

Removing barriers from work and social participation in older ages. How far can we go?

Despina Gherman

Associate professor ,

University of Medicine and Pharmacy “Carol Davila” București

The National Institute for Work Capacity Assessment and Rehabilitation



Conflict of interests

I have no potential conflict of interest to report

Content

- **An overview on aging**
- **The biology of aging**
- **Demography. The European context**
- **Active aging**
- **Work at older ages**
- **Conclusions**



An overview on aging

The European Union decided to designate 2012 "European Year for Active Ageing and Solidarity between Generations".

“The world population is aging”

“The share of elderly people continues to increase”

“The global population aged 60 years or over is more than twice as large as in 1980”

“In 2050, older persons are expected to account for one in five people globally”

- **Life expectancy**
- **Fertility rates**
- **Migration**

Definition and perception

□ Gerontologists :

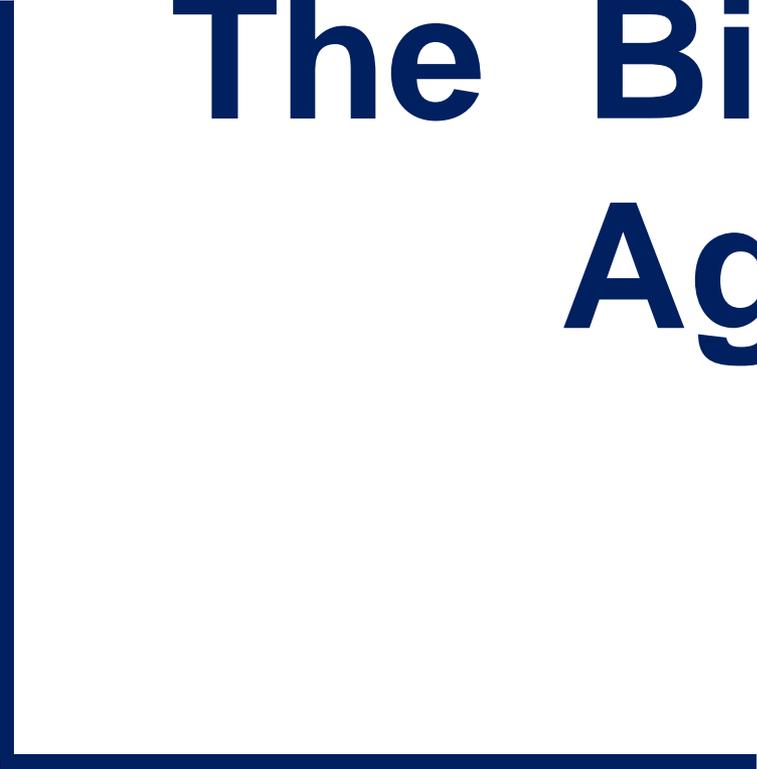
1. Chronological aging
2. Biological aging
3. Psychological aging
4. Social aging

	SK	57,7
	NL	70,4
	RO	60,5

□ Perception of aging – part of society’s culture

□ UN – cutoff **60 +**, ”older”, “elderly”

□ EU – The Active Aging Report 2012, average
63,9 years



The Biology of Aging

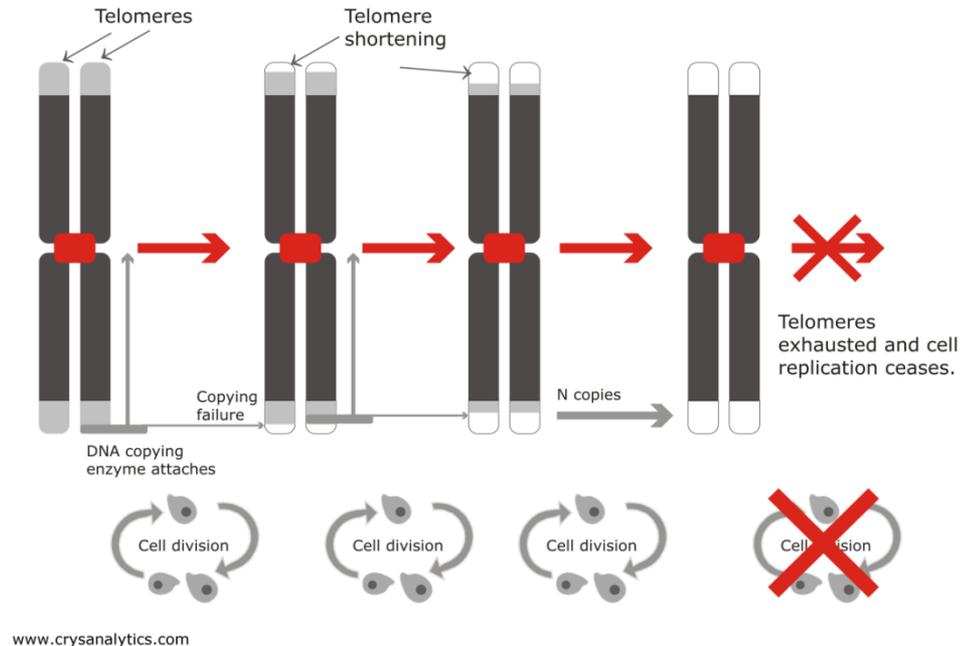
The Biology of Aging - a brief review -

1. Theories of aging

- Mutation accumulation
- Antagonistic pleiotropy
- Disposable soma theory

2. Mechanisms of aging

- Cell turnover and senescence
- Telomere shortening
- Oxidative stress
- Mitogen activated protein Kinase (MAPKs)
- Nutrient sensing (m-TOR pathway)



Frailty in Aging

- Increased vulnerability to adverse outcome (endogenous and exogenous stressors)
- State of multidimensional nature
- Risk stratification paradigm
- Fits well with biopsychosocial model
- “Frailty syndrome” = pre-disability condition. **Reversible! Interventions !**

Measuring frailty- The Frailty Index

Frailty Phenotype Criteria*

1. Unintentional weight loss of >10 lbs (≥ 4.5 kg) or $\geq 5\%$ of body mass in the last year
2. Weakness
3. Exhaustion
4. Slow gait
5. Low physical

*Fried LP et al., 2001

Subclinical and clinical key components of frailty*

1. Inflammation
2. Oxidative damage
3. Body composition modifications
4. Comorbidities
5. Poor lifestyle behaviors

*Cesari, 2012

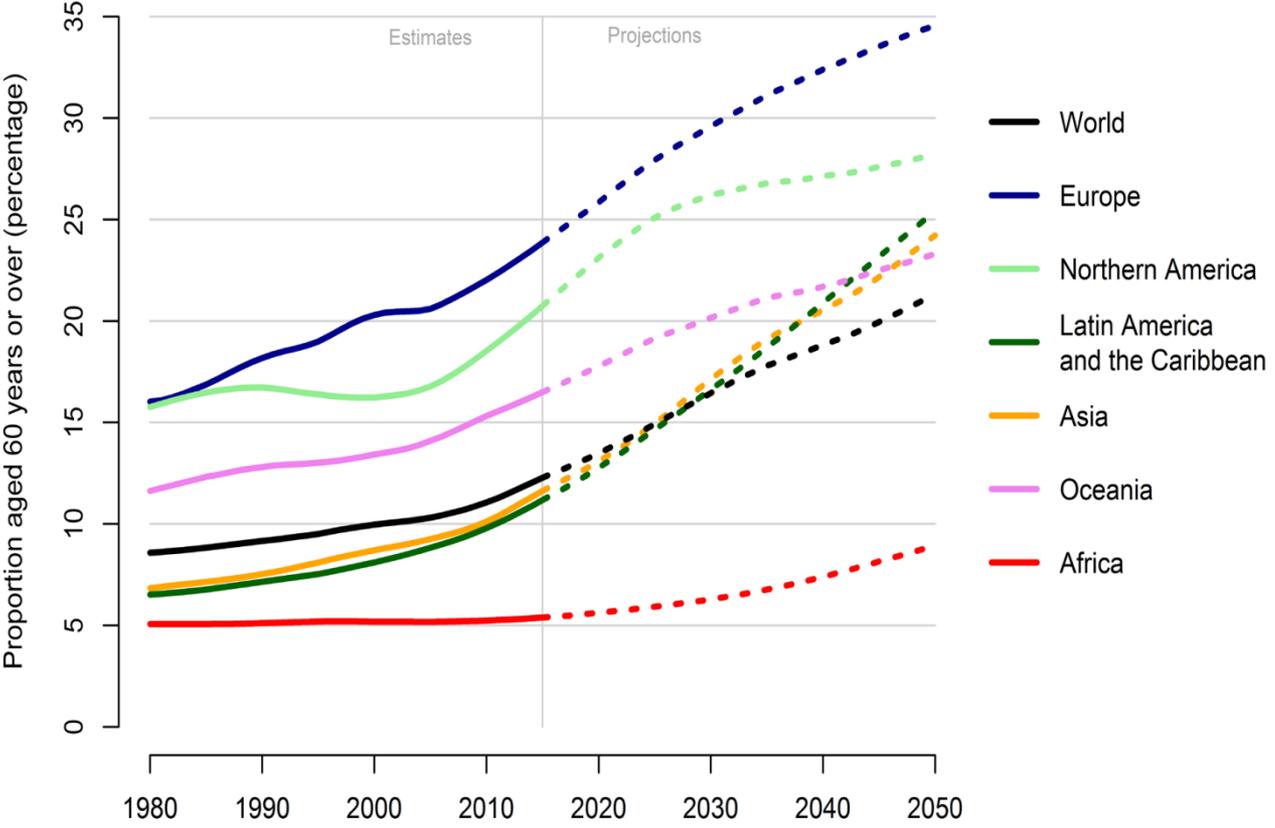
Measuring frailty- The ICF

- **Components in the WHO- ICF framework are interrelated and affect the personal level of participation restriction**
- **Explain the variance in participation restriction among frail older adults**
- **Argument that the participation restriction is multifactorial in etiology**



Demography

Percentage of population aged 60 years or over by region, from 1980 to 2050



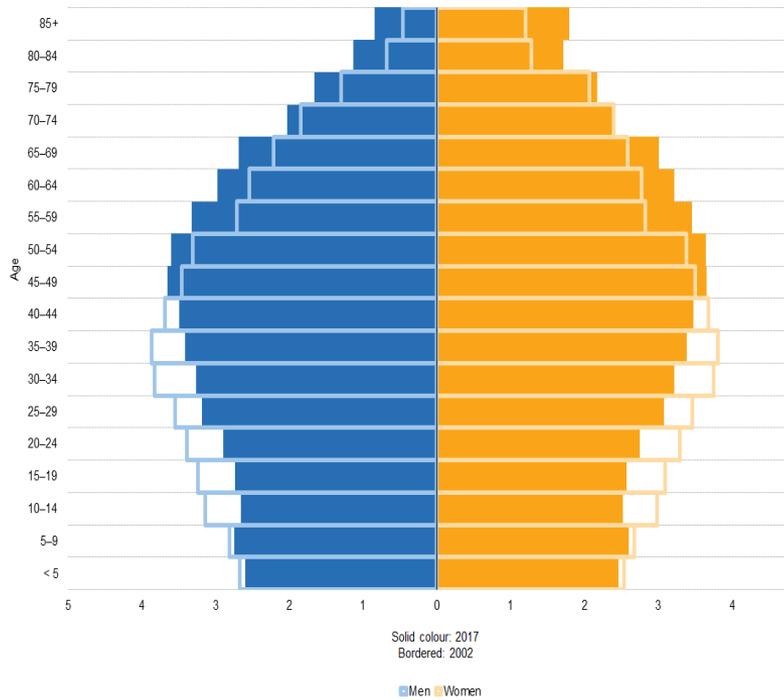
World Population Ageing 2017 Highlights
 United Nations
 New York, 2017



Data source: United Nations (2017). World Population Prospects: the 2017 Revision.

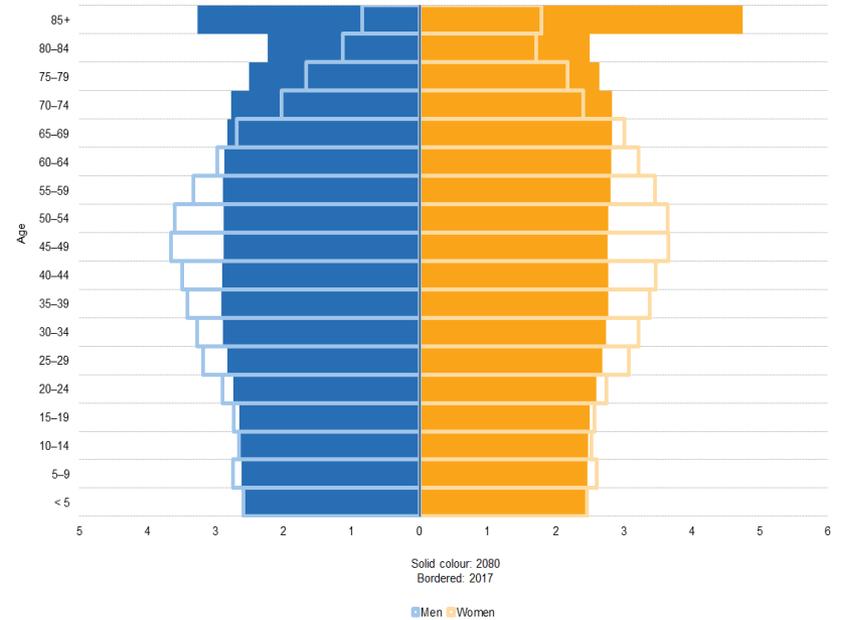
Population aging trends in EU

Population pyramids, EU-28, 2002 and 2017
(% of the total population)



Note: Break in series. 2017: estimate, provisional.
Source: Eurostat (online data code: demo_pjangroup)

Population pyramids, EU-28, 2017 and 2080
(% of the total population)



Note: 2017: estimate, provisional. 2080: projections (EUROPOP2015).
Source: Eurostat (online data codes: demo_pjangroup and proj_15npms)

Population age structure by major age groups in 2007 and 2017 (% of the total population)

	0–14 years old		15–64 years old		65 years old or over	
	2007	2017	2007	2017	2007	2017
EU-28 (*) (*)	15.9	15.6	67.1	64.9	17.0	19.4
Belgium (*)	17.0	17.0	66.0	64.6	17.1	18.5
Bulgaria		14.1	69.1	65.2	17.6	20.7
Czech Repu		15.6	71.1	65.7	14.5	18.8
Denmark		16.7	66.1	64.3	15.3	19.1
Germany (*)		13.4	66.3	65.4	19.8	21.2
Estonia (*)		16.2	67.9	64.4	17.3	19.3
Ireland (*)		21.1	68.9	65.4	10.8	13.5
Greece		14.4	66.7	64.0	18.6	21.5
Spain		15.1	68.9	66.0	16.5	19.0
France (*)		18.3	65.2	62.5	16.3	19.2
Croatia (*)		14.5	66.7	65.8	17.7	19.6
Italy		13.5	65.7	64.1	20.1	22.3
Cyprus		16.3	68.8	68.1	12.4	15.6
Latvia		15.6				
Lithuan		14.8				
Luxembourg (*)	18.3	16.2				
Hungary (*)	15.2	14.5				
Malta	16.6	14.1	69.5	67.0	13.9	18.8
Netherlands	18.1	16.3	67.4	65.2	14.5	18.5
Austria	15.6	14.4	67.5	67.1	16.9	18.5
Poland (*)	15.8	15.1	70.8	68.3	13.4	16.5
Portugal	15.7	14.0	66.7	64.9	17.5	21.1
Romania	16.9	15.6	68.4	66.6	14.7	17.8
Slovenia (*)	14.0	14.9	70.1	66.2	15.9	18.9
Slovakia	16.2	15.5	71.8	69.5	12.0	15.0
Finland	17.1	16.2	66.5	62.8	16.5	20.9
Sweden	17.0	17.6	65.6	62.6	17.4	19.8
United Kingdom	17.8	17.8	66.3	64.1	15.9	18.1
Iceland	21.3	19.7	67.1	66.2	11.6	14.0
Liechtenstein	17.1	14.9	71.0	68.2	11.9	17.0
Norway	19.4	17.8	66.0	65.5	14.6	16.6
Switzerland (*)	15.8	14.9	68.1	67.1	16.2	18.1
Montenegro	20.1	18.2	67.0	67.4	12.9	14.4
The former Yugoslav Republic of Macedonia (*)	18.9	16.6	69.8	70.2	11.2	13.3
Albania	24.9	18.2	66.3	68.7	8.8	13.1
Serbia (*)	15.6	14.4	67.2	66.3	17.2	19.4
Turkey	26.6	23.7	66.6	68.0	6.8	8.3

Germany 21,2 %

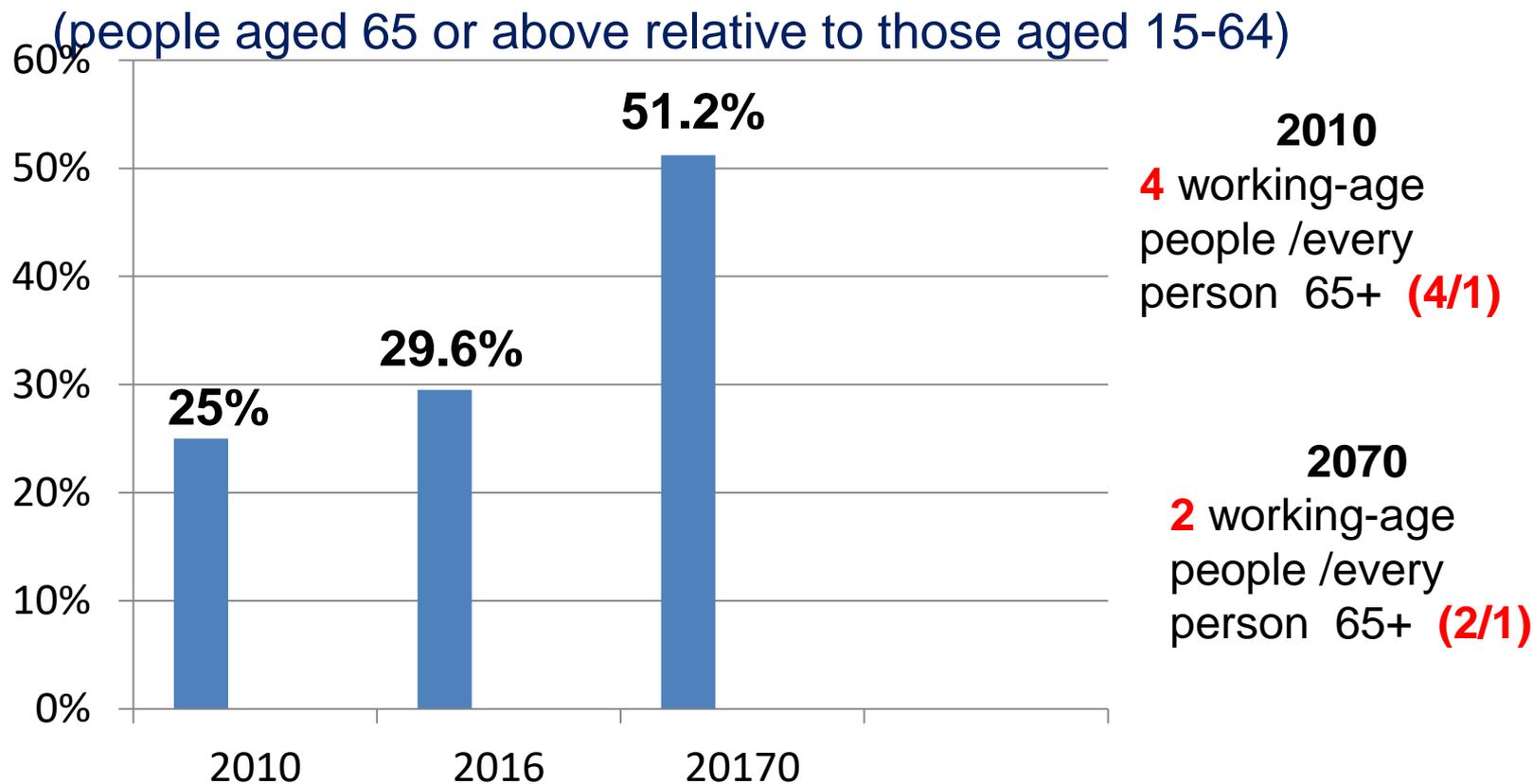
Ireland 13,5 %

Italy 22,3 %

65 years and over 2017

Source: Eurostat (online data code: demo_pjanind)

The demographic old- age dependency ratio



Source: The 2018 Aging Report, Underlying Assumptions and Projection Methodologies

https://ec.europa.eu/info/publications/economic-and-financial-affairs-publications_en.



European Commission

ISSN 2449-6014 (online)

The 2018 Ageing Report

Economic & Budgetary Projections for the 28 EU Member States (2016-2070)

INSTITUTIONAL PAPER 079 | MAY 2018



Source: Commission Services based on Eurostat 2015-based population projections

	Old-age dependency ratio (65+/15-64)		
	2016	2060	2070
BE	28.4	43.5	45.2
BG	31.5	63.0	56.2
CZ	28.1	55.7	49.7
DK	29.5	45.0	50.2
DE	32.2	55.1	55.9
EE	29.7	55.7	52.7
IE	20.9	44.2	41.2
EL	33.4	67.2	63.1
ES	28.6	53.2	46.6
FR	30.4	43.3	44.8
HR	29.3	53.7	56.2
IT	34.5	61.0	60.3
CY	22.2	55.7	61.0
LV	30.5	65.2	53.8
LT	29.0	63.9	53.1
LU	20.6	44.6	48.9
HU	27.5	53.2	52.0
MT	29.1	53.9	55.8
NL	28.1	44.3	48.4
AT	27.6	51.3	54.4
PL	23.7	64.9	62.2
PT	32.1	64.9	67.2
RO	26.3	56.7	52.8
SI	28.1	55.0	50.2
SK	21.0	59.4	56.8
FI	32.8	49.7	52.0
SE	31.6	42.7	43.2
UK	27.9	43.5	46.0
NO	25.2	44.1	47.2
EA	30.9	52.3	51.8
EU*	29.6	51.6	51.2
EU27	29.9	53.1	52.2

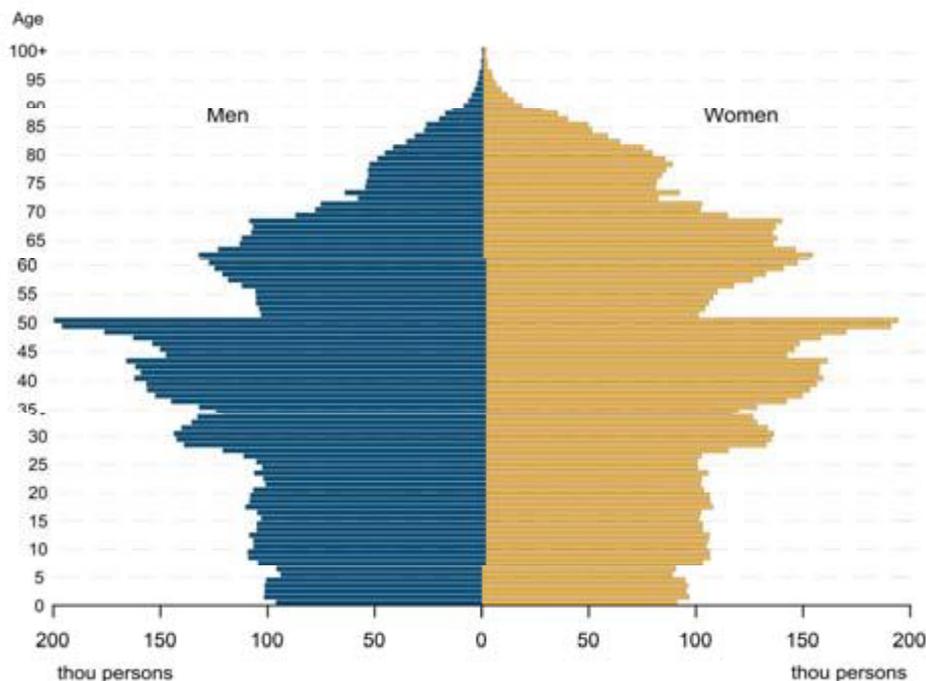


ROMANIA

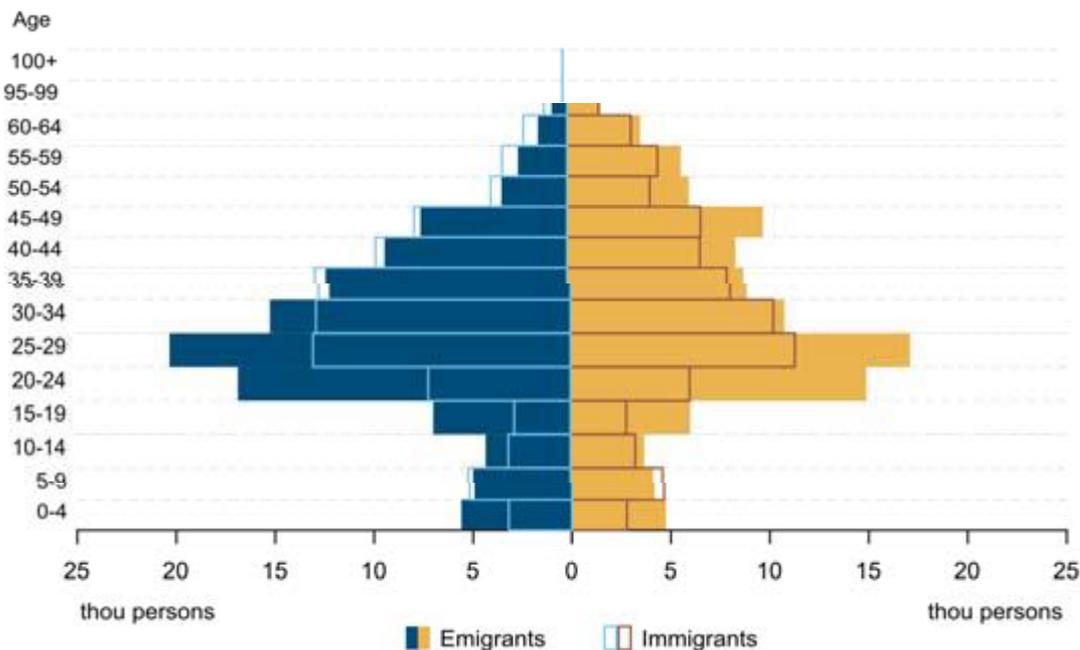
NATIONAL INSTITUTE
OF STATISTICS

www.insse.ro

PRESS RELEASE

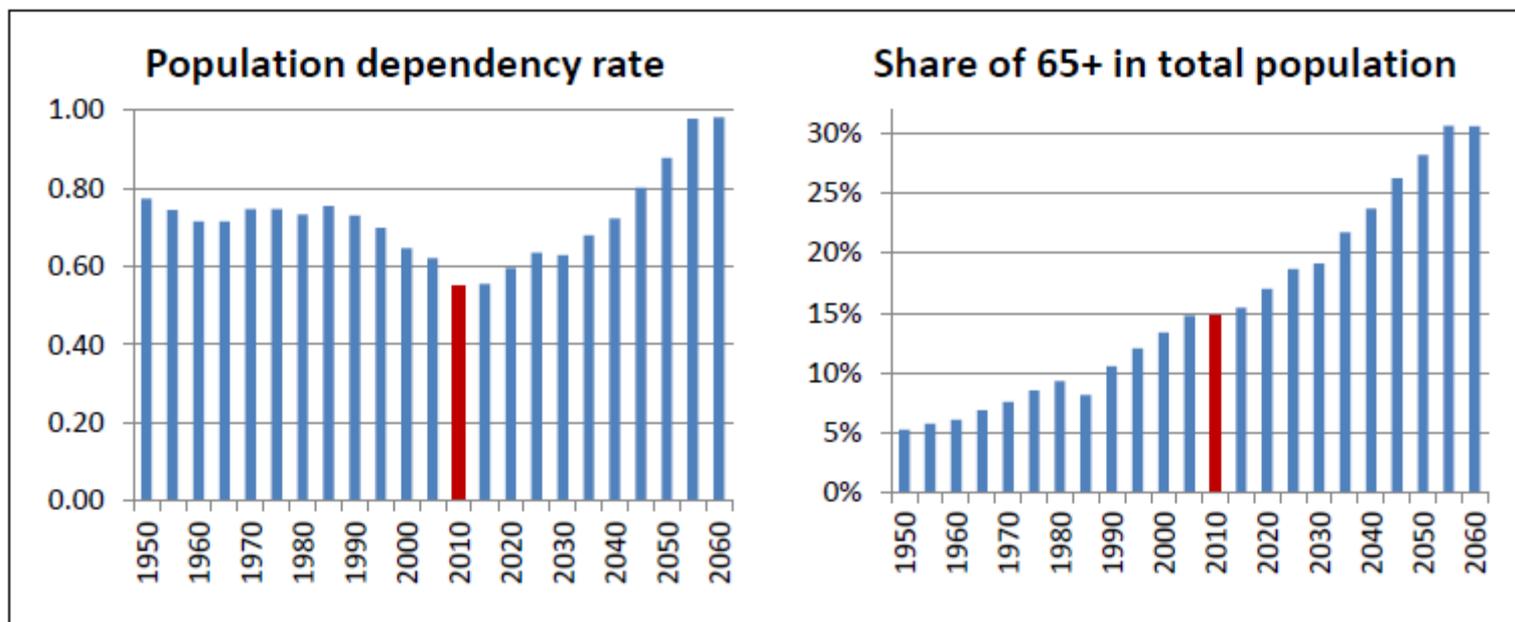


Usually resident population by gender and age on 1st January 2018



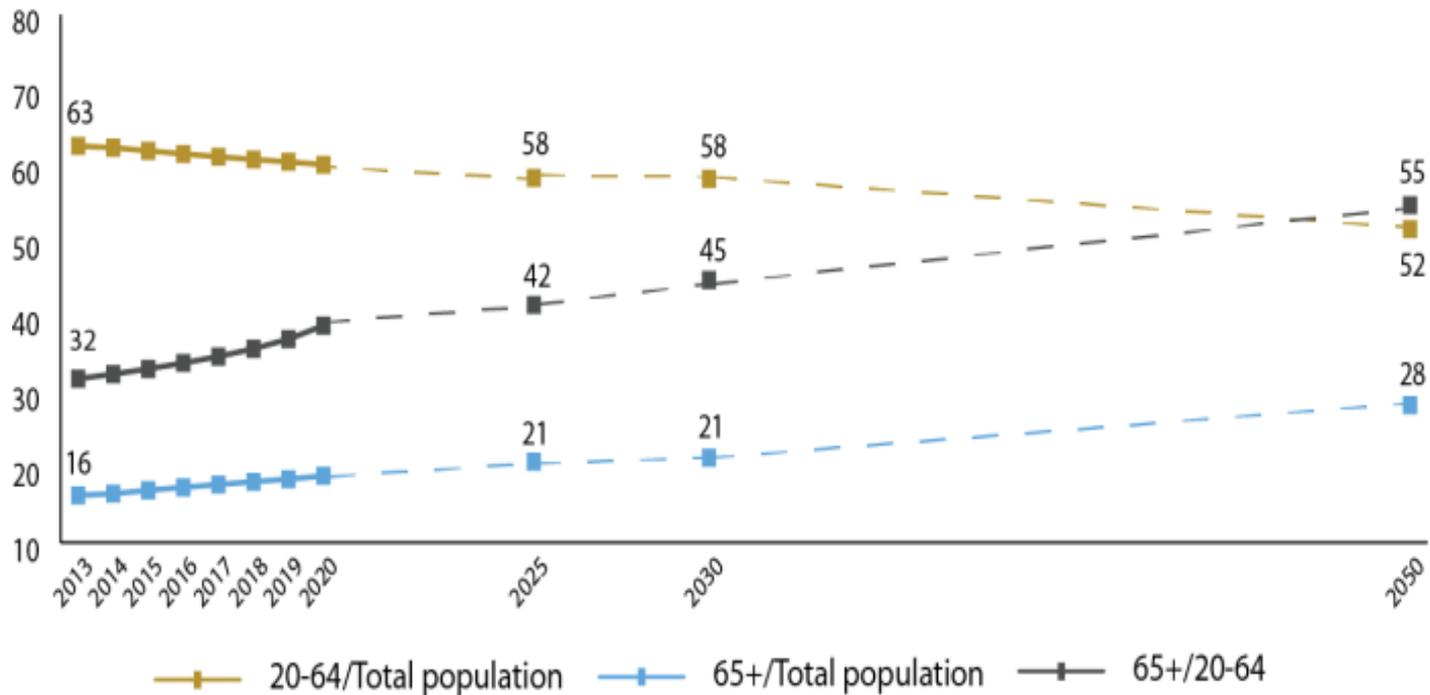
Long-term temporary international migration by gender and age group

Trends in Population Dependency Rate and Share of 65+ Population



Source: Living long, staying active and strong : Promotion of Active Aging in Romania, World Bank, (based on UN population statistics), 2014

Projected Changes in Age Composition of Romanian Society



Source: EU Population Projections

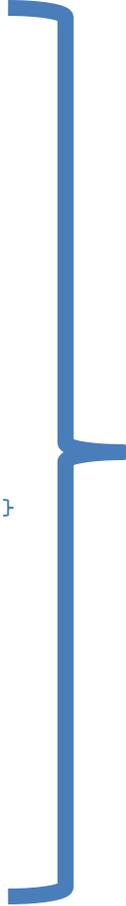
Source: Inputs for the Preparation of a Draft National Strategy and Action Plan on Social Inclusion and Poverty Reduction (2014–2020).



Active Aging

“Aging well“

- **Successful aging**
- **Active aging**
- **Healthy aging**
- **Positive aging**
- **Productive aging**
- **Competent aging**



**Activity
perspective**

“ACTIVE AGING”

- **A link between activity and health (WHO, 1994)**
- **Mental and physical well-being**
- **Autonomy and participation in social, economic, cultural, spiritual and civic affairs**
- **Quality of life**

“SUCCESSFUL AGING”

- **Individualistic concept**
- **Clinical/medical based criteria**
 - low probability of disease and disability
 - high cognitive and physical functional capacity
 - active engagement with life

Rowe & Kahn, 1997

ACTIVE AGING

Definition

“*Active aging* refers to the situation where people continue to participate in the formal labor market, as well as engage in other unpaid productive activities (such as care provision for family members and volunteering), and live healthy, independent and secure lives as they age” *

MULTIDIMENSIONAL CONCEPT OF AGING

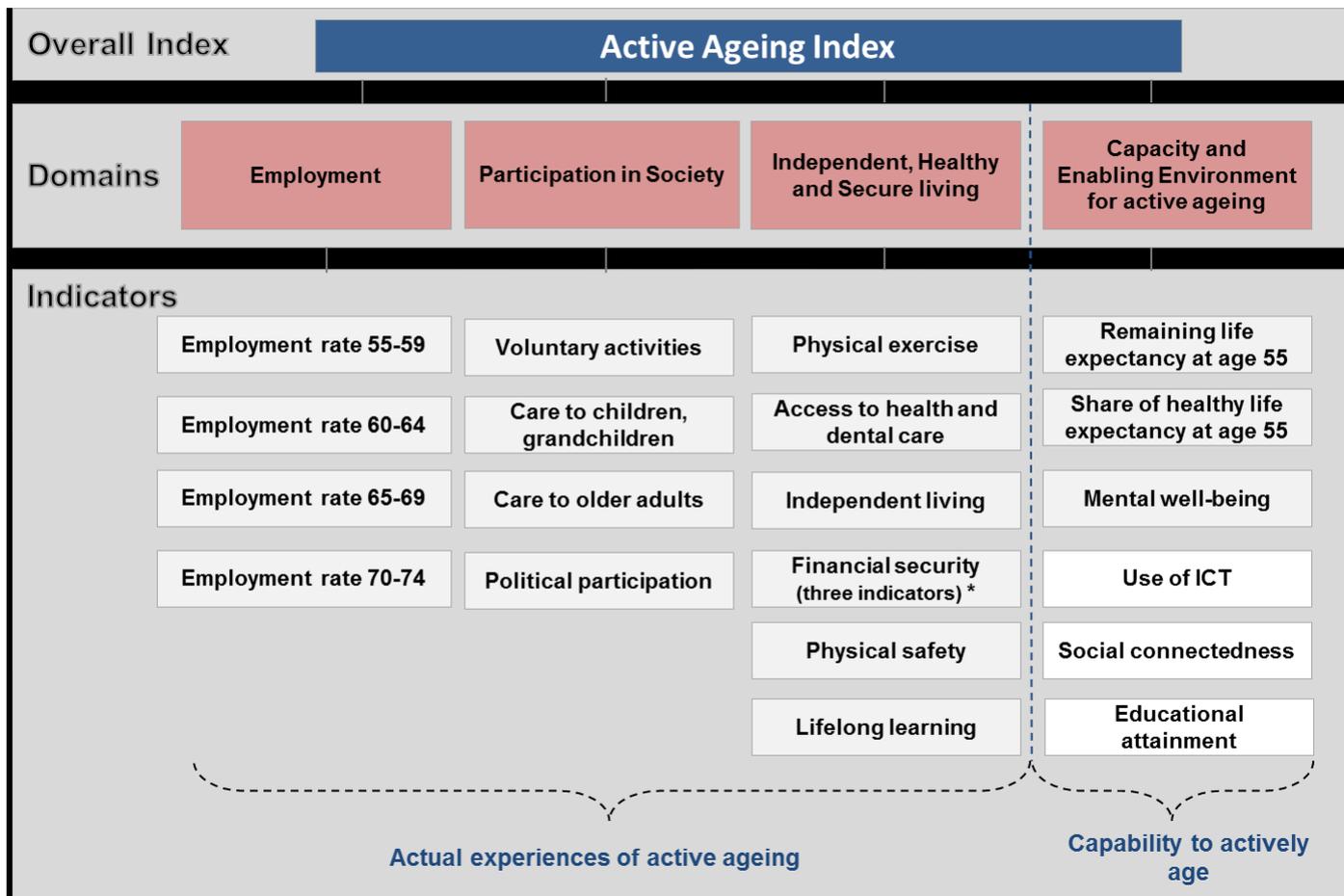
*** 2012, European Centre for Social Welfare Policy and Research in Vienna in close collaboration with, and advice from, the European Commission's Directorate General for Employment Social Affairs and Inclusion and the UNECE.**

Active aging index (AAI)

- **Developed in the context of the "European Year for Active Ageing and Solidarity between Generations".**
- **Analitical tool that aims to monitor (and compare) active ageing outcomes at different levels: international, national, and subnational**
- **To monitor the progress made as a result of policies designed in response to the challenge of population aging**
- **To identify areas of improvement**

The active aging index (AAI)

Employment, Social Affairs & Inclusion



Composite indicator

- 24 indicators
- 4 domains

Ranking EU countries, on the basis of the overall AAI and the domain specific indices

OVERALL	Employment	Social participation	Independent living	Capacity for active ageing
1 Sweden	1 Sweden	1 Ireland	1 Denmark	1 Sweden
2 Denmark	2 Cyprus	2 Italy	2 Sweden	2 Denmark
3 Ireland	3 UK	3 Luxembourg	3 Netherlands	3 Netherlands
4 UK	4 Portugal	4 Sweden	4 Finland	4 Luxembourg
5 Netherlands	5 Estonia	5 France	5 Germany	5 UK
6 Finland	6 Denmark	6 Netherlands	6 UK	6 Ireland
7 Cyprus	7 Finland	7 Finland	7 Ireland	7 Finland
8 Luxembourg	8 Netherlands	8 Austria	8 Luxembourg	8 Belgium
9 Germany	9 Romania	9 Belgium	9 France	9 France
10 Austria	10 Germany	10 Denmark	10 Slovenia	10 Austria
11 Czech Rep	11 Ireland	11 UK	11 Czech Rep	11 Germany
12 France	12 Latvia	12 Czech Rep	12 Belgium	12 Spain
13 Portugal	13 Lithuania	13 Cyprus	13 Austria	13 Malta
14 Belgium	14 Czech Rep	14 Spain	14 Hungary	14 Czech Rep
15 Italy	15 Austria	15 Malta	15 Lithuania	15 Italy
16 Estonia	16 Bulgaria	16 Slovenia	16 Romania	16 Bulgaria
17 Spain	17 Greece	17 Hungary	17 Malta	17 Cyprus
18 Lithuania	18 Spain	18 Lithuania	18 Estonia	18 Portugal
19 Malta	19 Slovenia	19 Germany	19 Italy	19 Slovenia
20 Romania	20 Luxembourg	20 Portugal	20 Cyprus	20 Lithuania
21 Slovenia	21 France	21 Greece	21 Poland	21 Estonia
22 Latvia	22 Italy	22 Latvia	22 Spain	22 Poland
23 Bulgaria	23 Slovakia	23 Slovakia	23 Slovakia	23 Greece
24 Greece	24 Poland	24 Estonia	24 Portugal	24 Slovakia
25 Hungary	25 Belgium	25 Romania	25 Greece	25 Hungary
26 Slovakia	26 Malta	26 Bulgaria	26 Bulgaria	26 Latvia
27 Poland	27 Hungary	27 Poland	27 Latvia	27 Romania

AAI at the local level

- The Peer Review “The Active Aging Index at the local level”, held in Germany , 2016
- Questionnaire answered by the peer countries



National legislation on elderly's health & social assistance (MOLSJ)

- National Strategy for Promoting Active Aging and the protection of Elderly
- Strategic Action Plan 2015-2020(Government Decision)
- “Living Long, Staying Active and Strong : Promotion of AA in Romania (WB, 2014)

- At the central level strong commitment to the active aging agenda
- At the local level- insufficient knowledge and awareness of the active aging concept and the AAI

AAI at the individual level

Selfie aging index (SAI)*

- Based entirely on self- assessed indicators
- Multidimensional assessment for active and healthy aging
- Refined indicators: being employed, looking after grand children, worrying about vandalism and crime , Internet use

***Goncalves J., et al., 2017**

Work at older ages

- **Physical changes**
- **Learning and cognition**
- **Motivation**
- **Employability and demand**
- **Health and safety at work**
- **Work ability**

The work ability model

I. Individual resources

- Health and functional capacities (physical, mental, social)
- Education and competence
- Values and attitudes
- Motivation

II. Work-related aspects

- Work demands (physical, mental)
- Work community and management
- Work environment

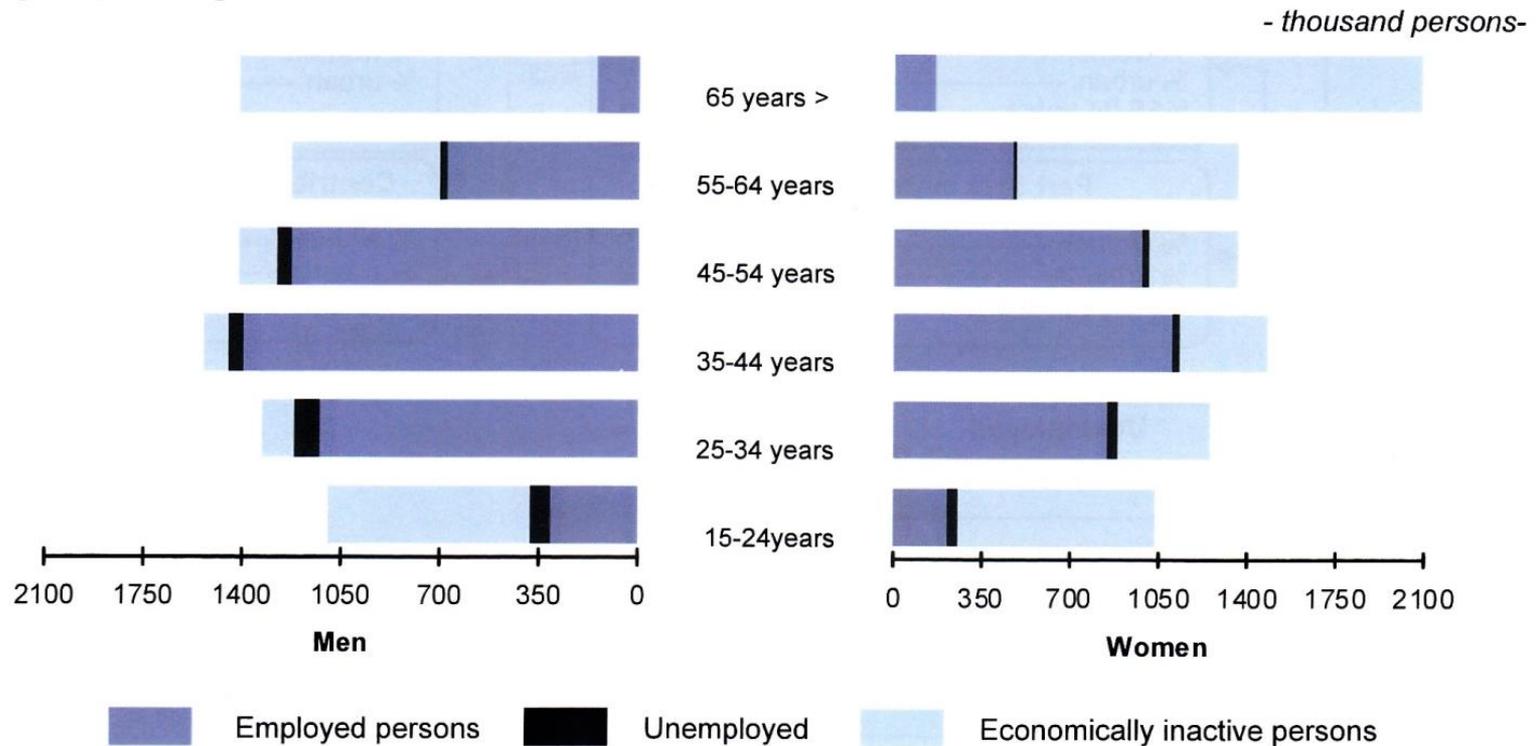
Illmarinen, J, 2009

Berg, van den T.I. et al. , 2009

Removing barriers

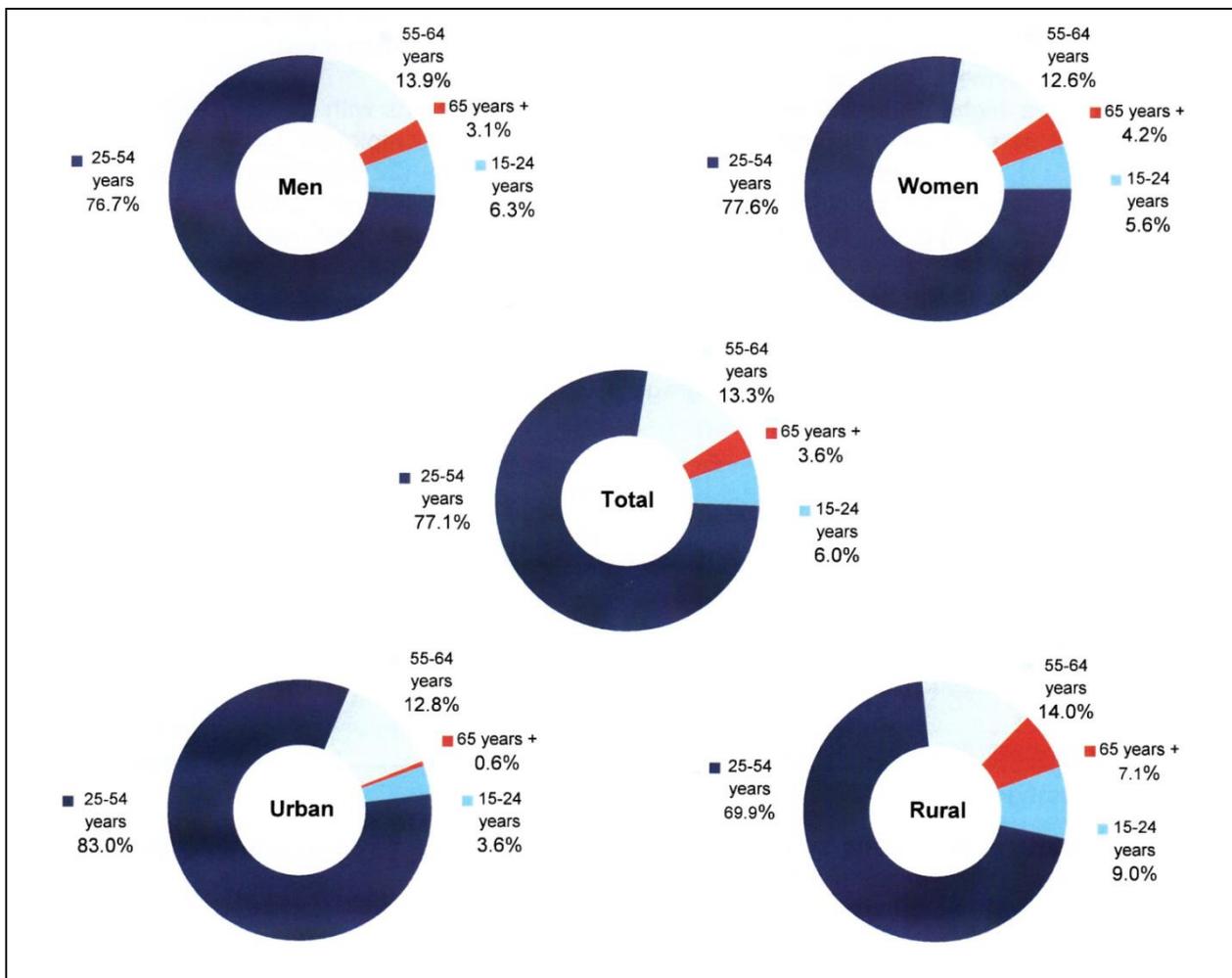
- **Breaking down perception of old age-related stereotypes**
- **Avoiding “ageist” employment policies**
- **Making it possible to keep professional skills up to date for all the employees, regardless of age**
- **Friendly working environment (all ages benefit)**
- **Flexibility**
- **Managing intergenerational conflict**
- **Holistic approach, on case- by- case basis**

Distribution of population aged 15 years and over by labour status , gender and age group, in 2017



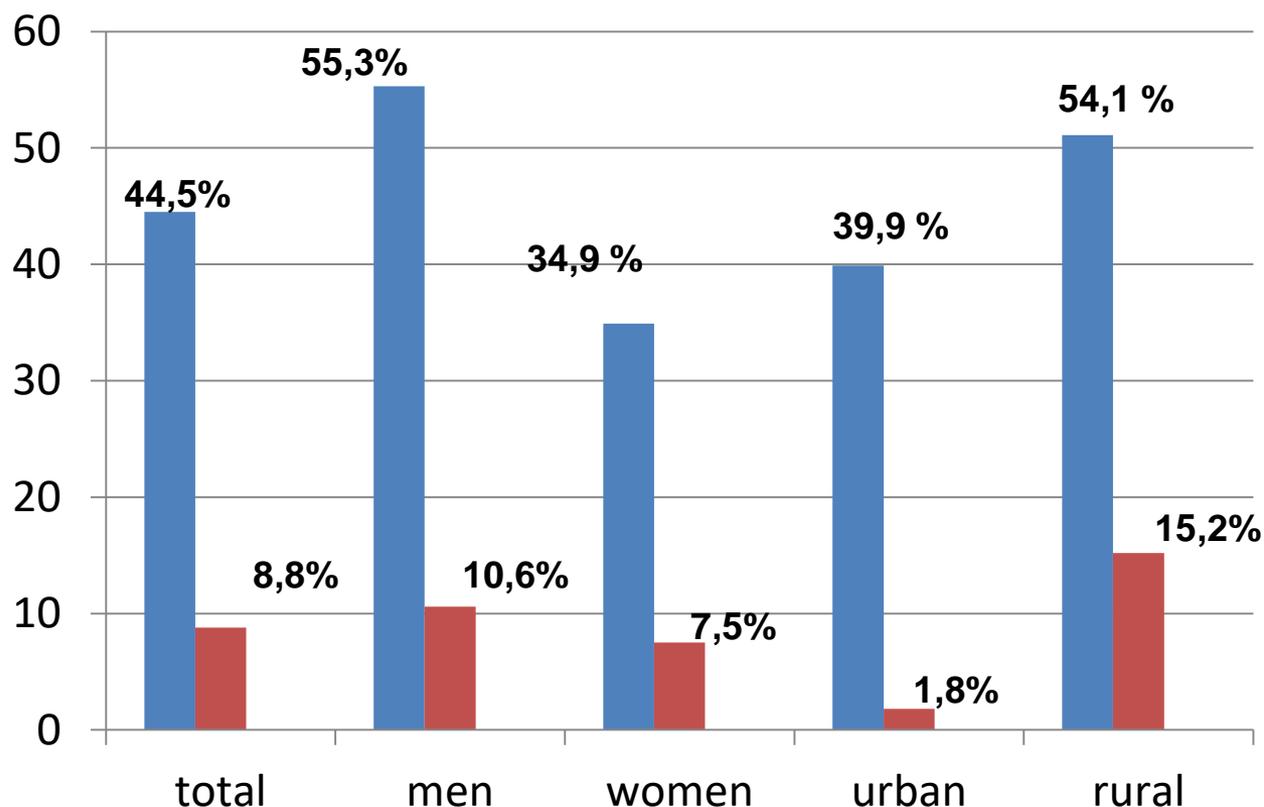
Source: National Institut of Statistic- Labour Force in Romania, Employment and Unemployment, AMIGO,2017

Employment distribution by gender, urban/rural area and age groups , in 2017



Source: National Institut of Statistic- Labour Force in Romania, Employment and Unemployment, AMIGO,2017

The employment rate of persons aged 55-64 and 65+



Employment rate
Weight of employed persons of age group in the total population of the same age group

Source: National Institut of Statistic- Labour Force in Romania, Employment and Unemployment, AMIGO,2017

Pension reforms legislated in Romania

- **Direct impact on the labor market participation rates**
- **Eligibility requirements for old age pension**
 - Retirement age for men 65 years ,since January,2015, still increasing for women to 63,until 2030
 - The compulsory full contribution period increased to 35 years, the minimum contribution period 15 years
- **Eligibility requirements for early retirement pension tightened , penalties**
- **Active military police corps and special public servants within the national defense , increase of the standard retirement age at 60 years until 2030**
- **Special law for physicians , 65 years , regardless of gender**

Conclusions

Threat or a great **achievement** of humanity ?!

Burden or **benefits** for families and society ?!

Still a challenge : demographically, biologicaly, perception & policy wise



Thank you

despina.gherman@umfcd.ro