

Manual on National Transfer Accounts: Public Reallocations

Andrew Mason

University of Hawaii at Manoa and East-West Center

Training Workshop on Measuring and Analyzing the Generational
Economy with National Transfer Accounts, United Nations
Population Division, Bangkok, Thailand, 17-20 September, 2012



Outline of Presentation

Introduction

Constructing aggregate controls

Estimating the age shapes

Finalizing age profiles

Comparing, summarizing, and applying the account

Outline of Presentation

Introduction

Constructing aggregate controls

Estimating the age shapes

Finalizing age profiles

Comparing, summarizing, and applying the account

Public Reallocations

- Economic flows to and from age groups that arise because of government action.
- Public and private reallocations, together, measure the ways that resources are shifted to complement the economic lifecycle
- Two kinds of public reallocations are possible:
 - Public transfers
 - Public asset-based reallocations

Features of public transfers:

- Transfers are quantified from the perspective of the individual or age group, not the government.
- Transfers, by definition, consist of an inflow matched by an outflow.
- Inflows
 - To individuals at each age (pensioners, school children)
 - To the rest of the world (spending on foreign aid)
- Outflows
 - From individuals at each age (taxes or non-tax methods of funding transfers)
 - From the ROW (taxes paid by foreign entities)

Features of public transfers:

- Public transfers are classified by:
 - In-kind (equivalent to public consumption)
 - Cash
- Public transfers are classified by use or purpose:
 - Education
 - Health
 - Pensions
 - Other transfers

Annual per capita public transfers (yen 000s), Japan, 2004, selected age groups

	0	1	2	15	45	70	90+
Public Education	-14	-14	-14	938	-213	-108	-44
Public Education, Inflows	0	0	0	1032	0	0	0
Public Education, Outflows	15	15	15	27	228	116	47
Public Health Care	246	106	108	5	-286	318	1871
Public Health Care, Inflows	274	133	135	55	131	529	1956
Public Health Care, Outflows	28	27	28	50	417	212	85
Public Pensions	-35	-34	-35	-63	-521	1212	647
Public Pensions, Inflows	0	0	0	0	8	1480	755
Public Pensions, Outflows	35	34	35	63	529	269	108
Public Transfers, Other In-Kind	281	282	281	254	-194	56	211
Public Transfers, Other In-Kind, Inflows	315	315	315	315	315	315	315
Public Transfers, Other In-Kind, Outflows	34	33	34	61	510	259	104
Public Transfers, Other Cash	119	119	119	107	-82	24	89
Public Transfers, Other Cash, Inflows	133	133	133	133	133	133	133
Public Transfers, Other Cash, Outflows	14	14	14	26	215	109	44

Public asset-based reallocations

- Inflows
 - Asset income (income from sovereign wealth fund)
 - Public dis-saving
- Outflows
 - Asset income (interest on public debt)
 - Public saving
- Assigned to ages and ROW using rules described below

Annual per capita public age reallocations, Japan, 2004, selected age groups (yen 000s)

	0	1	2	15	45	70	90+
Public Age Reallocations	615	477	477	1343	-1024	1640	2830
Public Transfers	596	458	458	1309	-1311	1494	2772
Public Transfers, Inflows	722	581	584	1536	587	2458	3160
Public Transfers, Outflows	126	123	126	228	1899	965	388
Public Asset-based Reallocations	19	19	19	34	288	146	59
Public Asset Income	-5	-5	-4	-8	-69	-35	-14
Less: Public Saving	-24	-23	-23	-42	-357	-181	-73

Outline of Presentation

Introduction

Constructing aggregate controls

Estimating the age shapes

Finalizing age profiles

Comparing, summarizing, and applying the account

Structure of public flow account

- Summarizes the major public age reallocations
- Quantifies flow to and from age groups (national) versus flows to and from ROW
- Transfer inflows and outflows with details discuss below
- Asset-based reallocations

Overview: Structure of public flow account

	Total	National	ROW
Public transfers, net	0.0	1.8	-1.8
Public transfer inflows	2,002.7	2,001.0	1.7
Public transfer inflows, in-kind	1,665.9	1,665.9	—
Public transfer inflows, cash	336.8	335.1	1.7
Public transfer outflows	2002.7	1,999.2	3.5
Taxes and grants	1,888.2	1884.8	3.5
Transfer deficit(+)/surplus(-)	114.4	114.4	—
Public asset-based reallocations	114.4		
Asset income, net	248.4		
Less: Public saving	134.0		

Construct a public expenditure inventory

1. Identify public programs that lead to significant age reallocations.
2. Estimate aggregate expenditure for each program.
3. Identify beneficiaries of each program (particular age groups).
4. Determine sources of revenue used to fund each program
5. Determine interest expense for public debt.
6. Reconcile public expenditure with SNA.

Inventory of public expenditures: Sample format

Purpose/Program	Value of flow			Beneficiaries	Funding method	Sources of information
	In-kind	Cash	Total			
Education						
Operating public schools						
Scholarships ,other cash transfers						
Health						
National Health Insurance						
Sanitation, disease prevention						
Health education						
Pensions						
Urban pension fund						
Rural pension fund						
Other social insurance programs						
Unemployment						
Disability						
Other						
Other programs						
Interest on public debt						
Total expenditure						

NTA public flows and SNA counterparts

NTA Variable	SNA or GFS Counterpart
Public transfer inflows, in-kind	Public Consumption Expenditure (Use of Disposable Income Account). Cash transfers to household for health care and other cash vouchers are counted as public consumption.
Public transfer inflows, cash	Social benefits other than social transfers in-kind (Secondary Distribution of Income Account).
Public transfers to ROW, net	Current international cooperation in the secondary distribution of income account reports transfers between governments. Other public transfers to the rest of the world, e.g., non-resident households, are not available.
Taxes	Taxes on production and imports (Allocation of primary income account); Current taxes on income and wealth; Social contributions; Other current transfers.
Transfer Surplus/Deficit	Calculated; no SNA or GFS counterpart
Asset Income	Net operating surplus + Net property income (Allocation of primary income account.)
Public Saving	Net saving, general government (Use of Disposable Income Account)

Classification of public-sector transfer inflows: NTA and UN Classification of Functions of Government (COFOG)

NTA purpose	COFOG (division number)
Education	Education (9)
Health	Health (7)
Pensions	Social Protection, Old age (102)
Other Social Protection	Social Protection (10) excluding Old age (102)
Other	General public services (1), defense (2), public order and safety (3), economic affairs (4), environmental protection (5), housing and community amenities (6), recreation, culture, and religion (8)

Example of public transfer inflows classified by purpose

		National			
Purpose	Total inflows	Total national inflows	In-kind transfer inflows	Cash transfer inflows	ROW
Total	2,002.7	2,001.7	1,665.9	335.1	1.7
Education	249.7	249.7	249.7		
Health	265.3	265.3	265.3		
Pensions	99.2	99.2		99.2	
Other	1,388.5	1,386.8	1150.9	235.9	1.7

Construct a public revenue inventory

- Identify all sources of public revenue
 - Taxes, social contributions, and grants
 - Asset income
 - Operating surplus of government
 - Property income
 - Income from sovereign wealth funds, currency stabilization funds, etc.
 - Interest on loans to students, farmers, etc.
- Rely on SNA or GFS
- Reclassify revenues using NTA classification scheme

Tax Revenues, Sample Country	
TOTAL	-1,888.2
Taxes on production and imports [1]	-763.6
Taxes on products	-755.6
Value added type taxes (VAT)	-265.6
Taxes and duties on imports excluding VAT	-153.4
Export Taxes	--
Taxes on products except VAT, import and export taxes	-336.6
Monopoly revenues, excise, stamp taxes from tobacco and alcohol	-62.3
Taxes on financial transactions	-115.7
Other	-158.5
Other taxes on production	-8.0
Subsidies [1]	47.4
Subsidies on products	--
Import subsidies	--
Export subsidies	--
Other subsidies on products	--
Other subsidies on production	47.4
Current taxes on income, wealth, etc. [2]	-660.6
Taxes on income	-412.6
Individual income tax	-219.3
Corporate income tax	-193.3
Other current taxes	-248.0
Taxes on asset holdings	-225.5
Other	-22.4

Public Sector Revenues (continued)

Social contributions [2,3]	-413.9
Employers' actual social contributions	-413.9
Employees' actual social contributions	--
Social contributions by self- and non-employed persons	--
Imputed social contributions	--
Other current transfer outflows [2]	-97.5
Other current transfers, domestic [4]	-94.0
Other current transfers, rest of the world [5]	-3.5

Sources:

[1] Allocation of primary income account, resources, general government.

[2] Secondary distribution of income account, resources, general government.

[3] Includes social contributions paid to social security funds, insurance enterprises, or autonomous pension funds, administering social insurance schemes to secure social benefits for employees. Thus, all sectors are included.

[4] Includes other current transfers, uses, for general government except current transfer with in general government and current international cooperation.

[5] Current international cooperation.

NTA classification of taxes

- Conventions
 - Taxes, social contributions, and grants are not distinguished. They are just called taxes.
 - Taxes are classified by the economic resource or use being taxed.
 - Consumption
 - Labor income
 - Assets and asset income
 - Income

Mapping UN SNA taxes, social contributions, and grants to NTA age profiles of tax sources

Tax source	SNA Classification
Consumption	Value added type taxes (VAT)
	Taxes and duties on imports excluding VAT; Less: import subsidies
	Other taxes on production and imports; Less: Other subsidies on products
Consumption of alcohol and/or tobacco	Monopoly revenues and excise and stamp taxes from tobacco and alcohol
Labor income	Export taxes; Less: export subsidies
	Other taxes on production; Less: other taxes on production
	Employers' actual social contributions
	Employees' actual social contributions
	Social contributions by self- and non-employed persons
	Imputed social contributions
Asset income	Export taxes: Less: export subsidies
	Other taxes on production; Less: other taxes on production
	Individual income tax
	Corporate income tax
Income	Individual income tax
Various	Other current taxes

Mapping IMF Government Financial Statistics (GFS) to NTA public transfer outflows

GFS classification	Suggested NTA tax source
Taxes on income, profit, capital gains, payable by individuals	Labor, asset income
Taxes on income, profit, capital gains, payable by corporations, other enterprises	Asset income
Taxes on payroll and workforce	Labor income
Taxes on property	Asset holding
Taxes on goods and services	Consumption
Taxes on international trade and transactions	Various
Other taxes	Various
Social contributions	Labor income
Subsidies to public corporations	Various
Subsidies to private enterprises	Various

GFS classification	Suggested NTA tax source
Grants from foreign governments, current	Rest of world
Grants from foreign governments, capital	Exclude from NTA flow account
Grants from other general government units	Zero for general government
Property income	Not a public transfer (asset income)
Sale of goods and services	Other
Fines, penalties, forfeits	Other
Voluntary transfers other than grants, current	Other
Voluntary transfers other than grants, capital	Exclude from NTA flow account
Miscellaneous, unidentified revenue	Other

Transfer Deficit/Surplus

- What if taxes are insufficient to fund transfer inflows.
- A shortfall is called the *transfer deficit*.
- Transfer deficit is funded through asset-based reallocations, either relying on asset income or through public borrowing.
- If taxes exceed transfer inflows, a transfer surplus is generated matched by a public asset-based net outflow.

	Total
Public transfers, net	0.0
Public transfer inflows	2,002.7
Public transfer outflows	2,002.7
Taxes and grants	1,888.2
Transfer deficit(+)/surplus(-)	114.4
Public asset-based reallocations	114.4
Asset income, net	248.4
Less: Public saving	134.0

Outline of Presentation

Introduction

Constructing aggregate controls

Estimating the age shapes

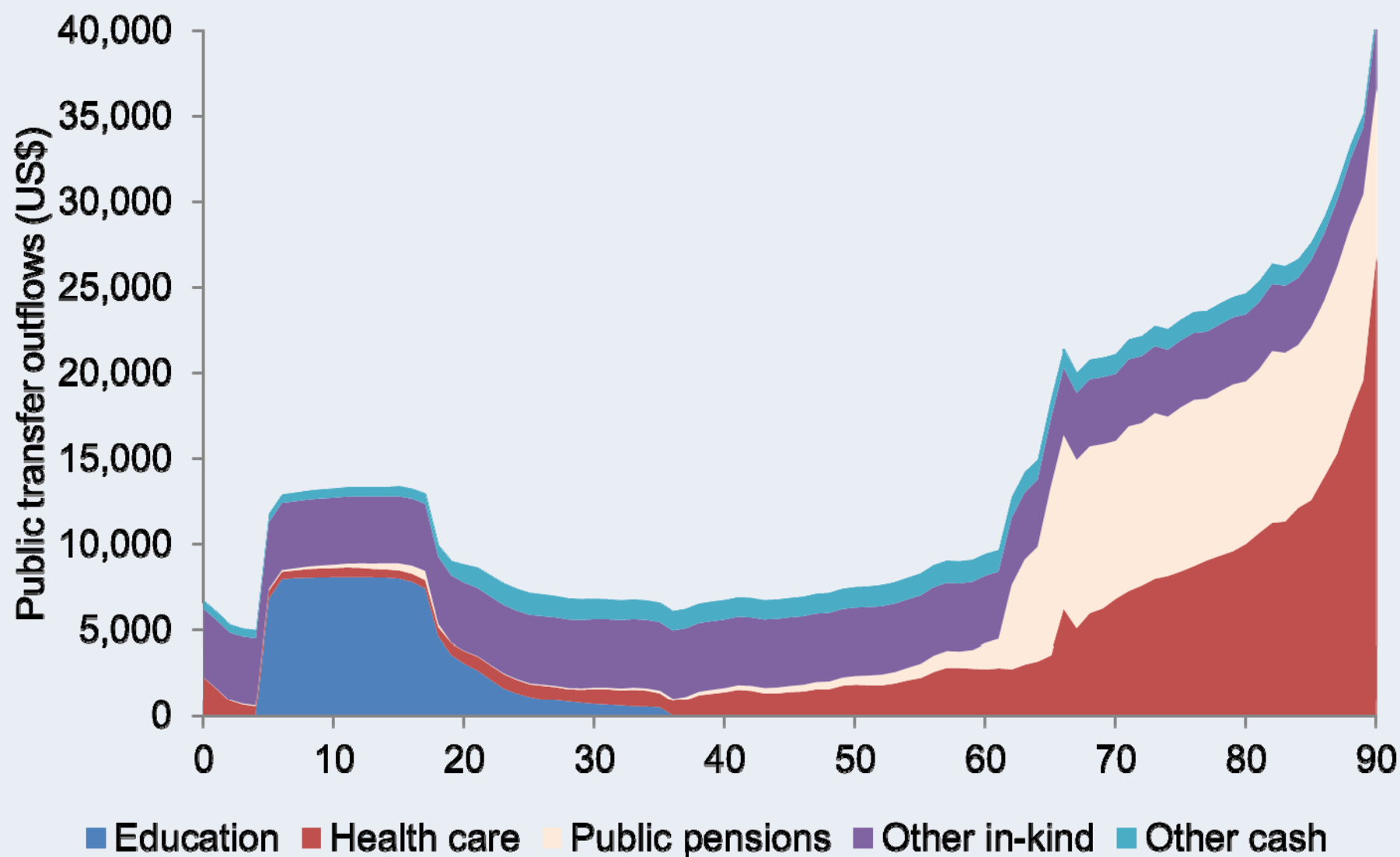
Finalizing age profiles

Comparing, summarizing, and applying the account

Age profiles of public transfer inflows

- In-kind transfers
 - Identical to public consumption
 - Methods and estimates from chapter 4 are used
- Cash transfers
 - Administrative records: publicly available reports of benefits by age
 - Household surveys: often must be allocated to individuals within the household

Public transfer inflows by age and purpose, per capita, US 2003, US\$



Age profiles of taxes

- Assign to the age group of the use or resource being taxed
 - Consumption taxes to age groups based on consumption
 - Income to age groups based on their income, etc.
- If tax rate is independent of age, shape of tax profile will be identical to shape of use or resource being taxed.
- Tax rate may vary by age because of features of the tax system.

Age profile of public transfer outflows

- Calculated separately for each public sector program
- Depends on the age profile of the tax or taxes used to fund each program
- Some programs have earmarked taxes, e.g., pensions rely on earnings tax.
- Many programs rely on general funds, all taxes not earmarked for a specific purpose.
- Age profile of transfer deficit/surplus is identical to age profile for asset-based reallocations.

Outline of Presentation

Introduction

Constructing aggregate controls

Estimating the age shapes

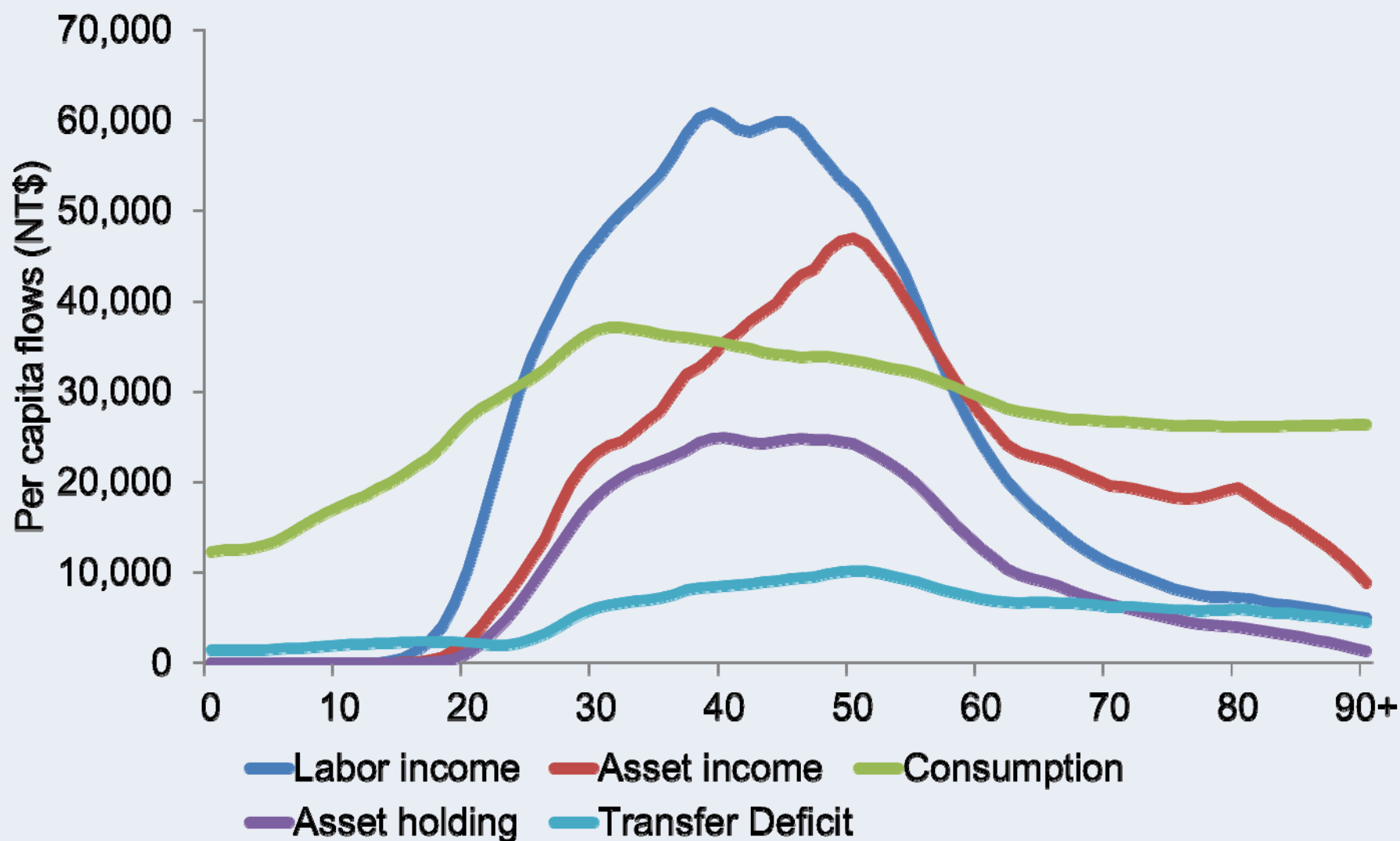
Finalizing age profiles

Comparing, summarizing, and applying the account

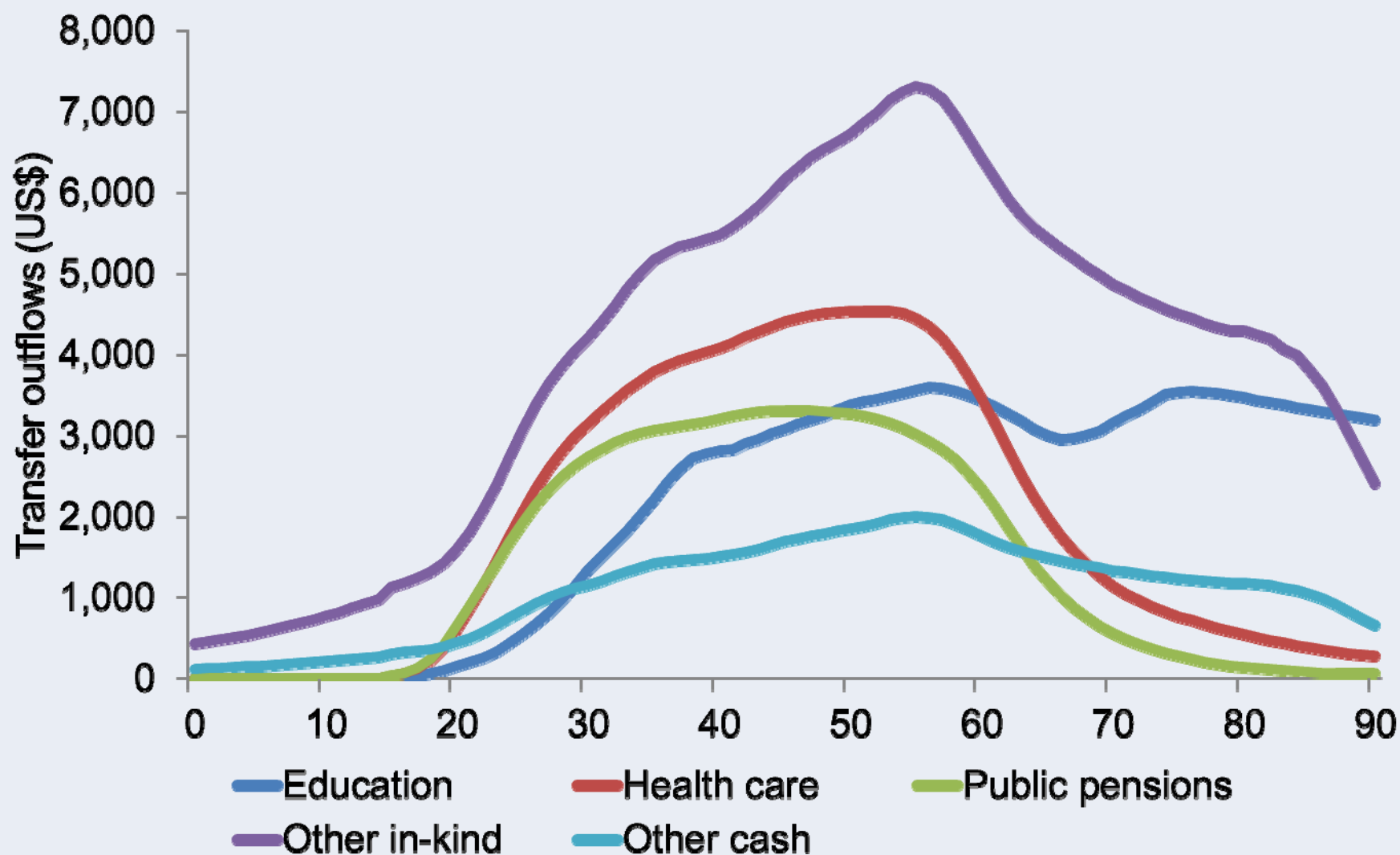
Finalizing

- Same steps as with other accounts
- Smooth and select upper age interval
- Adjust to match aggregate controls
- Evaluate
- Document
- Archive

Public transfer outflows by age and source, per capita, Taiwan, 1998



Public transfer outflows by age and purpose, per capita, unadjusted, US, 2003



Public asset-based reallocations by age, per capita, Costa Rica, 2004

