

EXPEDITION: model presentation 1st BELMOD steering Committee

FPS Social Security
20/05/2019



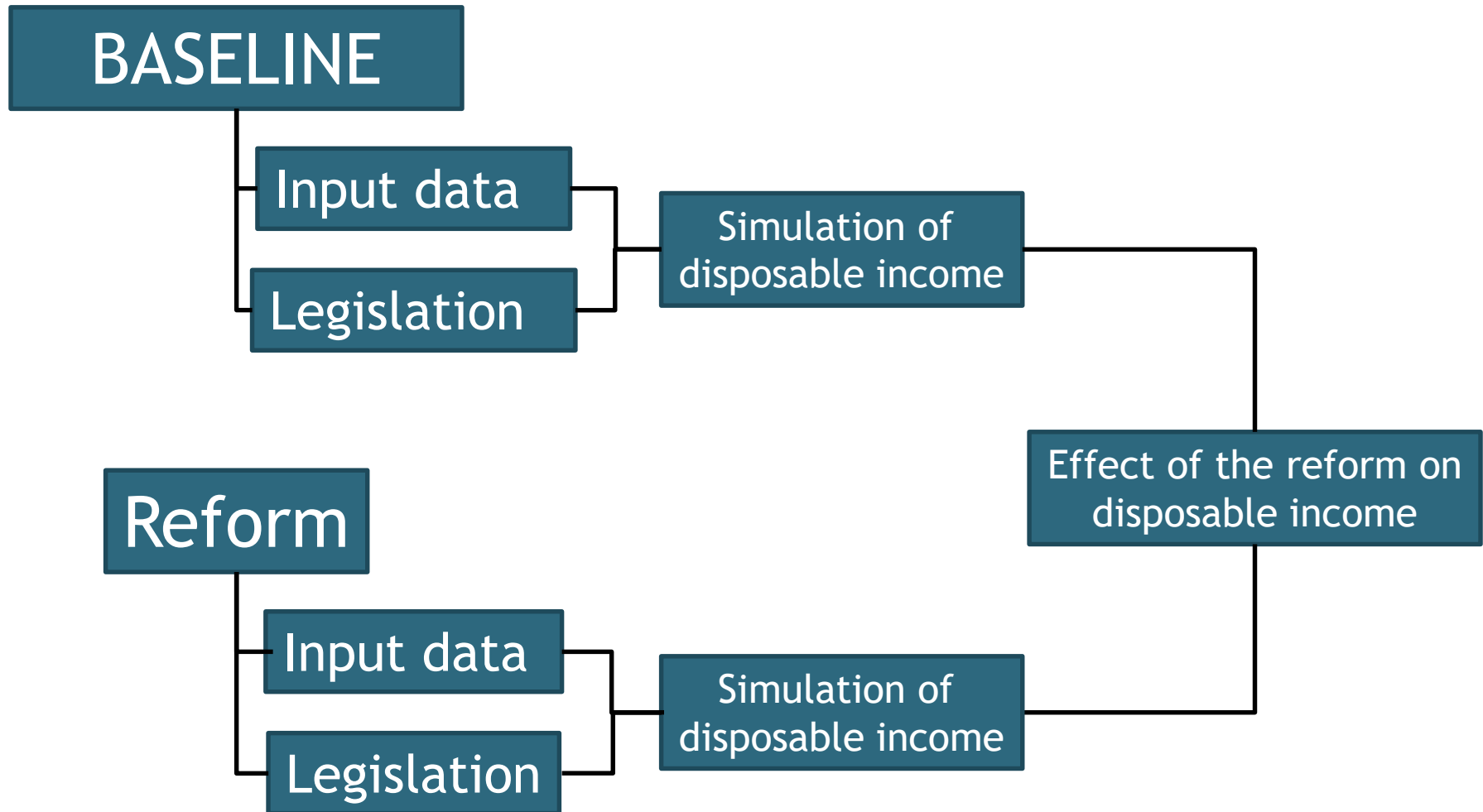
MICROSIMULATION MODEL EXPEDITION

- EX-ante simulation of
- Policy reforms and
- an **E**valuation of their Distributional Impact
- on Income and **O**ther welfare **N**otions

EXPEDITION: general characteristics of the model

- **Policies**
 - Focus on social and fiscal policies
- **Calculation method**
 - Mechanical
 - No behavioral reactions taken into account
 - Socio-demographic characteristics of individuals and households are kept constant
- **Based on administrative micro data**
- **Central output**
 - Disposable household income

EXPEDITION - structuur model



EXPEDITION: which policy domains?

1. Pensions:

- Payout details based on the Pension Registers
- Simulation of retirement pensions based on career data
 - For employees: detailed information based on the SIGEDIS file
 - For self-employed and civil servants: simulation possibilities are limited. Interpretation of careers on the basis of the processed career breaks
- Simulation of survivor pensions: not possible
 - Due to missing career data of the deceased partner
- Via a separate module: REPLICA. Not simulated in EUROMOD itself
- Gross pensions: read in EUROMOD for the calculation of social security contributions on pensions, personal income tax, etc.

EXPEDITION: which policy domains?

2. Benefits paid by the RVA:

- Full unemployment benefit
- Integration allowance
- Income guarantee benefit
- Benefits within the system of unemployment with company supplement
- Temporary unemployment benefit

- Other benefits paid by the RVA
 - Not simulated, directly taken from the data
 - Part of disposable income

EXPEDITION: which policy domains?

3. **Sickness and disability benefits:**

- Period of primary sickness
- Disability
- Maternity rest, breast feeding breaks (employees only)
- Paternity and adoption leave (employees only)

- Not: system for civil servants
- Not: accidents at work and occupational diseases
 - Not simulated, directly taken from the data
 - Part of disposable income

EXPEDITION: which policy domains?

4. Social security contributions and personal income taxes:

- SSC: employees
- SSC: civil servants
- SSC: self-employed
- Personal income taxes: final settlement
 - NOT: withholding income tax
- Special social security contributions

- NOT: a number of tax benefits / tax credits (e.g. housing taxation, service vouchers, child care)

EXPEDITION: which policy domains?

5. Sociale assistance benefits:

- Living wage
- Income guarantee for the elderly (IGO)
- Income replacement allowance (IVT)
- Integration allowance (IT)
- Allowance for elderly help (THAB)

- Not: deafening benefits for persons with a disability

EXPEDITION: which policy domains?

6. Child benefits:

- Birth premium
 - Basic allowance
 - Age supplements
 - Social supplements
 - Additional allowance for children with a disability
 - Increased benefit for orphans
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- Both the old system, as well as the regionally differentiated new systems are simulated

EXPEDITION: which data?

- **Data used:**
 - Administrative micro data from the DWH AM & SB
 - Supplemented with a number of variables from IPCAL and CENSUS_2011
 - 265 804 private households. 593 887 individuals situated within these households.
- **Observation year of the data: 2012**
- **Last modeling year: 1 jan 2019**
- **Uprating**
 - Adjusting the nominal amounts to the price level of the most recent modeling year
- **Reweighting:**
 - Adjusting for changes in the population structure between the year of observation and the most recent modeling year

EXPEDITION: which data?

- **Starting point = DWH AM & SB (not the SILC) + regulation of the policy domain you want to simulate**
- **Ordering principle for the family composition = Rijksregister**
 - Starting point = reference person
 - Alternative option: starting from the fiscal household (IPCAL)
 - Cleaning within the Rijksregister (e.g. not allowing that 1 person has more than 1 partner)
- **Cleaning of the input data set**
 - Collective households (-)
 - Households with disposable income = 0:
 - Frontier workers (+)

EXPEDITION: which data?

Determining income from work / benefits: 3 important elements:

1. Family composition: primary source = Rijksregister

- For specific domains: overruled with information from the specific institution (e.g. sickness and invalidity benefits or unemployment benefits)

2. Labour market history : Cascade system:

- RSZ - RSZPPO - SIGEDIS (rudimentary data)

3. Information about the statute of the individual: at the specific institution.

EXPEDITION: which data?

- **Looking at the individual over a full year (so not: only last status)**
- **Combination of different statuses = possible**
 - Not within 1 source
 - E.g. Combination of different jobs: we take the job with the highest hourly wage and the total number of quarters employed
 - Exception: RVA benefits
 - Yes, if different sources are combined
 - E.g. Combination of period of unemployment with a period of employment within the same year

EXPEDITION: which data?

- Information about the exact moment of entrance and exit in a specific system is not always requested exactly
- This is particularly important for the modeling of primary sickness
 - Several short periods of opting in and out of the benefit

EXPEDITION:

- **Data preparation / reweighting**
 - SAS + STATA
- **EUROMOD**
 - 1 baseline run: 9 minutes
 - Updating: in EUROMOD itself
 - EUROMOD policies: started from scratch, based on the available DWH AM & SB variables
 - No revision of the existing policies based on SILC data
- **Processing of the EUROMOD output:**
 - STATA

Output

- www.dc2019.be