

The Returns to Various Types of Investment in Education and Training

London Economics

Proposed Agenda

- Review of the literature (summary)
- Achievement of the Lisbon Targets
- Implementation of the targets
- Results and policy implications
- Conclusions
- Future lines of research

Review of the Literature (summary)

□ Benefits of education

- Individuals (labour market, wages)
- Firms (spillovers, productivity, poaching problem)
- Economy (growth)
- Other benefits (externalities: social cohesion, health, undesired teenage pregnancy and crime)

□ Rates of return to education

- Need to account for stream of costs and benefits
 - Costs of education
 - Benefits of education (higher earnings, higher probability of employment)

Achievement of the Lisbon Targets

By 2010

- Target 1: EU average rate of no more than 10% ESL
- Target 2: MST graduates increase by at least 15% (reduce gender imbalance)
- Target 3: at least 85% of 22 yo completed USE
- Target 4: decrease by 20% low-achieving 15 yo in reading literacy (compared to the year 2000).
- Target 5: participation LL at least 12.5% (25-64 age group)
- Target 6: increase in young people finishing TE
- Target 7: increase the quality of education

Achievement of the Lisbon Targets

- Required interventions to achieve the targets:

| | | |
|------------------|---|-----------------------------------|
| "Group A" | Countries above the EU benchmark | No action required |
| "Group B" | Countries below the benchmark | Achieve adjusted benchmark |

Adjusted benchmark: EU 2010 benchmark adjusted for the progress made by Group A.

Achievement of the Lisbon Targets

- Required interventions to achieve the targets (July 2005):

| Target | EU Bch. | Current (A) | Current (B) | Adjusted Bch. |
|--------|---------|----------------|----------------|------------------|
| 1 | 10.0% | 6.8% | 18.0% | 10.9% |
| 2 | 783,000 | 740,000 | | |
| 3 | 85.0% | 88.8% | 73.1% | 84.0% |
| 4 | 15.1% | 11.0% | 19.6% | 15.5% |
| 5 | 12.5% | 22.2% | 6.04% | 9.93% |
| 6 | 53.9‰ * | 76.7‰ | 34.5‰ | 38.4‰ |

Note: * US 2000 figure.

Achievement of the Lisbon Targets

□ Required interventions:

- **Targets 1 and 3:** BE, CY, DK, EE, FR, DE, GR, HU, IE, IT, LV, MT, NL, PT, ES, and UK.
- **Target 2:** all countries.
- **Target 4:** AT, BE, CZ, DK, FR, DE, GR, HU, IT, LV, PL, PT, SK, and ES (no data are available for CY, EE, LT, MT, and SI for this target).
- **Target 5:** BE, CY, CZ, EE, FR, DE, GR, HU, IE, IT, LV, LT, MT, PL, PT, SK, and ES.
- **Target 6:** AT, CY, CZ, DE, IT, SK, and MT (no data are available for GR for this target).

Implementation of Targets

- **Target 1 and 3:** ESL will go back to school and achieve USE.
- **Target 2:** graduates will increase following a rise in the number of students MST.
- **Target 4:** Reading Recovery programmes are implemented for the lowest achieving students. As a result, a proportion of the students improve their literacy skills.
- **Target 5:** we assume that the number of people undertaking LL increases.
- **Target 6:** increase in the intake of TE students is required.

Results and policy implications

- Estimated rates of return for targets and countries that need action are presented in the report.
- Drivers of rates of return (scenario analysis)
 - Important driver: employment probability from having achieved additional education.
 - Not substantially influenced by the costs of education
 - Mincerian rates of return do not influence noticeably the estimated returns

Results and policy implications

Table 1: Private and social rates of return for targets by order of size

| | Private | | | | Social | | | |
|----|---------|-----|-----|--------|---------|-----|-----|--------|
| | Highest | | | Lowest | Highest | | | Lowest |
| AT | MST | Lit | TE | | Lit | MST | TE | |
| BE | USE | Lit | MST | | USE | MST | Lit | |
| CY | MST | USE | TE | | MST | USE | TE | |
| CZ | Lit | TE | MST | | Lit | TE | MST | |
| DK | USE | Lit | MST | | USE | Lit | MST | |
| EE | USE | MST | | | USE | MST | | |
| FI | MST | | | | MST | | | |
| FR | USE | Lit | MST | | MST | USE | Lit | |
| DE | USE | TE | Lit | MST | USE | Lit | TE | MST |
| GR | USE | Lit | | | USE | Lit | | |
| HU | MST | | | | MST | | | |
| IE | USE | MST | | | USE | MST | | |
| IT | MST | USE | Lit | TE | MST | USE | Lit | TE |
| LV | USE | Lit | MST | | USE | Lit | MST | |
| LT | MST | | | | MST | | | |
| MT | MST | USE | TE | | MST | USE | TE | |
| NL | USE | MST | | | USE | MST | | |
| PL | Lit | MST | | | Lit | MST | | |
| PT | MST | USE | Lit | | MST | USE | Lit | |
| SK | Lit | TE | MST | | Lit | TE | MST | |
| SI | MST | | | | MST | | | |
| ES | MST | USE | Lit | | MST | USE | Lit | |
| SE | MST | | | | MST | | | |
| UK | USE | MST | | | USE | MST | | |

Note: Shaded cells identify internal rates of return in excess of 7%. USE upper secondary education, TE tertiary education, Lit literacy rates.
See report for detailed results.

□ Policy implications from our analyses:

- Member States should focus primarily on achieving Targets 1 and 3, and Target 2.
- In general, Target 6 yields the lowest returns. This is because of the high costs involved in higher education.
- Achievement of Target 4 yields returns that lie between those shown by the investments necessary to achieve Targets 1 and 3, and Target 6.

Conclusions

- Literature evidence shows that there are noticeable benefits from education (at an individual, firm and social level)
- Estimated returns have shown that investing in education is worth in many MS, especially in USE.
- Achieving the targets raises the difficult challenge of increasing the number of graduates without reducing the quality of education in the overall system.
- Low levels of spending in education can have dramatic consequences, as the case studies have shown.
- TE public and private expenditure in the EU is below the US (in PPS), basically due to low EU private TE expenditures.