

### Institute of Statistics and Demography Warsaw School of Economics



#### Population Ageing and Social Security in Europe

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UNITED NATIONS EXPERT GROUP MEETING ON CHANGING POPULATION AGE STRUCTURES

AND SUSTAINABLE DEVELOPMENT

Population Division

Department of Economic and Social Affairs

**United Nations Secretariat** 

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#### **OUTLINE**

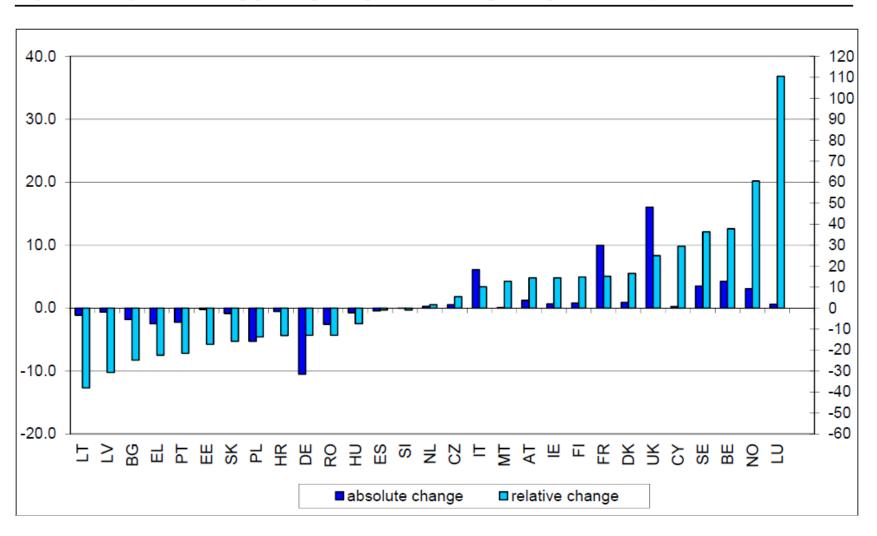
- Demographic change in Europe
- Measuring ageing and consequences of ageing
- Adequacy and sustainability of penison systems in Europe
- Life course matters: Gender Pension Gap
- Conclusions

#### DEMOGRAPHIC CHANGE IN EUROPE

- "The new demography of Europe" is driven by the lowest fertility levels combine with the continious incerases of life expectancy
- Population ageing leads to changes in the size and the age structure of population in European countries
  - According to the Eurostat the total population size between 2013 and 2060 will fall in half of the EU countries
  - The number of people in retirement age will be increasing,
     while the population in productive age will decline
  - Europe is the only continent where the number of people in working age is projected to decline

#### PROJECTIONS OF CHANGE IN THE TOTAL POPULATION

Graph I.1.12: Projection of the total population (percentage and absolute change for the period 2013-2060)

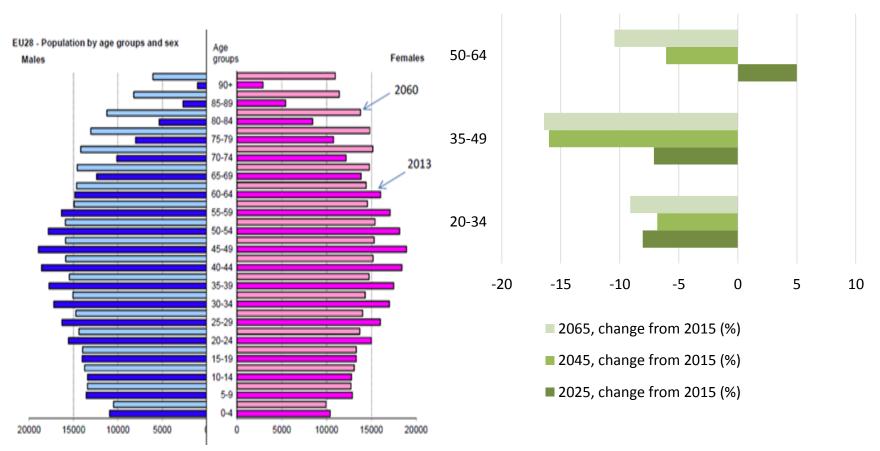


Source: Ageing Report 2015 (European Commission DG ECFIN, 2015)

### CHANGES IN THE AGE STRUCTURE OF THE EUROPEAN POPULATION

### EU 28 population by age groups and sex

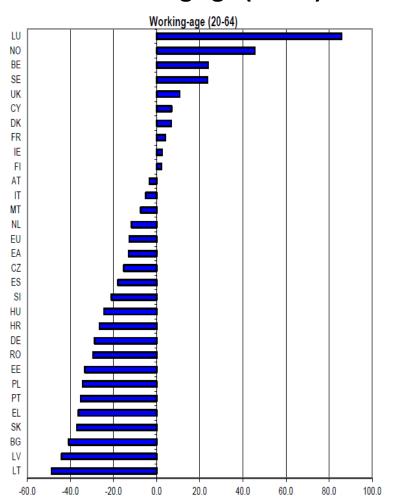
### Relative change in the working age population by age groups in EU 28



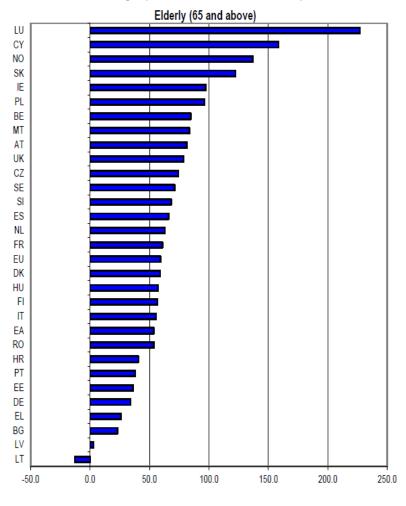
Source: Ageing Report 2015 (European Commission DG ECFIN, 2015) (left), own calculations based on Europop 2013 projection (right)

## CHANGE IN THE SELECTED AGE GROUPS OF POPULATION BY COUNTRY

#### Working age (20-64)



#### Elderly (65 and above)



Source: Ageing Report 2015 (European Commission DG ECFIN, 2015)

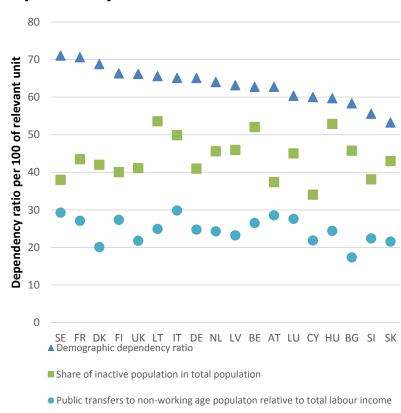
#### HOW TO MEASURE DEPENDENCY?

- With rising life expectancy, including healthy life expectancy, traditional measures of depedency do not capture actual life course choices
  - Not all younger and older people are inactive and
  - Considerable share of people in the working age population are inactive and economically dependent on others
- Age-specific economic behaviour depends on institutions: the education system, labour market policy as well as pension arrangements
- Intergenerational transfers, particularly those received by younger and older people can vary significantly

# HOW TO MEASURE DEPENDENCY? DEMOGRAPHIC VS. ECONOMIC APPROACH

Name	Definition:
Demographic dependency ratio	The population in age groups 0- 19 years and 65+ years in relation to the population aged 20-64
Share of non- employed population in total population	Non-employed population measured as total population less those that are employed (measured in full-time equivalent) divided by total population
Net public transfers to non- working age population relative to total labour income	Net public transfers (public transfer inflows – public transfer outflows) for people in age groups (0-19) and (65 and over) divided by total labour income of people in all ages

### Estimates of demographic and economic dependency in selected EU countries



## DEMOGRAPHIC CHANGE AND PUBLIC EXPENDITURE IN THE PAST TWO DECADES IN EUROPE

- Population ageing in Europe has already lead to a rising share of older people in the past 20 years.
- The cross country comparison shows that in 2014 countries that have on average older populations have also higher public spending
- At the same time, many EU countries introduced various reforms that had an impact on their public expenditure levels.

Projected increase in	Relation between the demographic change and government expenditure 1995-2014				
dependency ratios	Fiscal adjustment	Fiscal pressure	Not significant		
Very high	RO	SK PL	HU SI BG		
High	DE LU		CZ PT AT		
Medium	CY		EE ES EL NL IT LV		
Low	UK	FI	LT DK		
Lowest		FR SE	IE		

#### SOCIAL SECURITY SYSTEMS IN EUROPE

- All EU countries have well developed social security systems
- These are mostly mandatory, pay-as-you-go or with mixed financing schemes.
- The type of pension provision varies from (the most popular) defined benefit schemes, through various types of point systems to (notional) defined contributions.
- The average pension spending in the EU countries in 2013 was 11.2% of GDP, ranging from 7.2% of GDP in Latvia to 16.2% of GDP in Greece

#### EU AND NATIONAL LEVEL PENSION POLICIES

- The development of social protection policies is the responsibility of each Member State
- Since 2003 in the area of pensions, this is supported by the "soft policy tool", that is open method of coordination process (OMC) that supplement the legislative and financial instruments of social policy
  - Used to support the definition, implementation and evaluation of their social policies
  - Helps to develop mutual cooperation
  - Based on common objectives and indicators
- In the area of pensions, the OMC objectives include guaranteeing **adequate** and **sustainable** pension systems.

## THE WHITE PAPER ON ADEQUATE, SAFE AND SUSTAINABLE PENSIONS

- Published by the European Commission in 2012
- Puts forward a range of initiatives to face the population ageing challenge, such as:
  - to create the right conditions so that those who are able can continue working to reach a better balance between time in work and time in retirement;
  - to ensure people who move to another country can keep their pension rights;
  - to help people save more and ensure that pension promises are kept and people get what they expect in retirement.
- One of the important policy responses that are recommended by the Commission is the shift of legal retirement ages in line with life expectancy changes

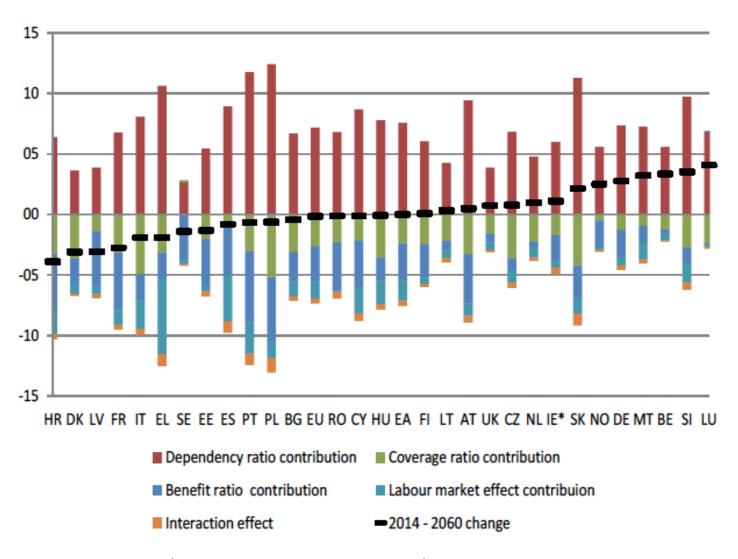
## Monitoring Adequacy and Sustainability of Pensions in Europe

- Adequacy and sustainability are two sides of the same coin
- Pension systems need to provide adequate incomes for old-age, otherwise they would not be socially sustainable
- Fiscal sustainability is needed to maintain sound economic foundations of pension systems based on inter-generational contract

#### Measuring Sustainability and Adequacy

- Every three years (last time in 2015), both sustainability and adequacy are assessed using macroeconomic and microeconomic projections
- Ageing Reports, prepared by the Ageing Working Group of the Economic Policy Committee focus on the impact of population ageing on public finance, including pensions
- Pension Adequacy Reports, prepared by the Social Protection Committee and DG Employment focus on the current and projected levels of pensions

## WHAT DRIVES FUTURE PENSION SPENDING IN THE EU COUNTRIES?



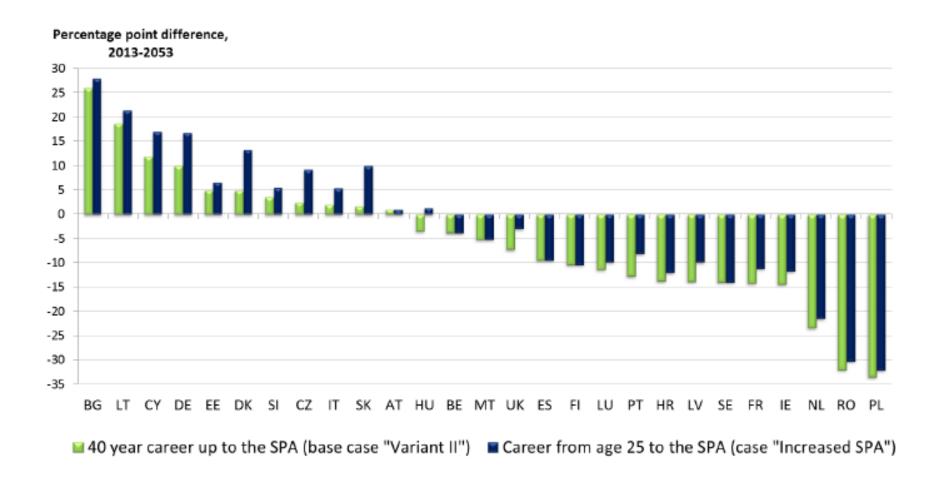
Source: Ageing Report 2015 (European Commission DG ECFIN, 2015)

#### Pension Adequacy Monitoring

- Mesured by the calculation of current and prospective theoretical replacement rates (TRRs) for stylised working careers
- Projections of individual pensions and the change of replacement rates between current retirees and the future ones, who start their working careers and work to standard pensionable age (SPA)
- Standard case: people who work 40 years to standard pensionable age (i.e. from 25 to 65)
- The prospective TRRs range from 30 to more than 87 per cent of average earnings (depending on the country)

		Gross prospective Theoretical Replacement Rates  at average earnings							
Member State	Base Case I		Base Case II		Increase in SPA		SPA in 2053		
	age 25 to 65		40 years to SPA		age 25 to SPA				
	men	women*	men	women*	men	women*	Men	women*	
BE	49.5		49.5		49.5		65.0 ***		
BG	62.5	68.1	62.5 65.0		62.5	56.7	65.0	63.0	
CZ	38.3		43.8		46.3		68.3		
DK	n.a.		63.5		71.4		72.0		
DE	49.5		49.2		56.1		67.0		
EE	46	5.7	46.7		46.7		65.0		
ΙE	29	).9	62.7		65.8		68.0		
EL	47	1.2	46.1		47.2		62.0		
ES	79	).5	79	.5	7	9.5	65.0		
HR	27	1.9	29	29.0		30.2		67.0	
FR	50	).4	55.6		58.1		67.0		
IT	60	).7	73.0		80.1		70.3		
CY	n.a.		61.0		66.0		68.5		
LV	43	3.9	43.9		43.9		65.0		
LT	53.9		53.9		53.9		65.0		
LU	83	83.6		78.6		70.3		60.0 **	
HU	53	3.7	53	.7	5	3.7	65.0		
MT	60	60.8		60.8		60.8		65.0	
NL	42	2.8	87.9		90.0		67.0		
AT	71	.2	71	71.2		71.2		65.0	
PL	31	.8	34.4		36.8		67.0		
PT	52	2.1	63.5		67.6		68.4		
RO	31.8	34.0	31.8	31.0	31.8	30.2	65.0	63.0	
SI	38.7	40.7	38.7	40.7	38.7	40.7	6	0.0	
SK	46.7		51.8		54.6		66.0		
FI	50.8		50.8		50.8		65.0		
SE	55.1		55.1		55.1		65.0		
UK	26.8		60.0		63.8		68.0		

### DIFFERENCE BETWEEN CURRENT AND PROSPECTIVE THEORETICAL REPLACEMENT RATES



#### LIFE COURSE DEVELOPMENTS AND PENSION LEVELS

- The projections of individual pension rights with the use of the TRRs are based on the assumption of long working careers without breaks.
- In reality people have more diversified life courses, including career breaks due to unemployment, parenthood or other developments
- This particularly concerns women, who usually need to reconcile both work and family lives
- With pension systems that tend to favour longer careers and higher wages, this leads to increased risk of pension gap between men and women

### Measuring Current and Future Gender Pension Gap

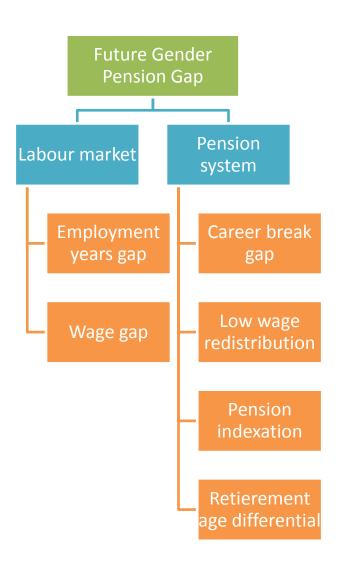
#### **Current pension gap**

- measured as a difference between pension income of men and women
- assessed using standardised survery: EU Survey on Income and Living Conditions

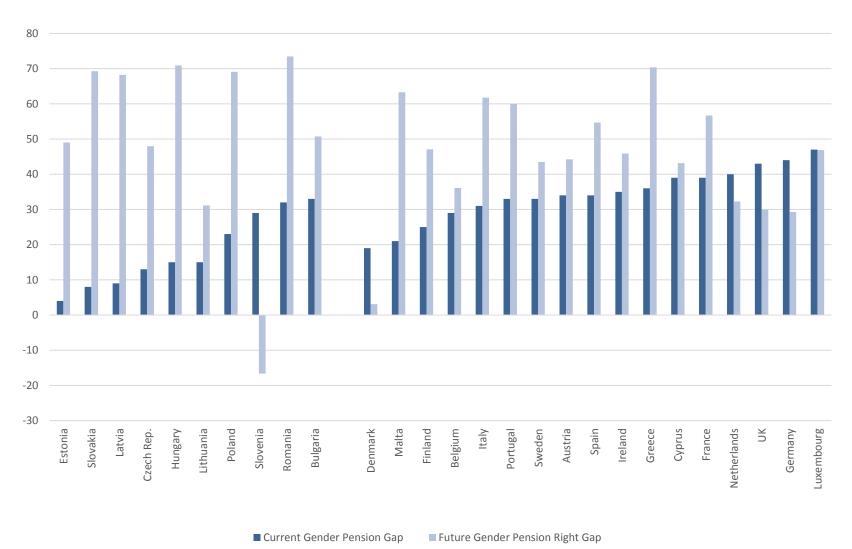
#### **Future pension gap**

- based on the set of indicators that includes those linked to the labour market developments as well as pensions systems' ones
- Based on harmonised measurement for EU countries in regular time intervals

### FACTORS INCLUDED IN THE ASSESSMENT OF THE FUTURE GENDER PENSION GAP



# CURRENT AND FUTURE GENDER PENSION GAP COMPARED



Source: (Bettio et al., 2012) and (Chłoń-Domińczak, 2013)

#### **CONCLUSIONS**

- Population ageing poses a significant challenge for the social security systems in Europe
- The two objectives for pension systems' design are sustainability and adequacy of benefits
- Many countries introduce reforms that aim at maintaining the stability of the pension systems in the future
  - increasing effective pension age and legal pension age
  - benefit formulae are changed, as they tend to take into account the entire working lives and wage levels
- The policy monitoring tools that exist in Europe encourage reforms that aim at maintaining stability of pension systems in the long-time horizon
- Such policies frequently encourage longer working lives and postponed retirement, which increase risk of low old-age income of women.
- Balanced and forward-looking structural reforms are important to face the ageing challenge aiming at:
  - increasing productivity and high labour market participation
  - reconciliation of family and working lives