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Introduction

Introduction

- **Increased interest** in distributional information

- Several initiatives focus on distributional data on basis of micro data

- Two projects target distributional data **in line with national accounts** (using micro data as input): EGDNA and DINA

- More insight needed in **similarities and differences** to:
  1. assist compilers in improving their methodologies
  2. explain any differences in results to users

Overview of EGDNA project

- Launched in 2011 as an **OECD/Eurostat** Expert Group

- Aim: To develop **methodology** for compilation of distributional results on household income, consumption and saving (and wealth) consistent with NA

- Unit of analysis: (Equivalized) private **households**

- Input data: Mainly survey data and administrative data

- **Step-by-step approach** consisting of identifying relevant micro data, imputing for missing elements and aligning to NA totals

- Countries engaged in two exercises to calculate **experimental** results (see publication of 2015 results)

- Some countries are already publishing their results

Overview of DINA project

- Dates back to 2011: Launch of World Top Income Database

- Aim: **Synthetic micro files** on income and wealth consistent with NA

- Unit of analysis: adult **individual** (equal split and individualistic series)

- Input data: Mainly tax and survey data, as well as information from rich lists

- **Methodology** consists of combining data sources, scaling up to NA totals and imputing for missing items

- Data available for range of countries in **World Wealth and Income Database**

1. Differences in scope

Differences in coverage and level of detail

Coverage

The EGDNA project covers **Income, Consumption and Savings** (and will eventually also include wealth), whereas DINA focuses on **Income and Wealth**

Level of detail

The EGDNA project aims to arrive at **aggregated breakdowns** of the household sector (e.g. into income quintiles) whereas DINA aims at **synthetic micro files** providing the possibility of **more detailed breakdowns**. The latter depends on the reliability of the data.

2. Differences in concepts

Target population and unit of analysis

Target population: Private **households** vs. adult **individuals** (*what about the people below 20 years old?*)

Unit of analysis: **Equivalized** household results vs. '**equal-split**' and '**individualistic**' individual results. This implies a different view on **economies of scale** for people living in households of different size and composition. This may give rise to different distributional results, depending on the composition of households across the distribution.

Income concepts (1)

- EGDNA focuses on **household disposable** and **adjusted disposable income**, whereas DINA distinguishes **pre-tax factor and national income**, and **post-tax disposable and national income**

- The **main difference** is that EGDNA focuses on the income of the **household sector**, whereas DINA also includes income of the rest of the economy to arrive at measures consistent with **national income**

- These differences may be substantial and may significantly **affect distributional results**

Income concepts (2)
Main differences with SNA measures

| Comparable SNA measure	Pre-tax factor income	Pre-tax national income	Post-tax disposable income	Post-tax national income
Primary income of HH sector	X	X		
HH disposable income			X	
HH adjusted disposable income				X
Differences with SNA measure				
Taxes less subsidies on production	+	+		
Primary income of corporations	+	+	+*	+*
Primary income of government (net of taxes less subsidies on production)	+	+	+	+
Gap between pension contributions and benefits		+	+	+
Net other current transfers			–	–
Collective consumption				+
Government surplus				+

* Net of current taxes paid

Income concepts (3)
Example of post-tax national income

Composition of **post-tax national income** in percentages of **net household adjusted disposable income**, 2015
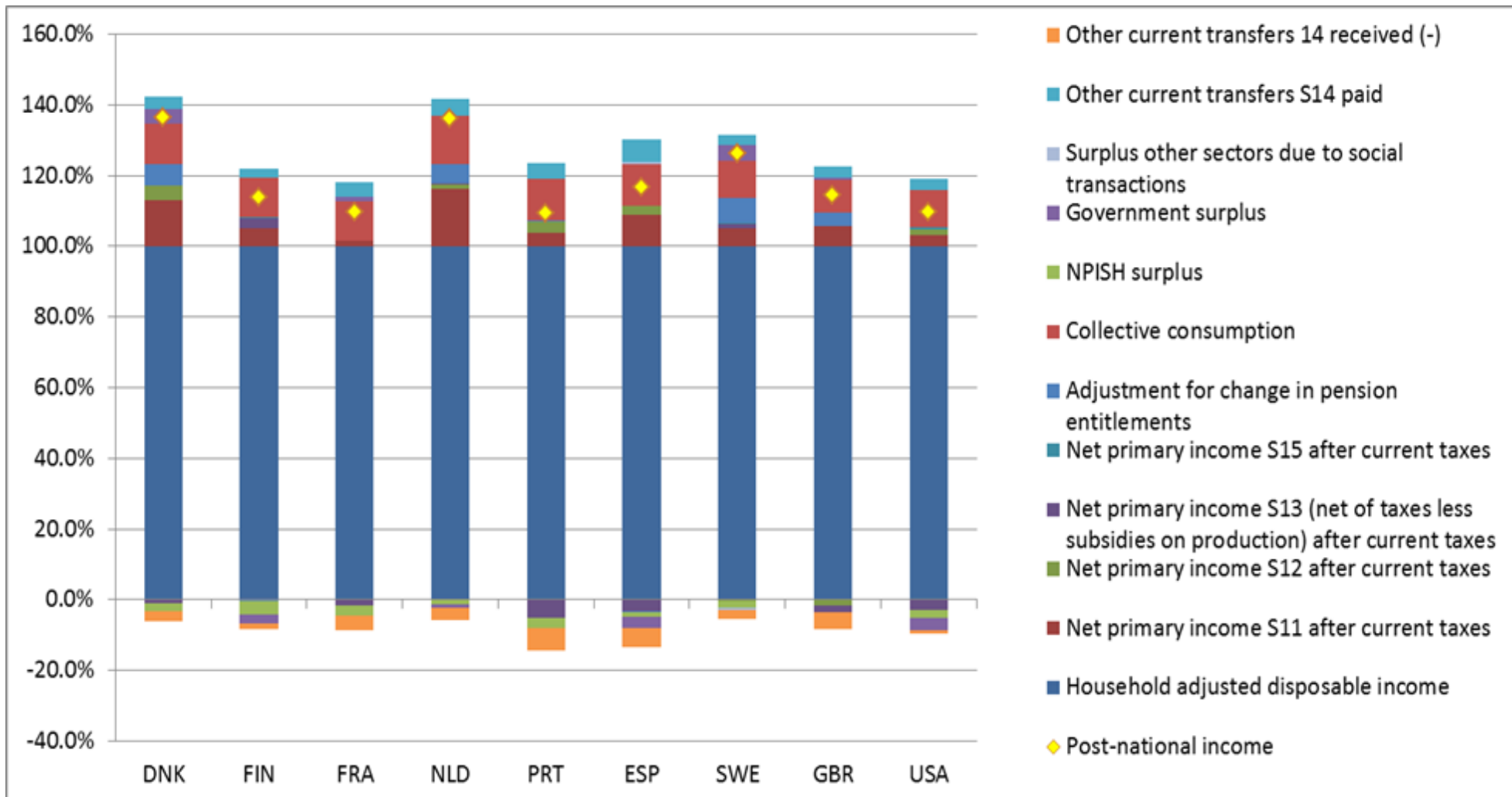
Source: OECD.stat

Income concepts (4)
Discussion of main differences

- Inclusion of primary income (**undistributed profits**) of corporations:

  - Not all domestic portfolio equity is held by domestic households + they will also own portfolio equity in foreign corporations

  - How to allocate the amount to relevant individuals?

  - Alternative: focus on holding gains (derived from the revaluation account)

- Inclusion of **primary income of general government** (and other government surplus/deficit):

  - Can the full amount be attributed to the current population?

  - How to allocate the amount to relevant individuals (avoiding double counting over time)?

- Inclusion of **collective consumption**:

  - It concerns consumption that benefits the community as a whole, so questionable whether it should be included in individual income measures

  - How to allocate the amount to relevant individuals?

Income concepts (5)
Discussion of main differences

- Exclusion of **other current transfers** in DINA:

  - It concerns non-life insurance premiums and claims, but also other transfers such as remittances

  - In some countries low income households very much depend on these transfers, so not including it may significantly affect inequality measures

  - E.g.: Net other current transfers constitutes **20.8%** of disposable income of the first quintile in Mexico; 16.1% in Israel; 8.8% in Portugal

- Treatment of **pension** transactions:

  - DINA not only looks at the impact of pension contributions and benefits, but also tries to allocate any gap between the two to specific individuals

  - However, pensions often concern re-distribution in time at individual level, so allocating the gap to individuals would often imply offsetting the initial transactions

  - The only redistribution which may make sense to show is when there is a gap between the pension contribution and the accrual of an entitlement at the individual level

3. Differences in methodology

Differences in input data

Differences may arise due to use of **different data sources**. However, the input data may often be the same:

- DINA relies on tax data, supplemented with survey data and rich lists
- EG DNA relies on survey and administrative data, depending on the country

Furthermore, differences may arise due to:

- Different adjustments to correct for **conceptual and classification differences**
- Different corrections to micro data to correct for **measurement and estimation errors**

Impact of imputations and alignment

Imputations will have to be made for missing elements and data will have to be **aligned to NA totals**, both affecting distributional results.

Size of **alignment and imputations** as % of adjusted disposable income as obtained from the **EGDNA exercise**.

Source: Zwijnenburg (2016)

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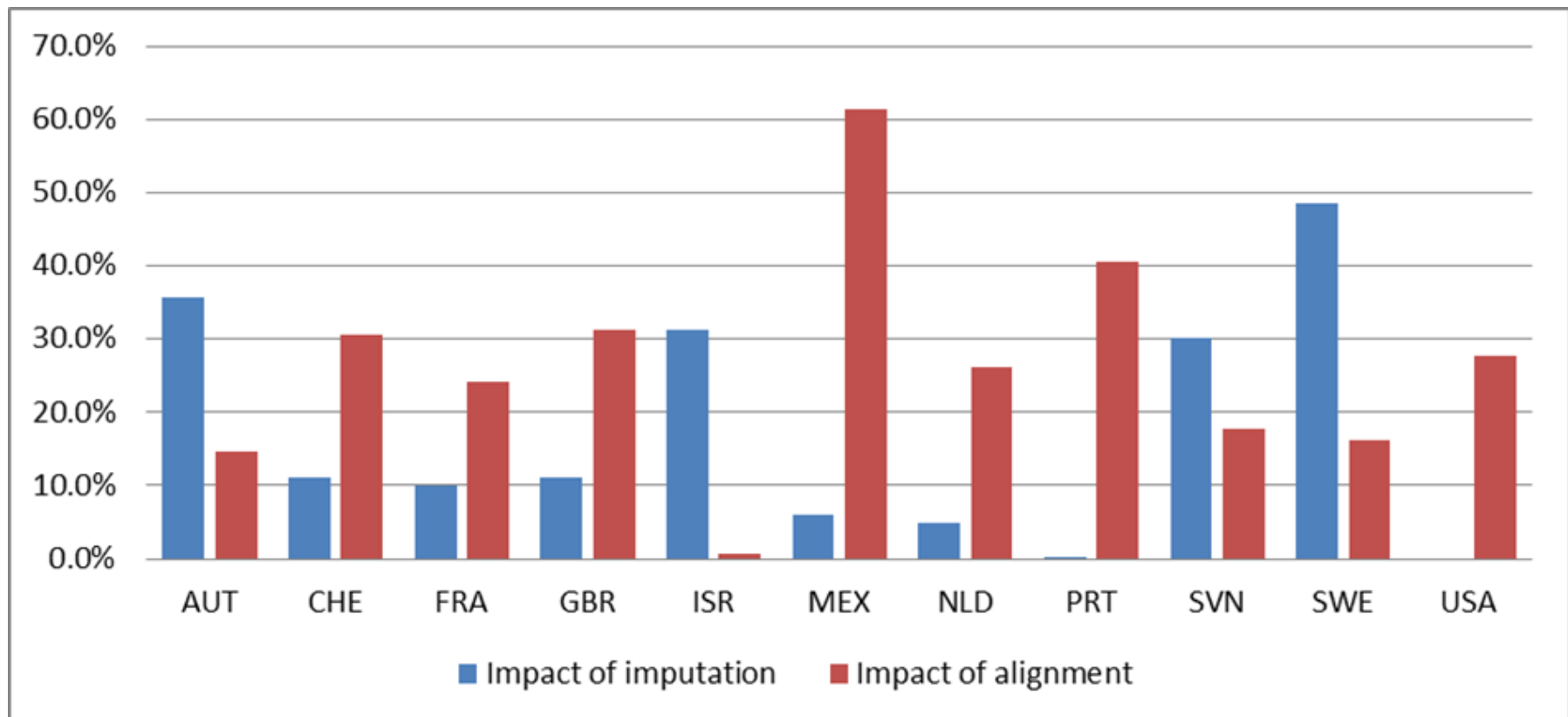
Impact of alignments

Adjustment coefficient (macro/micro aggregate) for items with **largest gaps** in EGDNA exercise

NA-Code	Item	Number of countries	Average	Minimum	Maximum
B2	Operating surplus	6	1.47	0.47	2.43
B3	Mixed income	9	2.69	1.30	5.24
D1R	Compensation of employees	9	1.15	1.01	1.38
D41R'	Interest received (not adjusted for FISIM)	8	2.08	0.66	6.40
D42R	Distributed income of corporations	7	5.06	0.70	17.76
D41P'	Interest paid (not adjusted for FISIM)	9	3.58	1.02	11.31
D5P	Current taxes on income and wealth	10	1.18	0.78	1.54
D62R	Social benefits other than STiK	10	1.22	0.97	1.55

Source: Zwijnenburg (2016)

Ideally, information is available to **properly allocate the gaps** to relevant households. Alternative is to allocate the gaps **proportionally**. This may lead to **significantly different** allocations.

Given the possible impact of micro-macro gaps, **more information** would be welcomed on their role in DINA

Impact of imputations (1)

DINA contains **more imputed items** than EGDNA. Their allocation to individuals may also significantly affect distributional results

Size of components of post-tax national income for which **micro-information is assumed to be missing** (in % of post-tax national income)
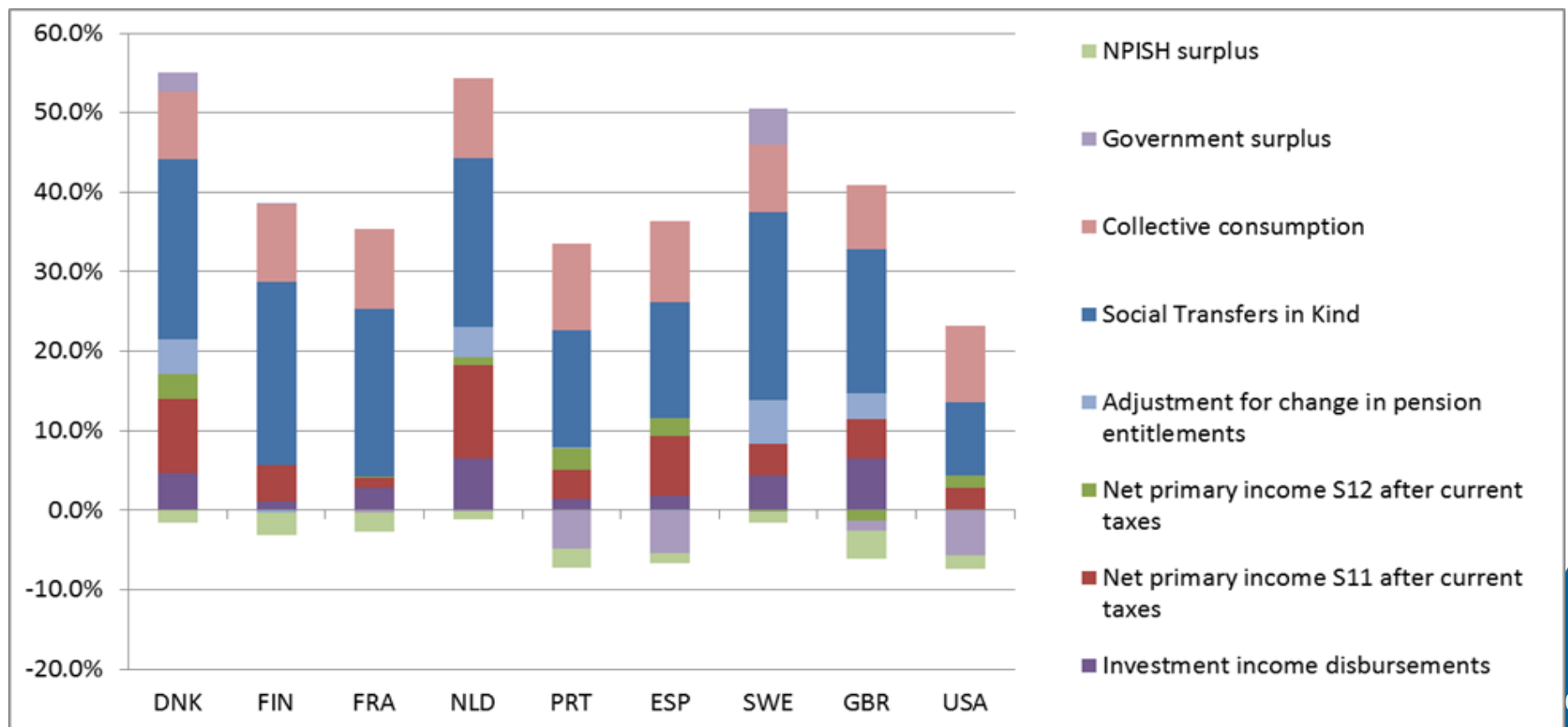
Source: OECD.stat

Impact of imputations (2)

Comments regarding **DINA techniques** to allocate imputed items:

- Undistributed profits of corporations: How strong is the **assumption of equal rates of return** on equity? How strong is the underlying distribution of wealth (based on capital income flows)?

- Social transfers in kind on health: **Lump sum method** (average value to individuals) comes close to insurance value approach in EGDNA

- Other social transfers in kind: Actual use approach seems preferable to allocation **in proportion to post-tax disposable income**

- Public spending on collective goods and services: Allocation in proportion to post-tax disposable income is highly questionable

- Other items: What is the impact of the allocation of other imputed items on the distributional results?

As the related amounts are substantial, **more information** would be welcomed on their impact on distributional results in DINA

Conclusions

- DINA and EGDNA both aim to compile distributional results in line with NA totals

- Differences in scope, concepts and methodology may give rise to different outcomes

- A **good understanding** of these differences is important to assist users in assessing which measure(s) will best suit their purpose and in understanding any differences in outcomes

- Furthermore, **metadata** will be useful to better assess the robustness of the results, especially in relation to the possible impact of micro-macro gaps and imputations

- Discussion on **pros and cons** of choices and assumptions in compiling distributional results will help in further improving the work of both projects

Thank you for your attention

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