Future total income and consumption levels according to educational level in EU countries

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Motivation

• Economic growth depends on both age and educational level of individuals

• More educated earn higher labour income and also consume more

• Level of educational attainment is projected to increase in the future

• How would future higher education attainment improve economic sustainability in EU countries given the current pattern of labour income and consumption?

• Can increased level of educational attainment mitigate the consequences of population ageing in terms of economic sustainability?
Annual gross earnings per capita, by level of educational attainment in 2014

Source: Eurostat
Share of individuals by educational attainment: projections for EU15 countries by 2060

Source: WIC
Methodology and data

- 15 EU countries
  - Belgium, Czech Republic, Estonia, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovakia, Spain
- Combination of two datasets:
  - NTA data for 2010 decomposed by 3 educational levels:
    1. Basic: ISCED 0 - 2
    2. Higher: ISCED 3 – 4
    3. Tertiary: ISCED 5 – 6
  - Wittgenstein Centre population projections by 3 educational levels (Medium SSP2 scenario):
    1. Primary: ISCED 0 – 2
    2. Secondary: ISCED 3
    3. Post-secondary: ISCED 4 - 8
- Note: in the following slides, some results are shown only for Estonia and Italy
Labour income and consumption for EU15 by age and educational level in 2010

Source: own calculations
Projections of labour income and consumption for Estonia and Italy by 5-year age groups and educational level in 2020 and 2060

Source: own calculations
Increase/decrease of total labour income and consumption for EU15 in 2060 relative to 2020 due to population changes by assuming age profiles from 2010

Conventional NTA

NTA by education

Source: own calculations
## Projected impact of improved educational level on labour income and consumption for EU15

<table>
<thead>
<tr>
<th>Country</th>
<th>Total $Y_{L,conv}$</th>
<th>Total $C_{conv}$</th>
<th>Total $Y_{L,edu}$</th>
<th>Total $C_{edu}$</th>
<th>Increase (in %)</th>
<th>Conventional NTA 2020 $C_{conv}/Y_{L,conv}$</th>
<th>2060 $C_{conv}/Y_{L,conv}$</th>
<th>NTA by education 2020 $C_{edu}/Y_{L,edu}$</th>
<th>2060 $C_{edu}/Y_{L,edu}$</th>
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Source: own calculations
Projections of labour income (YL) and consumption (C) by educational level for Estonia and Italy (and Portugal) by 2060

Source: own calculations
Projections of average labour income (YL) and consumption (C) for EU15 by 2060

Source: own calculations
Economic sustainability – economic dependency ratio (C/YL)
Limitations and conclusion

• Cross-sectional NTA data for 2010 – we assume that labour income and consumption by age and educational level remain unchanged until 2060

• Taking into account future improvement in educational attainment shows:
  • a positive impact on labour income by 2060 – around 20% on average
  • increased consumption – around 9% on average
  • smaller gap between labour income and consumption in the future
Thank you for your attention.