

NTA: Public Transfers

(Preliminary)

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Outline

- I. Public Sector in NTA: brief review
- II. Public Transfers: the balance
- III. Public Transfer Outflows
- IV. Public Transfer Inflows

I. Public Sector in NTA

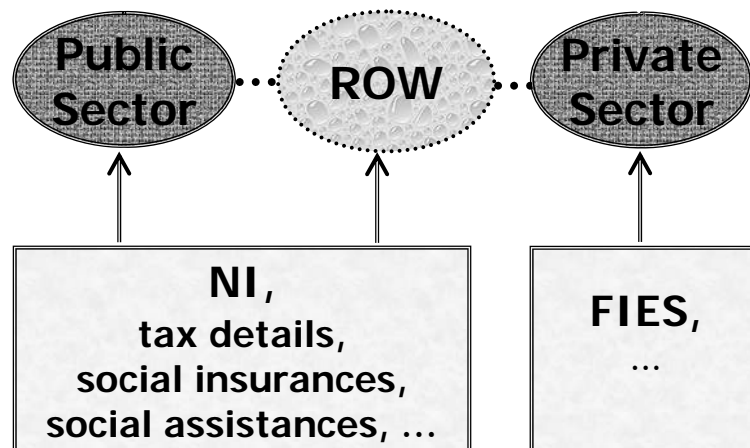
NTA Flow Account Identity

$$(1) \underbrace{Y^l(a) + Y^a(a) + \tau^+(a)}_{\text{Inflows}} = \underbrace{C(a) + S(a) + \tau^-(a)}_{\text{Outflows}}$$

$$(2) \underbrace{C(a) - Y^l(a)}_{\text{Lifecycle Deficit}} = \underbrace{Y^a(a) - S(a)}_{\text{Asset-based Reallocations}} + \underbrace{\tau^+(a) - \tau^-(a)}_{\text{Net Transfers}}$$

Age Reallocations

Public and Private Sectors in NTA



National Transfer Accounts

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Private Sector includes:

- ▶ households
- ▶ public and private enterprises
- ▶ non-profit institutions serving household sector (NPISH)

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Public Sector includes:

- ▶ By #4.112 of SNA,
the general government sector consists of the following group of resident institutional units:
 - i) All units of central, state or local government
 - ii) Social insurance funds at each level of government
 - iii) All non-market non-profit institutions that are controlled and mainly financed by government units.
- ▶ Public enterprises or profit-making activities (e.g., monopoly) are not included.

Functions of Public Sector in NTA

Two intergenerational functions

- i) Transfers resources across age groups (today)
 - ▶ Cash transfers (public pensions, unemployment benefits,...)
 - ▶ In-kind transfers (education, health care, defense,...)
- ii) Manages public assets (later)
 - ▶ Pays and receives income on public financial assets/debt
 - ▶ Borrows and lends thereby creates public wealth and debt
 - ▶ Public capital does not yield income by assumption in SNA

An Extended NTA Table (Taiwan, 1998, M NT)

	total	domestic	ROW
Lifecycle Deficit		961,578	
Consumption	6,184,251	6,184,251	
private consumption	4,518,376	4,518,376	
public consumption	1,665,874	1,665,874	
Labor income	5,222,673	-5,222,673	12,546
Age Re-allocation		961,578	
Private asset-based reallocation		848,918	-81,097
private non-labor income, net	2,190,199	2,271,296	-81,097
private savings		-1,422,378	
Public asset-based reallocation		163,748	
public non-labor income, net		248,432	
public savings		-84,684	
Private transfer		-52,894	52,894
Public transfer	0	1,806	-1,806
public transfer inflow	2,000,991	2,002,797	-1,806
public cash transfer inflow	335,117	335,117	
public in-kind transfer inflow	1,665,874	1,665,874	
ROW	0	1,806	-1,806
public transfer outflow	-2,000,991	-2,000,991	
taxes and social insurance contribution	-1,884,761	-1,884,761	
public transfer surplus(+)/deficit(-)	-116,231	-116,231	

relate to
public resource
transfer

relate to
public assets
management

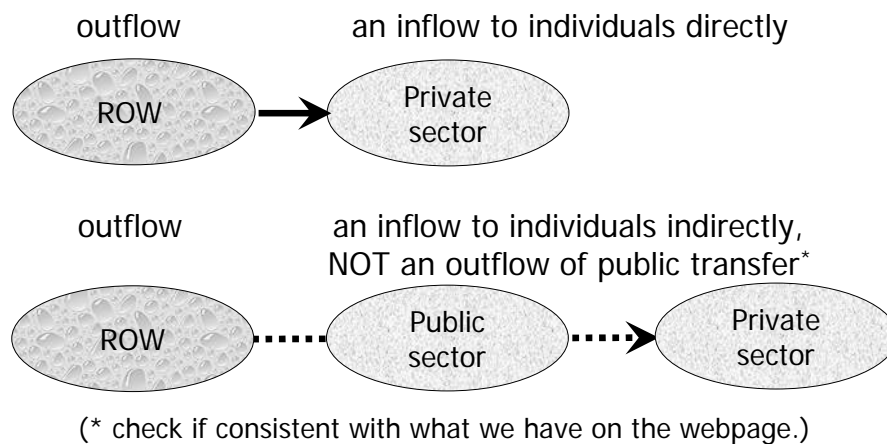
Rest of the World (ROW)

- Domestic sector may make payments to (and from) ROW in
 - labor income, e.g., overseas workers
 - asset income, e.g., interest or dividends received from abroad is an inflow for domestic taxpayers.
 - private or public transfers, e.g., charitable donations or official grants sent abroad are outflow for the domestic sector.

NTA Table with ROW in a Column (Taiwan, 1998, M NT)

	total	domestic	ROW
Lifecycle Deficit		961,578	
Consumption	6,184,251	6,184,251	
private consumption	4,518,376	4,518,376	
public consumption	1,665,874	1,665,874	
Labor income	-5,235,219	-5,222,673	12,546
Age Re-allocation		961,578	
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An Outflow from ROW is An Inflow to the Domestic Sector



Public Flow Accounts (1998, Taiwan)

	Total	domestic	ROW
Public asset-based reallocation		163,748	
net asset income	248,432	248,432	
public savings (in negative term)	-84,684	-84,684	
Public transfer	0	1,806	-1,806
<u>public transfer inflow</u>	2,000,991	2,002,797	-1,806
cash transfer inflow	335,117	335,117	
in-kind transfer inflow	1,665,874	1,665,874	
ROW, net (net inflow mediated by the public sector)	0	1,806	-1,806
<u>public transfer outflow</u>	-2,000,991	-2,000,991	
taxes and social contribution	-1,884,761	-1,884,761	
public transfer surplus(+)/deficit(-)	-116,231	-116,231	

National Transfer Accounts

II. Public Transfers: the balance

Transfers (based on Andy's presentation)

- ▶ Transfers are defined as flows that involve no explicit *quid pro quo*.
 - Many transfers may involve implicit obligation, e.g., transfers between children and parents.
 - Retirement benefits paid to public workers as part of their employment contract are not transfers.

Public Transfers

- ▶ Public transfer system consists of a set of mutually exclusive and exhaustive programs.
- ▶ Programs vary across countries and can be broadly defined by sector (education, etc.) or narrowly defined (Aid for Teenage Mothers, etc.)
- ▶ Source of funding: Some programs have obligated or committed sources (e.g., 90% of Taiwan's Health Tax on Tobacco goes into NHI Fund), thus have distinctive age pattern in inflow and outflow.
- ▶ Age-related programs are the emphasis in NTA

Public Transfers (based on Andy's slides)

► A public transfer program is measured in NTA by:

- Outflows from taxpayers or social contributors funding the program
- Inflows to the beneficiaries of the program
- Total inflows and outflows must be equal, for each sector, though not for any age

Public Inflows (by major sectors)

► In-kind transfer: from Public Consumption

- Education
- Cash transfers to HH for health care are counted as public consumption of health care.
- Other in-kind transfers

► Cash transfers

- Social security benefits in cash
- Social assistance benefits in cash
- Pension programs
- Grants,...

► Talk more in section IV

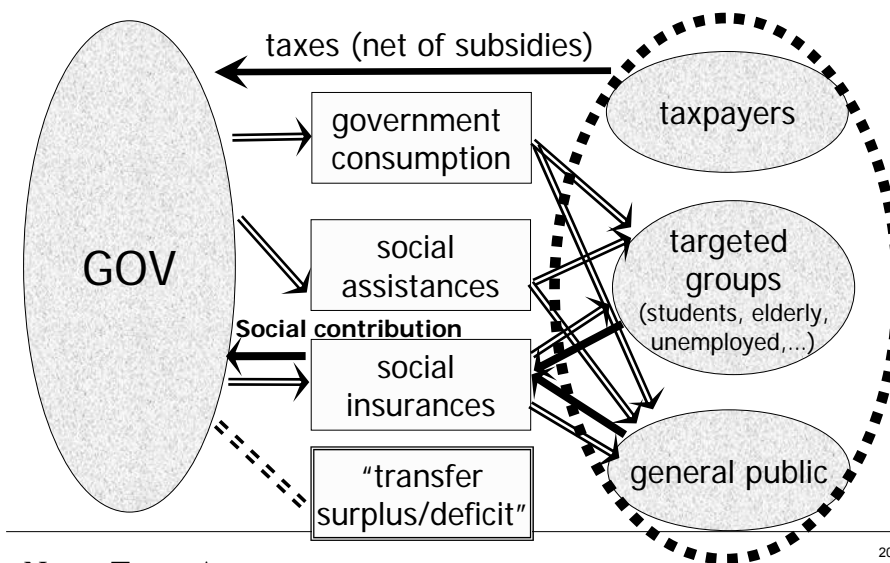
Public Outflows (by major sources)

- ▶ Taxes
 - Direct taxes
 - Indirect taxes, minus subsidies
 - Other revenues, e.g., fees and fines
- ▶ Social security contributions
- ▶ Transfer surplus // deficit
 - If public outflows > public inflows, i.e., the government spend more than it collects taxes, then it has a deficit
 - This is a calculated amount, no SNA or GFS counterpart
- ▶ Grants
- ▶ Talk more in section III

National Transfer Accounts

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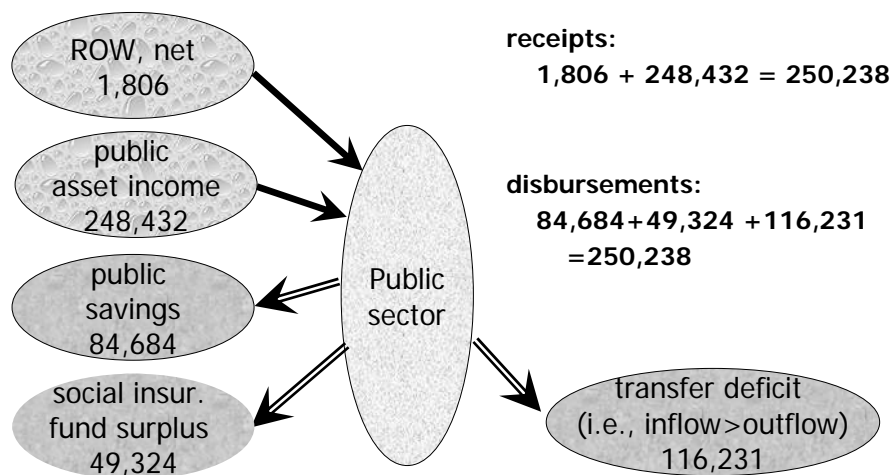
Public Transfers: Inflows = Outflows



National Transfer Accounts

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How Is Public Transfer Deficit Financed? (Taiwan, 1998)



National Transfer Accounts

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Public Sector Accounts Balance

► Inflows

- public asset income
- ROW, net

► Outflows

- public transfer deficit (a calculated term)
- public savings
- Other forms of asset accumulation, such as the surplus of NHI fund

National Transfer Accounts

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Three Important Questions

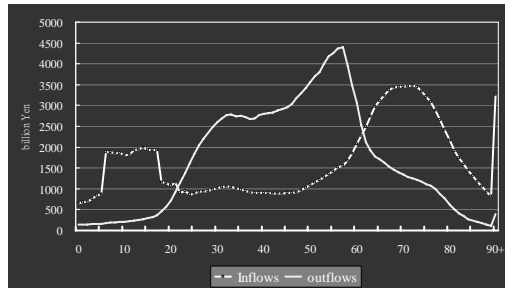
(based on Andy's slides)

- ▶ How large is each program (annual expenditure)?
- ▶ Which age groups benefit (inflows)?
- ▶ Which age groups bear the cost (outflows)?

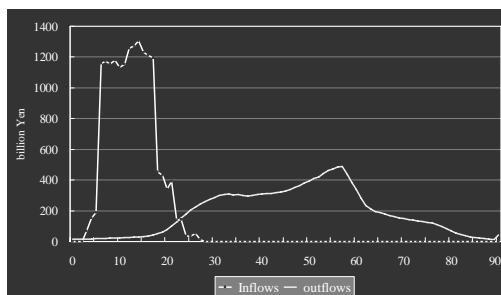
Age Profile of Public Transfers

- ▶ Transfer inflows are assigned to the age group of the intended beneficiary of the program
- ▶ Transfer outflows are assigned to tax payers based on tax incidence rule

Age Profile of Public Transfer Flows (Japan, 2004)



**Public
Transfers**



Education

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III. Public Transfer Outflows

Public Outflows (by major sources)

- ▶ Taxes
 - Direct taxes
 - Indirect taxes, minus subsidies
 - Other revenues, e.g., fees and fines
- ▶ Social security contributions
- ▶ Grants to ROW
- ▶ Transfer surplus // deficit
 - Deficit: If public outflows > public inflows, i.e., the government spend more than it collects taxes
 - a calculated amount, no SNA or GFS counterpart

Assigning Tax Incidence

- ▶ Public transfer outflows are assigned to taxpayers or social contributors who fund the transfer programs, based on tax incidence rule

NTA Public Outflows

NTA Variable	GFS Counterpart (GFS Table 5.1: Classification of Revenue)
Taxes	11 Taxes 111 Taxes on income, profits, and capital gains 112 Taxes on payroll and workforce 113 Taxes on property 114 Taxes on goods and services 1143 Profits of fiscal monopolies 1145 Taxes on use of goods and on permission to use goods or perform activities (e.g., motor vehicle taxes) 115 Taxes on international trade and transactions 116 Other taxes
Social contribution	12 Social security contributions
Grants	26 Grants to foreign governments or international organizations (an outflow mediated by the government)
Other revenue	14 other revenue 141 Property income (It is asset-based reallocation in NTA) 142 Sales of goods and services (?) 143 Fines, penalties, and forfeits 144 Voluntary transfers other than grants 145 Miscellaneous and unidentified revenue
Subsidies	25 Subsidies (GFS Table 6.1)

Taxes and Subsidies

- **Taxes.** In GFS taxes are grouped into six categories:
 - (i) taxes on income, profits, and capital gains;
 - (ii) taxes on payroll and workforce;
 - (iii) taxes on property;
 - (iv) taxes on goods and services;
 - (v) taxes on international trade and transactions; and
 - (vi) other taxes.
- **Subsidies.** Subsidies to public corporations and private enterprise is an expense in GFS (Table 6.1: Economic Classification of Expense); subsidies are treated in NTA as negative taxes.

Source of Outflow

► Direct taxes:

These taxes are levied according to taxpayers' own declaration of labor income, property income, or fees and fines

► Indirect taxes:

The government does not receive the payment directly from the final taxpayer.

Table 13. Tax Incidence for Public Transfer Outflows

Public Transfer Outflows	Tax Incidence or Source of Outflow
Taxes on Income	Combined asset and labor income
Taxes on Profits and capital gains	Asset income
Taxes on earnings including contributions of employers; Social contributions	Earnings or labor income
Taxes on Payroll and workforce	Earnings
Taxes on Property	Value of assets
Taxes on Goods and Services	Value of consumption of goods and services subject to tax
Taxes on International Trade and Services	Various: Consumption, labor income, asset income, Rest of the World.
Other Taxes	Various

Indirect Taxes

	Total	Capital Y	Labor Y	C
D.2. Taxes on production and imports			35,299	608,079
D.21 Taxes on products			0	608,079
D.211 Value added type taxes (VAT)	267,870	0	0	267,870
D.212 Taxes and duties on imports excluding VAT	117,513	0	0	117,513
D.213 Export Taxes	0	0	0	0
D.214 Taxes on products except VAT, i		102,571	0	222,696
i) Monopoly revenues and excise and stamp		0	0	62,848
ii) Taxes on financial transactions	102,571	102,571	0	0
iii) Other	159,848	0	0	159,848
D.29 Other taxes on production	52,948	17,649	35,299	0
D.3 Subsidies	17,362	-15,787	-31,575	0
D.31 Subsidies on products	0	0	0	0
D.311 Import subsidies	0	0	0	0
D.312 Export subsidies	0	0	0	0
D.319 Other subsidies on products	0	0	0	0
D.39 Other subsidies on production	-47,362	-15,787	-31,575	0

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Social Contributions

- Social contributions are outflows paid by employees and employers on behalf of their employees that fund social benefits in health insurances or pension
- Social contributions and outflows from the age groups which pay the social contributions.

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Grants

- ▶ Grants to foreign governments or international organizations
 - public transfer outflow to ROW in NTA
 - capital transfers should be excluded from grants.
- ▶ Who contributes?
 - Use the age pattern for unobligated taxes

Other Revenue by GFS

- ▶ An important component is property income (interest income, dividends, distributions from quasi-corporations, rent,...), which involves asset-based reallocations and is NOT a public transfer outflow.
- ▶ Other components are public transfer outflows
 - sales of goods and services
 - fines, penalties, and forfeits; voluntary transfers other than grants
 - miscellaneous and unidentified revenue.

Obligated Taxes, Grants, and Social Contributions

- Some programs may have obligated or committed sources of funding.
 - Pension programs are often funded through payroll taxes.
 - Grants from foreign governments may target health or education programs.

Table 12. Public Transfer Outflows by Funding Source and Purpose

	Public Transfer Outflows by Purpose						
	Total transfer outflows	Education	Health	Pensions	Other social protection	Other	Surplus
Taxes and Social Contributions on:							
Income, profits, and capital gains							
Payroll and workforce							
Property							
Goods and services							
Int'l trade and services							
Other taxes							
Grants							
Other revenues excluding public asset income less subsidies							
Total							

In the Taiwan case, most cells are empty, as few taxes are obligated

IV. Public Transfer Inflows

Public Inflows (by major sectors)

- ▶ In-kind transfer: from Public Consumption Expenditure (SNA Use of Disposable Income Account)
 - Education
 - Cash transfers to HH for health care are counted as public consumption of health care.
 - Other in-kind transfers
- ▶ Cash transfers (GFS Classification of Expense. Table 6.1)
 - Grants
 - Social security benefits in cash
 - Social assistance benefits in cash
 - Pension programs,...

Public Transfer Inflows by Sector

NTA Sector	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).

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Public Transfer Inflows

In-kind	Public Consumption Expenditure (SNA Use of Disposable Income Account). Cash transfers to household for health care are counted as public consumption of health care.
Cash	Grants + Social security benefits in cash + Social assistance benefits in cash + Employer social benefits in cash (GFS Classification of Expense Table 6.1)

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Public Transfer Inflows Classified by Sector and Type

By Sector	by Type		
	Total Inflows	In-kind Transfer	Cash Transfer
Total			
Education	18,062	16,865	1,197
Health	32,758	32,231	527
Pensions			
Other Social Protection			
Other			

* Colored cells are non-zero for Japan, 2004, but all zeros in Taiwan, due to lack of more detailed information.

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Age Profile of Beneficiary: Cash Transfers

- ▶ for targeted programs (or social insurances)
 - directly from income survey
 - from other sources
 - allocate on per capita basis
- ▶ For untargeted cash program
 - equally allocated on per capita basis

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Age Profile of Beneficiary: In-kind Transfers

- ▶ Administration, defense, public health,...
 - Public goods in nature, with the non-rivalness property and/or externalities
 - In NTA, allocate on per capita basis in the same way as untargeted cash transfers (but needs justification)
- ▶ Education
 - Allocate to enrolled students (of public schools?)
- ▶ Health
 - National health insurance payments and similar reimbursement programs, e.g., Medicare and Medicaid in the US, are classified as in-kind transfer inflows
 - Data may be drawn from income or other survey