Full Generational Accounts: What do we give to the next generation?

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Full Generational Accounts (FGA) address two questions

1. Traditional Generational Accounts assesses the sustainability and generational equity of the public transfer programs. How does this assessment change if we include private transfer programs?
2. What endowment do we leave to the next generation through lifetime transfers and bequests? How does the size (relative to lifetime earnings) vary over time and across countries? How does it break down between public and private, and between financial and human capital?

What endowment for children? Has FGA been declining in higher income countries?

- Growth of public sector transfers to the elderly redistributes income upwards from young to old
- Annuitization of assets reduces bequests
- Reverse mortgages and lengthening life in retirement reduce asset transfers to younger generations through bequests and gifts.
- Public higher education has become less a transfer and more a self-investment by the young, financed by borrowing.

What is in the FGA?

- Here we broaden the measure.
- Public: All taxes and transfers including
  - public education
  - health care
  - pensions
  - long term care, and other programs
- Private: All transfers received by a generation over its lifetime including
  - Consumption (parental support)
  - education
  - health care
  - inter vivos transfers
  - end of life bequests

Issues of Concept and Measure

1. For public transfers we include outflows (taxes) minus inflows (benefits), like GA. But for private transfers we include only inflows, because childrearing and transfers to others are choices.

2. For bequests we use indirect estimates provided by Miguel Romero-Sanchez through his new program (on NTA website).

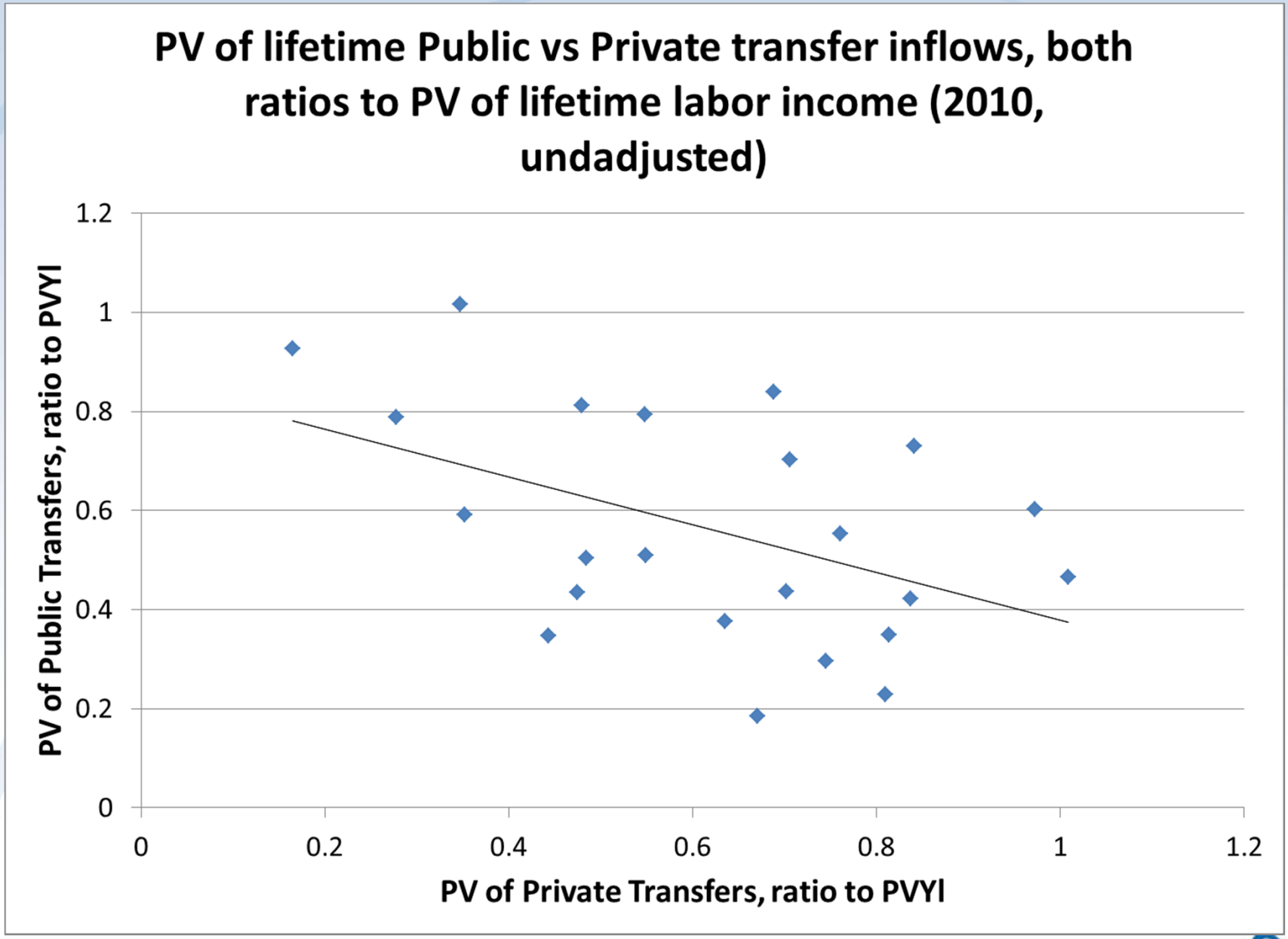
- Based on asset income by age
- Assumes mortality independent of wealth
- Specify average fraction of bequests going to kids vs spouse
- Uses UN fertility and mortality data

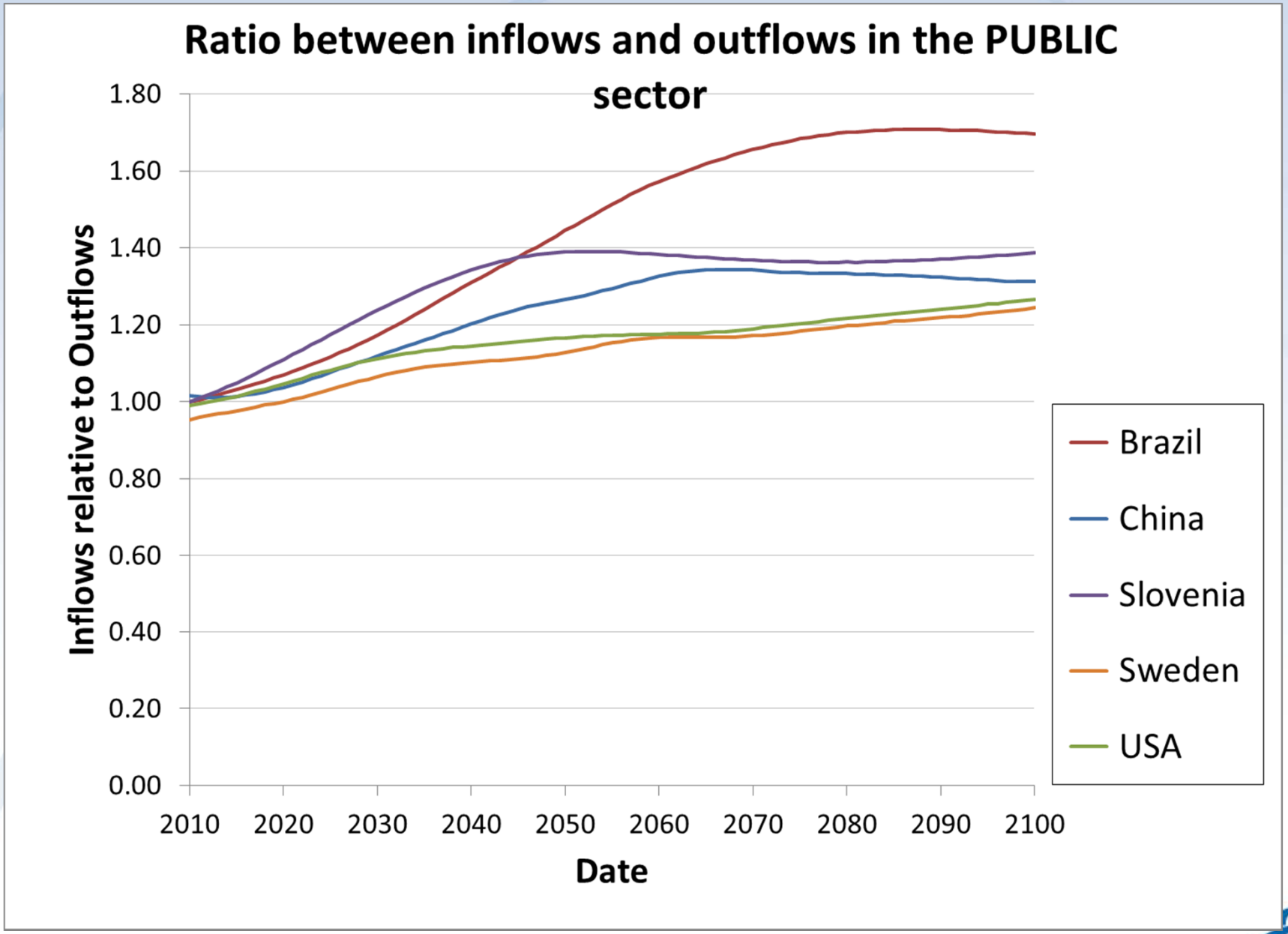
3. Should transfer inflows and outflows be adjusted to be equal?

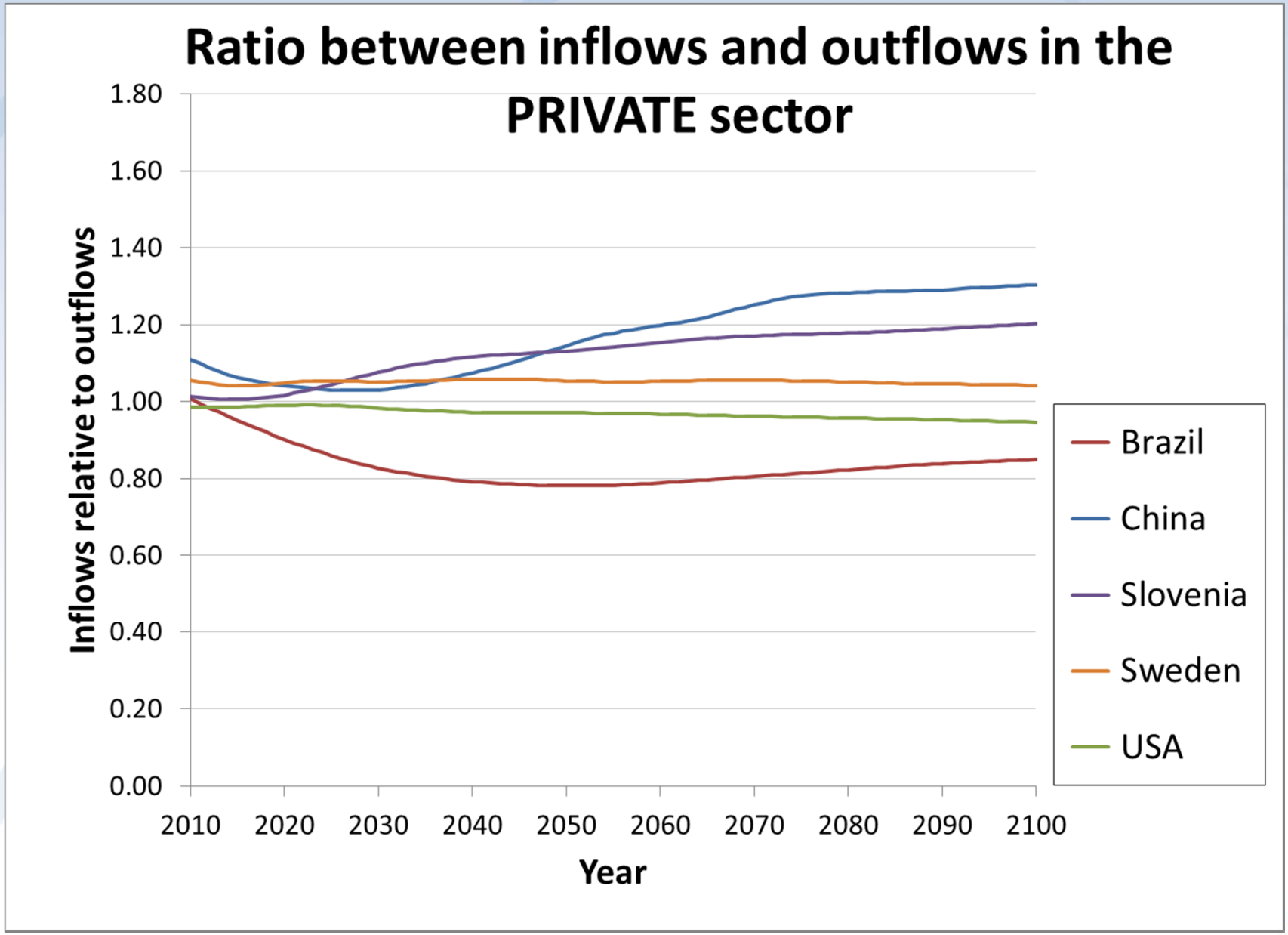
- To assess sustainability and generational equity of public transfers, we leave future public taxes and benefits out of balance.
- To assess what is given to the next generations, we should construct realistic future transfer profiles by adjusting inflows and outflows to be equal each year. We assume this is done 50-50.

4. After these adjustments, the distribution of assets by age in the future will be inconsistent with the assumed distribution of assets by age.

- One solution: use tau model of Mason and Lee (2007)


PV of lifetime Public vs Private transfer inflows, both ratios to PV of lifetime labor income (2010, undadjusted)
PV of Public Transfers, ratio to PVYl
PV of Private Transfers, ratio to PVYl
0
0.2
0.4
0.6
0.8
1
1.2


Ratio between inflows and outflows in the PUBLIC sector
Inflows relative to Outflows
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100
Date
Brazil
China
Slovenia
Sweden
USA


Ratio between inflows and outflows in the PRIVATE sector
Inflows relative to outflows
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100
Year
Brazil
China
Slovenia
Sweden
USA

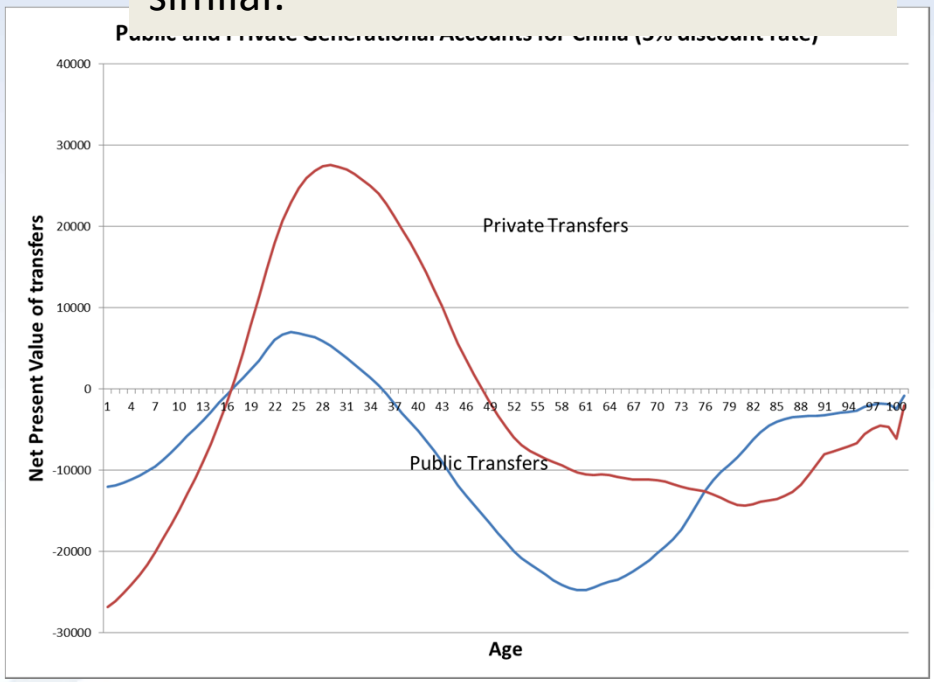
PV of life time bequests per birth, relative to PV of lifetime labor income (discount rate=3 or 5%; share of bequests to children = 50%)

Present Value at birth of expected life time bequests relative to PV of lifetime survival weighted labor income, assuming mortality is independent of asset holdings at each age, and that 50% of bequests go directly to children.

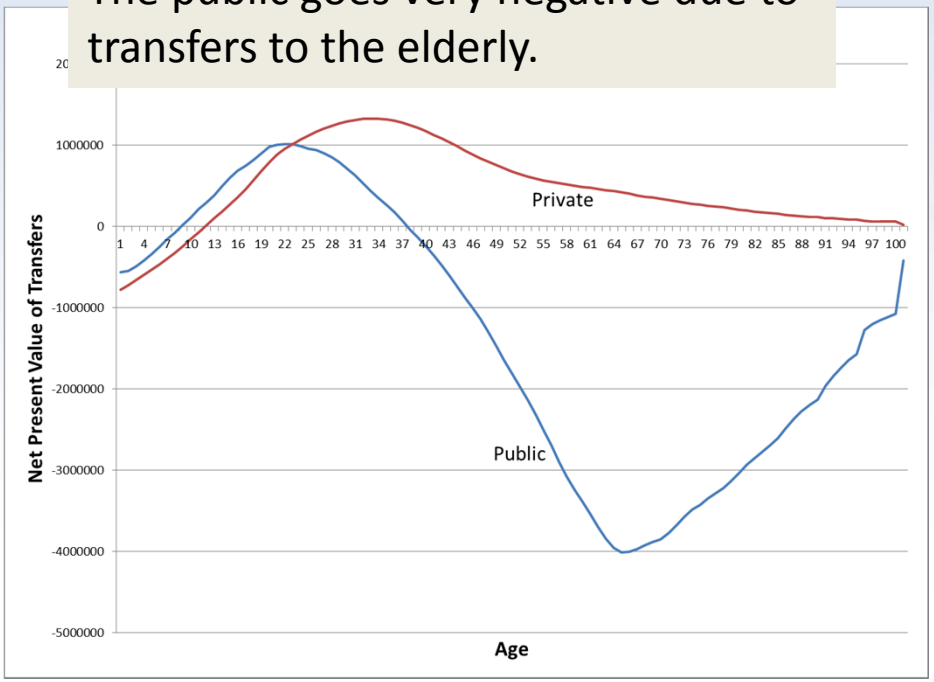
	Discount Rate	
Country	3%	5%
Austria	0.11	0.09
Brazil	0.16	0.13
Chile	0.15	0.12
China	0.05	0.04
Colombia	0.12	0.10
Costa Rica	0.12	0.09
Finland	0.09	0.08
Germany	0.17	0.13
Hungary	0.10	0.10
India	0.15	0.12
Indonesia	0.10	0.09
Jamaica	0.17	0.13
Japan	0.14	0.11
Philippines	0.19	0.16
Republic of Korea	0.10	0.09
Slovenia	0.08	0.07
Spain	0.15	0.12
Sweden	0.16	0.12
United States of America	0.20	0.15
Uruguay	0.16	0.12

Generational Accounts by age in China and Priv

In China, private transfers parallel the public, including education and support of the elderly, so the age trajectories of the accounts are quite similar.



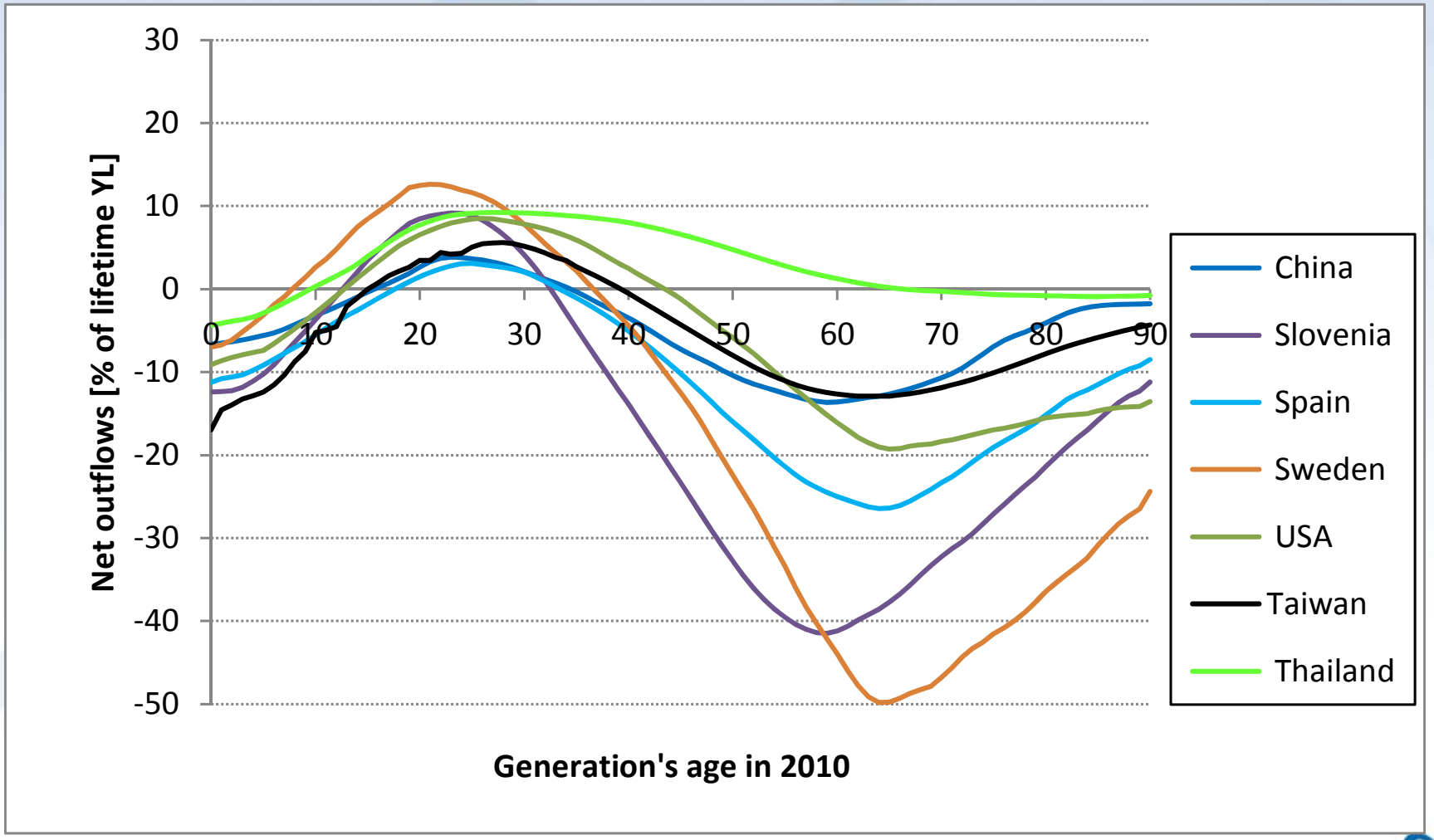
In Sweden, the elderly make net transfers to younger people, so the account stays positive after childhood.
The public goes very negative due to transfers to the elderly.



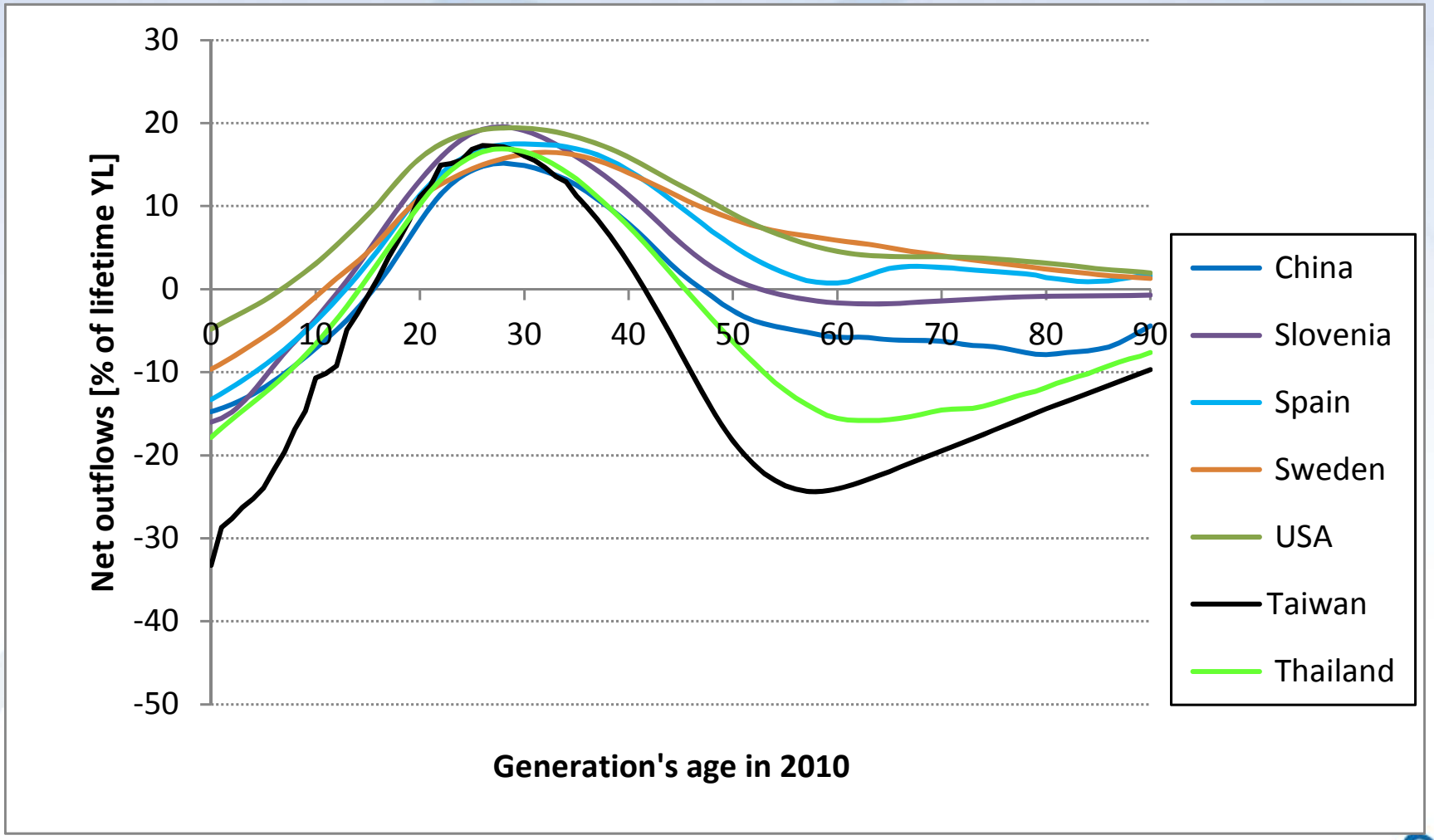
Technical remark

- The NTA age profiles refer to different years. We start projections in 2010 for all countries. Therefore we adjust age profiles of inflows and outflows to match the original aggregate values, although using age structure from 2010.

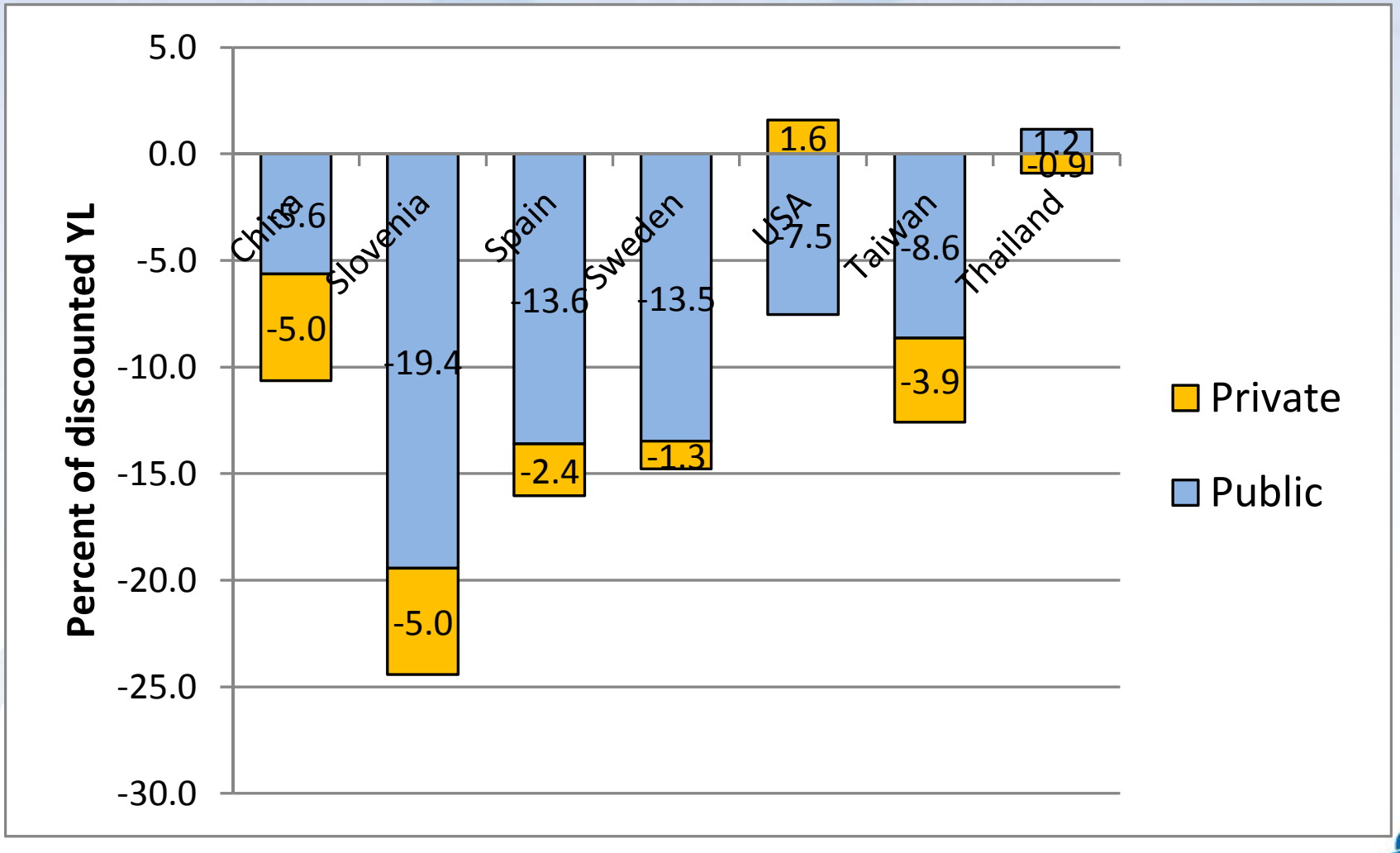
Public GA (Discounted **net public** outflows as % of newborn's lifetime YL)



Private GA (Discounted **net private** outflows as % of newborn's lifetime YL)



Discounted net public and private transfers (outflows – inflows), relative to PV of lifetime labor income of all generations (currently living and future)



FGA decomposition – for newborns; year-to-year adjustment [relative to the newborn's lifetime YL]

	Net public outflows	Net private outflows	Bequests	TOTAL	*Without private outflows*	Missing part?
China	-0.5	-10.1	-5.0	-15.7	*-47.7*	?
Thailand	-6.0	-9.7				?
US	-2.4	-6.2	-19.8	-28.3	*-71.1*	?
Slovenia	7.4	-11.3	-8.4	-12.4	*-53.9*	?
Spain	2.6	-11.1	-15.1	-23.6	*-59.1*	?
Sweden	5.2	-8.1	-15.5	-18.5	*-44.2*	?
Taiwan	-6.3	-14.6				?

Net outflows that newborns would face during their lifetime; year-to-year adjustment [% of the newborn‘s lifetime YL]

Public outflows	Public outflows, Human Capital	**Public inflows**	Public inflows, Human Capital	**Private outflows**	Private outflows, Human Capital	**Private inflows**	Private inflows, Human Capital
31.4	7.6	**31.9**	9.9	**32.0**		**42.1**	
24.6	9.0	**30.5**	13.4	**61.0**	7.5	**70.7**	
44.7	17.1	**47.1**	18.8	**42.8**	6.8	**49.0**	5.2
78.3	27.8	**70.9**	31.6	**41.5**	1.3	**52.8**	3.3
53.5	16.5	**51.0**	20.1	**35.4**	1.7	**46.6**	2.8
101.0	32.7	**95.8**	35.4	**25.7**	0.7	**33.9**	1.5
48.6	12.2	**54.9**	16.6	**73.9**	6.0	**88.5**	18.0

Conclusions

- In most countries the pressure on the private system in the future will be lower than on the public system

- Assuming 1.5% productivity growth and 3% discount rate and year-to-year adjustment people would through their lifetime receive more than they would give; predominantly through private transfers