

WORKSHOP: TRANSFERS

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FLOW IDENTITY AND AGE REALLOCATIONS

Basic flow identity:

$$\underbrace{C(x) - Y^l(x)}_{\text{Life cycle deficit}} = \underbrace{\tau^+(x) - \tau^-(x)}_{\text{Net transfers}} + \underbrace{Y^A(x) - S(x)}_{\text{Asset-based reallocations}}$$

→ Components are further disaggregated **by sector**:

- Public age reallocations
 - Net public transfers = public transfer inflows (in-kind + in-cash) – public transfer outflows
 - Public asset-based reallocations = public asset income – public saving
- Private age reallocations
 - Net private transfers = inter-household + intra-household transfers
 - Private asset-based reallocations = private asset income – private saving

→ Components are further disaggregated **by purpose**: Health, education, pensions, etc.

FLOW IDENTITY AND AGE REALLOCATIONS

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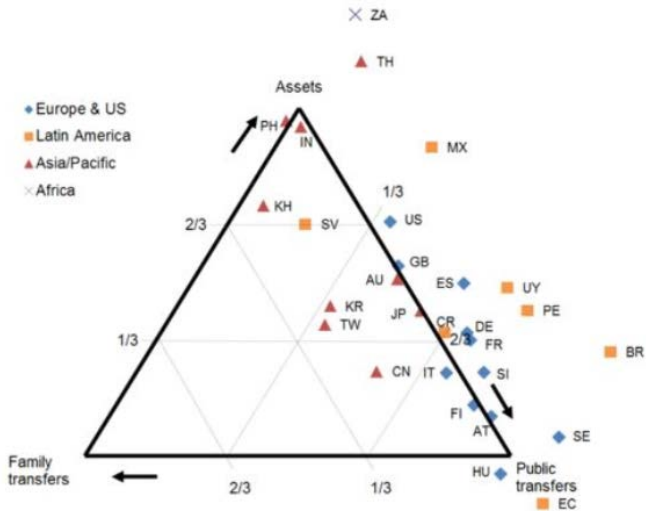
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LCD FINANCING, INDIVIDUALS 65+



Source: NTA webpage

AGGREGATE CONTROLS

AGGREGATE CONTROLS

- **Basis: Secondary distribution of income account**
 - Net national income + **net transfers from the ROW** = net disposable income
 - SNA data can be used to construct complete aggregate controls for public transfers
 - Information about private transfers limited
- **Differences:**
 - 1.) Broader definition (+ ITLS on products and production, + whole public consumption is used)
 - 2.) Intersectoral features of the flows:
 - a) Private transfers: Within private, between private and ROW
 - b) Public transfers: Between public and private, public and ROW
 - Transfers within public sector are excluded
- SNA only includes transfers received/paid by each sector but not the exact direction

TRANSFER COMPONENTS

1st GROUP: Mainly paid by households, received by government/corporations

- Taxes less subsidies on products and production:
 - Public/private, public/ROW
 - Current taxes on income, wealth, etc.:
 - Public/private, public/ROW
 - Net social contributions:
 - Public/private, public/ROW, private/private
- In general: Be aware of country-specific flows

TRANSFER COMPONENTS (CONT.)

2nd GROUP: Mainly paid by government/corporations, received by households

- Public transfers in-kind:
 - Public/private
- Social benefits other than social transfers in-kind:
 - Public/private, public/ROW, private/private

3rd GROUP: Other current transfers

- Public/private, public/ROW, private/private
- Current international cooperation: Direction is clear – public/ROW
- Net non-life insurance premiums
- Net non-life insurance claims
- Miscellaneous current transfers



Whenever direction of the flow is not clear **intersectoral flow matrix** is needed

DIRECTION OF PUBLIC AND PRIVATE TRANSFERS, AUSTRIA, 2010

Net Non-Life Insurance Premia					
from/to	TO public	TO private	TO ROW	TO total	
FROM public		0	0	0	
FROM private		5,549	34	5,583	
FROM ROW		156		156	
FROM total	0	5,705	34	5,739	
Net Non-Life Insurance Claims					
from/to	TO public	TO private	TO ROW	TO total	
FROM public				0	
FROM private	0	5,533	172	5,705	
FROM ROW	0	11		11	
FROM total	0	5,544	172	5,716	
Miscellaneous Current Transfers					
from/to	TO public	TO private	TO ROW	TO total	
FROM public		4,602		4,602	
FROM private	3,713	0	1,025	4,738	
FROM ROW		680		680	
FROM total	3,713	5,282	1,025	10,020	
Social Contributions					
from/to	TO public	TO private	TO ROW	TO total	
FROM public				0	
FROM private	46,149	3,934	288	50,371	
FROM ROW	439	37		476	
FROM total	46,588	3,971	288	50,847	
Social Benefits other than Social Transfers in Kind					
from/to	TO public	TO private	TO ROW	TO total	
FROM public		55,677	687	56,365	
FROM private		2,119	26	2,145	
FROM ROW		627		627	
FROM total	0	58,423	713	59,137	

TRANSFER ACCOUNT, AUSTRIA, 2010

Variable abbreviation	Variable Name	Value (mill. of national currency)
T	Transfers	-1,828
TG	Public Transfers	-2,356
TGI	Public Transfer, Inflows	115,813
TGIC	Public Transfer Inflows, in cash	Net from the ROW
TGII	Public Transfer Inflows, in kind	55,354
TGO	Public Transfer, Outflows	118,169
TGF	Taxes	66,884
TGP	Social Contributions	46,149
TGX	Other Revenue	3,713
(TD)	Transfer deficit/surplus	1,423
TF	Private Transfers	528
TFB	Inter-household Transfers	528
TFW	Intra-household Transfers	Net from the ROW
TFI	Private Transfers, Inflows	1,553
TFBI	Inter-household transfers, Inflows	1,553
TFWI	Intra-household transfers, Inflows	na*
TFO	Private Transfers, Outflows	1,025
TFBO	Inter-household transfers, Outflows	1,025
TFWO	Intra-household transfers, Outflows	na*

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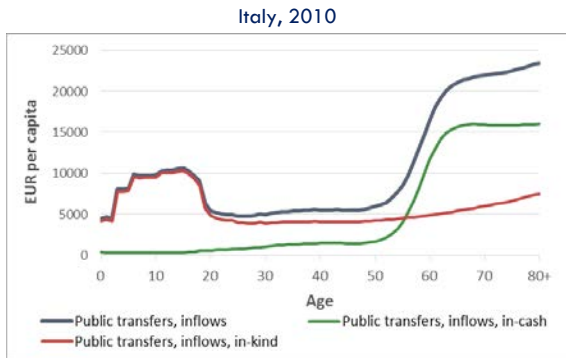
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In NTA usually estimated from survey data

PUBLIC TRANSFERS

PUBLIC TRANSFER INFLOWS

- Flows from the government to the beneficiaries of the public programs
- Public transfer inflows in-kind = public consumption
- Public transfer inflows in-cash: direct payments by the government to individuals



PUBLIC TRANSFER INFLOWS IN-CASH

Subcategories: Education; health; pensions; other cash transfers: unemployment, housing, family and children allowances, miscellaneous social protection

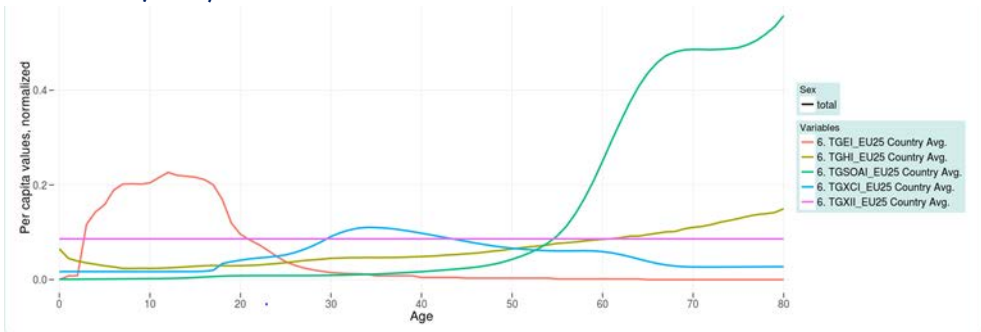
Macro controls:

- Total values are based on SNA
- Total values must be divided into subcategories for different public programs (government expenditure reports or other administrative data, GFS database provided by IMF, etc.)

PUBLIC TRANSFER INFLOWS IN-CASH (CONT.)

Age profiles:

- Transfers are assigned to the beneficiaries of specific public program, based on:
 - Administrative data (reports on benefits/beneficiaries by age)
 - Survey data: Reported at the individual level or at the household level (assigned to the beneficiaries, to the HH head, to all the adults, etc.)



PUBLIC TRANSFER OUTFLOWS

- The current flows that fund public transfer inflows

- SUBGROUPS:

1.) Distinguished **by purpose**: Education, health, pensions, other in-kind, other cash

→ Macro controls: Net public transfers of residents = net from the ROW (holds for each program)

2.) Distinguished **by source**: Taxes, social contributions, grants, other current transfers (transfer deficit/surplus)

→ Macro controls: More detailed information from SNA, etc.

PUBLIC TRANSFER OUTFLOWS: AGE PROFILES

- **By purpose:** The sources of funding can vary significantly

(may rely more heavily on earning taxes, consumption taxes, etc.)

- **By source** - estimated using:
 - Survey data
 - Administrative records
 - The age profile of the activity being taxed (ex. taxes on consumption → private consumption age profile)

MAPPING OF SNA TAXES TO TAX SOURCE

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
Consumption of alcohol and/or tobacco	Less: Other subsidies on products
	Monopoly revenues and excise and stamp taxes from tobacco and alcohol
Labour income	Export taxes*
	Less: export subsidies*
	Other taxes on production*
	Less: other taxes on production*
	Employers' actual social contributions
	Employees' actual social contributions
Asset income	Social contributions by self- and non-employed persons
	Imputed social contributions
	Export taxes*
	Less: export subsidies*
	Other taxes on production*
	Less: other taxes on production*
Income	Individual income tax*
	Corporate income tax
Various	Individual income tax
	Other current taxes

* Taxes are allocated in proportion to the shares of labour and asset income.

Source: *United Nations, 2013*

MAPPING OF GFS DATA TO NTA OUTFLOWS

GFS classification	Suggested NTA tax source
Taxes	
Taxes on income, profit, and capital gains	
Payable by individuals	Labour and asset income*
Payable by corporations and other enterprise	Asset income
Taxes on payroll and workforce	Labour income
Taxes on property	Asset holding
Taxes on goods and services	Consumption
Taxes on international trade and transactions	Various
Other taxes	Various
Social contributions	Labour income
Subsidies	
To public corporations	Various
To private enterprises	Various
Grants	
From foreign governments	
Current	Rest of the world
Capital	Exclude from NTA flow account
From other general government units	Zero for general government
Other revenue	
Property income	Not a public transfer (Asset income)
Sales of goods and services	Other
Fines, penalties, and forfeits	Other
Voluntary transfers other than grants	
Current	Other
Capital	Exclude from NTA flow account
Miscellaneous and unidentified revenue	Other

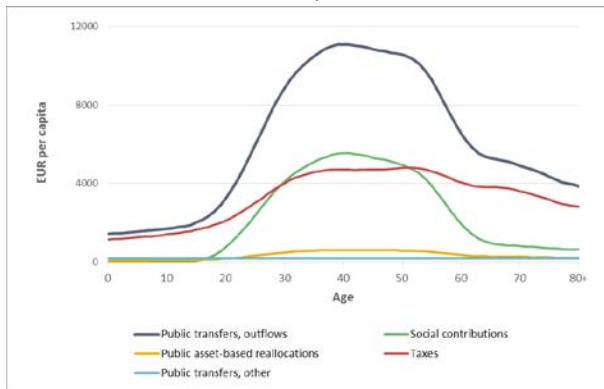
* In the absence of additional information, taxes are allocated in proportion to the shares of labour and asset income.

Source: United Nations, 2013

PUBLIC TRANSFER OUTFLOWS (CONT.)

- If public outflows are insufficient to finance inflows, a public transfer deficit is generated (=positive public ABR), otherwise transfer surplus (=negative public ABR)

Slovenia, 2010



Source: Istenič et al., 2017

PRIVATE TRANSFERS

PRIVATE INTER-HOUSEHOLD TRANSFERS

- Transfers such as gifts, monetary allowances, donations, transfers from family members working abroad (**remittances**), etc.
- **Macro controls:** The SNA data are limited



net private transfers from the ROW =

= private transfer inflows – private transfer outflows

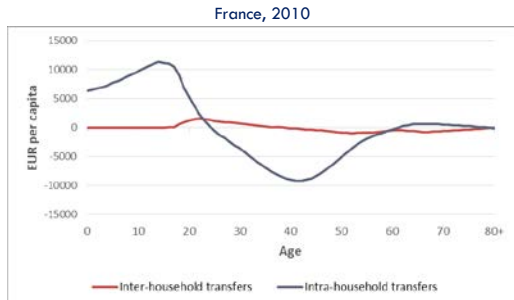
- inflows/outflows estimated using survey data
 - Per capita averages \times age-specific population
 - Adjustment is needed:
 - Proportional adjustment (same scaling factor)
 - Split the difference
 - Adjust inflows or outflows only

PRIVATE INTER-HOUSEHOLD TRANSFERS (CONT.)

■ Age profiles:

- Based on survey data (variables that capture cash or in-kind gifts, payments received/paid by the HH)
- Reported for the household level → flowing to/from the household head

■ Relative importance of inter- and intra-household transfers



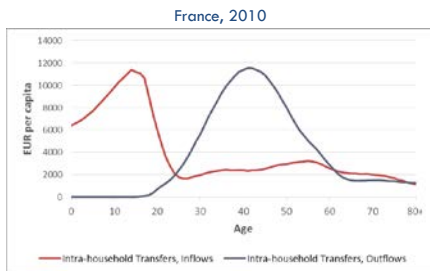
INTRA-HOUSEHOLD TRANSFERS

- An indirect estimation method
- Data:
 - Only one data source for income and consumption
 - Two data sources: Household structure from one survey + already calculated age profiles

IN GENERAL:

- Non-head members with a deficit receive inflows from members with a surplus
- If household total deficit > household total surplus

→ Deficit is financed by household head (ABR)



Source: Istenič et al., 2017

INTRA-HOUSEHOLD TRANSFERS

ESTIMATION PROCEDURE

- 1.) **Individual deficit** = consumption – disposable income
 - Consumption = private consumption (excluding housing)
 - Disposable income = labour income + public inflows in-cash + net inter-hh transfers – taxes paid

- 2.) Intra-household transfer **inflows**
 - Non-head members with a deficit receive inflows from members with a surplus or from the household head
 - The “tax rate” (= share of individual’s surplus) is the same for all household members
 - If household total deficit > household total surplus → deficits are financed by household heads (private ABR)

INTRA-HOUSEHOLD TRANSFERS (CONT.)

3.) Intra-household transfer **outflows**

- Outflows for non-household heads = individual surplus
 - Part is transferred to non-heads (according to the tax rate)
 - Remaining to the head
- Outflows of the household head = the tax rate \times the household head individual surplus + total remaining deficit of other household members (shortfall is financed through ABR)

4.) Intra-household transfer inflows/outflows by function (education, health, other)

- inflows for each function are proportional to the individual consumption of that function
- outflows for each function are proportional to the total inflows for each sector

AN EXAMPLE OF MACRO CONTROLS TABLE



Ageing Europe – An Application of
National Transfer Accounts for Explaining
and Projecting Trends in Public Finances

ABOUT AGENTA

PARTNERS & ADVISORS

WORK PACKAGES

DATAEXPLORER

PUBLICATIONS

NEWS & MEDIA



About

NTA 2010 Data

NTTA Data

NTA Variables



Methodology and Variables



Ageing Europe – An Application of
National Transfer Accounts for Explaining
and Projecting Trends in Public Finances

NTA methodology and variables

European NTA provide age- and gender-specific data on income, transfers, consumption and saving. The estimation approach is similar for most of the variables:

1. In a first step the European System of Accounts and related data to estimate the aggregate values, i.e. the quantities of income, transfers, consumption and saving for the economy as a whole.
2. In a second step, the distribution of these variables over age groups and genders is estimated using survey data and administrative data.

In the following description of the variables, we give an intuitive interpretation of each variable, including a short description of the aggregate values and the method of estimating the distribution over age groups. For more details please consult the manuals.

Aggregate values:

The [Excel-file for the aggregate values](#) contains data that are required for the calculation of NTA aggregate (=total economy) values and shows how the calculations are done.

THANK YOU