

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

Ema Kelin

Tanja Istenič

Jože Sambt

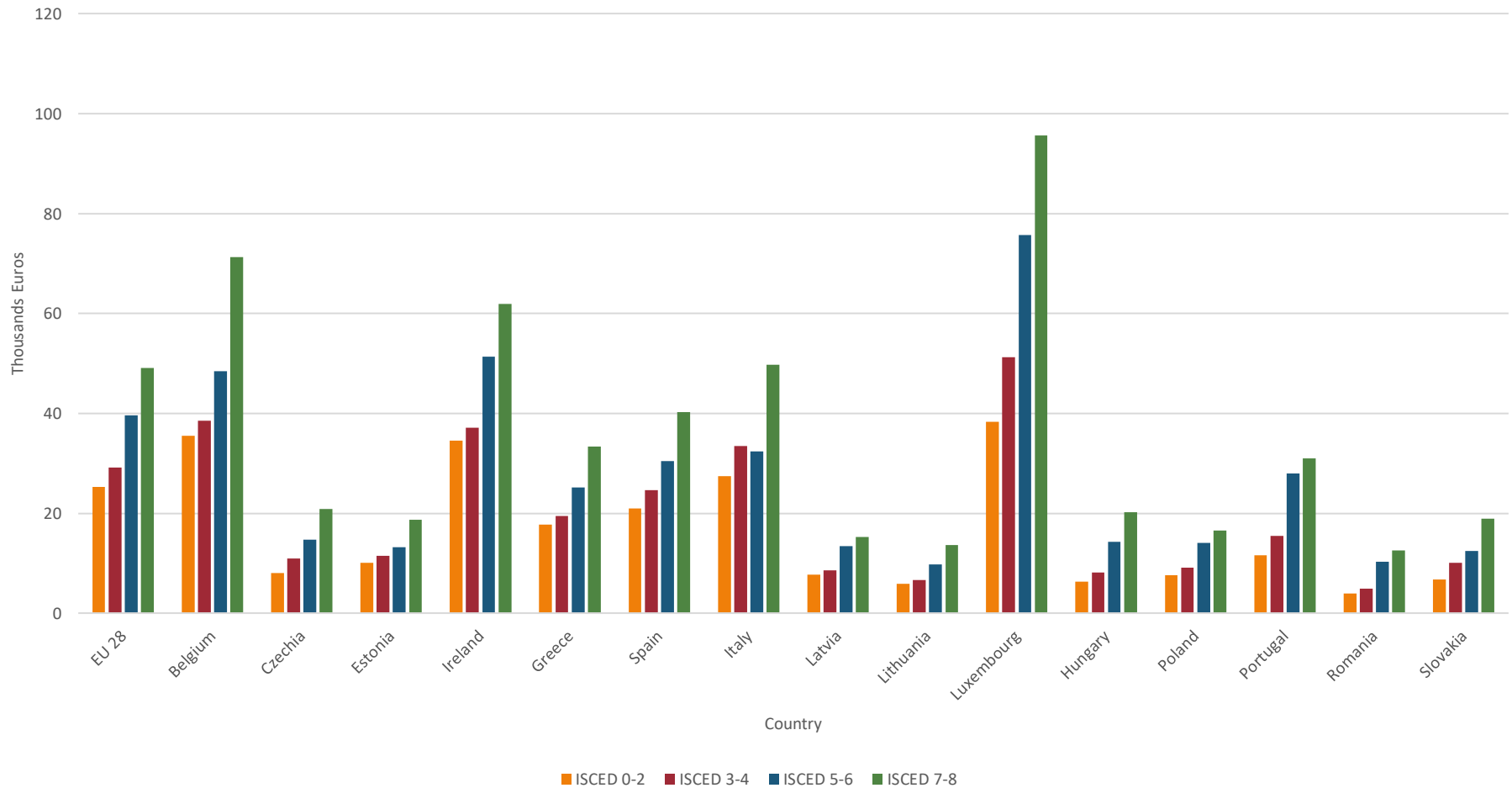


13th Virtual NTA Meeting

Motivation

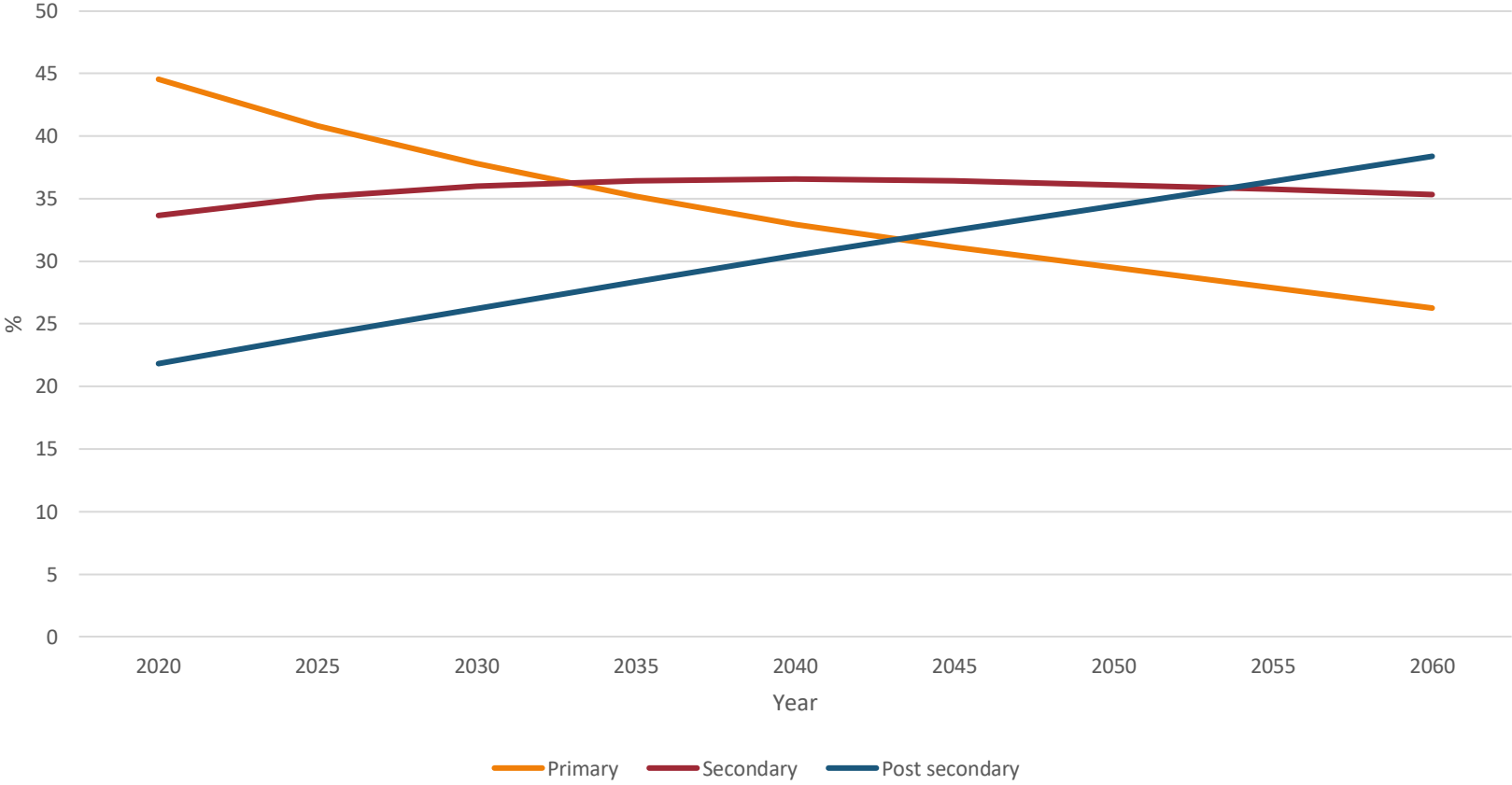
- Economic growth depends on both age and educational level of individuals
- More educated earn higher labour income and also consume more
- Level of educational attainment is projected to increase in the future
- How would future higher education attainment improve economic sustainability in EU countries 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



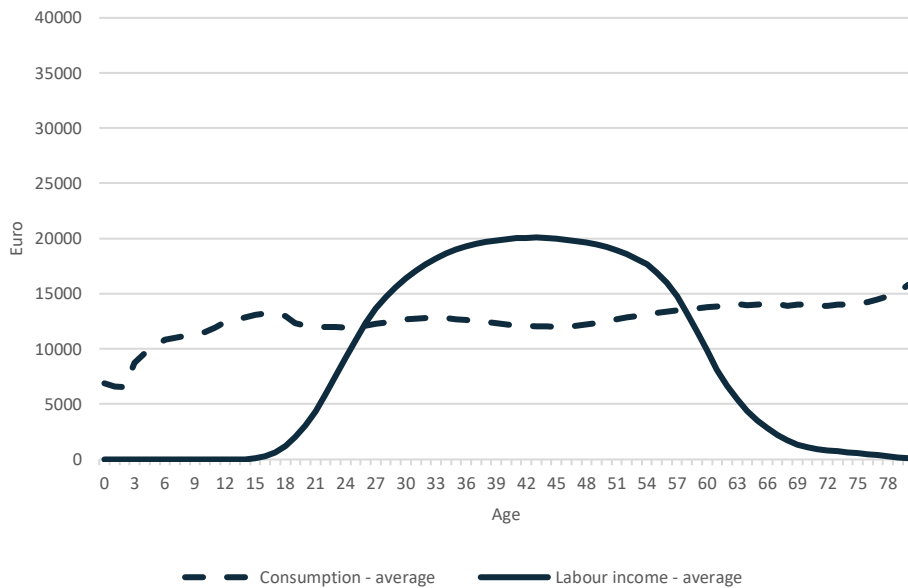
Source: WIC

Methodology and data

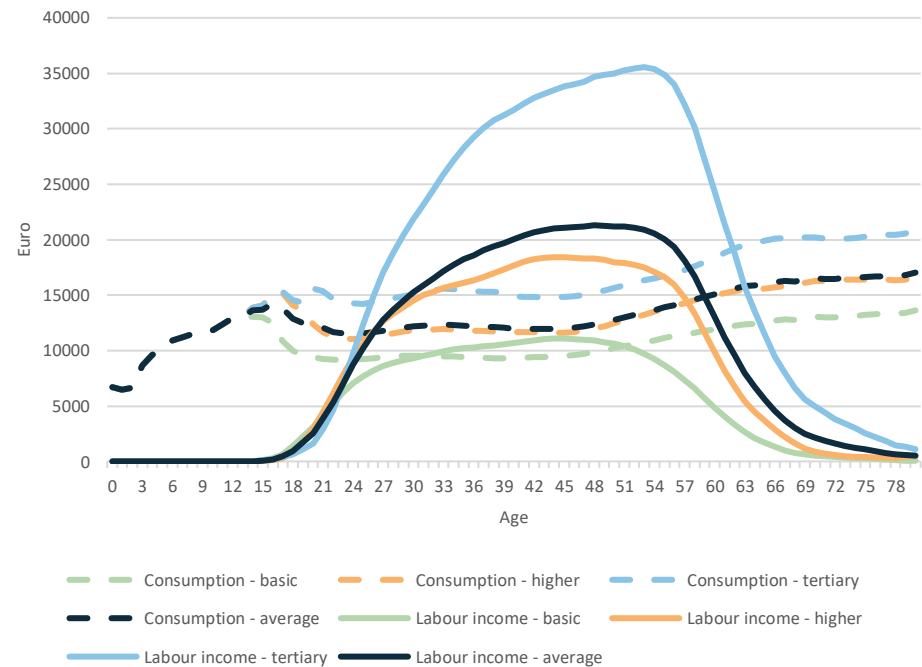
- 15 EU countries
 - Belgium, Czech Republic, Estonia, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Slovakia, Spain
- Combination of two datasets:
 - NTA data for 2010 decomposed by 3 educational levels:
 1. Basic: ISCED 0 - 2
 2. Higher: ISCED 3 – 4
 3. 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

NTA nominal - per capita - EU15 average

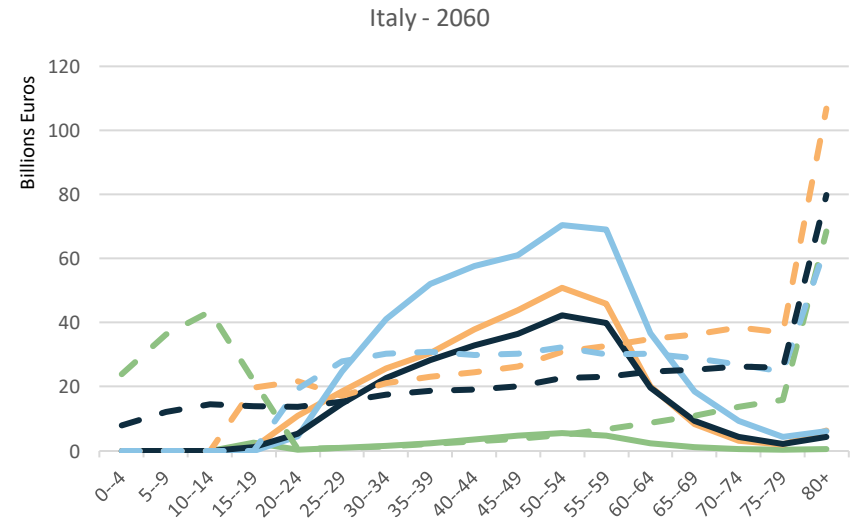
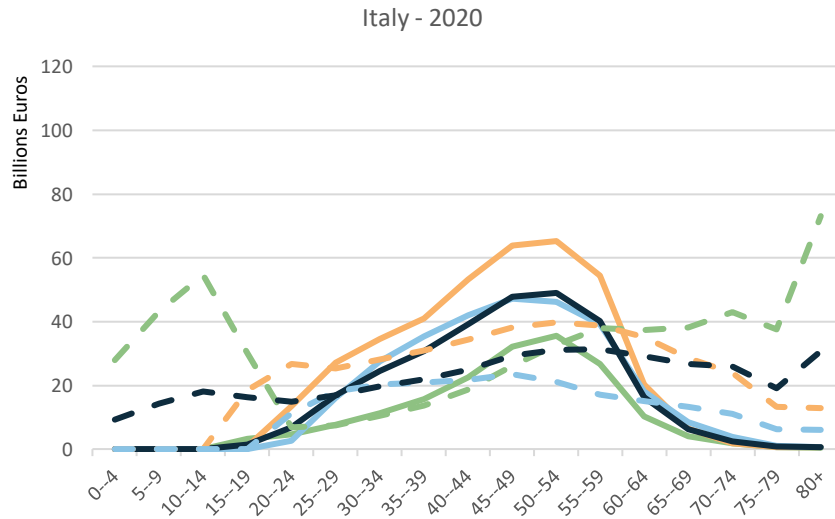
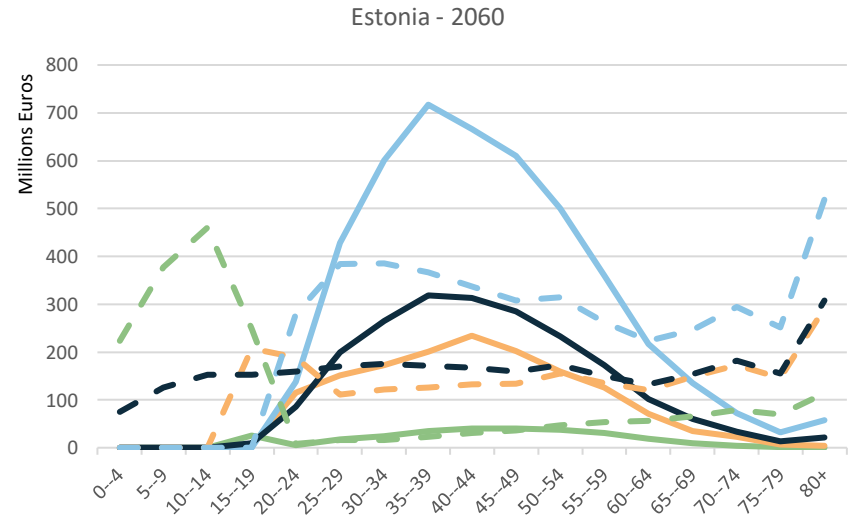
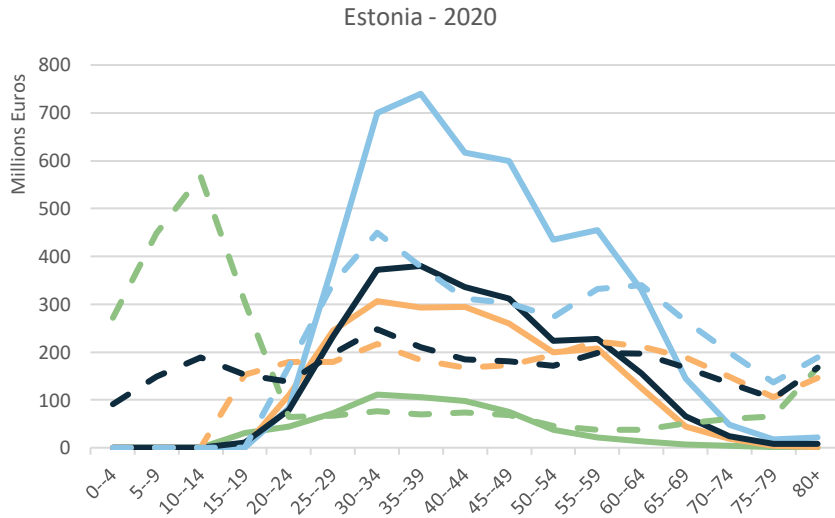


NTA by education - EU15 average



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

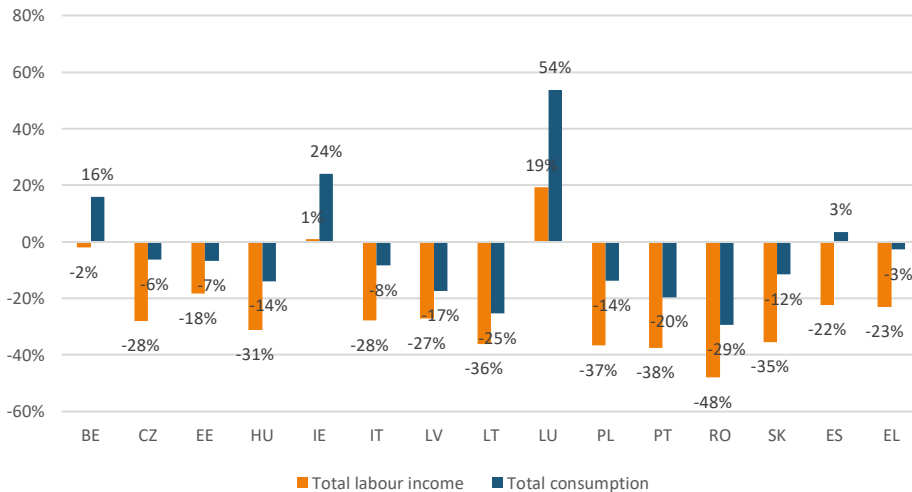


Source: own calculations

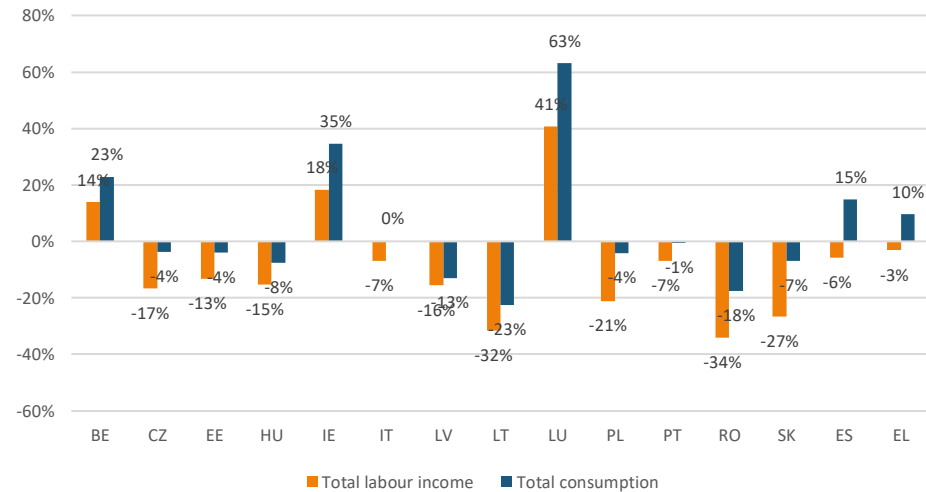
- Labour income - primary
- Labour income - secondary
- Labour income - post secondary
- Labour income - average
- - - Consumption - primary
- - - Consumption - secondary
- - - Consumption - post secondary
- - - Consumption - average

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



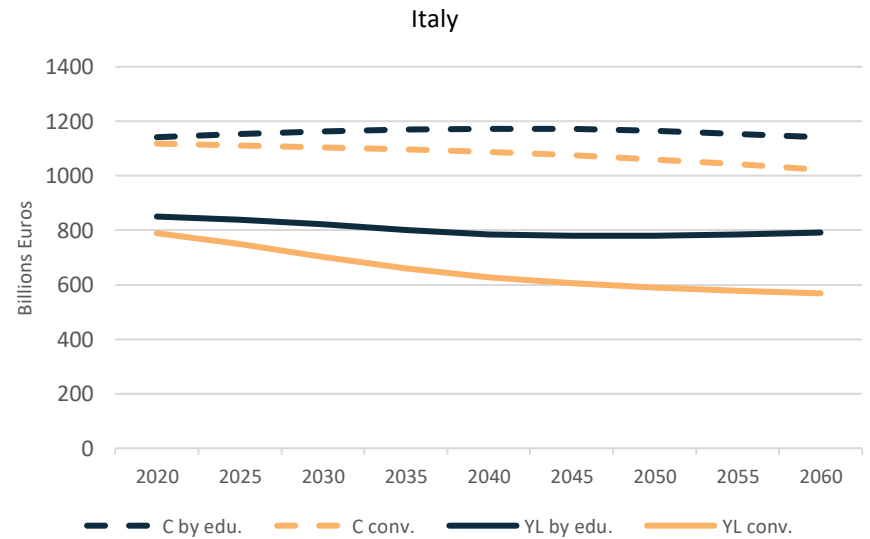
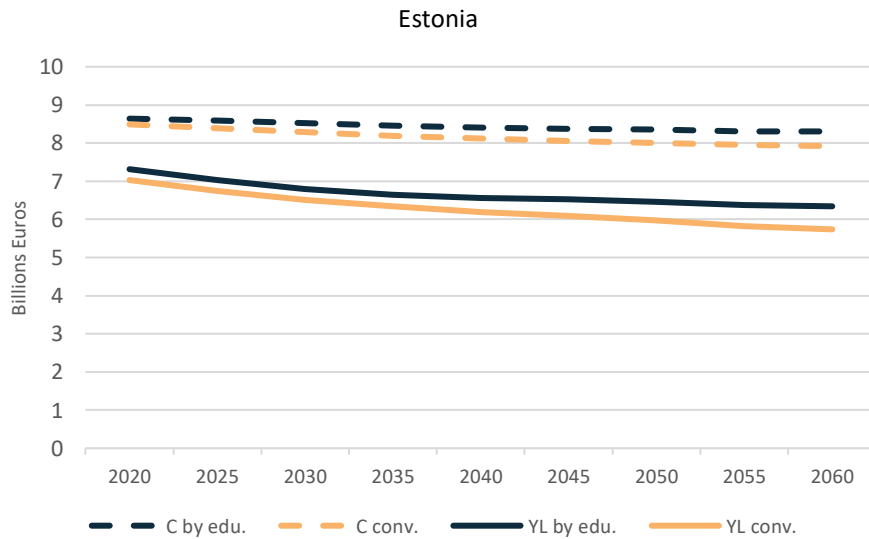
Source: own calculations

Projected impact of improved educational level on labour income and consumption for EU15

Country	Conventional NTA (ratio 2060 to 2020)		NTA by education (ratio 2060 to 2020)		Increase (in %)		Conventional NTA		NTA by education	
	Total YL _{conv}	Total C _{conv}	Total YL _{edu}	Total C _{edu}	in YL (YL _{edu} /YL _{conv})	in C (C _{edu} /C _{conv})	2020 C _{conv} /YL _{conv}	2060 C _{conv} /YL _{conv}	2020 C _{edu} /YL _{edu}	2060 C _{edu} /YL _{edu}
	BE	0.98	1.16	1.14	1.23	16.21	6.03	1.23	1.45	1.18
CZ	0.72	0.94	0.83	0.96	15.67	2.67	1.31	1.71	1.21	1.39
EE	0.82	0.93	0.87	0.96	6.09	2.99	1.21	1.38	1.18	1.31
HU	0.69	0.86	0.85	0.92	23.18	7.23	1.19	1.49	1.10	1.19
IE	1.01	1.24	1.18	1.35	17.23	8.61	1.28	1.57	1.06	1.21
IT	0.72	0.92	0.93	1.00	28.92	9.39	1.42	1.80	1.34	1.45
LV	0.73	0.83	0.84	0.87	16.01	5.20	1.38	1.56	1.35	1.39
LT	0.64	0.75	0.68	0.77	7.20	3.88	1.64	1.91	1.43	1.62
LU	1.19	1.54	1.41	1.63	18.02	6.18	1.19	1.54	1.12	1.30
PL	0.63	0.86	0.79	0.96	24.58	11.12	1.35	1.83	1.26	1.53
PT	0.62	0.80	0.93	0.99	49.10	23.67	1.37	1.77	1.23	1.31
RO	0.52	0.71	0.66	0.82	26.76	16.88	1.54	2.10	1.48	1.85
SK	0.65	0.88	0.73	0.93	13.75	5.37	1.34	1.84	1.16	1.48
ES	0.78	1.03	0.94	1.15	21.31	11.01	1.26	1.67	1.19	1.44
EL	0.77	0.97	0.97	1.10	25.94	12.70	1.64	2.08	1.48	1.67
				Average	20.66	8.86	1.36	1.71	1.25	1.43

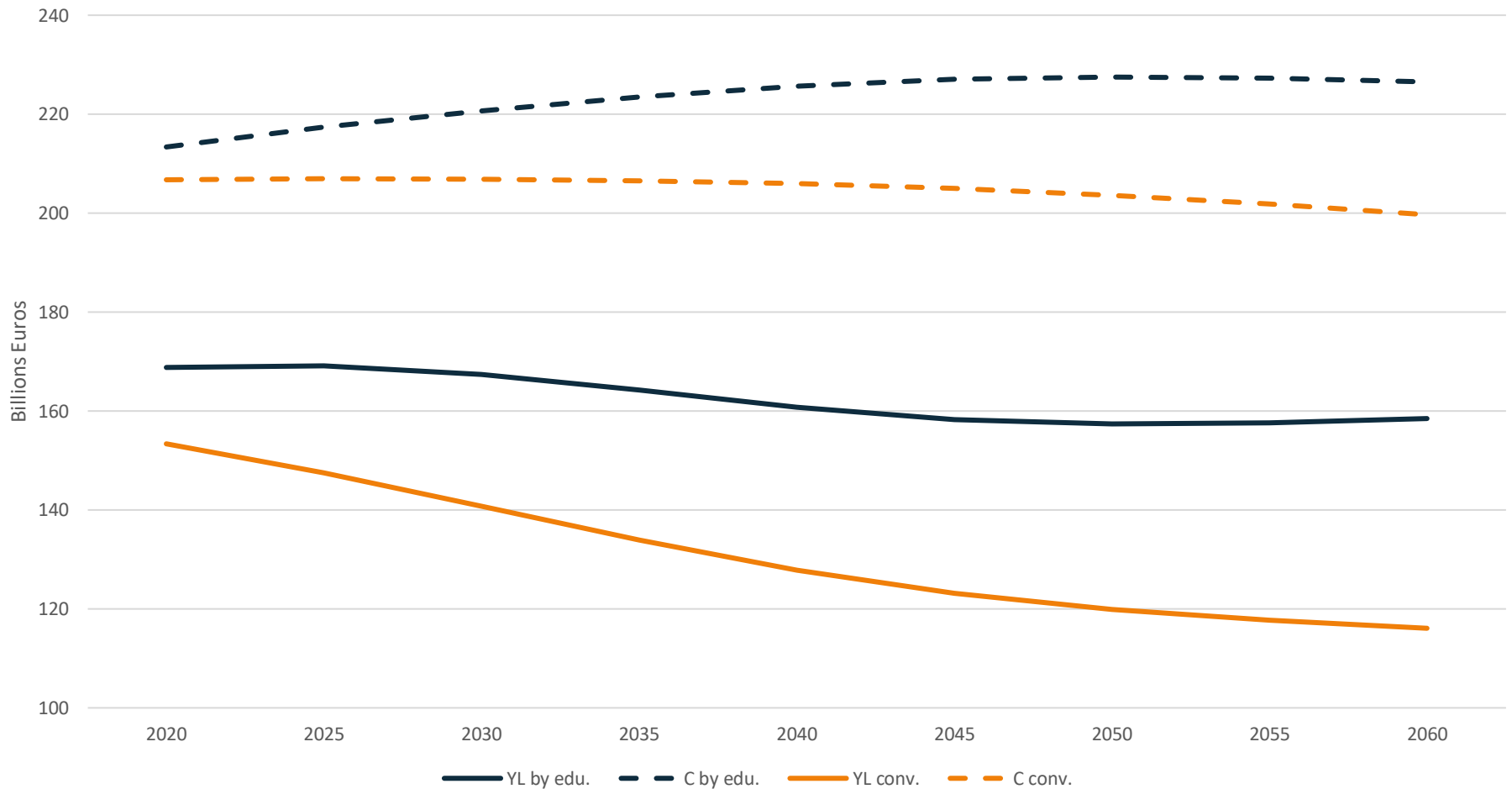
Source: own calculations

Projections of labour income (YL) and consumption (C) by educational level for Estonia and Italy (and Portugal) by 2060



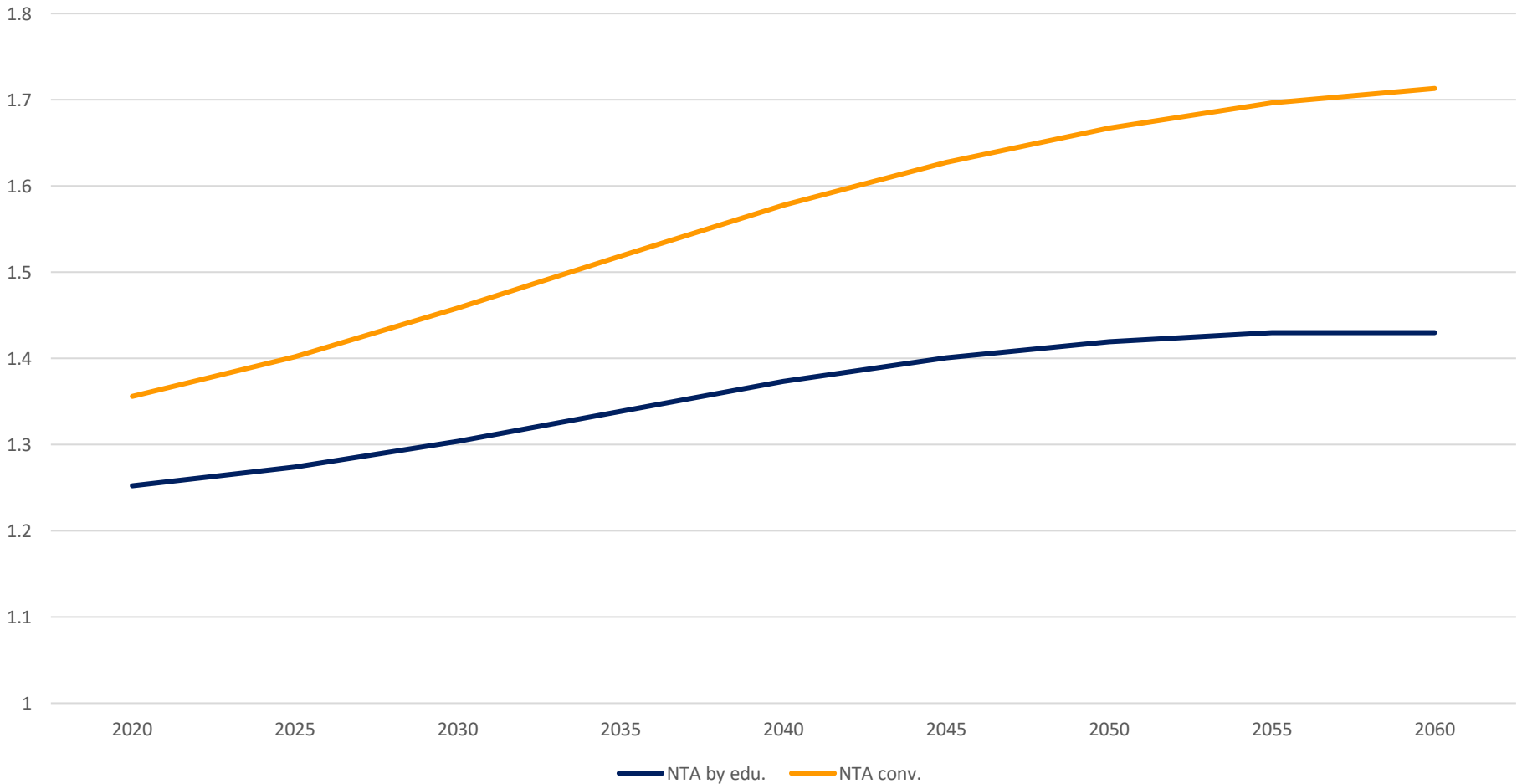
Source: own calculations

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.

