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## Population Dynamics and Sustainable Development

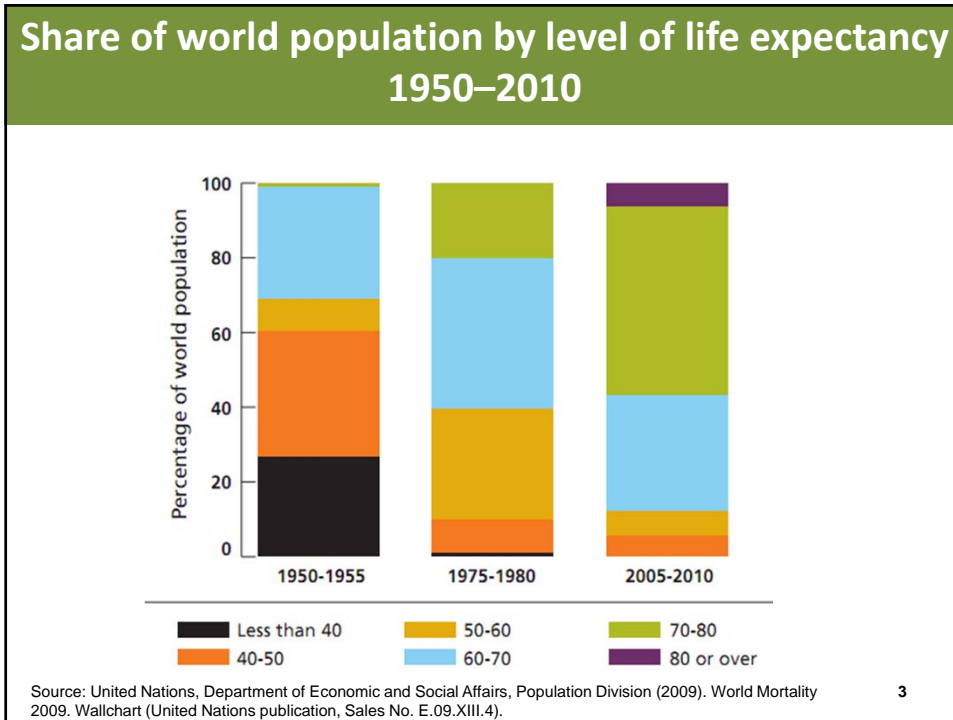
UNECE Regional Conference  
Enabling Choices: Population Priorities for the 21st century  
Geneva, 1-2 July 2013

## Back to classics....

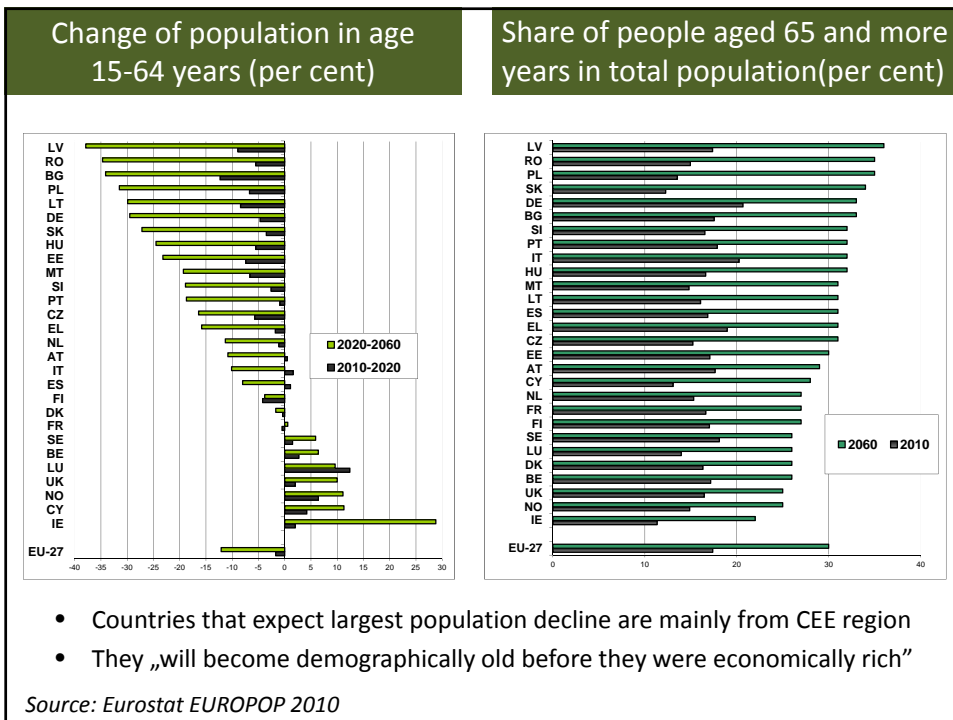
„The greatest improvements in the productive powers of labor, and the greater part of the skill, dexterity, and judgment, with which it is anywhere directed, or applied, seem to have been the effects of the division of labor”

„It was not by gold or by silver, but by labor, that all the wealth of the world was originally purchased; and its value, to those who possess it, and who want to exchange it for some new productions”

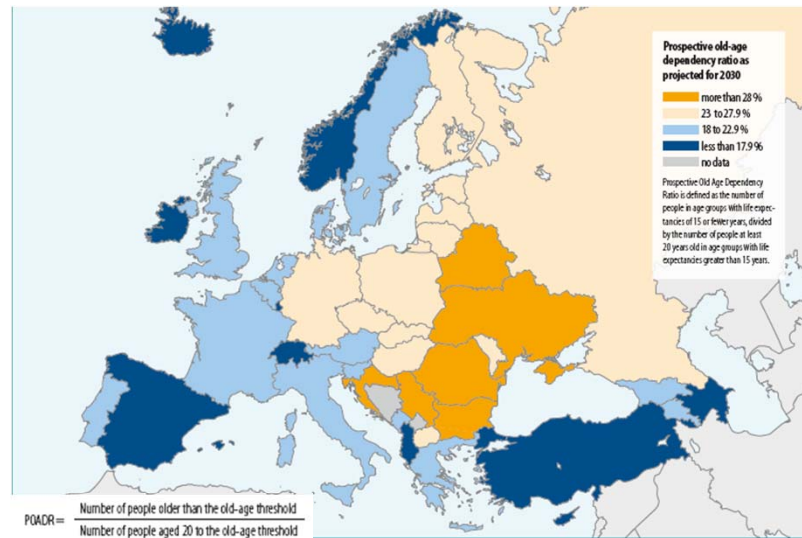
Adam Smith „The Wealth of Nations”



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## Demographic divide in Europe



Source: European Demographic Datasheet 2012, Wittigstein Centre, VID, IIASA

## Two points for further consideration

- Population change and human capital development – do countries substitute a quantity with a quality?
- Population change and consumption patterns

## Demographic change and human capital development

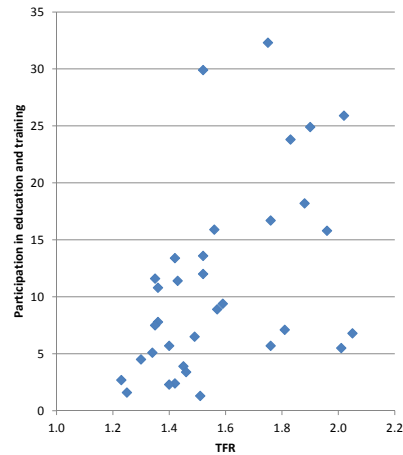
- The demographic change and ageing of baby-boom generation leads to changes of the age structure of the working-age population
- Development of human capital should not rely only on increasing qualifications of younger workers
- Persistent differences in LLL participation by age can also lead to increasing inequality in human capital distribution across age
- Education and life-long learning policy should focus on both young and adults to maintain LLL activity throughout all ages

## Why LLL is needed?

- Technological changes and globalisation also lead to dynamically changing demand for competencies at the labour market
- Competencies acquired during formal education tend to depreciate in time
- LLL of adults can help to reduce the skill gap resulting from formal education
- It also helps to catch up with the changing demand on the labour market

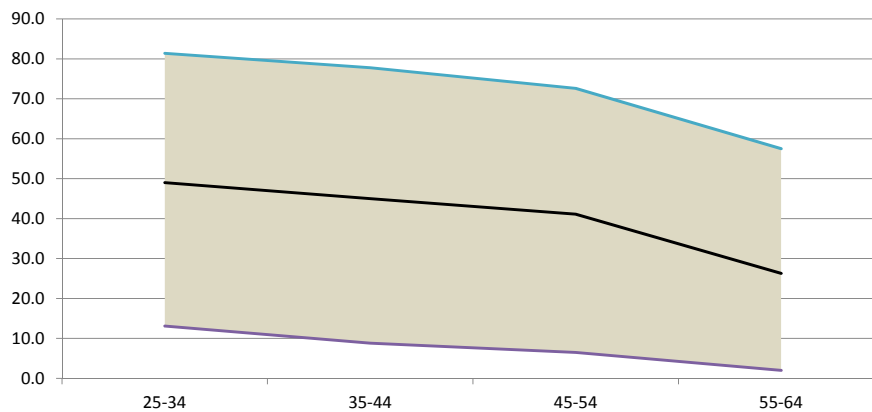
## Fertility and investment in human capital (2011)

- Countries with low fertility rate don't invest in adult learning
- This leads to divergence of human capital development between countries (both in quantitative and qualitative terms)



Source: Own calculations based in Eurostat LFS data 2011

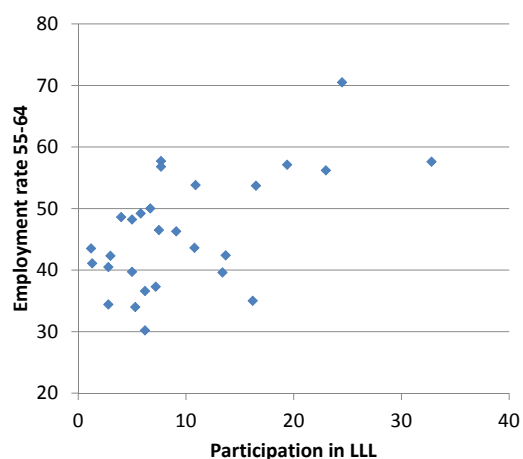
## Participation in formal and non-formal learning by age (2011)



Line - average EU 27  
 Highest values for Sweden, lowest for Romania

Source: Adult Education Survey, Eurostat

## Participation in E&T and employment rate of older workers



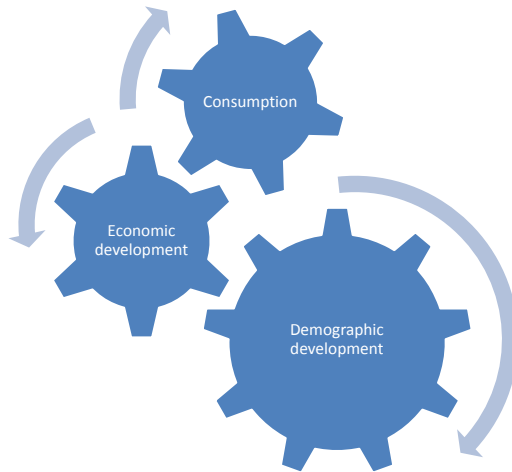
- In the light of increasing retirement ages in EU, there is a need to promote participation of adults in education and training

Source: Own calculations based in Eurostat LFS data 2010

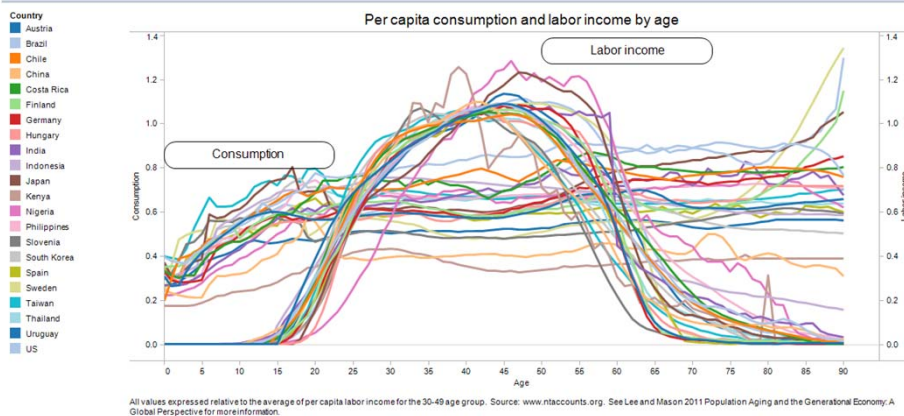
## The challenge of life-long learning

- Current developments in LLL show that
  - countries with strongest changes in the age composition would not compensate them through quality improvements
  - education inequalities between generations or groups with different educational attainment would be hardly reduced
- LLL policies should focus on older age groups as well as those with lower formal qualifications

## Demographic change affects economic development and consumption patterns



## Age profiles: consumption and labour income



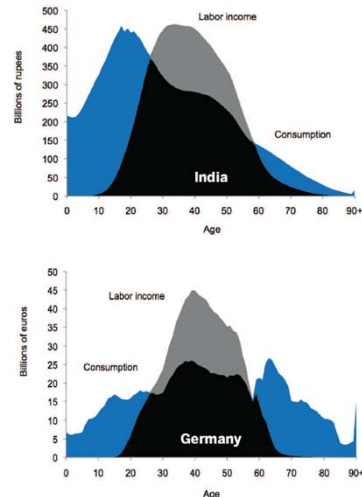
Source: Ron Lee & Andy Mason, May 27 2012

## Population structure affects consumption patterns

- Economic model and cycles are consumption driven
- Changes in age structure and household structures due to demographic change affect consumption models
- Second demographic dividend ?

Source: NTA brochure, [www.ntaccounts.org](http://www.ntaccounts.org)

Aggregate labor income and consumption by age in India (2004) and Germany (2003)



## Conclusions

- Demographic change will impose a re-definition of economic and social policies
  - Social Investment Package in EU
- The scale of necessary adjustments is unprecedented
- Europe divide regarding the second demographic dividend - little chances for CEE countries to benefit from this dividend
- Risk of increasing divergences
  - Within countries
  - Within regions
  - Globally
- Margin for policy inefficiencies narrows