

# IESS: AN OVERVIEW OF THE MAIN OBJECTIVES AND FINDINGS

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# IESS

Improving Effectiveness  
in Social Security

**IESS – Final Conference**

Rome, 16 May 2016

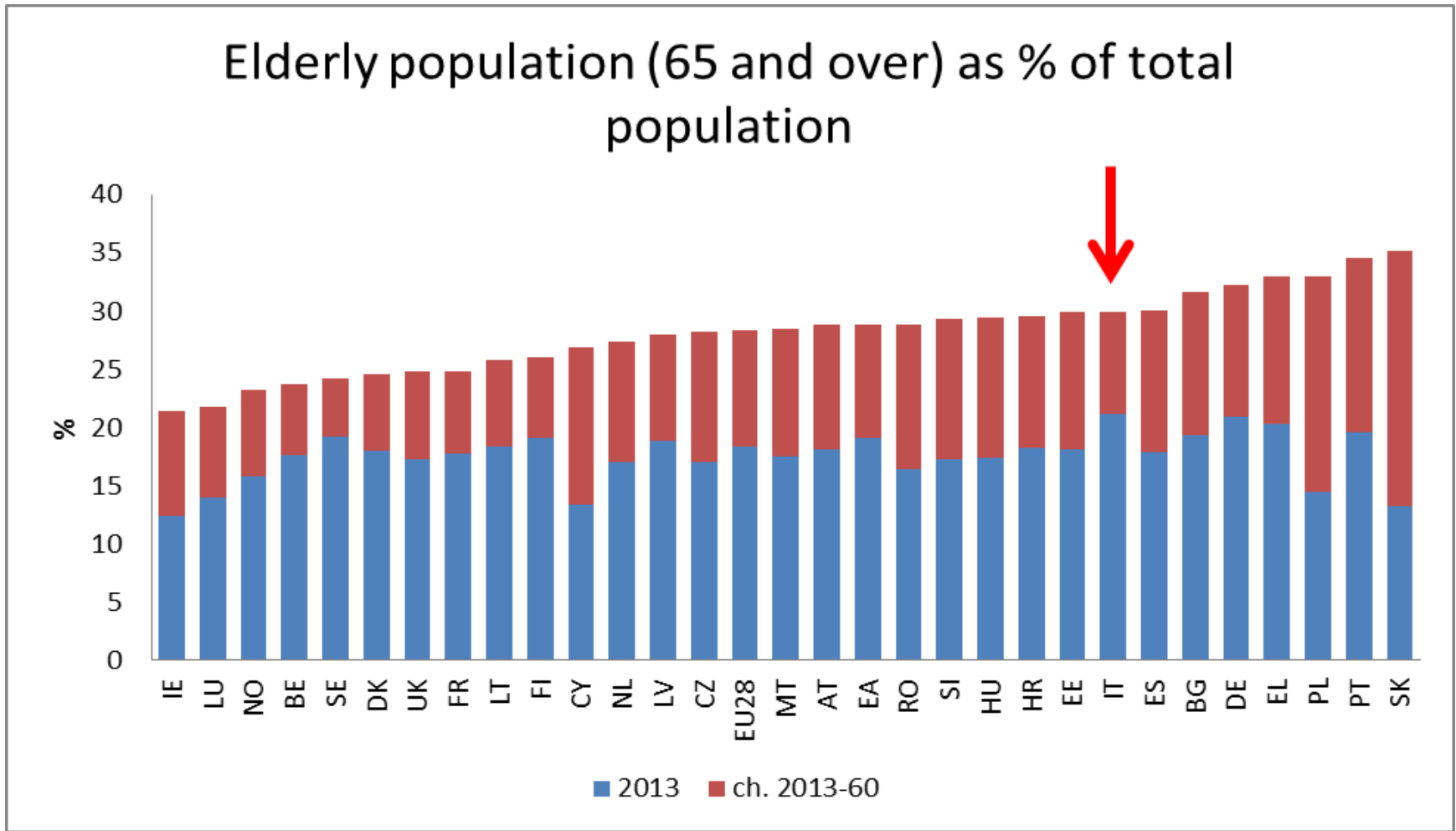
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# Outline

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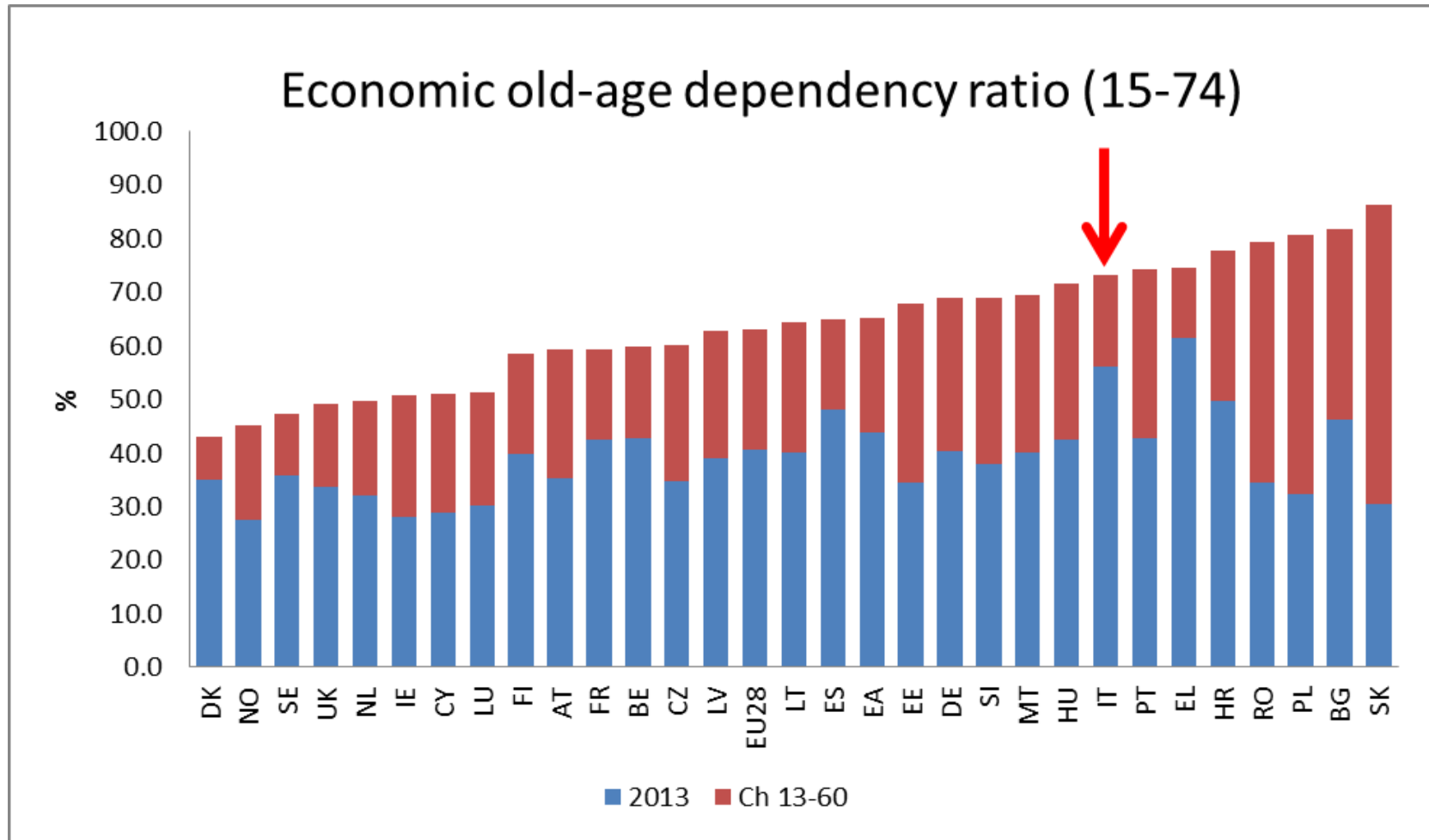
- Setting the scene and addressing the policy debate
- Project's objectives
- Instruments: Data (AD-SILC) and Model (T-DYMM)
- An overview of the results
- Limits of the analysis and future developments

# Setting the scene: Ageing in EU



Source: European Commission, 2015 Ageing Report

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# Sustainability of pensions: policy options

## Eligibility-restricting reforms

Tools	Reforms
Reduce Coverage ratios	<ul style="list-style-type: none"><li>• increase in statutory and early retirement ages</li><li>• link of eligibility requirements to life expectancy</li><li>• levelling the gender gap in pension eligibility requirements</li><li>• definition of penalties (and bonuses) for early (late) retirement</li></ul>

## Generosity-reducing reforms

Reduce Benefit ratios	<ul style="list-style-type: none"><li>• full career contribution/ average pay schemes;</li><li>• accrual rates linked to the actual performance of national economies</li><li>• full or partial indexation of pension benefits;</li><li>• automatic or semi-automatic balancing mechanisms capping the amount of pension benefits;</li><li>• Sustainability factors</li></ul>
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# Sustainability of pensions: policy options

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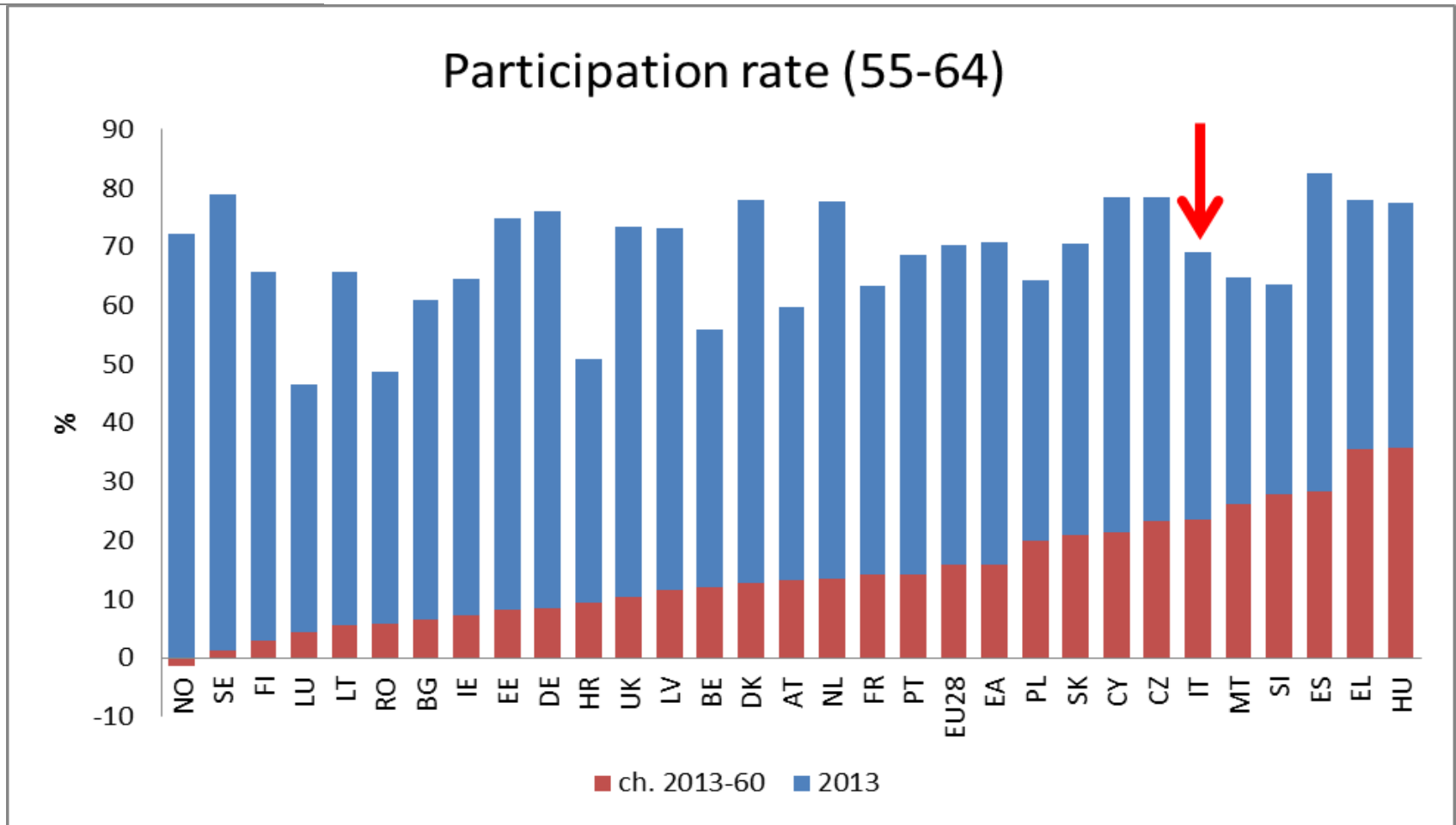
- Schwan and Sail (2013), **AWG deterministic projections.**
- **Optimal combinations between eligibility-restricting and generosity-reducing measures** for growth, labour participation rates, fiscal sustainability and adequacy.
- Incentives to **labour participation** of older optimized **linking age/contribution eligibility requirements and life expectancy** (especially for long careers).
- **Actuarial fair pension** entitlements reducing the generosity of the system calls for an **automatic balancing mechanism or a sustainability factor.**
- A rule that links the amount of pension benefits to longevity gains without adapting statutory retirement ages would necessary result in lower pension benefits as they will be reduced in proportion to the decreased probability of death. Likely future adequacy issues.

# Sustainability of pensions: policy options

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- **Dieppe and Guarda (2015), ECB approach based on three DSGM models for Portugal, Luxembourg and Finland.**
- Analysis of population ageing and alternative **pension reforms** aiming at **stabilizing the debt-to-GDP ratio** over the medium run.
- **To stabilize debt following a demographic shock, labour taxes should increase to unacceptable levels**, thus reducing labour supply and medium-term growth.
- **Two-year increase in the retirement age** would reduce pension expenditures and increase social contributions through longer working lives but **still suboptimal due to the increase in labour taxes** to stabilize debt.
- In addition **cutting the pension replacement ratio by 15 p.p., would stimulate labour supply** and the drop in the medium-term growth would be contained.

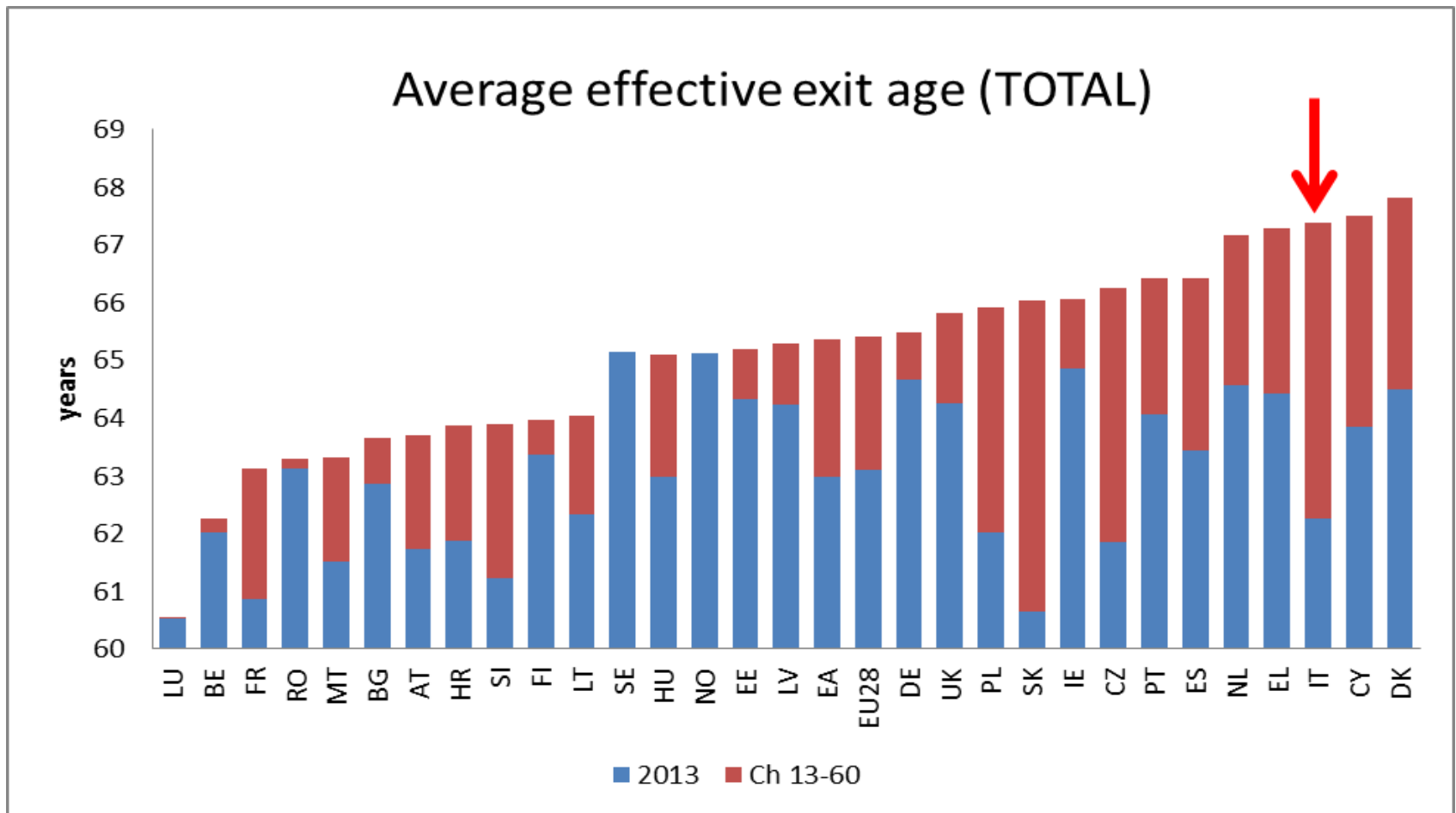
# Labour participation and ageing



Source: European Commission, 2015 Ageing Report

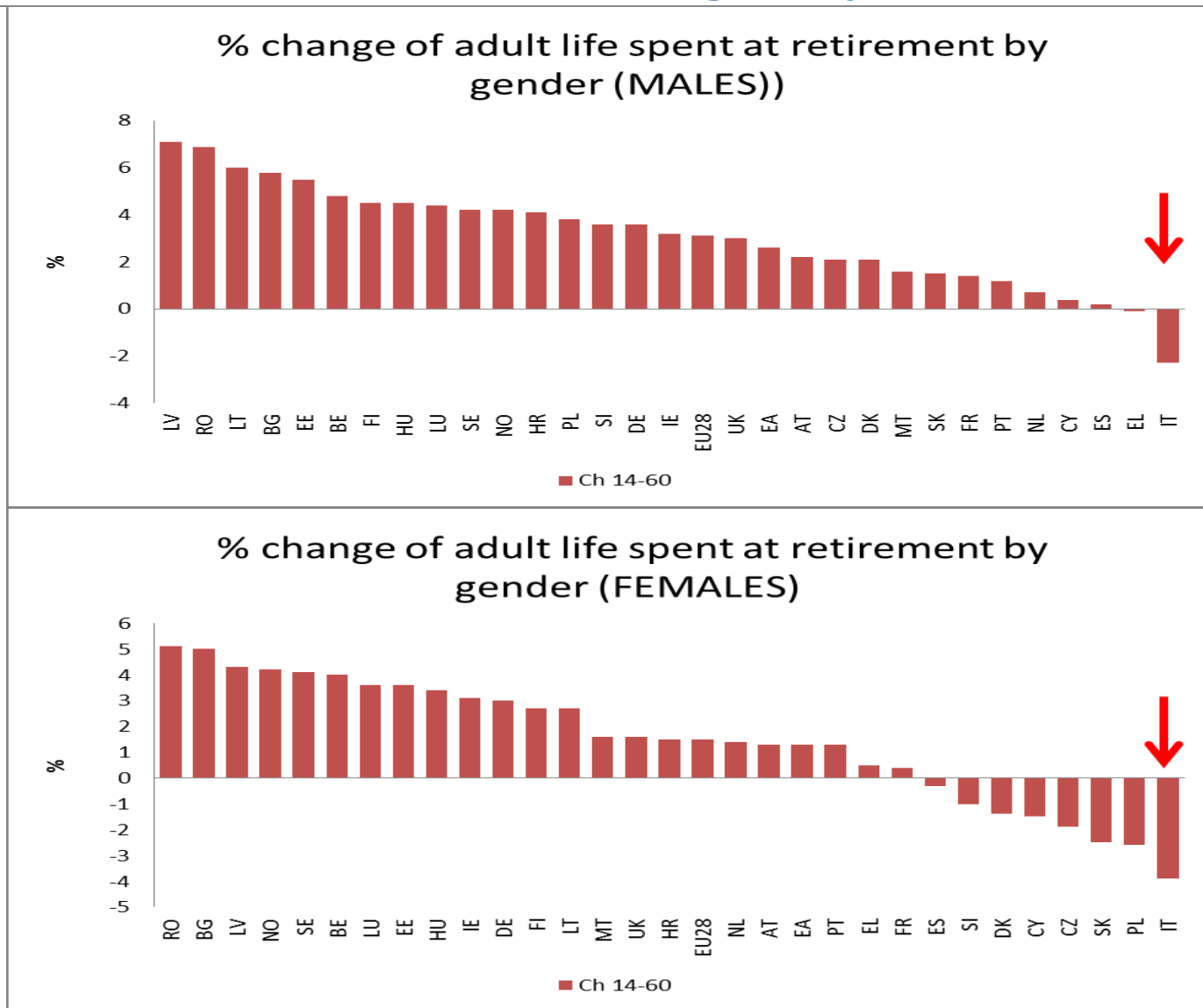


# Increase in average exit age

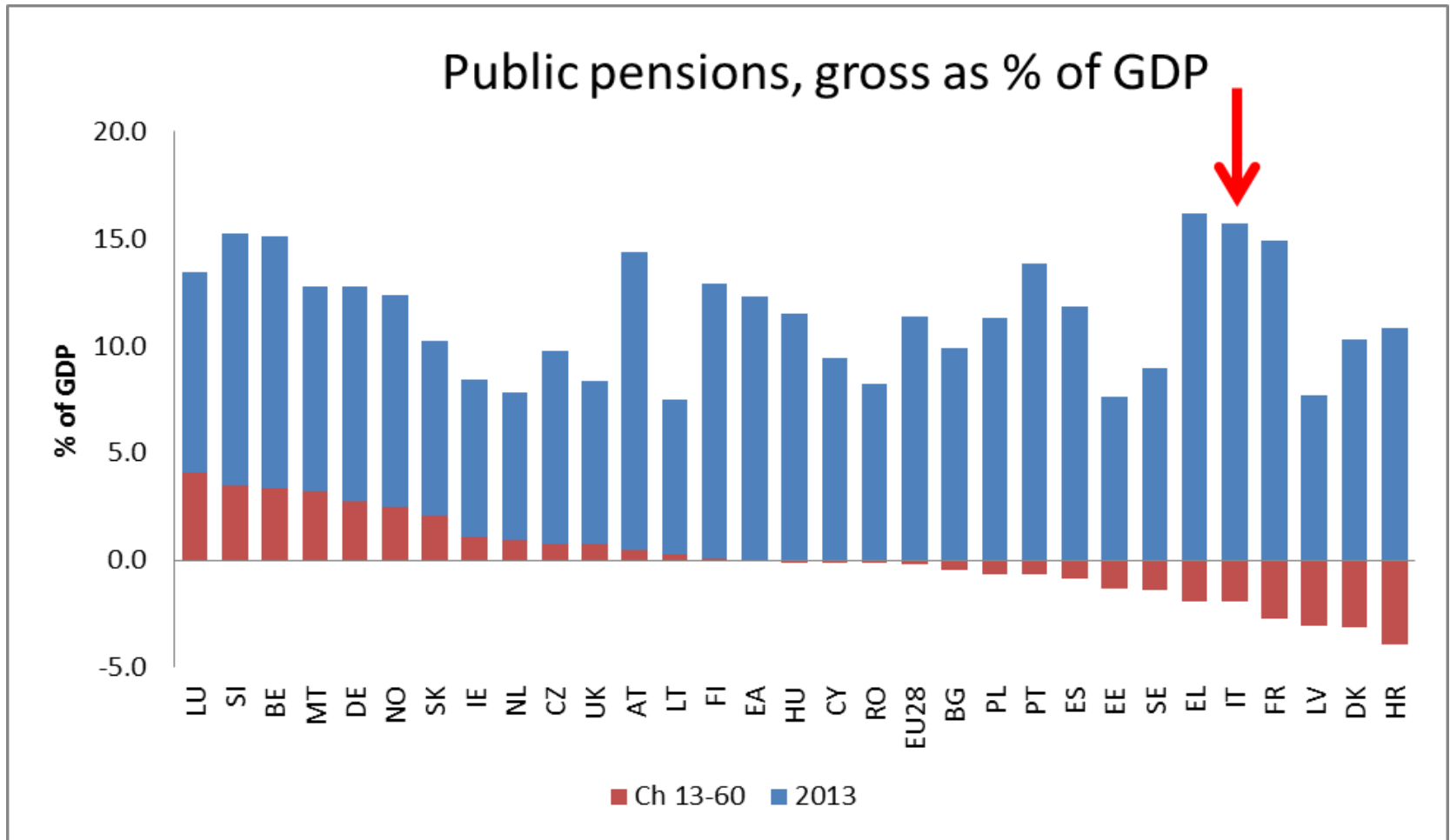


Source: European Commission, 2015 Ageing Report

# Effect of NDC and link to longevity

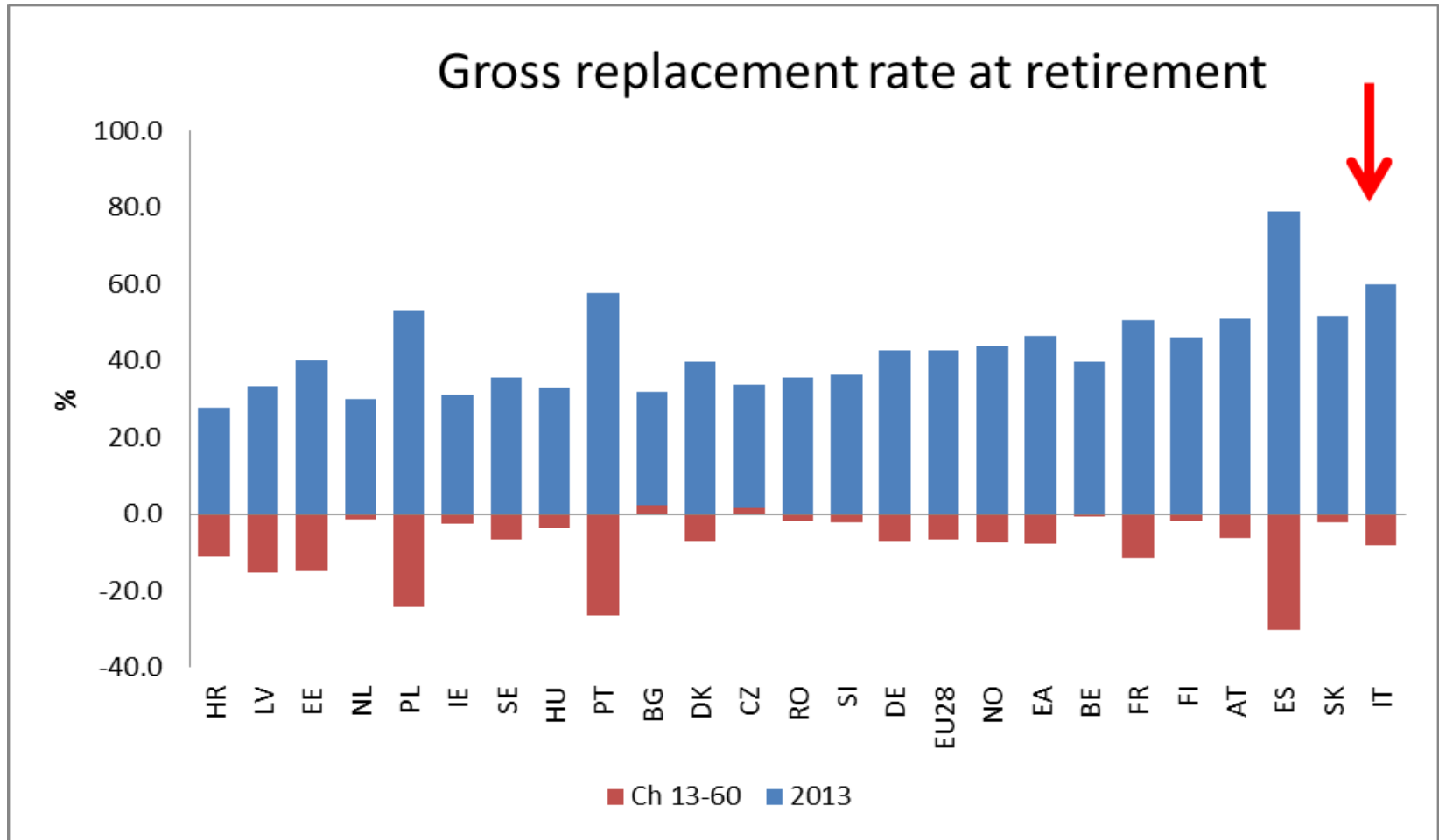


# Projected fall in pension expenditures



Source: European Commission, 2015 Ageing Report

# An aggregate measure of adequacy



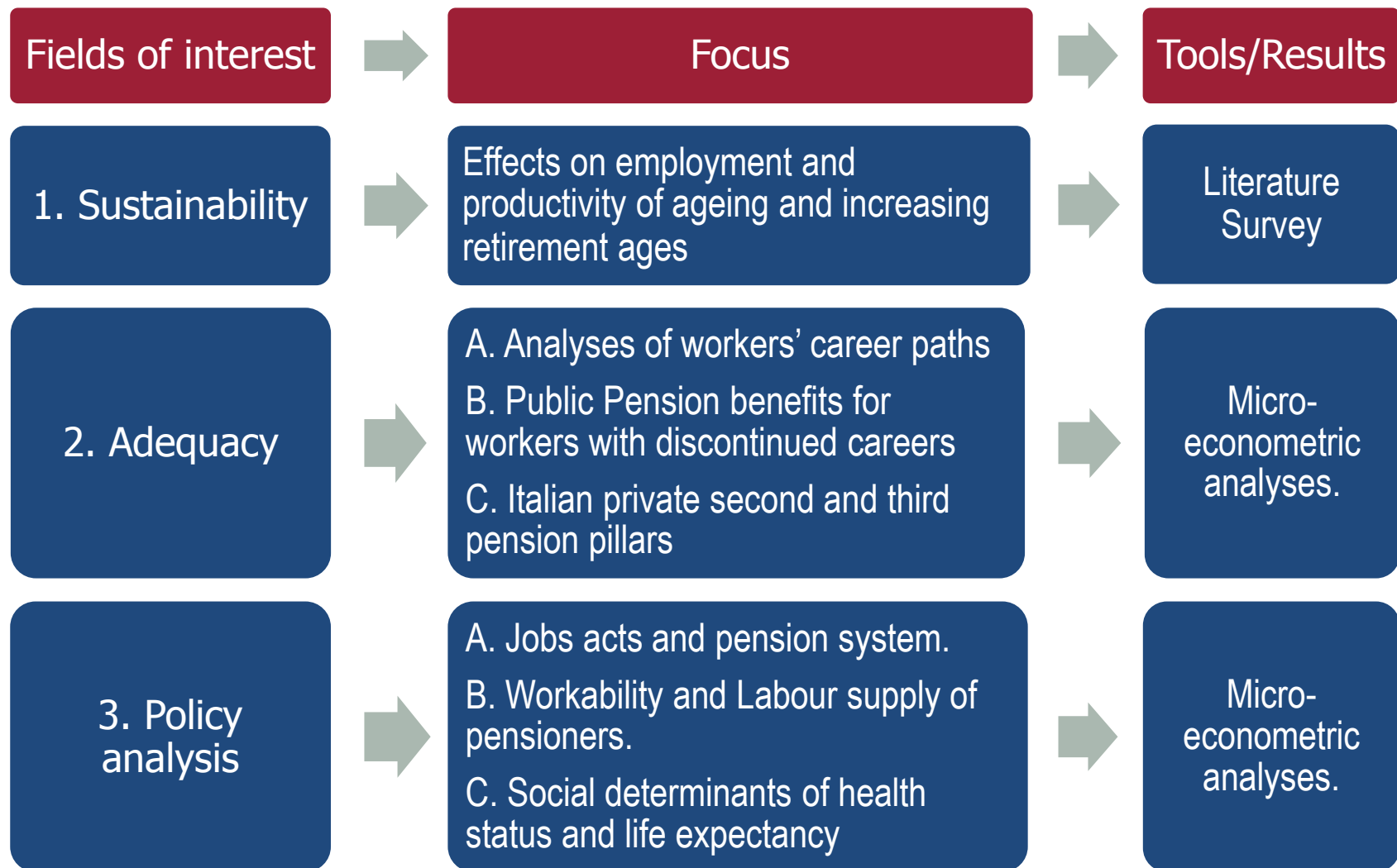
Source: European Commission, 2015 Ageing Report

# Overall purpose of the project IESS

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- The project «Improving effectiveness in social security» (IESS) aims at assessing the cost effectiveness of the Italian Pension System in the short and long run focusing on its **sustainability, adequacy** and **policy analysis**.
- IESS follows up a previous project named «Innovative Datasets and Models for Improving Welfare Policies».
- It will provide **innovative analytical tools** to improve the effectiveness of public policy evaluation.

# Main aspects of IESS

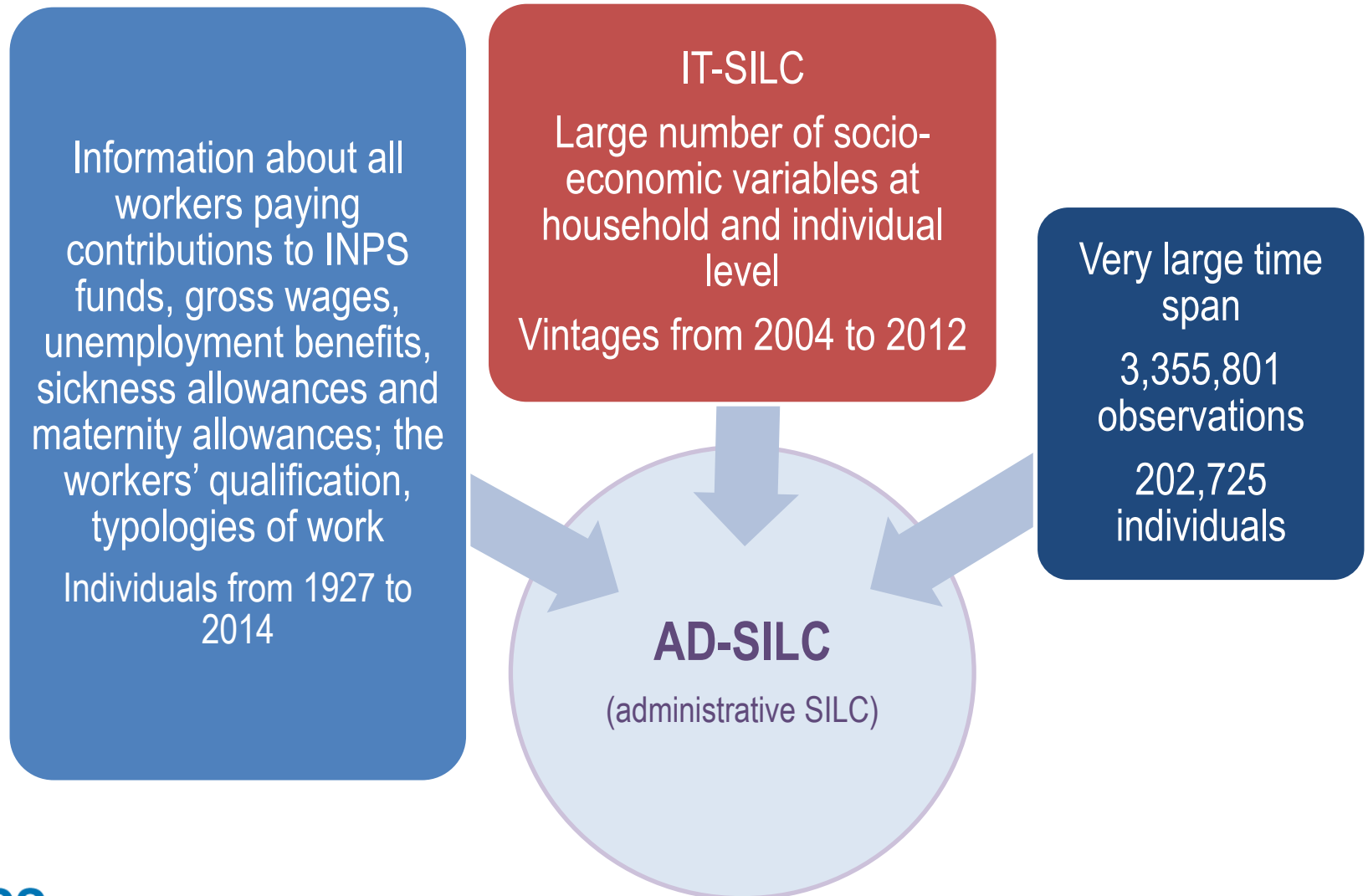


# Innovations vis-à-vis the previous project

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- Updating and extending the dataset used for the microsimulation by developing a new version of AD-SILC (Administrative SILC)
- Endogenous parameters for long run projections;
- Mortality and social-economic variables
- Improvement of the estimates relative to the labour market;
- Updating the existing modules;
- Extension and improvement of the dynamic microsimulation model T-DYMM;
- Inclusion of complementary pension savings;

# AD-SILC: Merging administrative with survey data





# Administrative vs survey datasets

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- Administrative data (INPS)
  - Advantages:** very wide coverage and very long time span
  - Limits:** only information needed for administrative modules
- Survey data (SILC)
  - Advantages:** rich information about individuals' background and socio-economic characteristics
  - Limits:** very limited sample size and short time span

# AD-SILC: Contents and features

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- AD-SILC is an unbalanced dataset containing both:
  - retrospective information on individuals' working conditions before the year of survey of SILC, and
  - forward-looking information on individuals' working conditions after the year of survey of SILC.
- Panel INPS - longitudinal data of individuals' working history since their entry in the LM: occupational status, income evolution, contribution accumulation, etc.
- Panel SILC - longitudinal data of individual socio-economic characteristics (up to 4 years): education, marital status, number of children, etc.

# AD-SILC: Use and Results for life expectancy

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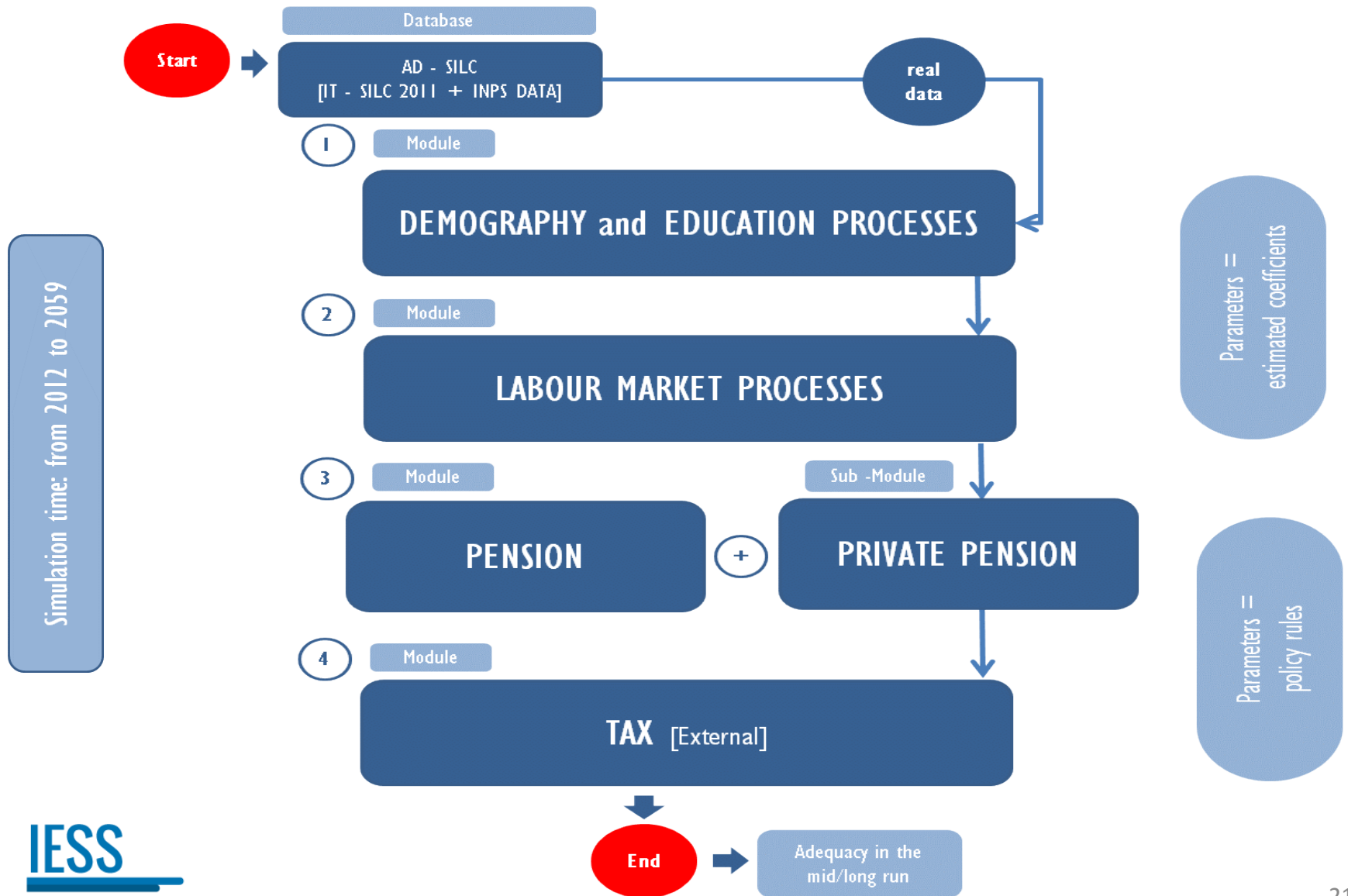
- Survival analysis (Cox Regressions) for Italy
- Measuring the instantaneous probability of death given current information and socio-economic explicative variables
- Description of life expectancy patterns
- Education and better work conditions reduce the risk of mortality
- Higher individual income reduce the risk of mortality
- Living in “poor” areas increase the risk of mortality

# AD-SILC: Use and Results for labour market

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- Transition among work statuses
- Estimation of endogenous parameter for T-DYMM
- Individual features matters
- Education and past work experience increase the probability of being employed, getting better compensations and better (permanent) work conditions;
- Family conditions (number of children, being married/single) increase inequality

# The *new* release: T – DYMM 2.0



# T-DYMM: the main tools

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- A new microsimulation platform LIAM2 ensuring increasing benefits in terms of speed and data capacity.
- A new version of the dataset AD-SILC allowing to carry out more robust analyses about the individual dynamics on the labour market and the pension accumulation in the contributory scheme and to supply a more detailed database to the micro-simulation model TDYMM.
- “Endogenous” estimation parameters

# T-DYMM: an overview of the results

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- NDC determines less generous benefits
- Over the long run, NDC produces larger reduction of richer pensions.
- Reduction inequality among pensioners
- Private and occupational pensions help richer pensioners to maintain high replacement rates. Poor pensioners do not have enough resources for contributing to private schemes.
- Current incentives to prolong working careers works only for those having stable careers.
- Need to improve labour market performance and protection (especially for those with unstable careers).

# Limits of the analysis and future developments

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- Demography → Migration module
- Labour Market → A) Sectoral specialisation of workers  
B) Endogenous Labour Demand
- Social Conditions → Households wealth  
Health conditions
- Pensions → Working pensioners



# IESS

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[www.iess-project.eu](http://www.iess-project.eu)



Il progetto IESS è finanziato dal Programma per l'Occupazione e la Solidarietà Sociale dell'Unione Europea – PROGRESS (2007-2013).  
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