

Boomers vs. Millennials: Who Owes How Much to Whom?

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Boomers vs Millennials: Who Owes How Much to Whom?

- “Boomer-blaming” debate
 - ✓ Millennials accuse (e.g., *How the Baby Boomers Stole the Millennials’ Economic Future*, 2019)
 - ✓ Boomers defend (e.g., *Stop Mugging Grandma*, 2019)
 - ✓ Taiwan’s “Lost Generation” of c1978-c1993, victimized by widened wealth gap
- We use NTA data to answer a simple (economic) question
 - ✓ “Do some cohorts transfer more resources to other cohorts than they receive in lifetime?”
 - ✓ Specifically, “Does a Millennial lose out relative to a Boomer, and by how much?”
- Findings
 - ✓ We measure the net intergenerational transfer flows of two cohorts
 - ✓ To our surprise, the Millennials may not be losers relative to Boomers.
 - How robust is this finding? If robust, why does it contradict popular impression?

Method: lifetime intergenerational transfers

- **Intergenerational Transfers** = Net Public Transfers + Net Private Transfers

- **Public Transfers** (not including the budget balancing term, TGDS, in NTA)

public inflows = in-kind transfers + social benefits + other cash benefit

public outflows = taxes + social contributions + other cash payments

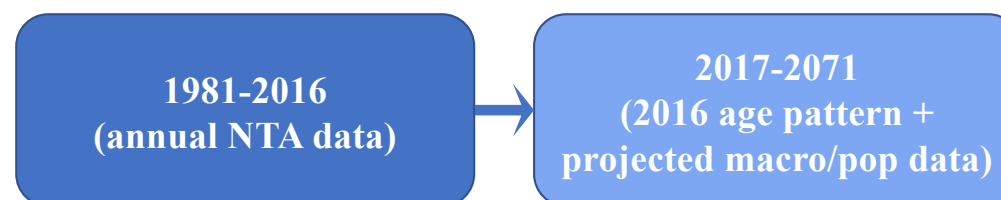
- **Private Transfers** (not yet including inter-household transfers, which are rather small anyway)

intra-household transfer inflows

Intra-household transfer outflows

Data: Two cohorts are compared

- **c1981**: 36 yrs (annual data) +55 yrs (forward projections, following GA method)



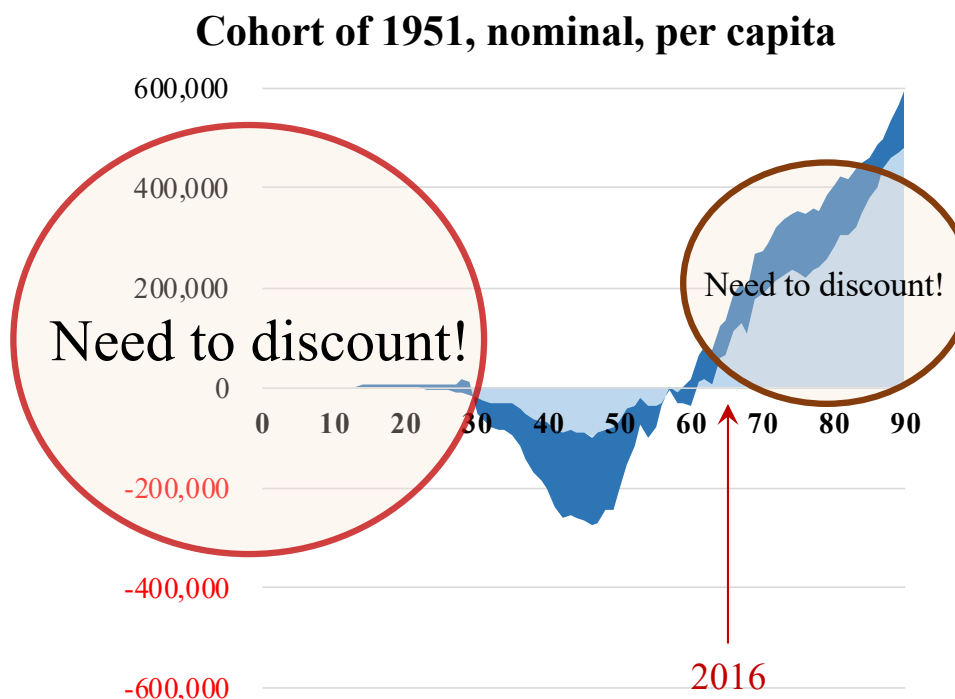
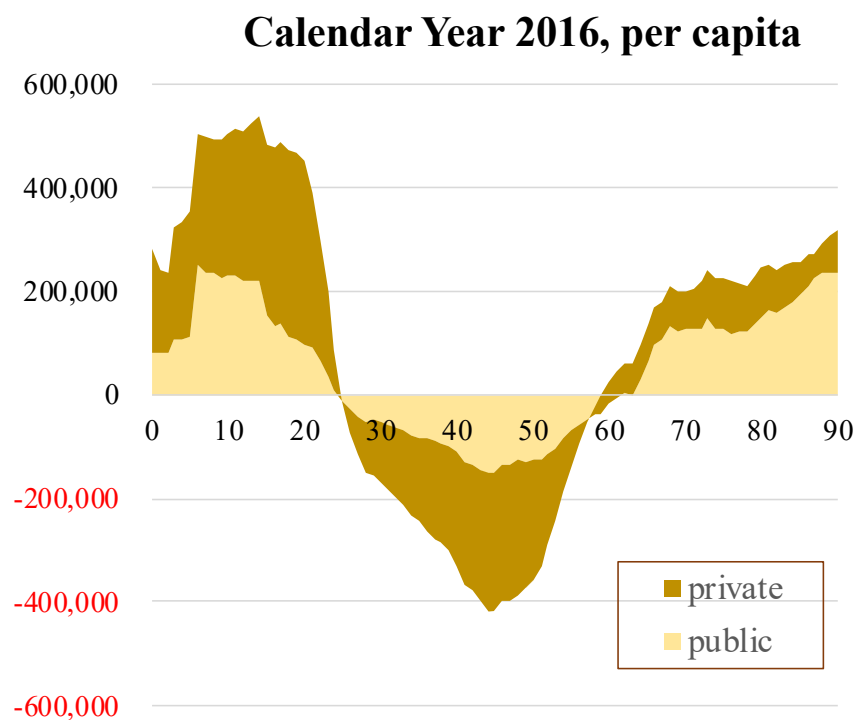
- **c1951**: 30 yrs (backward projection) + 36 yrs + 25 yrs (forward projections)



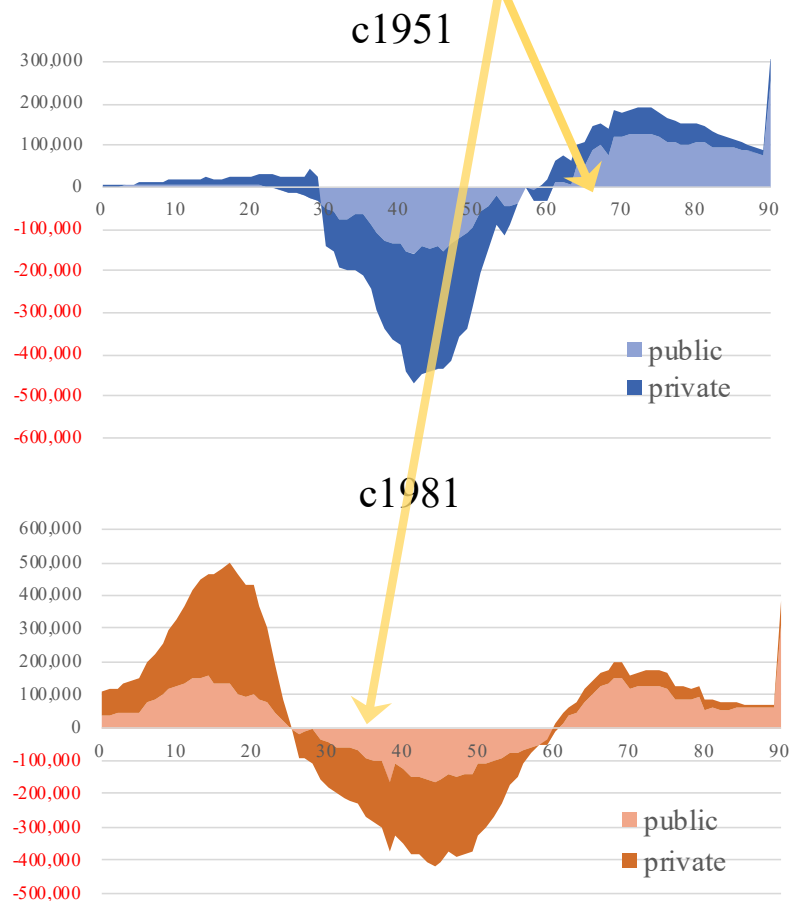
Background

- Rapid changes in Taiwan in the last 7 decades
 - ✓ Economic growth: average GDP per capita grew at 16.6% (1950s) → 3% (2010s);
in real terms, 4.8% (1950s) → 2.6% (2010s);
longer schooling years, higher health spending,...
 - ✓ Welfare: few social programs in the beginning, more are launched,
but some are overly generous, and pension reforms began since 2019
 - ✓ Demography: TFR 5.75 (1960) → 1.06 (2018), once 0.895 (2010);
Aging Society (1993) → Aged Society (2018) → Super Aged Society (2026)
 - ✓ family: 5.24 persons per household (1976) → 3.05 (2018);
intra-household transfers shift towards kids along family nuclearization

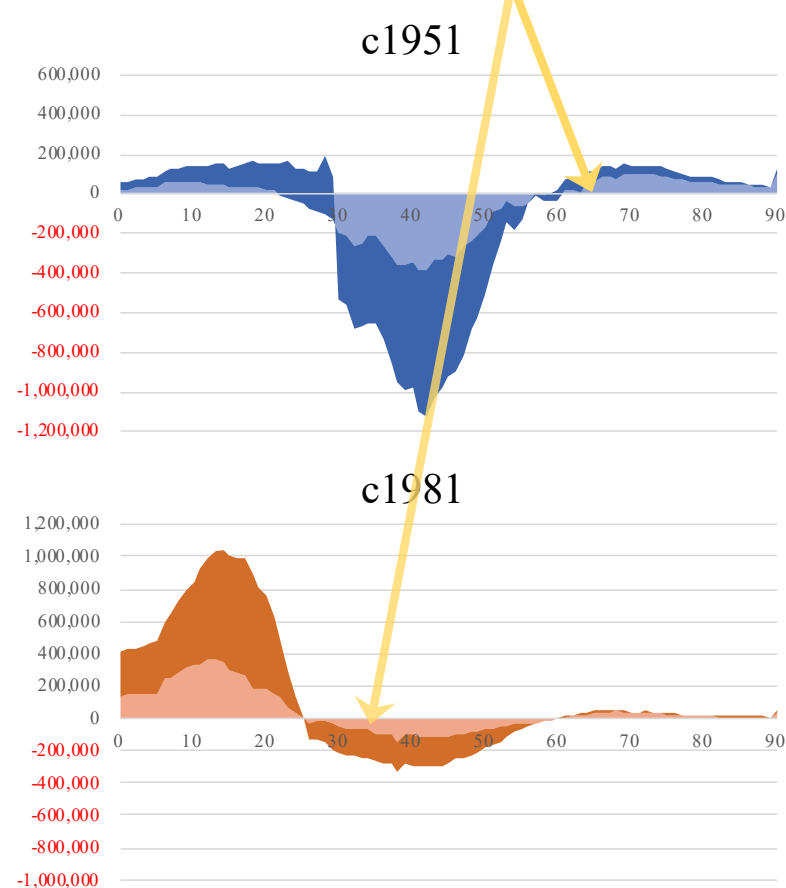
Result 1: Net intergenerational transfers



Discounted at 3% (2016 value)



Discounted at 7% (2016 value)



Result 2: Lifetime intergenerational transfers

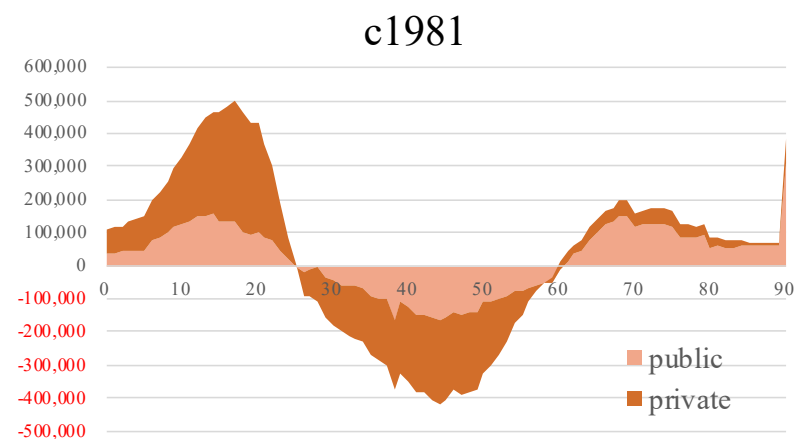
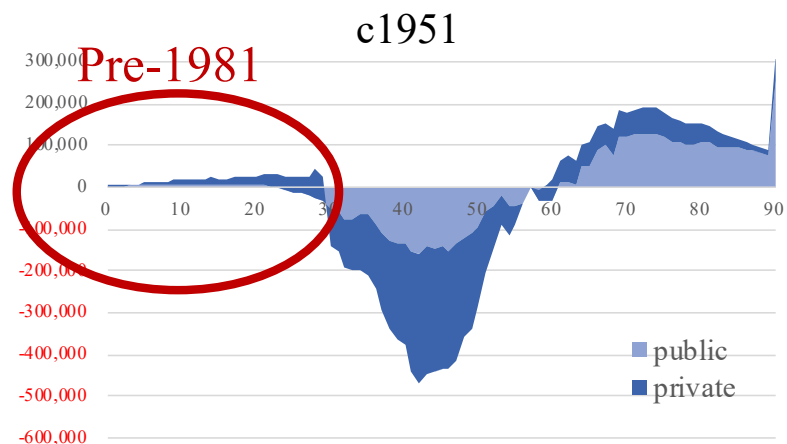
Survival rate adjusted	Discount rate = 3%		Discount rate = 7%	
	c1951	c1981	c1951	c1981
Private Transfers	-2,719,975	822,091	-7,071,564	7,636,694
Public Transfers	165,706	1,941,350	-4,233,216	3,751,884
Total Intergenerational Transfers	-2,554,269	2,763,441	-11,304,780	11,388,578

- At both 3% and 7%, c1981 receives POSITIVE lifetime intergenerational transfers, while c1951 is a net payer in its lifetime!
- This is the opposite of popular belief. How robust is this finding?

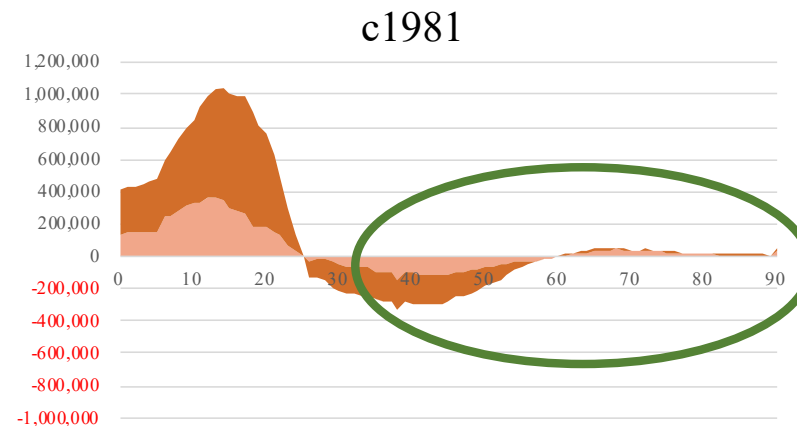
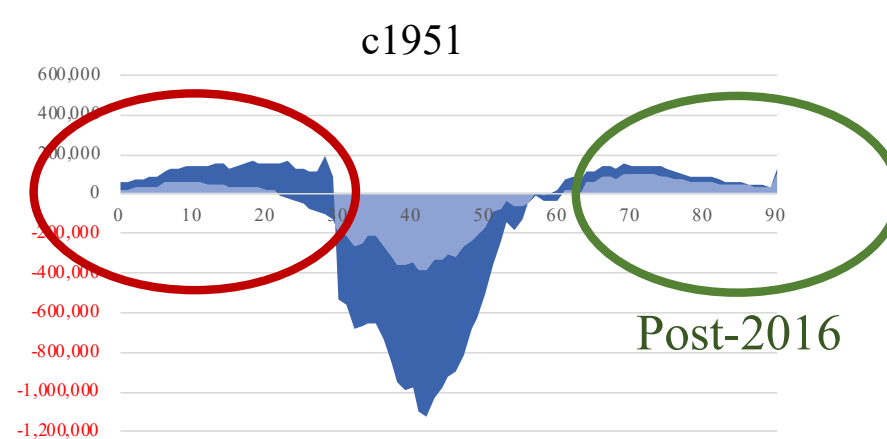
Is this result reasonable?

- 3%, 5%, 7% are numbers often used (Auerbach, 1999)
 - ✓ though US CEA (2017) recommends a lower number for today
- Yet neither 3% or 7% seems right for Taiwan
 - ✓ For either $\rho = 3\%$ or $\rho = 7\%$, the pre-1981 part of c1951 is still tiny
 - ✓ For $\rho = 7\%$, the post-2016 part of both c1951 and c1981 also looks small

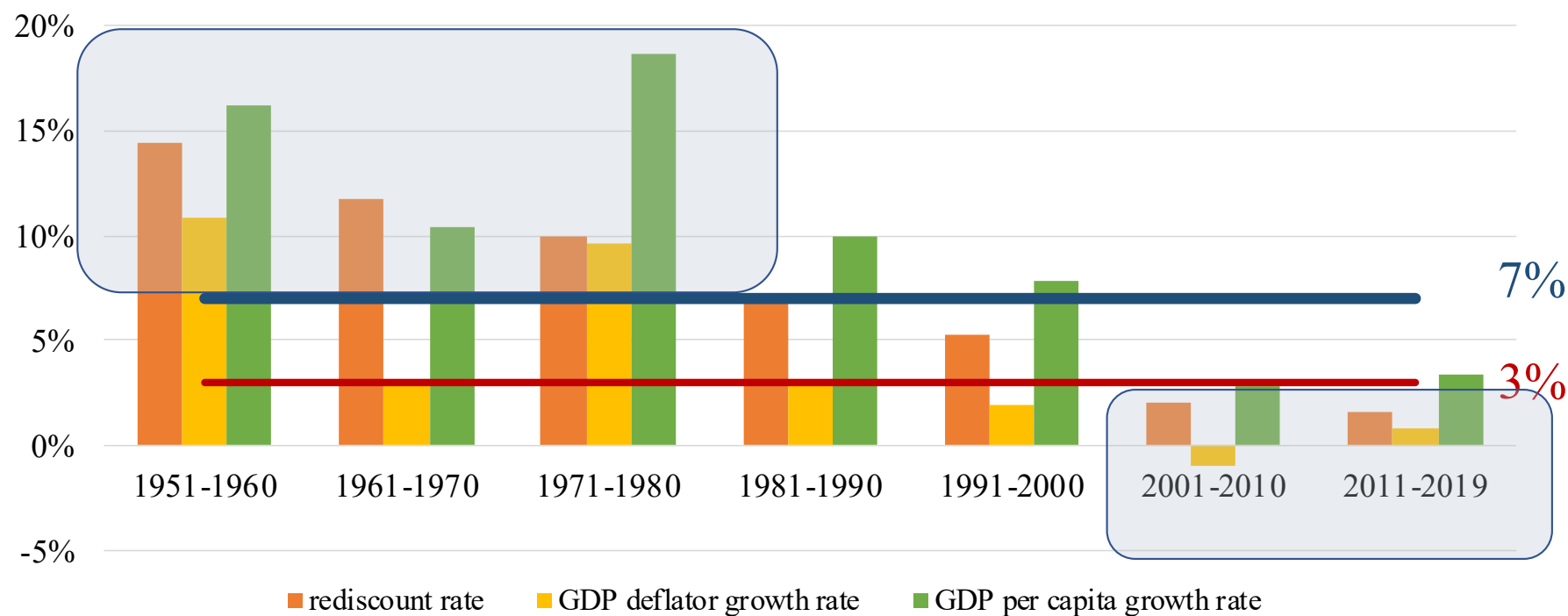
Discounted at 3% (2016 value)



Discounted at 7% (2016 value)



Economic performance of Taiwan



Choosing the discount rate

- A common approach: Social Rate of Time Preference
 - ✓ Ramsey (1928) equation, extended by Mankiw (1981)

$$\rho_t = \delta + \gamma g_t - \text{uncertainties}$$
 i.e., $\rho_t = f(\text{survival rate, risk aversion, econ growth rate, uncertainty, ...})$
 - ✓ Note that in the textbook, there is usually a subscript t for ρ
- Empirically, time preference schedule is sometimes non-linear (e.g., Ogawa, 1996)
- Discount rate experiments
 - ✓ fixed ($\bar{\rho}$): **3%, 5%, 7%, ...**
 - ✓ time-varying (ρ_t): interest rate, GDP deflator, **GDP per capita growth rate (g_t), ...**
 - ✓ Here two cases are reported: g_t and 3%

Result 3: Discount at non-constant rate

Discount rate	$\bar{\rho} = 3\%$		$\rho_t = g_t$	
	c1951	c1981	c1951	c1981
Private Transfers	-2,719,975	822,091	1,599,820	2,479,045
Public Transfers	165,706	1,941,350	1,451,309	3,876,082
Total Intergenerational Transfers	-2,554,269	2,763,441	3,051,130	6,355,127

- When $\rho_t = g_t$, c1951 receives POSITIVE, not negative, transfers in its lifetime.
- However, c1981 still receives more net transfers than c1951.

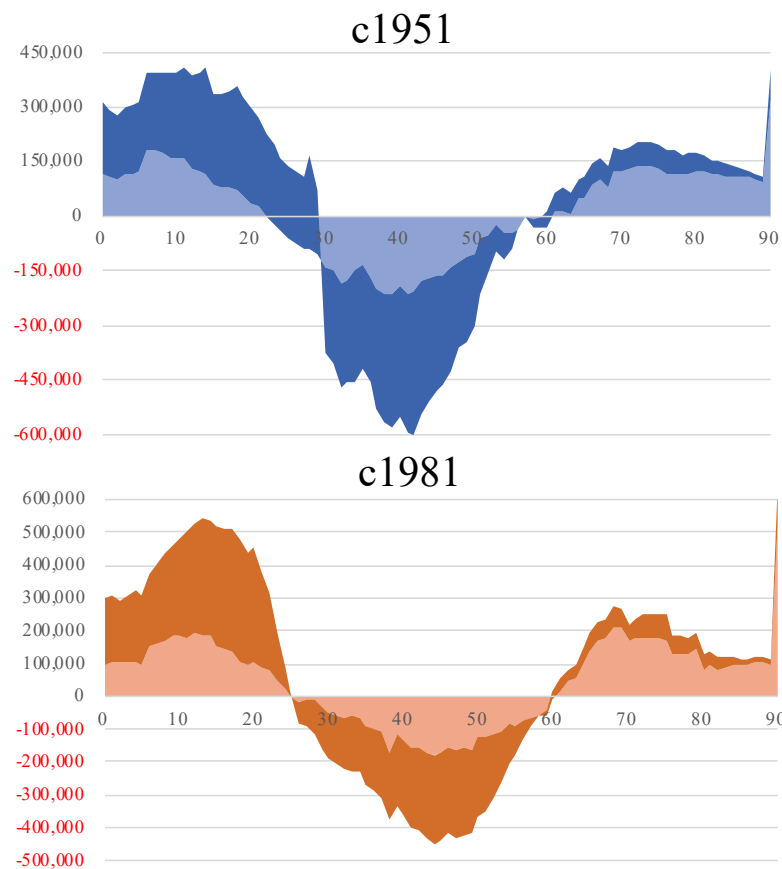
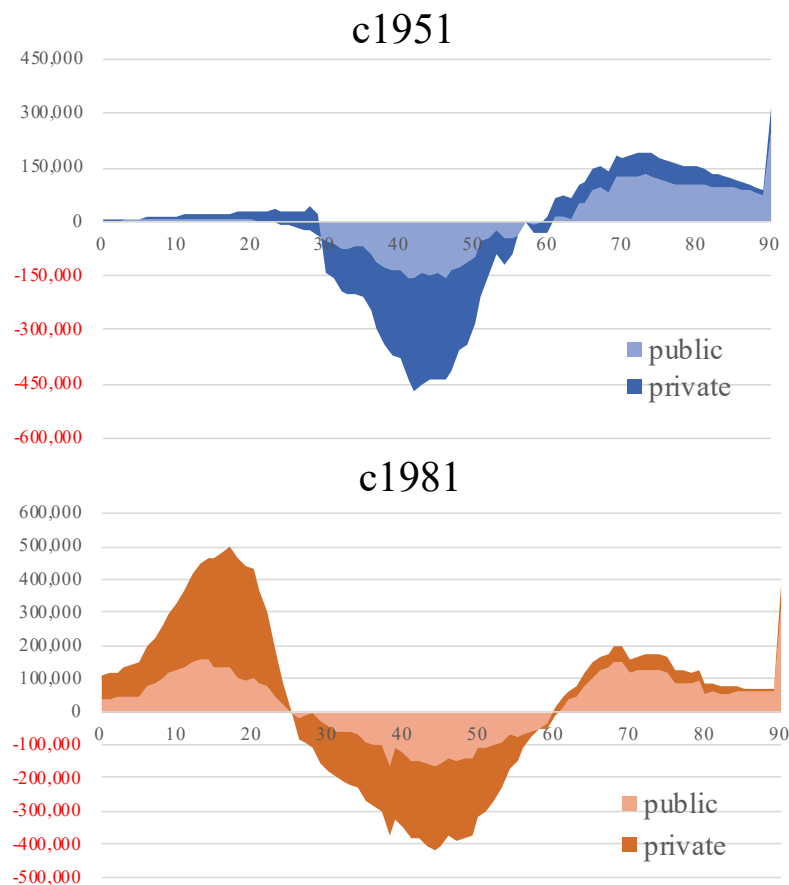
Result 4: Magnitude of the transfers

- For ease of comparison, we calculate these values as % of lifetime labor income
- Still, c1981 receives a higher rate of total intergenerational transfers, and this is so in many (but not all) cases at the more detailed level.

sector	age group	$\bar{\rho} = 3\%$		$\rho_t = g_t$	
		c1951	c1981	c1951	c1981
Private transfers	0-19	1.18%	15.76%	15.57%	19.56%
	20-59	-24.17%	-16.58%	-15.54%	-16.21%
	60-90 ⁺	8.05%	3.95%	5.35%	5.14%
Public transfers	0-19	0.55%	7.47%	8.27%	9.70%
	20-59	-15.27%	-10.76%	-14.13%	-10.66%
	60-90 ⁺	15.63%	10.66%	10.74%	14.23%
Total	0-90 ⁺	-14.04%	10.49%	10.26%	21.77%

$\bar{\rho} = 3\%$ (2016 value)

$\rho_t = g_t$ (2016 value)



Discussion 1

- Is c1981 a “loser” in intergenerational transfers, as commonly thought?

NO.

- ✓ The c1981 receives more transfers than it gives to other generations,
- ✓ The c1981 receives more than c1951, in present value, as well as in ratio
- ✓ The above statements hold true, whether the discount rate is fixed or time-varying

Discussion 2

- Why does c1981 receive more transfers than c1951?

Rapid social, economic and institutional changes matter (note that, by using g_t to discount, the “income effect” is already taken care of).

- ✓ The c1981 received more transfers at childhood, due to education expansion and family nuclearization
- ✓ The c1981 will receive larger amount of public pensions, because of new social programs, e.g., National Pension since 2008
- ✓ As for age 20-59, the c1981 pays a lower tax rate, but mostly for accounting reasons:
they spent more years in schools and started working (and paying taxes) later;
also their lifetime labor income is higher, making their tax rates look smaller.

Discussion 3

- Why does our finding contradict popular impression?
 - ✓ We measure **lifetime** transfers, yet an individual may care more about **specific instants**:
In 2016, the c1981 (aged 35) is starting to face the hardships as a “net payer”, whereas the c1951 (aged 65) has just entered the life stage to enjoy net inflows.
 - ✓ We measure **intergenerational** transfers only, yet an individual may consider **all** types of transfers, including asset reallocation
 - ✓ Moreover, we consider **current/known flows and situations**, yet there are also **worsened wealth gap**, between and within cohorts, **upcoming reforms** (e.g., Labor Pension Reform and Long-term Care Insurance), **escalated uncertainties** in the post-covid 19 era
- More work to do...