



INEQUALITY AND REDISTRIBUTION IN FRANCE, 1990-2018

EVIDENCE FROM POST-TAX DISTRIBUTIONAL NATIONAL ACCOUNTS

INSEE SEMINAR
PARIS, 14 NOVEMBER 2018

Discussed by Jorrit Zwijnenburg (OECD)



Contents

- Introduction
- Brief overviews of the EG DNA and the DINA project
- Differences between DINA and EG DNA:
 - Differences in scope
 - Differences in concepts
 - Differences in methodology
- Conclusions
- Questions



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): EG DNA and DINA
- More insight needed in **similarities and differences** to:
 1. assess pros and cons of specific choices
 2. assist compilers in improving their methodologies
 3. explain any differences in results to users



Overview of EG DNA 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: (Equivalentized) 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 EG DNA project covers **Income, Consumption and Savings** (and will eventually also include wealth), whereas DINA focuses on **Income and Wealth**

Level of detail

The EG DNA 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)

- EG DNA 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 EG DNA 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				+

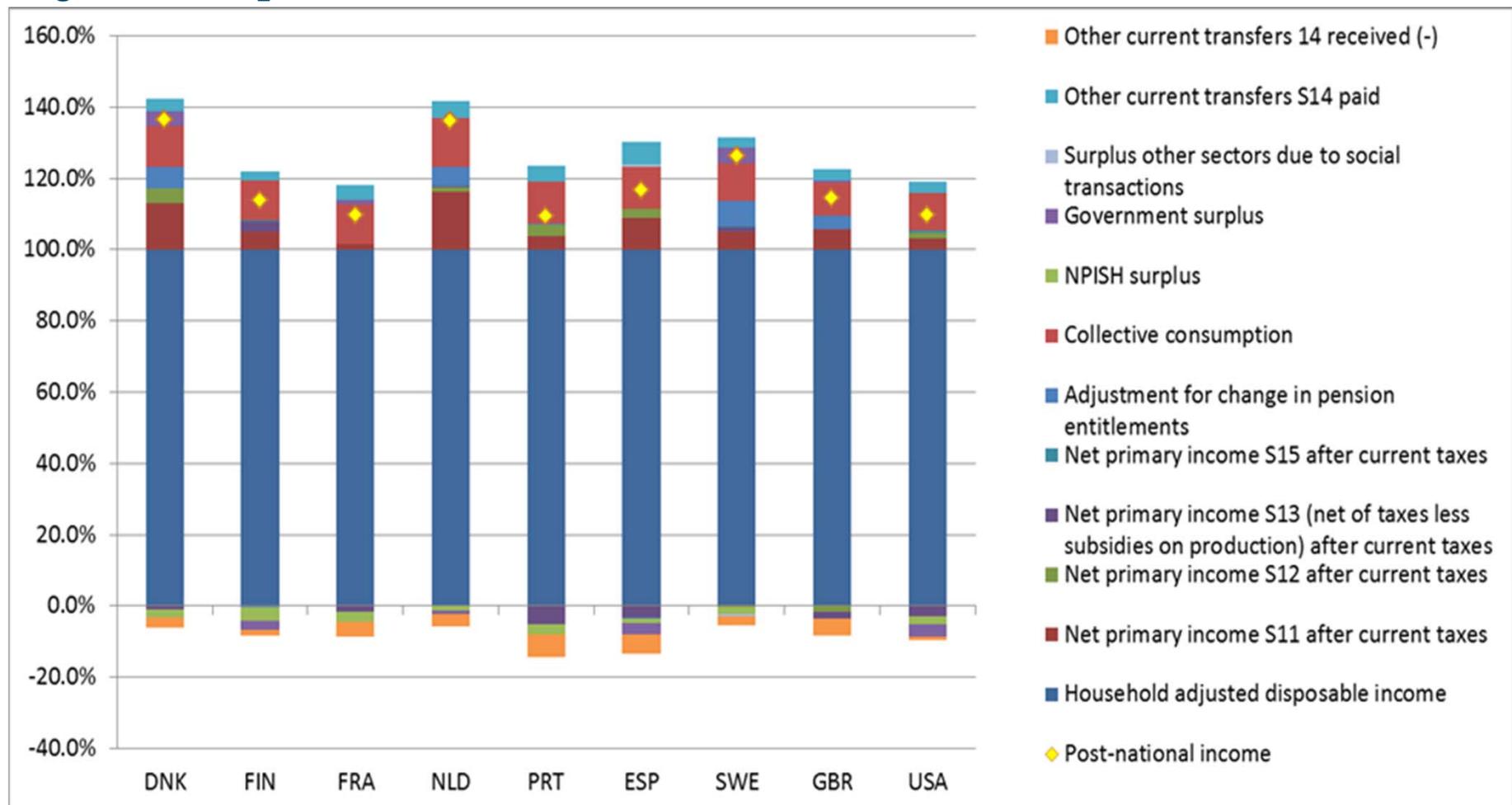
* Net of current taxes paid



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:

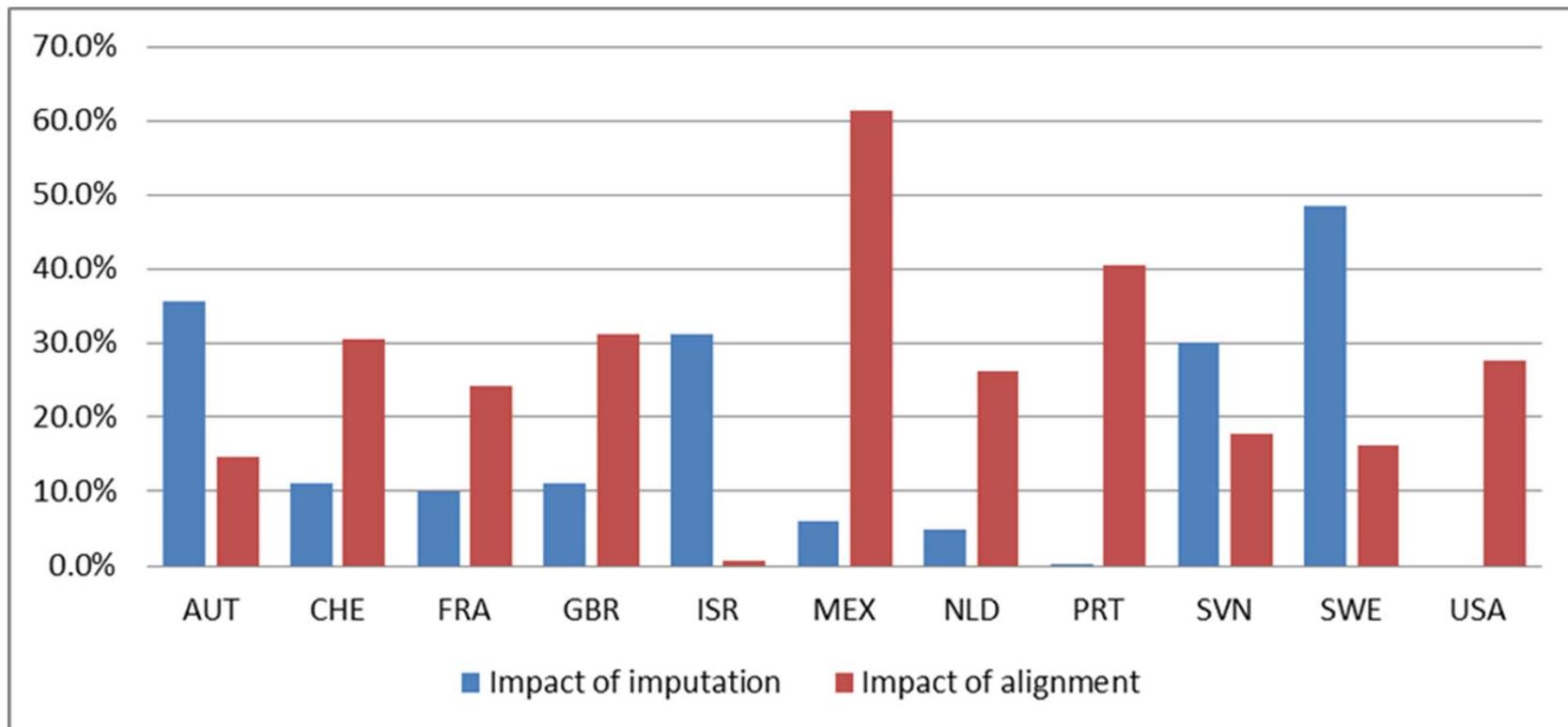
- Different adjustments to correct for **conceptual and classification differences**
- Different corrections to micro data to correct for **measurement and estimation errors**



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 **EG DNA exercise**.



Source: Zwijnenburg (2016)



Impact of alignments

Adjustment coefficient (macro/micro aggregate) for items with **largest gaps** in EG DNA 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.

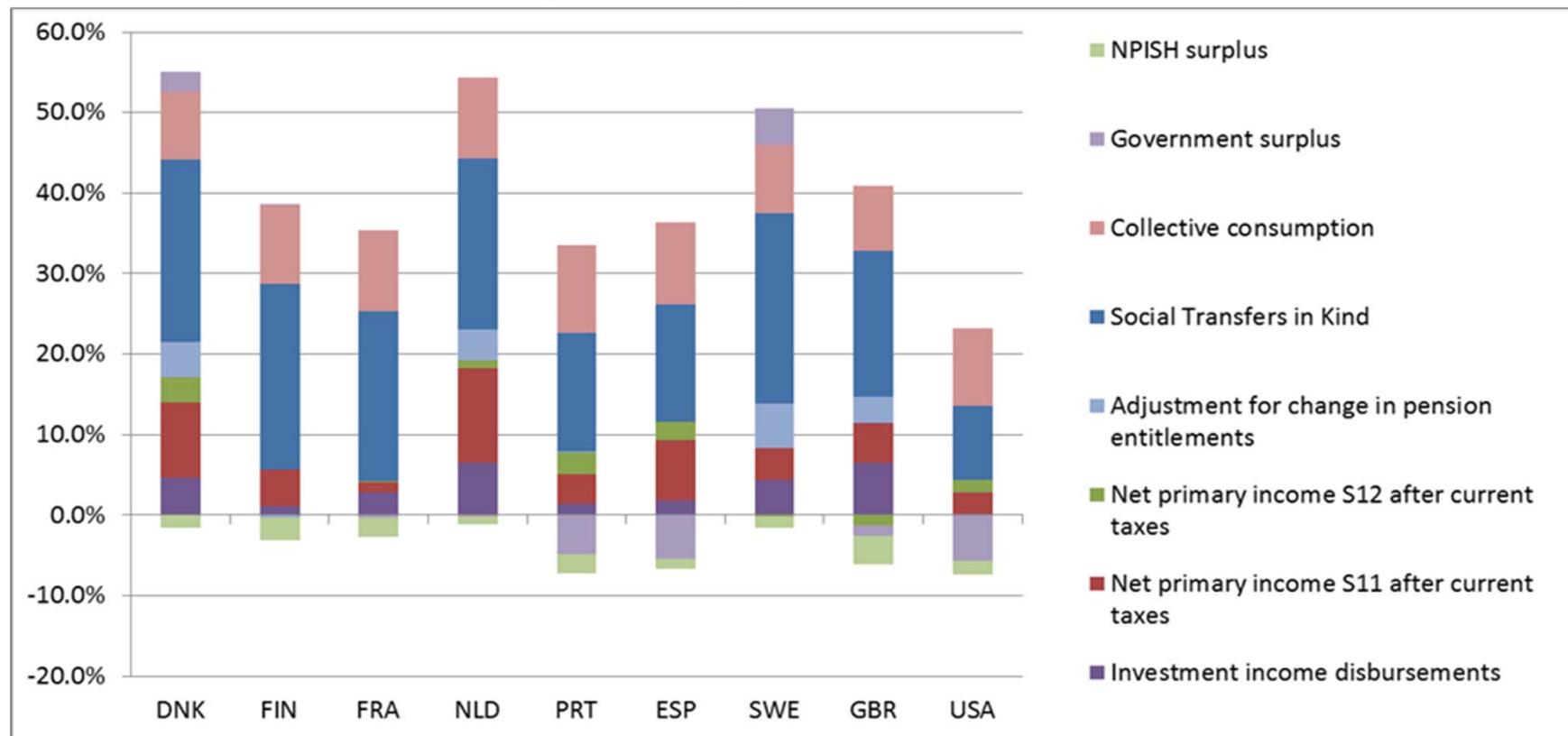
Given the possible impact of micro-macro gaps, it would be interesting to see how they feed into the DINA results.



Impact of imputations (1)

DINA contains **more imputed items** than EG DNA. 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 EG DNA, **proportional** does not
- 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, it would be interesting to see how they affect the DINA results



Conclusions

- DINA and EG DNA both 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



Questions

- What is the best **income concept** to use in inequalities studies?
- Should the focus be on the **household or individual**?
- What is the impact of the various assumptions on the results and what are the **margins of error** surrounding the results?
- To what extent may specific choices and assumptions affect **cross-country** comparisons and **time series** analyses?
- What is the **appropriate level of detail** for publishing distributional results in line with national accounts?



Thank you for your attention

For more information please contact:
Jorrit.Zwijnenburg@oecd.org