

# Inheritances in the Long Run\*

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Dresden Presentation

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# What's it about (wealth taxation)

- Introduces a “novel” algorithm, permitting formation of expectations of future wealth transmissions and the associated tax revenues by combining recent micro-data on the wealth of private households with demographic projections on age-, gender- and education specific mortality rates.
- Studies the structure of the distribution of wealth among private households in Austria.
- Demographic changes indicate a strong increase of aggregate capital transfers (both in number and size) over the coming decades.
- Projections indicate the sum of transferred assets increase from € 8 billion in 2010 up to € 20 billion by 2035.
- Simulations show that the combination of a comparatively high inheritance tax exemption threshold with significant marginal rates would have pronounced progressive effects.
- While the majority of the population would not suffer from the tax, total revenue inflow would be substantial.

# What is the Argument?

- Controversy in public policy debate and among economists about the proper level of taxation of inherited wealth.
- The public debate centers around the equity versus efficiency trade-off.
- A disparate set of economic models on optimal inheritance tax yield results from an optimal inheritance tax of 0 in the long run (because of growing distortions on intertemporal choices see Chamley 1986 and Judd 1985) to 55-60% (Picketty and Saez (2013)) depending on assumptions.
- The argument here is that a revenue neutral switch from tax on labour income to inheritance income would be growth enhancing and support the support the principle of social justice and intergenerational mobility (see FISCAL MONITOR: Taxing Times, October 2013. World Economic and Financial Surveys. International Monetary Fund. p.39). “A child’s success or failure should be independent of their parental circumstance”.
- According to (OECD, 2010) switching to inheritance taxes from taxes on labour income should result in positive growth effects since taxes on bequests and gifts have the lowest growth-inhibiting effects on labor supply decisions and human capital investments.

# Data

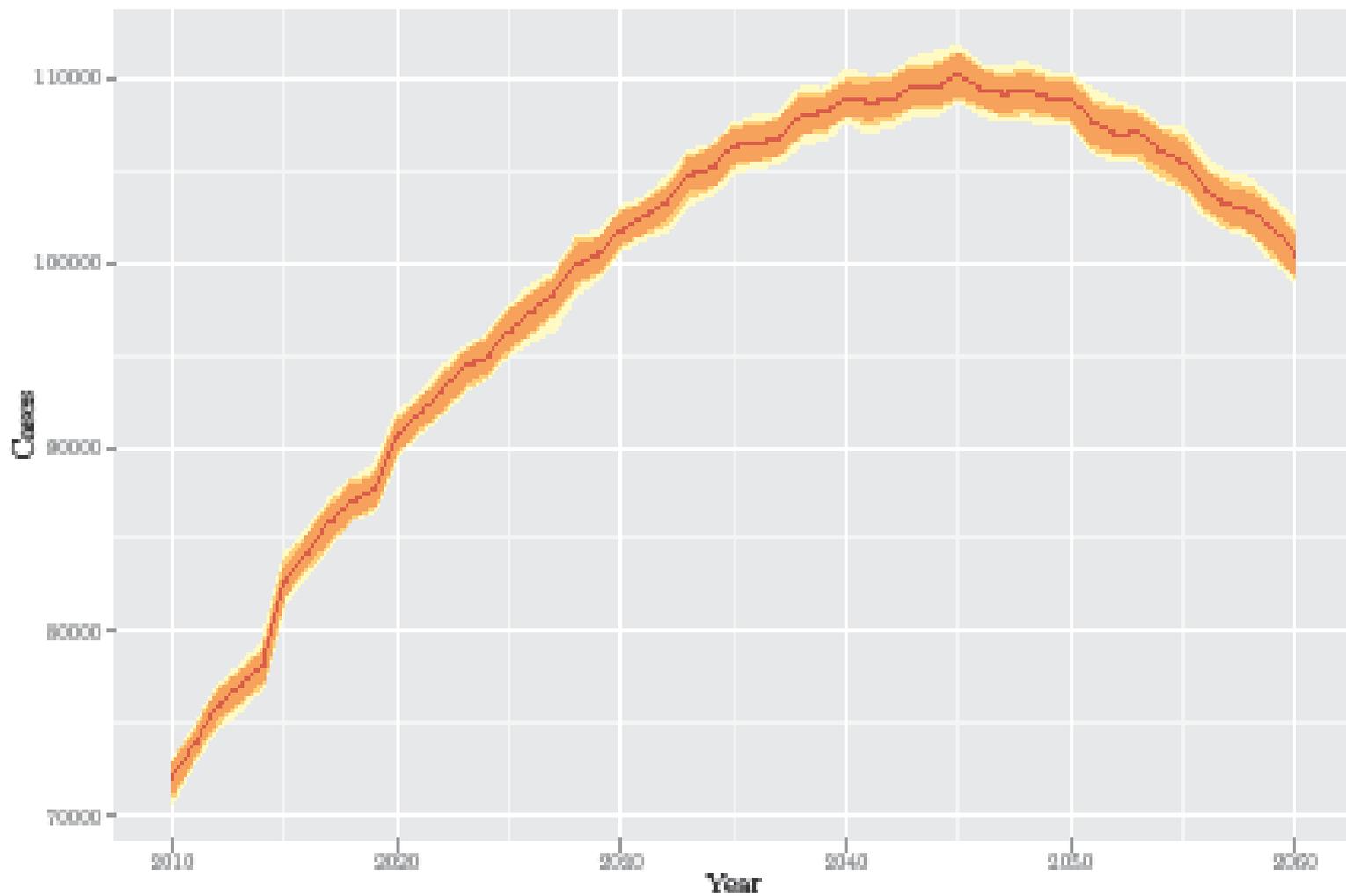
- Source: the first wave of the Household Finance and Consumption Survey (2010). More than 62,000 households across twelve countries were interviewed, leading to a micro dataset, which is representative at the euro area and the member state level.
- The random sample of households was drawn from a postal address register, the addresses were stratified based on geographical and community size classification.
- Overall, the gross sample of HFCS in Austria included 4,436 households. In total 2,380 households participated in the survey, which represents a response rate of about 56 percent.
- Stock variables and socioeconomic characteristics were collected from September 2010 to May 2011. For the income related information, the last full calendar year prior to the survey was used.
- Mortality rates vary significantly with the age, education and gender of a person also medical and technical progress is a factor so the Author employs projections of age-, gender- and education-specific mortality rates for the next 50 years, which were compiled by IIASA (2012).

# The Algorithm.

- 1. Compute the statistical age of individual (add difference between simulation and base year).
- 2. Select a subgroup of persons with the same gender, age and educational level.
- 3. Calculate the expected number of the deaths in subgroup (# persons x mortality rate for specific group).
- 4. Select an individual randomly from the subgroup of observations.
- 5. If individuals' sample weight < the E(# of deaths), assign simulation year as year of death.
- 6. If individual's weight > E(# of deaths) assign the year of simulation as their year of death with P proportional to sample weight – E(# deaths).
- 7. If two consecutive runs do not result in the assignment of a virtual death, jump to step 2 and select a different group.
- 8. Repeat steps 2–7 until all subsets of the population have been processed.
- 9. Repeat steps 1–8 until all years of the projection frame were processed.

# Authors Assumptions and Qualifications

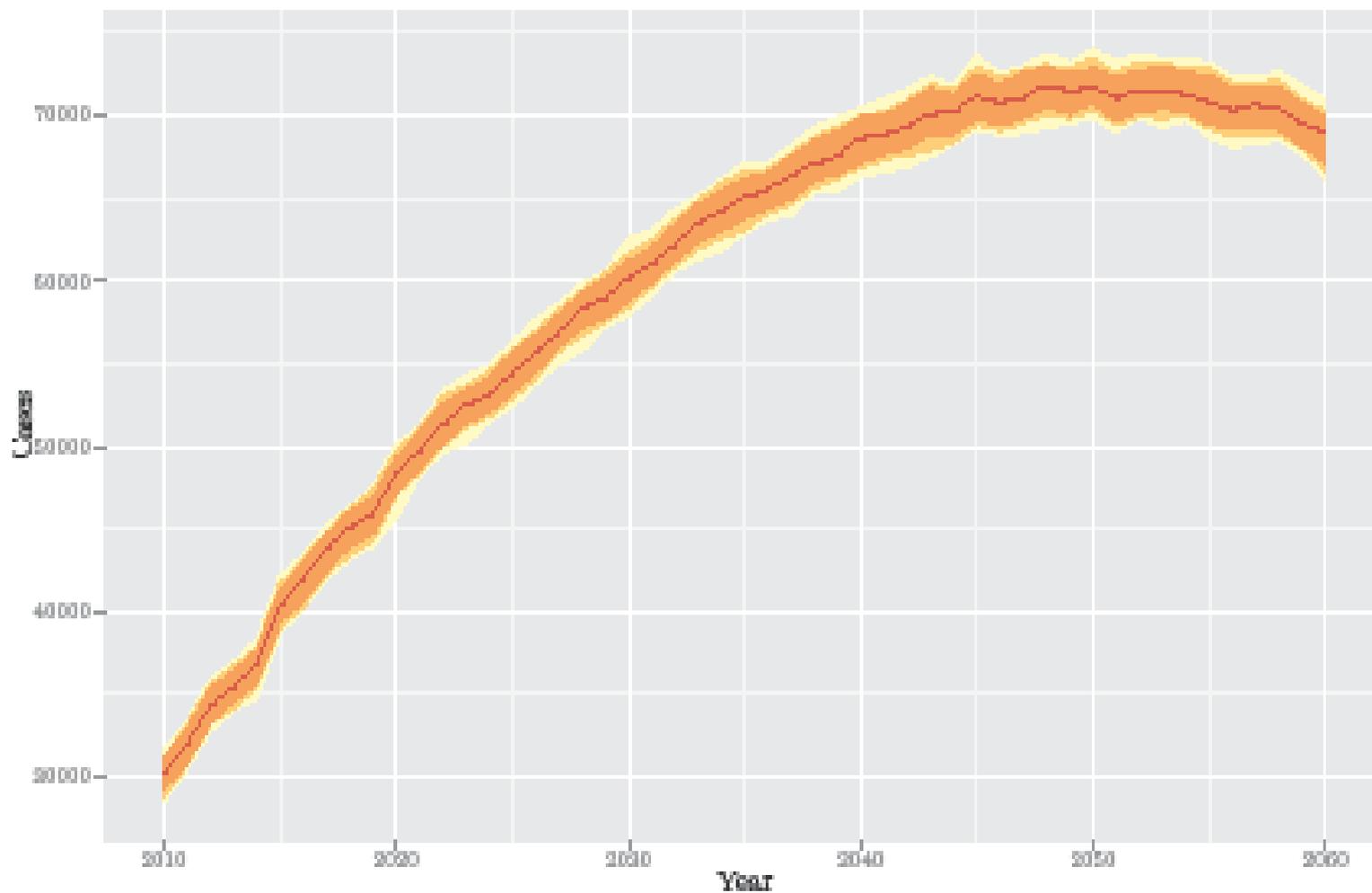
- Number of Deaths. It is assumed that the projections provided by IIASA on the evolution of mortality rates reflect the demographic change and the socio-demographic differences in the age, gender and education specific probabilities to die (IIASA, 2012).
- Number of Deaths vs. Successions: data on asset holdings only available only at the aggregated household level. Deaths are simulated on the basis of specific individual characteristics. Counts the transfer of assets at the time when the last person of a generation dies in a household.
- Inheritance vs. Donations: Forced transfers of assets following the death can be projected with a relatively high accuracy but not so for donations and gifts. Therefore, refrain from modeling donations and gifts separately and consider the transfer of assets at the time of death only. \*?\*
- Development of Asset Values: Uses asset market value as reported in 2010. \*??\*
- Assumes 0 inflation rate and Does not correct for under-estimated upper tail.
- It is assumed that each estate will flow to two people on average.



**Figure 3: Projection of Deaths**

*Median: red, Confidence bands: 90% (dark orange), 95% (orange), 99% (yellow).*

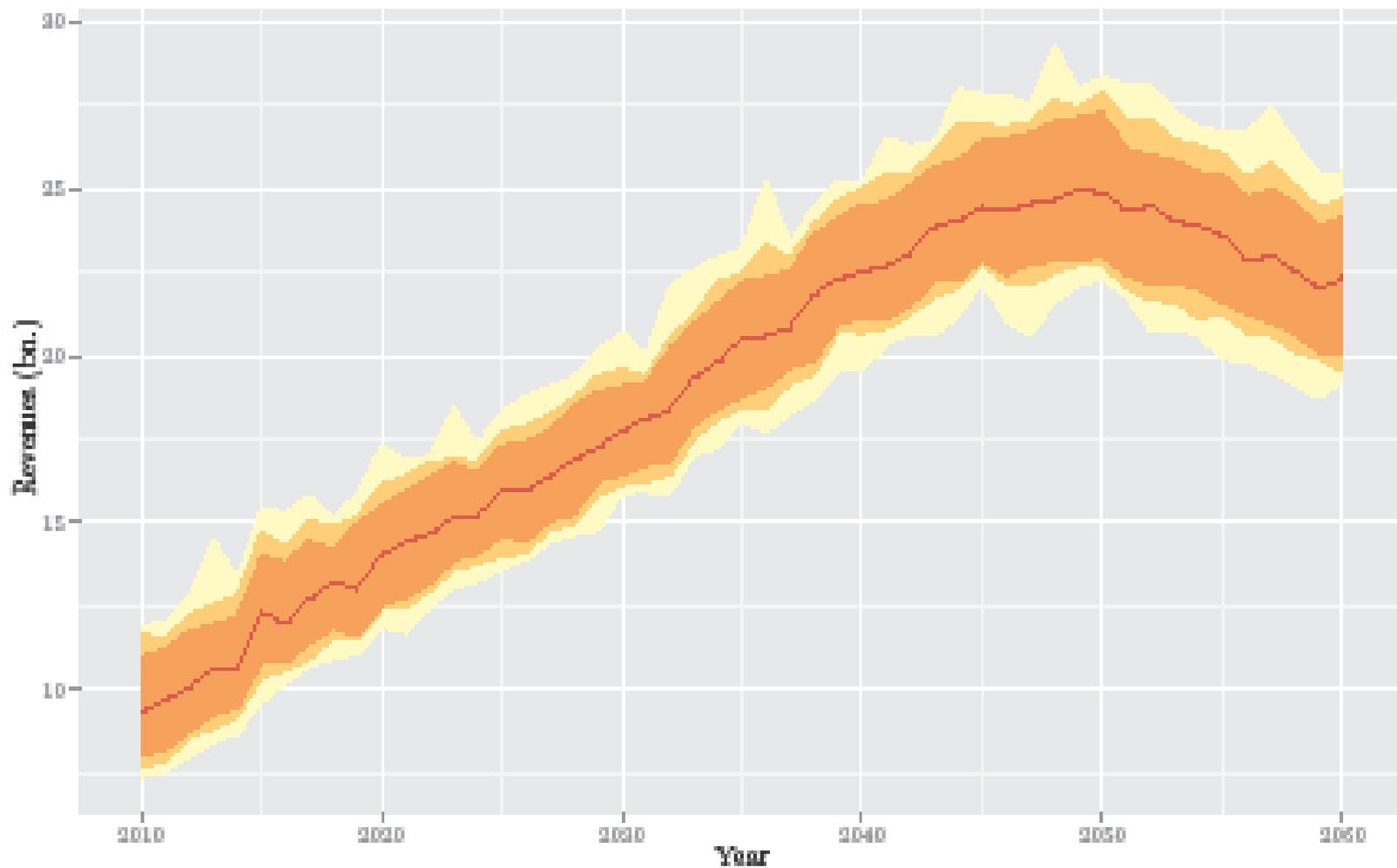
*Source: HFCS 2010, own illustration*



**Figure 4: Projection of Successions**

*Median: red, Confidence bands: 90% (dark orange), 95% (orange), 99% (yellow).*

*Source: HFCS 2010, own illustration*



**Figure 5: Projection of Wealth Transfers**

*Median: red, Confidence bands: 90% (dark orange), 95% (orange), 99% (yellow).*

*Source: HFCS 2010, own illustration*

# Revenue possibilities of alternative tax schemes.

- Note the strong increase in bequest amounts in Figure 4. What are the fiscal and distributional consequences for Austrians should the government decide to reintroduce a tax on such transfers. Examines 2 schemes.
- 1) A simple linear scheme that consists of a marginal tax rate of 10% that applies to each positive wealth transfer (i.e. €0 threshold). Bequests of the the bottom five percent of the wealth distribution are not taxed (liabilities exceed assets), then the average tax rate increases to 10%. The shares of overall tax revenues of each percentile differ substantially because of the unequal distribution of wealth.
- 2) Following Picketty and Saez (2013) examines a marginal tax rate of 66% above an exemption threshold of €500,000. Due to the threshold and the assumption that each bequest is divided between two heirs, only a minority of households would be taxed (bottom 95% not be taxed at all). tax rate reaches 25% in the 98% percentile and crosses 50% in the top percentile – distinctly progressive). While a majority of the population does not suffer from the tax, total revenue estimates are substantial .

# Table 2: Tax revenue — 0 Exemption threshold: Marginal rate: 10%

•	P01	P05	P10	Median	P90	P95	P99
• 2010	0.74	0.77	0.80	0.93	1.10	1.17	1.19
• 2015	0.87	0.92	0.95	1.06	1.22	1.28	1.33
• 2020	1.11	1.16	1.16	1.30	1.50	1.52	1.59
• 2025	1.33	1.38	1.41	1.52	1.65	1.68	1.73
• 2030	1.48	1.58	1.63	1.73	1.89	1.94	2.02
• 2035	1.73	1.82	1.85	1.98	2.16	2.23	2.30
• 2040	1.96	2.08	2.10	2.24	2.41	2.47	2.53
• 2045	2.13	2.22	2.23	2.41	2.59	2.71	2.80
• 2050	2.21	2.29	2.29	2.51	2.72	2.75	2.81
• 2055	2.07	2.12	2.22	2.40	2.57	2.64	2.69
• 2060	1.89	2.01	2.03	2.21	2.40	2.46	2.56

# Table 3: € 500,000 Exemption threshold: Marginal rate: 66%

•	P01	P05	P10	Median	P90	P95	P99
• 2010	1.17	1.31	1.46	2.25	3.18	3.57	3.78
• 2015	1.37	1.56	1.66	2.34	3.10	3.40	3.72
• 2020	1.29	1.84	1.95	2.56	3.57	3.70	4.26
• 2025	2.04	2.26	2.42	2.87	3.71	3.83	4.20
• 2030	2.02	2.52	2.75	3.28	4.26	4.36	4.82
• 2035	2.56	2.85	3.00	3.74	4.78	4.98	5.53
• 2040	3.11	3.33	3.54	4.29	5.27	5.55	5.75
• 2045	3.31	3.45	3.83	4.60	5.82	6.14	6.70
• 2050	3.37	3.89	4.09	5.02	6.33	6.49	6.66
• 2055	3.21	3.46	3.94	4.94	5.80	6.38	6.92
• 2060	3.25	3.68	3.90	4.72	5.88	6.09	6.81

# Conclusions.

- The structure of the distribution of wealth among private households in Austria and demographic changes indicate a strong increase of aggregate capital transfers over the coming decades.
- Number of transfers and their average amount will increase substantially from 8 billion in 2010 up to 20 billion in 2035.
- Taxation of inheritances and gifts would not only support the principle of social justice and intergenerational mobility, but also result in potentially attractive revenues.
- Could provide the necessary flexibility to facilitate a shift in the tax burden from labor towards capital.

# Comments

- An inter-generational issue:- a partial rather than full equilibrium analysis - why would taxes on cumulated wealth not inhibit saving?
- \*?\* “With respect to the estimation of inheritance flows, this means that asset transfers and thus tax revenues are expected to occur earlier in reality than modeled in this paper. However, this should not affect the expected average revenue from an inheritance taxation, but result only in a temporal shift thereof.” => ? fails to account for transfers and gifts being taxed less effectively than transfers at death.
- \*??\* Does not assume an asset growth rate at all??
- ??Presumes a stable population (immigration-emigration balance + changing birth rates?)??