is subjected to a steeply progressive scale with 16 brackets, where marginal rates climb from 7.65% to a top rate of **34%** for inheritances over **€797,555**.

The final and most distinctive step involves applying a **coefficient multiplier** to the initial tax bill. This multiplier increases based on the heir's pre-existing net wealth. For direct heirs, the multiplier ranges from 1.0 for those with pre-existing wealth under €400,000 to 1.2 for those with wealth over €4 million. This feature is designed to ensure that heirs who are already wealthy contribute a proportionally larger share.

Table 5.13. Spanish Regime: Stage 1 Results

Indicator	Value
Additional Revenue Collected	€134.7 billion
Intermediate Gini (Post-Tax)	0.6595
Change in Gini (Tax Effect)	+0.04%

Source: Author's calculations on SHIW 2022 data.

This multi-layered structure makes the Spanish national system exceptionally potent in terms of revenue generation and redistribution. As shown in Table 5.13, the simulation generates a remarkable **€134.7 billion** in additional revenue, by far the highest of any regime modeled.

However, despite this unparalleled revenue, the direct tax effect is a marginal increase in the Gini coefficient (+0.04%). This occurs because the extremely low allowance brings a vast number of smaller and medium-sized estates into the tax base. While progressive, this broad-based approach compresses the wealth of 'upper-middle' inheritors downwards more severely than it compresses the very top, slightly widening relative inequality. This highlights that the system's immense redistributive potential is almost entirely dependent on how its enormous revenue pool is subsequently used.

5.3.3 A Boundary Case: The United States Regime

The final simulation examines the federal estate tax of the United States, which is included not for its expected redistributive impact, but as an important analytical boundary case. The U.S. system is structured to apply only to the very largest estates, featuring an exceptionally high tax-free allowance. In 2022, this allowance was **\$12.06 million**, equivalent to approximately **€11.45 million**. While the tax rate on the value exceeding this threshold is a very high **40%**, the sheer magnitude of the exemption means that the vast majority of estates are not subject to the tax (United States Congress, 2017).

When this regime is applied to the 2022 SHIW data, the result is a perfect null effect. Not a single household in the inheritor sample reported a property value that even approaches the U.S. exemption threshold. Consequently, the simulation generates **€0 in additional tax revenue**, provides no funds for redistribution, and results in **no change whatsoever to the inequality indexes**.

This "null result" is, in itself, a significant finding for several reasons. First, it demonstrates empirically that a direct importation of the U.S. federal estate tax model would be entirely ineffective as a redistributive tool in the Italian context, at least based on the wealth distribution captured by survey data. Second, it highlights a fundamental difference in policy targeting; while many European and Asian systems are designed to tax a broader range of substantial inheritances, the U.S. model is exclusively focused on the wealthiest fraction of a percent of the population. Finally, it serves as a crucial benchmark, reinforcing the conclusion that any effective inheritance tax reform in Italy must be designed with thresholds that are sensitive to the Italian, rather than the American, distribution of wealth.

5.4 Step 2: Simulating Redistribution Scenarios and Decomposing Inequality Reduction

Having quantified the revenue-generating potential of each tax regime in the previous section, the analysis now proceeds to its second and final stage: simulating the redistribution of those revenues. The central objective of this section is to assess how different policy choices regarding the use of these funds can alter the final impact on wealth inequality.

To isolate the impact of the transfer itself, the analysis decomposes the total change in inequality into two parts. The first, the **tax effect**, was calculated in Section 5.3 as the change from the baseline Gini to the intermediate (post-tax) Gini. The second, the **redistribution effect**, is defined as the change from the intermediate Gini to the final post-reform Gini. This allows for a clear distinction between the inequality reduction stemming from tax collection and that stemming from the subsequent transfers. Furthermore, to understand how these reforms affect the structural gap between inheritors and non-inheritors, the analysis will also **decompose the change in the Generalized Entropy index (GE(2)) into its between-group and within-group components.**

To explore the sensitivity of outcomes to policy design, four distinct redistribution scenarios are simulated. The revenue figures calculated for each international tax regime in Section 5.3 serve as the input for each of these scenarios. Table 5.14 recaps these revenue totals, which form the basis for all subsequent transfer calculations. It should be noted that for Scenarios B and D, where transfers are proportional to household size, a single, uniform transfer amount per household is not applicable; the result tables for these scenarios will therefore omit the column with the amount of the transfer.

Table 5.14. Summary of Additional Revenue Collected by Tax Regime

Policy Scenario	Additional Revenue Collected (€ billion)
<i>Flat-Rate Regimes</i>	
Ireland	45.7
United Kingdom	30.1
<i>Progressive-Rate Regimes</i>	
Belgium (A - Reduced)	75.8
Belgium (B - Standard)	89.8
Ecuador	32.0
Finland	80.8
France (A - Reduced)	60.0
France (B - Standard)	90.4
Japan	40.8
South Korea (A - Reduced)	12.5
South Korea (B - Standard)	31.0
Spain	134.7
<i>Boundary Case</i>	
United States	0.0

The four redistribution scenarios are defined as follows:

- **Scenario A: Lump-Sum Transfer to the Bottom Decile.** A highly targeted approach where the entire revenue pool is distributed equally among all households in the bottom decile of the pre-reform net wealth distribution.
- **Scenario B: Proportional Transfer to the Bottom Decile.** A refined targeted approach where the transfer to households in the bottom wealth decile

is weighted by the number of household members (n_comp), directing more resources to larger families in need.

- **Scenario C: Universal Lump-Sum Transfer.** A universalist approach where the entire revenue pool is distributed equally as a "citizen's dividend" to *all* households in the population, regardless of their wealth.
- **Scenario D: Universal Proportional Transfer.** A hybrid approach that combines universality with a needs-based adjustment, distributing the transfer to *all* households but weighting the amount by the number of household members.

The following subsections present the simulation results for each of these four scenarios, detailing their respective impacts on the final Gini coefficient (and other inequality indexes) and allowing for a comparative assessment of their effectiveness.

5.4.1 Redistribution Scenario A: Lump-Sum Transfer to the Bottom Decile

This scenario models a policy of maximum targeting, concentrating the full fiscal power of the reform on the poorest segment of the population. The logic behind this approach is to achieve the largest possible reduction in inequality for a given amount of revenue by directly increasing the wealth of households at the bottom of the distribution. The results, detailing the final post-reform Gini coefficient and the decomposed tax and redistribution effects for all simulated tax regimes, are presented in Table 5.15.

Table 5.16 presents the decomposition of the change in the $GE(2)$ index, isolating the impact on inequality between inheritors and non-inheritors (GE_B) from the impact on inequality within each of those groups (GE_W).

The decomposition of the $GE(2)$ index in Table 5.16 reveals a critical insight into the mechanism of the reform. Across every simulated tax regime, the reduction in inequality is overwhelmingly driven by a decrease in **between-group inequality** (GE_B). The changes in this component are an order of magnitude larger than the changes in within-group inequality (GE_W), with reductions ranging from -5.3% to a remarkable -49.9% for the Spanish regime.

This result is a direct and mechanical consequence of the policy design: the tax is levied exclusively on inheritor households (raising their average tax burden), while the transfer is directed exclusively to the poorest households, the vast majority of whom are non-inheritors. This directly compresses the large, pre-existing wealth gap between the two groups.

Conversely, the impact on **within-group inequality** (GE_W) is consistently minimal, with reductions rarely exceeding -2.0%. This demonstrates a fundamental limitation of the simulated policy. While it is highly effective at reducing the average advantage of being an inheritor, it does little to alter the concentration of wealth *among* inheritors themselves. The richest inheritors remain vastly wealthier than middle-class inheritors, a dimension of inequality that this specific tax-and-transfer model is not designed to address.

Table 5.15. Decomposition of Gini coefficient Changes for Scenario A

Policy Scenario	Lump-Sum Transfer (€)	Post-Reform Gini	Total Change in Gini (%)	Tax Effect (%)	Redistribution Effect (%)
Baseline (Italy)	—	0.6593	—	—	—
<i>Flat-Rate Regimes</i>					
Ireland	18,265	0.6487	-1.61	-0.35	-1.26
United Kingdom	12,025	0.6520	-1.11	-0.19	-0.92
<i>Progressive-Rate Regimes</i>					
Belgium (A - Reduced)	30,322	0.6438	-2.35	-0.17	-2.18
Belgium (B - Standard)	35,925	0.6416	-2.68	-0.12	-2.56
Ecuador	12,795	0.6524	-1.04	-0.09	-0.95
Finland	32,326	0.6443	-2.27	+0.04	-2.31
France (A - Reduced)	23,991	0.6466	-1.92	-0.17	-1.75
France (B - Standard)	36,157	0.6411	-2.76	-0.18	-2.58
Japan	16,333	0.6497	-1.45	-0.24	-1.21
South Korea (A - Reduced)	4,984	0.6561	-0.48	-0.09	-0.39
South Korea (B - Standard)	12,395	0.6518	-1.13	-0.02	-1.11
Spain	53,872	0.6349	-3.70	+0.04	-3.74
<i>Boundary Case</i>					
United States	0	0.6593	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

Table 5.16. Decomposition of $GE(2)$ Changes for Scenario A. Groups: Inheritors vs. Non-Inheritors

Policy Scenario	Change in $GE(2)$ (%)	Change in Between-Group Inequality (GE_B) (%)	Change in Within-Group Inequality (GE_W) (%)
Baseline (Italy)	—	—	—
<i>Flat-Rate Regimes</i>			
Ireland	-1.4	-19.2	-1.4
United Kingdom	-1.5	-12.6	-1.4
<i>Progressive-Rate Regimes</i>			
Belgium (A - Reduced)	-1.5	-30.2	-1.4
Belgium (B - Standard)	-1.5	-35.2	-1.5
Ecuador	-0.7	-13.4	-0.7
Finland	-1.0	-32.0	-0.9
France (A - Reduced)	-1.3	-24.4	-1.3
France (B - Standard)	-1.8	-35.4	-1.7
Japan	-1.6	-16.9	-1.5
South Korea (A - Reduced)	-0.9	-5.3	-0.9
South Korea (B - Standard)	-1.4	-13.0	-1.4
Spain	-2.1	-49.9	-2.0
<i>Boundary Case</i>			
United States	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

5.4.2 Redistribution Scenario B: Proportional Transfer to the Bottom Decile

This scenario maintains the targeted focus on the bottom wealth decile but introduces a needs-based adjustment. Instead of an equal lump-sum for each household, the transfer amount is calculated on a per-capita basis and distributed to households according to their size. This approach acknowledges that larger households may have greater financial needs and aims to provide more equitable support within the poorest population group. The results of this proportional targeted approach are summarized in Table 5.17 and Table 5.18.

A comparison with the lump-sum approach in Scenario A reveals a nuanced trade-off. As shown in Table 5.17, the proportional transfer (Scenario B) is marginally less effective at reducing the overall Gini coefficient. For instance, under the Spanish tax regime, the total Gini reduction is -3.53%, compared to -3.70% in Scenario A. A possible explanation might be represented by the fact that the Gini coefficient is very sensitive to changes at the very bottom of the distribution. By redirecting some funds from smaller (e.g., single-person) households to larger ones within the bottom decile, this policy slightly dilutes the wealth boost for the most destitute individuals, who are most impactful in a Gini calculation.

Despite this slight difference in overall impact, the fundamental mechanism of inequality reduction remains unchanged. The $GE(2)$ decomposition in Table 5.18 confirms that the change is once again overwhelmingly driven by the reduction in **between-group inequality (GE_B)**. This highlights a key policy choice: while a

pure lump-sum transfer is mathematically optimal for reducing the Gini, a proportional transfer may be considered more equitable from a social welfare perspective that accounts for household size and needs.

Table 5.17. Decomposition of Gini coefficient Changes for Scenario B

Policy Scenario	Post-Reform Gini	Total Change in Gini (%)	Tax Effect (%)	Redistribution Effect (%)
Baseline (Italy)	0.6593	—	—	—
<i>Flat-Rate Regimes</i>				
Ireland	0.6488	-1.60	-0.35	-1.25
United Kingdom	0.6521	-1.07	-0.19	-0.88
<i>Progressive-Rate Regimes</i>				
Belgium (A - Reduced)	0.6442	-2.30	-0.17	-2.13
Belgium (B - Standard)	0.6422	-2.60	-0.12	-2.48
Ecuador	0.6525	-1.01	-0.09	-0.92
Finland	0.6447	-2.21	+0.04	-2.25
France (A - Reduced)	0.6469	-1.88	-0.17	-1.71
France (B - Standard)	0.6417	-2.71	-0.18	-2.63
Japan	0.6499	-1.44	-0.24	-1.20
South Korea (A - Reduced)	0.6519	-1.18	-0.09	-1.09
South Korea (B - Standard)	0.6562	-0.46	-0.02	-0.44
Spain	0.6361	-3.53	+0.04	-3.57
<i>Boundary Case</i>				
United States	0.6593	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

Table 5.18. Decomposition of $GE(2)$ Changes for Scenario B. Groups: Inheritors vs. Non-Inheritors

Policy Scenario	Change in $GE(2)$ (%)	Change in Between-Group Inequality (GE_B) (%)	Change in Within-Group Inequality (GE_W) (%)
Baseline (Italy)	—	—	—
<i>Flat-Rate Regimes</i>			
Ireland	-1.42	-18.97	-1.38
United Kingdom	-1.46	-12.75	-1.44
<i>Progressive-Rate Regimes</i>			
Belgium (A - Reduced)	-1.46	-30.31	-1.40
Belgium (B - Standard)	-1.52	-35.29	-1.44
Ecuador	-0.70	-13.53	-0.67
Finland	-1.01	-32.11	-0.94
France (A - Reduced)	-1.30	-24.46	-1.25
France (B - Standard)	-1.79	-35.49	-1.72
Japan	-1.56	-17.07	-1.53
South Korea (A - Reduced)	-1.37	-13.13	-1.35
South Korea (B - Standard)	-0.92	-5.47	-0.91
Spain	-2.07	-50.01	-1.96
<i>Boundary Case</i>			
United States	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

5.4.3 Redistribution Scenario C: Universal Lump-Sum Transfer

This scenario shifts from a targeted to a universalist policy framework. The entire revenue pool generated by each tax regime is distributed equally among all households in the Italian population, not just those in the bottom decile. This approach models the concept of a "citizen's dividend," where the proceeds from taxing intergenerational wealth transfers are returned to society as a whole. While expected to be less efficient at reducing statistical inequality than a targeted approach, such universal programs are often favored for their administrative simplicity and political viability, as they create a broad base of beneficiaries. The outcomes of this universal lump-sum approach are presented in Table 5.19 and Table 5.20.

The results confirm the expected trade-off between policy targeting and redistributive efficiency. As shown in Table 5.19, the universal lump-sum transfer is significantly less effective at reducing the Gini coefficient compared to the targeted scenarios. For every tax regime, the total percentage change in the Gini is roughly halved. For the Spanish regime, the most potent revenue generator, the inequality reduction falls from -3.70% in Scenario A to -1.77% here. This is a direct consequence of diluting the fiscal transfer: by spreading the revenue across the entire population, the impact on the households at the very bottom of the distribution—who are very influential in the Gini calculation—is substantially weakened.

Table 5.19. Decomposition of Gini coefficient Changes for Scenario C

Policy Scenario	Lump-Sum Transfer (€)	Post-Reform Gini	Total Change in Gini (%)	Tax Effect (%)	Redistribution Effect (%)
Baseline (Italy)	—	0.6593	—	—	—
<i>Flat-Rate Regimes</i>					
Ireland	1,823	0.6535	-0.88	-0.35	-0.53
United Kingdom	1,200	0.6553	-0.61	-0.19	-0.42
<i>Progressive-Rate Regimes</i>					
Belgium (A - Reduced)	3,026	0.6514	-1.20	-0.17	-1.03
Belgium (B - Standard)	3,585	0.6505	-1.33	-0.12	-1.21
Ecuador	1,277	0.6558	-0.53	-0.09	-0.44
Finland	3,226	0.6524	-1.05	+0.04	-1.09
France (A - Reduced)	2,394	0.6528	-0.99	-0.17	-0.82
France (B - Standard)	3,608	0.6501	-1.39	-0.18	-1.21
Japan	1,630	0.6541	-0.79	-0.24	-0.55
South Korea (A - Reduced)	1,237	0.6552	-0.62	-0.09	-0.53
South Korea (B - Standard)	497	0.6576	-0.26	-0.02	-0.24
Spain	5,376	0.6476	-1.77	+0.04	-1.81
<i>Boundary Case</i>					
United States	0	0.6593	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

Table 5.20. Decomposition of $GE(2)$ Changes for Scenario C. Groups: Inheritors vs. Non-Inheritors

Policy Scenario	Change in $GE(2)$ (%)	Change in Between-Group Inequality (GE_B) (%)	Change in Within-Group Inequality (GE_W) (%)
Baseline (Italy)	—	—	—
<i>Flat-Rate Regimes</i>			
Ireland	-1.33	-16.25	-1.30
United Kingdom	-1.40	-10.91	-1.38
<i>Progressive-Rate Regimes</i>			
Belgium (A - Reduced)	-1.32	-26.11	-1.27
Belgium (B - Standard)	-1.36	-30.48	-1.29
Ecuador	-0.64	-11.57	-0.62
Finland	-0.86	-27.69	-0.80
France (A - Reduced)	-1.19	-21.01	-1.15
France (B - Standard)	-1.63	-30.66	-1.57
Japan	-1.48	-14.61	-1.46
South Korea (A - Reduced)	-1.32	-11.23	-1.29
South Korea (B - Standard)	-0.90	-4.68	-0.89
Spain	-1.84	-43.59	-1.75
<i>Boundary Case</i>			
United States	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

The $GE(2)$ decomposition in Table 5.20 reveals a shift in the underlying mechanism of inequality reduction. While the reduction in **between-group inequality** (GE_B) remains the dominant effect, it is less pronounced than in the targeted scenarios. This is because inheritor households, as beneficiaries of the universal transfer, receive back a portion of the collected tax revenue, which dampens the compression of mean wealth between the two groups.

A more subtle shift occurs in how the policy addresses **within-group inequality** (GE_W). Although the absolute percentage reduction in GE_W is not substantially larger than in the targeted scenarios, the mechanism is fundamentally different. The targeted transfer (Scenario A) directs funds almost exclusively to the bottom wealth decile, a group composed overwhelmingly of non-inheritors. Its effect on within-group inequality is therefore confined to compressing the bottom of the non-inheritor distribution. In contrast, the universal transfer provides a wealth boost to all households, including poorer inheritors who may own a low-value property but possess few other assets. This creates a compressive effect across the entire distribution, reducing inequality not only among non-inheritors but also, for the first time, directly addressing disparities *within the inheritor group*. While the final percentage change in GE_W is comparable to the targeted scenarios, its source is qualitatively different and more widespread. This quantifies a key policy dilemma: universal transfers are less statistically potent for overall inequality reduction but engage with disparities more broadly across all segments of the population.

5.4.4 Redistribution Scenario D: Universal Proportional Transfer

The final scenario combines the universal scope of Scenario C with the needs-based adjustment of Scenario B. The revenue is distributed to all households in the population, but the amount each household receives is proportional to the number of its members. This represents a hybrid policy that recognizes the principle of a universal social dividend while simultaneously directing slightly more resources to larger families across the entire wealth spectrum. The results for this final redistribution design are detailed in Tables 5.21 and 5.22.

The results for this hybrid scenario reveal a nuanced and somewhat counterintuitive outcome. As shown in Table 5.21, the universal proportional transfer is the least effective of the four scenarios in terms of pure Gini coefficient reduction. For every tax regime, its impact is slightly weaker than that of the simple universal lump-sum in Scenario C. For instance, under the Spanish regime, the total Gini reduction is -1.68%, compared to -1.77% in Scenario C.

This occurs because household size and extreme wealth poverty are not perfectly correlated. Households at the very bottom of the net wealth distribution (including those with negative wealth) are often smaller units, such as single individuals or elderly couples. By weighting the transfer by household size, this policy directs a larger share of the funds to larger families who, while potentially low-income, may not be at the absolute bottom of the wealth spectrum. This diversion of resources, however small, away from the very poorest households is enough to slightly weaken the policy's compressive effect on the Lorenz curve, resulting in a smaller Gini reduction.

The GE(2) decomposition in Table 5.22 confirms this pattern. The mechanism mirrors that of all the others Scenarios, with a clear reduction in **between-group** (GE_B) inequality. The results are very similar to the ones of Scenario C.

Table 5.21. Decomposition of Gini coefficient Changes for Scenario D

Policy Scenario	Post-Reform Gini	Total Change in Gini (%)	Tax Effect (%)	Redistribution Effect (%)
Baseline (Italy)	0.6593	—	—	—
<i>Flat-Rate Regimes</i>				
Ireland	0.6537	-0.85	-0.35	-0.50
United Kingdom	0.6554	-0.59	-0.19	-0.40
<i>Progressive-Rate Regimes</i>				
Belgium (A - Reduced)	0.6518	-1.14	-0.17	-0.97
Belgium (B - Standard)	0.6510	-1.26	-0.12	-1.14
Ecuador	0.6560	-0.50	-0.09	-0.41
Finland	0.6528	-0.98	+0.04	-1.02
France (A - Reduced)	0.6531	-0.94	-0.17	-0.77
France (B - Standard)	0.6505	-1.33	-0.18	-1.15
Japan	0.6543	-0.76	-0.24	-0.52
South Korea (A - Reduced)	0.6554	-0.59	-0.09	-0.50
South Korea (B - Standard)	0.6576	-0.26	-0.02	-0.024
Spain	0.6482	-1.68	+0.04	-1.72
<i>Boundary Case</i>				
United States	0.6593	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

Table 5.22. Decomposition of $GE(2)$ Changes for Scenario D. Groups: Inheritors vs. Non-Inheritors

Policy Scenario	Change in $GE(2)$ (%)	Change in Between-Group Inequality (GE_B) (%)	Change in Within-Group Inequality (GE_W) (%)
Baseline (Italy)	—	—	—
<i>Flat-Rate Regimes</i>			
Ireland	-1.32	-16.55	-1.29
United Kingdom	-1.40	-11.11	-1.37
<i>Progressive-Rate Regimes</i>			
Belgium (A - Reduced)	-1.30	-26.57	-1.25
Belgium (B - Standard)	-1.34	-31.01	-1.27
Ecuador	-0.63	-11.79	-0.61
Finland	-0.84	-28.17	-0.78
France (A - Reduced)	-1.18	-21.39	-1.13
France (B - Standard)	-1.61	-31.19	-1.54
Japan	-1.47	-14.88	-1.45
South Korea (A - Reduced)	-1.31	-11.43	-1.29
South Korea (B - Standard)	-0.90	-4.76	-0.89
Spain	-1.80	-44.29	-1.71
<i>Boundary Case</i>			
United States	0.0	0.0	0.0

Source: Author's calculations on SHIW 2022 data.

5.5 Summary and Comparative Analysis of Results

The preceding sections have detailed the results of a two-stage microsimulation, first quantifying the revenue generated by various international tax regimes and then modeling the redistributive impact of four distinct transfer scenarios. This section synthesizes these findings to provide a comprehensive comparative analysis, identifying the most effective policy levers and the mechanisms through which they operate.

Decomposition Insights: The Dominance of the Redistribution Effect
The most striking finding across all scenarios is the overwhelming dominance of the **redistribution effect** over the **tax effect**. As shown in the decomposition tables for each scenario, the act of collecting the inheritance tax itself does very little to reduce the Gini coefficient. In the cases of the Finnish and Spanish regimes, the tax effect is even slightly positive (inequality-increasing), as their very low allowances pull down the wealth of "upper-middle" inheritors more than the ultra-wealthy.

This demonstrates that the power of an inheritance tax to reduce inequality lies not in the act of taxing, but in the subsequent use of the revenue. The Gini reduction is almost entirely driven by the "redistribution effect"—the transfer of wealth from (generally wealthy) inheritors to (poorer) recipients. This firmly establishes that inheritance tax should be understood primarily as a powerful tool for funding redistributive policies, rather than as a direct leveler of wealth.

Hierarchy of Tax Regimes: The Primacy of the Tax Base The simulations confirm a clear hierarchy of revenue-generating potential, which in turn determines the maximum possible redistributive impact. This hierarchy is driven not by top marginal rates, but by the size of the tax-free allowance.

- **High-Impact Tier:** The **Spanish**, standard **French**, standard **Belgian**, and **Finnish** regimes form the top tier. Their combination of very low allowances (from €15,957 to €100,000) and steep progressivity generates enormous revenue pools (from €80.8bn to €134.7bn), enabling the largest reductions in inequality regardless of the redistribution scenario.
- **Mid-Impact Tier:** This group, which includes the **Irish**, **UK**, **Japanese**, and standard **South Korean** regimes, features more generous allowances. This narrows the tax base and limits their revenue potential, resulting in more moderate, though still significant, inequality reductions.
- **Low-Impact Tier:** The most generous scenarios for South Korea and, especially, the **United States** show that excessively high allowances render a tax system ineffective as a redistributive tool in the Italian context.

The Critical Choice of Redistribution: A Policy Trade-Off The four redistribution scenarios reveal a fundamental trade-off between statistical efficiency and broader social equity objectives.

- **Targeted Scenarios (A and B)** are by far the most "efficient" at reducing overall inequality. By concentrating the entire revenue pool on the bottom wealth decile, they achieve the maximum mathematical impact on both the Gini coefficient and the within-group component of the GE(2) index (GE_W). This is because the overall within-group inequality is dominated by the large non-inheritor group; by injecting a massive transfer at the very bottom of this specific group's distribution, the policy creates a powerful compressive effect. The simple lump-sum transfer (Scenario A) is the most potent of all, as it directs resources to the absolute poorest households, which are most influential in inequality calculations.
- **Universal Scenarios (C and D)** are significantly less effective in statistical terms, achieving roughly half the inequality reduction of their targeted counterparts. Spreading the revenue thinly across the entire population dilutes the impact on all metrics. While these are the only scenarios that transfer wealth to poorer *inheritors*, this effect is too small to meaningfully impact the overall results.

This highlights a key policy dilemma: a targeted approach is mathematically optimal for tackling extreme poverty and maximizing the reduction in statistical inequality. A universal approach, while statistically weaker, may be preferred for its political viability, administrative simplicity, and its principle of treating all citizens equally.

Cross-National Patterns Grouping regimes geographically reveals some regional consistencies. Continental European systems (Belgium, France, Finland, Spain) tend toward lower allowances and more brackets, producing strong redistributive effects. The East Asian systems (Japan, South Korea), and the Ecuadorian one, feature high top rates but also substantial allowances or deductions, yielding more moderate impacts. The Anglo-American systems occupy both extremes: the UK provides moderate redistribution through its combined nil-rate and residence bands, while the U.S. federal approach is completely ineffective in the Italian context. These patterns likely reflect different policy priorities and political economies. European systems appear designed to tax a broad swath of substantial inheritances and achieve measurable redistribution, while the U.S. model targets only dynastic wealth. The East Asian regimes balance steep progressivity with protections for intergenerational transfers within families, possibly reflecting stronger cultural norms around filial obligation and multi-generational households.

5.6 Discussion of Findings and Policy Implications

The results of this comprehensive microsimulation exercise offer several crucial policy implications for any potential reform of Italy's inheritance tax system. The clearest conclusion is that the current system is an international outlier, functionally dormant as a tool for either revenue generation or redistribution. The simulations demonstrate that adopting almost any other developed country's model would lead to a substantial increase in revenue and a measurable decrease in wealth inequality.

The Primacy of the Tax Base The most consequential finding is that **the tax-free allowance is the primary determinant of a system's redistributive capacity**. High top-end tax rates are rendered irrelevant if the allowance is too high. The Spanish and Finnish regimes, despite having lower top rates than Japan, are far more powerful because their low thresholds (€16k and €20k, respectively) bring a broad base of inheritances into the tax system. For Italy, this implies that the current €1 million allowance is the single greatest barrier to a functional inheritance tax. Meaningful reform is impossible without a substantial reduction of this threshold.

Redistribution Design is as Important as Tax Design This analysis powerfully demonstrates that *how* the generated revenue is used is even more critical than *how* it is collected. The choice between targeted transfers (Scenarios A and B) and universal transfers (Scenarios C and D) is not a technical detail but a fundamental policy decision with profound consequences. A government prioritizing maximum statistical efficiency and poverty alleviation would favor targeted transfers. Conversely, a government focused on social cohesion and administrative simplicity might favor a universal "citizen's dividend."

Decomposition Reveals the True Mechanism The decomposition analysis using both the Gini and GE(2) indexes provides a clear picture of how inheritance tax reform works in practice.

- **The Redistribution Effect is Dominant:** The policy's power comes from using the revenue for transfers, not from the levying of the tax itself.
- **Targeted Transfers Tackle Both Between- and Within-Group Inequality:** By moving resources from (wealthy) inheritors to (poor) non-inheritors, targeted transfers are exceptionally effective at closing the structural wealth gap between these two groups (GE_B). Furthermore, because they create a large wealth shock at the bottom of the much larger non-inheritor group, they are also the most effective scenarios for reducing overall within-group inequality (GE_W).

This clarifies the limits of the policy. An inheritance tax, even when paired with transfers, is primarily a tool for addressing the advantage conferred by inheritance itself (GE_B). While it can also affect within-group inequality via redistribution, its ability to correct wealth concentration that already exists at the top of the inheritor group is minimal. This suggests that to tackle wealth inequality comprehensively, inheritance tax reform should be seen as one part of a broader toolkit that could include taxes on wealth stocks (e.g., a net wealth tax) or capital income.

Progressive Structures and Targeted Taxation While broadening the tax base emerges as the primary driver of revenue, progressive rate structures still add meaningful redistributive power. The comparison between flat-rate and progressive regimes with similar allowances (e.g., Ireland vs. Belgium reduced rates) shows that progressivity enhances impact by 0.7-0.8 percentage points in Gini reduction terms. For large inheritances, this difference becomes substantial in absolute revenue.

The Spanish system's wealth-adjusted multiplier represents an especially intriguing design innovation. By scaling the tax liability according to the heir's pre-existing wealth, the system operationalizes a principle of "ability to pay" that extends beyond the inheritance itself. This mechanism directly addresses the concern that inheritances exacerbate inequality most when they flow to already-wealthy recipients.

However, implementing such a system would require comprehensive wealth reporting by heirs, creating administrative complexity and potential for evasion that Italy would need to address. The Spanish experience suggests this is feasible, but the effectiveness of enforcement would be critical.

The Main Residence Provision: A Double-Edged Sword The scenario analyses for Belgium, France, and South Korea reveal that special provisions for the main residence or cohabiting heirs can reduce tax revenue by 20-60% depending on eligibility rates. These provisions are often justified on grounds of liquidity constraints—heirs should not be forced to sell the family home to pay inheritance tax—and on normative grounds that reward family stability or care provision.

Italy would need to carefully weigh these trade-offs. One intermediate approach might be to allow deferral of tax payment rather than reduction of tax liability—permitting heirs to pay over time or upon eventual sale, thus addressing liquidity concerns without sacrificing revenue. Alternatively, residence-related provisions could be capped or means-tested to target relief toward heirs who genuinely face financial hardship.

Chapter 6

Conclusion

This thesis has undertaken a dual-pronged investigation into the role of real estate inheritance in shaping wealth inequality in Italy. Through a detailed empirical analysis of the 2022 SHIW dataset and a comprehensive microsimulation of tax policy reforms, the study sought to both diagnose the current state of wealth and its transmission, and evaluate potential interventions. The research has yielded several key findings that contribute to the understanding of wealth dynamics in Italy and offer a quantitative foundation for policy debate.

6.1 Summary of Main Findings

The empirical analysis confirmed that wealth in Italy is distributed in a profoundly unequal manner, with a Gini coefficient of 0.659 that far exceeds the inequality observed for income (0.365). Inheritor households, who constitute approximately 15% of the population, possess on average 41% more wealth than the national mean, underscoring the significant advantage conferred by intergenerational transfers. However, the primary driver of overall wealth inequality was found to be the vast disparities *within* both the inheritor and non-inheritor groups, rather than the gap *between* them.

A central finding of the descriptive analysis is the role of inherited real estate as a "wealth floor". For a substantial portion of beneficiaries, particularly in the lower half of the wealth distribution, the inherited home constitutes nearly their entire net worth. This has a counter-intuitive equalizing effect on the overall wealth distribution by compressing its lower tail. When the value of inherited homes is computationally removed, the Gini coefficient for the remaining "self-made" wealth actually increases, revealing a more severe underlying inequality.

The microsimulation exercise established that Italy's current inheritance tax system, with its €1 million allowance for direct heirs, is functionally dormant as a redistributive tool. The simulations of thirteen international tax regimes demonstrated a clear and powerful conclusion: the tax-free allowance, not the top marginal rate, is the single most critical determinant of a system's redistributive capacity. Regimes with low allowances, such as those of Spain and Finland, generated the largest revenue pools and, consequently, enabled the most significant reductions in inequality. The most potent simulated reform, modelling the Spanish national

system combined with a targeted lump-sum transfer to the bottom wealth decile, was capable of reducing Italy's overall wealth Gini coefficient by a substantial 3.7%.

Furthermore, the decomposition of the policy impact revealed that the redistributive power of an inheritance tax lies not in the direct act of taxing, but in the subsequent use of the revenue. Across all scenarios, the "redistribution effect" of the transfer payment was overwhelmingly dominant. This confirms that inheritance taxation should be viewed primarily as a mechanism for funding policies aimed at mitigating inequality and poverty.

6.2 Policy Implications

The findings of this thesis carry significant implications for Italian policymakers. The primary conclusion is that a meaningful reform of the inheritance tax system offers a powerful, yet politically challenging, lever for addressing wealth inequality.

The simulation results suggest that **without substantially lowering the €1 million threshold for direct heirs**—to somewhere in the range of €15,000 to €100,000, depending on the desired revenue—**Italy cannot hope to approach the redistributive performance of its European neighbors**. However, the political economy of such a reform cannot be ignored. The sensitivity analysis presented in Section 5.1, which showed that a more realistic mix of heir types could increase the number of taxpayers from approximately 30,000 to over 660,000 households, hints at the political resistance that broader taxation might encounter. High thresholds are often politically sustainable precisely because they affect very few voters directly.

Beyond the political dimension, **any realistic reform discussion must also acknowledge significant administrative and implementation challenges**. The simulation's reliance on a simplified parent-child transfer assumption highlights a critical gap in Italy's administrative data. Implementing more sophisticated systems, such as relationship-specific rates or the wealth-adjusted multipliers used in Spain, would require comprehensive reporting of both heir-donor relationships and the pre-existing wealth of heirs. This would necessitate enhanced capacity for verification and enforcement at the tax authority to prevent wealth concealment or strategic estate planning, likely leading to an increase in administrative costs.

Furthermore, the abrupt implementation of any of the stricter regimes simulated would create significant transitional shocks. Gradual phase-ins, possibly with grandfathering provisions for estates planned under the current regime, would be necessary to ensure fairness and economic stability. **Policymakers must also confront Italy's substantial regional disparities in property values**. A uniform national threshold would have vastly different real effects across the country, creating both equity concerns and political challenges as the reform would disproportionately affect certain regions.

Finally, the simulation results raise **fundamental normative questions about distributional justice**. The baseline scenario established that inheritor households possess significantly more wealth than non-inheritors. The tax-and-transfer reforms simulated here explicitly aim to compress this gap. Yet, inheritance taxation touches upon deeply held beliefs about fairness. Is it just to tax assets purchased with already-taxed income? Should transfers within families be privileged over other

economic transactions? This thesis does not adjudicate these philosophical debates, but the magnitude of the redistributive effects documented here—particularly the 3.7% Gini reduction under the Spanish regime—demonstrates that the stakes are high. For policymakers who view the concentration of inherited wealth as a barrier to social mobility and economic fairness, these results confirm that inheritance taxation is a uniquely powerful tool.

6.3 Avenues for Future Research

The limitations of this study, dictated by data availability and the choice of a static model, naturally point toward several avenues for future research.

First, the static and arithmetic nature of the microsimulation model assumes no behavioral responses to the policy change. A crucial next step would be to develop a **behavioral (or dynamic) microsimulation model**. Such a model could incorporate estimated elasticities to predict how individuals might alter their saving behavior, labor supply, or engage in tax avoidance and evasion in response to a new tax regime. This would provide a more realistic forecast of both net revenue and the long-term distributional impact.

Second, this analysis was conducted within a partial equilibrium framework. Future research could employ a **general equilibrium model** to explore the macroeconomic consequences of a significant tax reform, such as its effects on aggregate savings, the national capital stock, and the market prices of assets like real estate.

Third, this study's focus was narrowed to the inheritance of a main residence due to data constraints. Future work should seek to incorporate **all forms of intergenerational transfers**, including financial assets, business equity, and other properties. A comprehensive analysis of all inherited wealth would provide a more complete picture of its role in shaping inequality.

Finally, a **dynamic, overlapping-generations model** could be used to simulate the long-run, multi-generational impacts of tax reform. While the current model provides a "day after" snapshot, a dynamic model could trace how different policies alter the trajectory of wealth accumulation and inequality over several decades, offering deeper insights into their effects on intergenerational mobility.

Appendix A

Additional Tables

Table A.1. Population Distribution by Geographic Area of Birth

	Proportion	Std. Error	95% Conf. Interval
North	0.375	0.005	0.365, 0.385
Centre	0.173	0.003	0.167, 0.179
South	0.376	0.004	0.367, 0.385
Foreign	0.076	0.005	0.067, 0.086

Table A.2. Population Distribution by Birth Cohort

	Proportion	Std. Error	95% Conf. Interval
Greatest Generation	0.003	0.001	0.001, 0.005
Silent Generation	0.156	0.006	0.143, 0.169
Baby Boomers	0.354	0.008	0.338, 0.370
Generation X	0.317	0.010	0.298, 0.336
Millennials/Generation Y	0.156	0.007	0.142, 0.170
Zoomers/Generation Z	0.014	0.002	0.011, 0.018

Table A.3. Population Distribution by Geographic Area of Residence

	Proportion	Std. Error	95% Conf. Interval
North	0.476	0.000	0.476, 0.476
Centre	0.201	0.000	0.201, 0.201
South	0.323	0.000	0.323, 0.323

Table A.4. Population Distribution by Parental Education

	Proportion	Std. Error	95% Conf. Interval
None	0.154	0.007	0.141, 0.167
Primary School	0.433	0.010	0.413, 0.452
Lower Secondary School	0.197	0.008	0.181, 0.212
Upper Secondary School	0.142	0.007	0.129, 0.156
Bachelor's Degree	0.049	0.003	0.042, 0.055
Post-Graduate Specialization	0.002	0.000	0.001, 0.002
No Response/Don't Know	0.024	0.003	0.018, 0.030

Table A.5. Population Distribution by Education Level

	Proportion	Std. Error	95% Conf. Interval
None	0.020	0.003	0.015, 0.025
Primary School	0.136	0.007	0.123, 0.150
Lower Secondary School	0.281	0.008	0.266, 0.297
Professional Diploma (3 years)	0.069	0.005	0.059, 0.078
Upper Secondary School	0.323	0.008	0.308, 0.338
Bachelor's Degree	0.023	0.003	0.018, 0.029
Master's Degree	0.128	0.005	0.118, 0.138
Post-lauream Specialization	0.019	0.002	0.015, 0.024

Table A.6. Population Distribution by Working Status

	Proportion	Std. Error	95% Conf. Interval
Worker	0.223	0.007	0.209, 0.238
Clerk	0.176	0.008	0.161, 0.192
Manager	0.056	0.004	0.048, 0.064
Entrepreneur/Self-employed Professional	0.081	0.005	0.071, 0.092
Other Self-employed	0.043	0.004	0.034, 0.051
Retired	0.376	0.010	0.356, 0.395
Other Not Employed	0.045	0.004	0.038, 0.052

Table A.7. Population Distribution by Ownership Status

	Proportion	Std. Error	95% Conf. Interval
Non-Owner	0.255	0.008	0.239, 0.270
"Self-made" Owner	0.594	0.009	0.576, 0.612
Inheritor Owner	0.152	0.006	0.139, 0.164

Table A.8. Test for Lorenz Dominance of Net Income over Net Wealth

	Coefficient	Std. err.	t	P> t	[95% conf. interval]
net_income					
0	(omitted)				
5	.008874	.0003736	23.76	0.000	.0081418 .0096063
10	.0237676	.0006639	35.80	0.000	.0224663 .0250689
15	.0421824	.0009343	45.15	0.000	.0403509 .0440138
20	.06213	.0011608	53.53	0.000	.0598546 .0644053
25	.0811938	.0015151	53.59	0.000	.0782239 .0841637
30	.0983979	.0019652	50.07	0.000	.0945458 .1022501
35	.1143417	.0024262	47.13	0.000	.1095858 .1190976
40	.129762	.002984	43.49	0.000	.1239126 .1356114
45	.1446842	.0036544	39.59	0.000	.1375209 .1518475
50	.1594645	.0044925	35.50	0.000	.1506583 .1682707
55	.1739995	.0054533	31.91	0.000	.1633098 .1846892
60	.1881861	.0065684	28.65	0.000	.1753107 .2010616
65	.2023203	.007862	25.73	0.000	.1869091 .2177315
70	.2160457	.0093634	23.07	0.000	.1976913 .2344
75	.2286495	.0111208	20.56	0.000	.2068503 .2504487
80	.2392463	.0131896	18.14	0.000	.2133918 .2651007
85	.2470667	.0156485	15.79	0.000	.2163924 .2777411
90	.2473008	.018801	13.15	0.000	.2104468 .2841547
95	.2352548	.0228408	10.30	0.000	.190482 .2800277
100	0	2.46e-16	0.00	1.000	-4.83e-16 4.83e-16

Note: This table presents the full output for the test of Lorenz dominance, as discussed in Subsection 4.1.1. The results confirm that the Lorenz curve for net income lies significantly above that of net wealth at all quintiles ($P < 0.001$), providing formal evidence that income is more equally distributed than wealth within the sample.

Table A.9. Test for Lorenz Dominance of Net Wealth over "Self-made" Wealth

	Coefficient	Std. err.	t	P> t	[95% conf. interval]
net_wealth					
0	(omitted)				
5	.0020129	.0003817	5.27	0.000	.0012647 .0027611
10	.0020923	.0003883	5.39	0.000	.0013311 .0028535
15	.0023533	.0004047	5.81	0.000	.00156 .0031466
20	.0033788	.0005221	6.47	0.000	.0023504 .0044022
25	.0072102	.0009708	7.43	0.000	.0053073 .0091131
30	.0133684	.001312	10.19	0.000	.0107966 .0159402
35	.0190198	.0015324	12.41	0.000	.0160161 .0220236
40	.0228839	.0017691	12.94	0.000	.0194161 .0263516
45	.0256039	.0019767	12.95	0.000	.0217292 .0294786
50	.0276673	.0021645	12.78	0.000	.0234244 .0319101
55	.0292866	.0023167	12.64	0.000	.0247454 .0338279
60	.0304096	.0024443	12.44	0.000	.0256182 .0352001
65	.0314128	.0025651	12.25	0.000	.0263848 .0364409
70	.0322567	.0026541	12.15	0.000	.027054 .0374594
75	.0324964	.0027613	11.77	0.000	.0270836 .0379092
80	.0319651	.0028563	11.19	0.000	.0263661 .037564
85	.0306742	.0029085	10.55	0.000	.0249973 .036375
90	.0294278	.0031314	9.40	0.000	.0232896 .035566
95	.0239912	.0033394	7.18	0.000	.0174453 .030537
100	0	6.04e-16	0.00	1.000	-1.18e-15 1.18e-15

Note: This table presents the full output for the test of Lorenz dominance, as discussed in Subsection 4.1.2. The results confirm that the Lorenz curve for net wealth lies significantly above that of "self-made" wealth at all quintiles ($P < 0.001$).

Table A.10. Birth Cohort Distribution by Ownership Status

Ownership Status	Birth Cohort						Total
	Greatest Gen.	Silent Gen.	Baby Boomers	Gen. X	Gen. Y (Millennials)	Gen. Z (Zoomers)	
Non-Owner	0.231 (0.129)	0.206 (0.017)	0.179 (0.011)	0.268 (0.015)	0.426 (0.025)	0.484 (0.074)	0.255 (0.008)
Self-made Owner	0.691 (0.137)	0.635 (0.023)	0.625 (0.016)	0.594 (0.016)	0.496 (0.025)	0.438 (0.071)	0.594 (0.009)
Inheritor Owner	0.074 (0.056)	0.158 (0.016)	0.196 (0.014)	0.138 (0.011)	0.078 (0.014)	0.078 (0.033)	0.152 (0.006)
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Note: This table displays column proportions of ownership status for each generation. Jackknife standard errors are reported in parentheses.

Table A.11. Birth Area Distribution by Ownership Status

Ownership Status	Region				
	North	Centre	South	Foreign	Total
Non-Owner	0.191 (0.015)	0.184 (0.015)	0.260 (0.012)	0.699 (0.032)	0.255 (0.008)
	0.641 (0.017)	0.635 (0.021)	0.593 (0.015)	0.273 (0.030)	0.594 (0.009)
Self-made Owner	0.168 (0.010)	0.181 (0.015)	0.147 (0.010)	0.028 (0.017)	0.152 (0.006)
	Total	1.000	1.000	1.000	1.000

Note: This table displays column proportions of ownership status for each region. Jackknife standard errors are in parentheses.

Table A.12. Education Level Distribution by Ownership Status

Ownership Status	Education Level								
	None	Primary	Lower Secondary	Prof. Diploma	Upper Secondary	Bachelor's	Master's	Post-Lauream	Total
Non-Owner	0.449 (0.062)	0.280 (0.021)	0.322 (0.016)	0.241 (0.027)	0.226 (0.013)	0.189 (0.047)	0.154 (0.016)	0.170 (0.050)	0.255 (0.008)
Self-made Owner	0.466 (0.058)	0.544 (0.025)	0.522 (0.018)	0.572 (0.034)	0.629 (0.015)	0.691 (0.059)	0.719 (0.022)	0.682 (0.062)	0.594 (0.009)
Inheritor Owner	0.086 (0.029)	0.176 (0.024)	0.157 (0.013)	0.188 (0.027)	0.146 (0.011)	0.120 (0.041)	0.126 (0.017)	0.148 (0.056)	0.152 (0.006)
Total	1.000								

Note: This table displays column proportions of ownership status for each education level. Jackknife standard errors are in parentheses.

Table A.13. Parental Education Level Distribution by Ownership Status

Ownership Status	Parental Education Level							
	None	Primary	Lower Secondary	Upper Secondary	Bachelor's	Post-Graduate	No Response	Total
Non-Owner	0.297 (0.018)	0.257 (0.011)	0.236 (0.018)	0.241 (0.020)	0.252 (0.032)	0.201 (0.117)	0.184 (0.034)	0.255 (0.008)
Self-made Owner	0.562 (0.021)	0.554 (0.014)	0.644 (0.018)	0.651 (0.022)	0.610 (0.037)	0.755 (0.120)	0.724 (0.050)	0.594 (0.009)
Inheritor Owner	0.142 (0.017)	0.189 (0.010)	0.120 (0.015)	0.108 (0.013)	0.138 (0.028)	0.045 (0.043)	0.092 (0.031)	0.152 (0.006)
Total	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Note: This table displays column proportions of ownership status for each parental education level. Jackknife standard errors are in parentheses.

Table A.14. Working Status Distribution by Ownership Status

Ownership Status	Working Status								Total
	Worker	Clerk	Manager	Entrepreneur	Other Self-Emp.	Retired	Other Non-Occup.	Total	
Non-Owner	0.442 (0.022)	0.184 (0.018)	0.107 (0.022)	0.170 (0.028)	0.195 (0.044)	0.188 (0.012)	0.542 (0.035)	0.255 (0.008)	
Self-made Owner	0.442 (0.021)	0.680 (0.022)	0.753 (0.034)	0.658 (0.035)	0.630 (0.045)	0.637 (0.014)	0.307 (0.040)	0.594 (0.009)	
Inheritor Owner	0.116 (0.014)	0.136 (0.015)	0.140 (0.030)	0.172 (0.024)	0.175 (0.030)	0.175 (0.011)	0.150 (0.024)	0.152 (0.006)	
Total	1.000								

Note: This table displays column proportions of ownership status for each working status category. Jackknife standard errors are in parentheses.

Table A.15. Test for Lorenz Dominance of Net Wealth over Net Income

	Coefficient	Std. err.	t	P> t	[95% conf. interval]
net_income					
0	(omitted)				
5	.0072064	.0009955	7.24	0.000	.0052535 .0091593
10	.0184788	.0019434	9.51	0.000	.0146663 .0222912
15	.0327718	.0028469	11.51	0.000	.0271869 .0383568
20	.0481446	.0037089	12.98	0.000	.0408686 .0554205
25	.0644464	.0047583	13.54	0.000	.0551115 .0737812
30	.0807333	.0058959	13.69	0.000	.0691667 .0922998
35	.0966351	.007384	13.09	0.000	.0821492 .111121
40	.1118352	.0089633	12.48	0.000	.0942513 .1294192
45	.1274895	.0108744	11.72	0.000	.1061562 .1488227
50	.1438306	.0130822	10.99	0.000	.1181661 .1694952
55	.1605244	.0154075	10.42	0.000	.1302982 .1907505
60	.1777299	.0178198	9.97	0.000	.1427713 .2126884
65	.1954101	.0205119	9.53	0.000	.1551702 .2356501
70	.2128298	.0236129	9.01	0.000	.1665063 .2591532
75	.2301819	.0271718	8.47	0.000	.1768767 .283487
80	.2473111	.0312899	7.90	0.000	.1859272 .3086949
85	.2588605	.0365224	7.09	0.000	.1872114 .3305095
90	.2686814	.0423789	6.34	0.000	.1855432 .3518196
95	.2588396	.0498816	5.19	0.000	.1609828 .3566965
100	0	8.68e-17	0.00	1.000	-1.70e-16 1.70e-16

Note: This table presents the full output for the test of Lorenz dominance for the subsample of inheritors, as discussed in Subsection 4.3.2. The results confirm that the Lorenz curve for net income lies significantly above that of net wealth at all quintiles ($P < 0.001$), providing formal evidence that income is more equally distributed than wealth within the sample.

Table A.16. Mean Inheritance Share by Wealth Decile for the Whole Sample

Wealth Decile	Mean (%)
1 (Poorest)	0.00
2	3.99
3	24.96
4	18.97
5	12.40
6	13.49
7	15.64
8	13.38
9	11.48
10 (Richest)	9.25
Total	12.35

Note: Based on 9,641 observations.

Table A.17. Mean Inheritance Share by Wealth Decile for the Inheritors

Decile	Mean	p25	p50	p75
1 (Poorest)	0.00	0.00	0.00	0.00
2	270.69	93.95	95.24	303.03
3	115.79	87.42	95.64	100.00
4	99.26	86.54	94.79	98.52
5	89.93	78.95	90.57	97.32
6	80.96	64.52	87.98	96.46
7	74.03	52.86	83.41	92.59
8	72.60	54.29	76.92	91.82
9	58.75	38.21	55.80	84.71
10 (Richest)	46.64	24.37	39.11	63.91
Total	81.50	56.61	84.88	95.68

Note: Based on 1,307 observations. All the statistics are in percentages.

Appendix B

Variable Construction Details

This appendix provides a detailed description of the procedures used to construct the key variables for the descriptive and microsimulation analyses presented in this thesis. The steps are documented to ensure transparency and reproducibility, following the logic of the Stata do-files used for data preparation.

Main Analytical Variables

- **Parental Education (`parent_edu`):** This variable was constructed in a two-step process to maximize data availability. First, historical data from previous SHIW waves were used to retrieve parental education information for households belonging to the panel component of the survey. Second, a single variable was created using the `egen rowmax()` command, which takes the maximum education level reported for either the father or the mother. This serves as a proxy for the household's intergenerational human capital background.
- **Birth Cohort (`birth_cohort`):** A categorical variable was generated to group household heads based on their year of birth (`birth_year`) according to standard sociological definitions: Greatest Generation (≤ 1927), Silent Generation (1928-1945), Baby Boomers (1946-1964), Generation X (1965-1980), Millennials (1981-1996), and Zoomers (1997-2012).
- **Ownership Status (`owner_status`):** This is the central categorical variable for the three-group analysis. It was created based on the `poss_way` variable, which indicates how the main residence was acquired. Households with a missing value for `poss_way` were classified as "Non-Owner" (0). Households who acquired their home via any means other than full inheritance were classified as "Self-made' Owner" (1). Households who acquired their home via full inheritance (`poss_way == 3`) were classified as "Inheritor Owner" (2).
- **Inheritor (`inheritor`):** This is the primary binary variable for the full-sample analyses. It is equal to 1 if `owner_status == 2`, and 0 otherwise.
- **Inheritor-Owner (`inheritor_owner`):** This is the binary variable for the homeowner subsample analyses. It is defined only for households where

`is_owner == 1`, taking the value 1 if `owner_status == 2` and 0 if they are "Self-made" Owners (`owner_status == 1`).

- **Self-Made Wealth (`selfmade_wealth`):** This variable isolates the portion of net wealth not attributable to the value of the inherited main residence. For inheritor households, it is calculated as `net_wealth - value_2022`. For all other households, it is equal to their total `net_wealth`.
- **Inheritance Share (`inher_share`):** This variable measures the economic significance of the inherited home for inheritor households. It is calculated as the ratio of the property's 2022 market value to the household's total net wealth: $(\text{value_2022}/\text{net_wealth}) \times 100$.
- **Inverse Hyperbolic Sine of Wealth (`asinh_net_wealth`):** A simple logarithm could not be used for net wealth due to the presence of 258 households with zero or negative net worth. To address this, the inverse hyperbolic sine (`asinh`) transformation was used. The `asinh` function behaves very similarly to the natural log for large positive values but is also defined for zero and negative values, making it an ideal tool for transforming wealth data without discarding observations.

Microsimulation Model Variables

The microsimulation analysis in Chapter 5 required the creation of several specific variables to model the tax-and-transfer schemes.

- **Counterfactual Heir Type (`heir_type`):** For the sensitivity analysis of the Italian tax system, a counterfactual heir type was randomly assigned to inheritor households based on a uniform random draw (`runiform()`). Households were assigned as parent-child (80% probability), sibling (15% probability), or other relative (5% probability) to simulate a more diverse set of heir relationships.
- **Tax Calculations:** The microsimulation for each foreign country regime followed a consistent four-step process, as exemplified by the French scenario:
 1. **Baseline Italian Tax (`tax_due_ita`):** The tax liability under the current Italian system was first calculated for each inheritor, assuming a parent-child transfer (4% tax on the value exceeding €1 million).
 2. **Hypothetical Foreign Tax (`tax_due_fr`):** The tax liability under the simulated foreign regime (e.g., French rules) was calculated based on its specific allowances and progressive bracket structure, applied to the 2022 market value of the property.
 3. **Additional Tax (`additional_tax`):** The additional tax burden was calculated as the maximum of zero and the difference between the hypothetical foreign tax and the baseline Italian tax: $\max(0, \text{tax_due_fr} - \text{tax_due_ita})$.

4. **Post-Reform Wealth (`net_wealth_posstax`)**: The post-tax wealth of each inheritor was calculated by subtracting the `additional_tax`. The total revenue from this additional tax was then aggregated and redistributed as a lump-sum transfer to all households in the bottom decile of the pre-reform wealth distribution, creating the final post-reform wealth variable used for inequality analysis.

Variables for Graphical Representation

- **Integer Weights (`int_universewt`)**: For the creation of histograms in Stata, which only accepts integer-valued frequency weights, a separate weight variable was created by taking the integer part of the final sampling weight, following the suggestion of West et al., 2025.
- **Non-Negative Self-Made Wealth (`selfmade_wealth_forgraph`)**: For the stacked bar charts showing the composition of wealth (Figures 4.13a and 4.13b), a non-negative version of the `selfmade_wealth` variable was created using $\max(0, \text{selfmade_wealth})$. This was a purely presentational choice to prevent negative "self-made" wealth (due to debt) from distorting the visual representation of the stacked percentages, affecting only a small number of observations.

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