

# Equity and Equality of Opportunity in Tertiary Education

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ASSET round table

# Equity/Efficiency

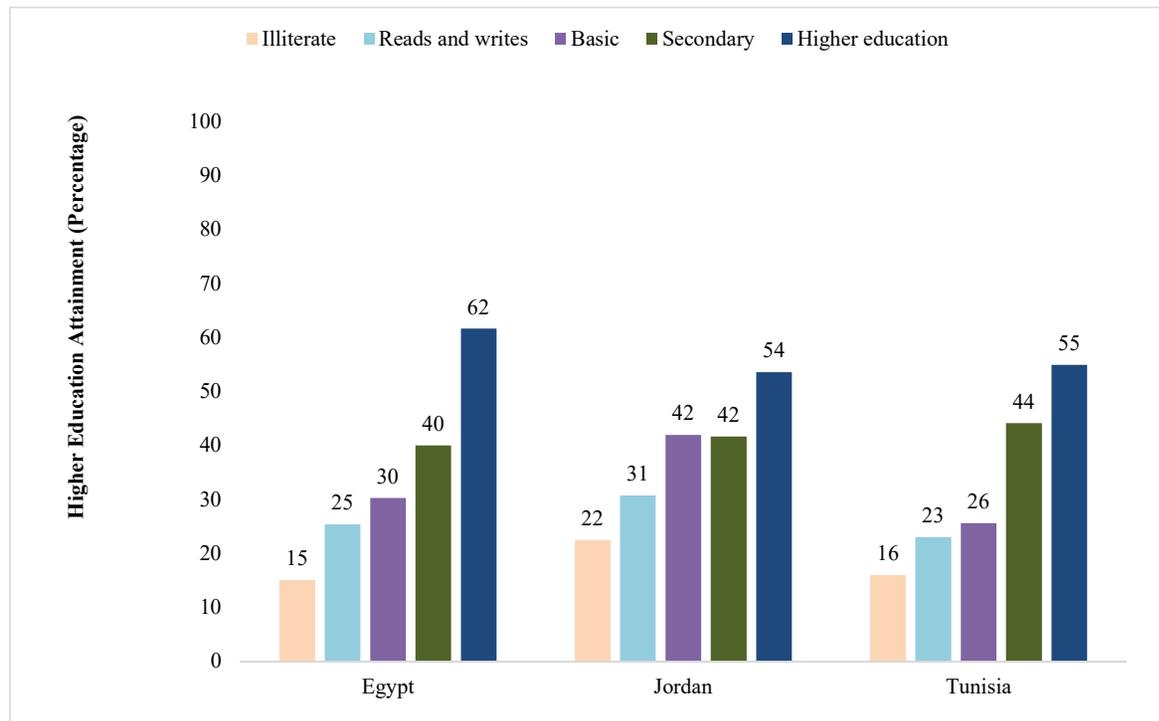
- Do economists have something to say about how to finance tertiary education?
  - Yes of course (efficiency, second best approach, Social welfare functions with incentive constraints).
- Do economists have something to say about how the laymen and many social decision makers address the issue?
  - In the public debate, almost only equity arguments can be called for
  - A piecemeal approach. (First step)

# Comparing two models

- The model of western part of continental Europe. Tertiary education is free of charge + some limited grants for poor-background student
- The Commonwealth model (Australia, NZ, Great-Britain): Uniform fees, income contingent loans repayment (ICLR), and grants for poor-background students
  - Friedman & Kuznets (1945)
  - Bruce Chapman (Australia) and Nicholas Barr (UK)
  - Gary-Bobo and Trannoy (Rand 2015): Optimal without considering any equity issue
- Current debate in MENA countries

# Evidence on MENA countries (Kraft, Alawode 2015)

**Figure 3. Attainment of Higher Education by Father's Education.**  
**Egypt and Tunisia: Free/ Jordan: Private funding and scholarship**



# Outline

- Defining 4 equity principles (rather agnostic)
- Why it is difficult to conclude that a system is better than the other for all equity principles

# Conditioning on SES of parents

- We will look at the distribution of advantages of the students with respect to parent advantages
- Legitimate even if the link between parents and students have been weakened?
- Yes, at least from the social observer point of view. Because there is a strong determinism in education outcome.

# Two different inspirations for equity principles

1. First idea: Progressivity of the State intervention

State intervention should not increase inequality of outcomes (in which generation?, parents, students?)

- 2 Second idea: Equality of opportunity in higher education attainment/completion

Difficulty: effort is not observable

# Progressivity principles

- The tax and transfer system (including transfers in kind, tertiary education expenditures) should decrease the inequality of disposable level of well-being (including transfers in kind)
- Jakobsson Theorem (1976): Inequality reducing iff progressivity
- The tax, transfer and benefit system should be progressive with respect to parent's social advantage.
- Statutory progressivity
- Effective progressivity: taking into account the effective consumption of tertiary education services

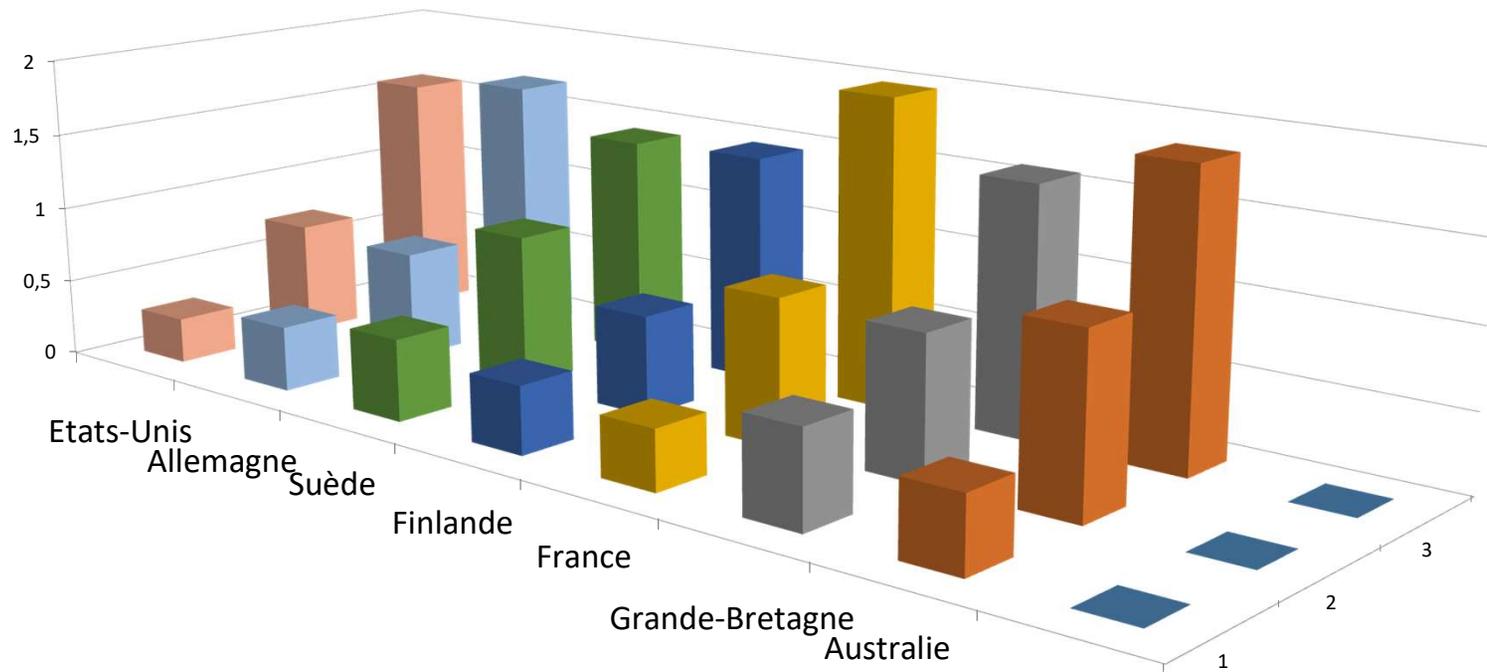
# Equality of opportunity principles

- Expression of equality of opportunity in terms of conditional attainment/completion
- Lefranc-Pistoiesi-Trannoy (*JPubE* 2009): without any information on effort, only a necessary condition of EOP.
- Strong EOP: the fraction of people obtaining a degree of higher education should not depend on the parent's social advantage
- Weak EOP: The probability of obtaining a degree of tertiary education conditional on achieving secondary education should not depend on the parent's social advantage

# Four principles

- Let  $k$  the continuous index of parent 'social advantage
  - Let  $p(k)$  the probability of completion in tertiary education
  - Let  $r(k)$  the probability of completion secondary education
  - Let  $q(k)$  the conditional probability  $= \frac{p(k)}{r(k)}$
  - Let  $c(k)$  the user cost of tertiary education
  - Let  $s(k)$  the degree of subsidizing tertiary education
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- Strong/weak EOP:  $p(k)/q(k)$  independent of  $k$
  - Statutory progressivity:  $s(k)$  decreasing with  $k$
  - Effective progressivity:  $s(k)c(k)p(k) = s(k)c(k)r(k)q(k)$  decreasing with  $k$

# Strong EOP violated (parental education level primary, secondary, tertiary) OCDE Data



## Regarding the comparison (free of charge/ ICL)

- In every country,  $p(k)$  is increasing with  $k$ , but at a different slope
- Making tertiary education free of charge means that  $s(k)$  is basically constant.
- Then  $sc(k)p(k)$  is increasing with income.
- Now, what about ICL?

# ICL vs wrt free of charge and effective progressivity

- The difference in the derivative of each term between the two regimes

$$s(k)c(k)r(k)q(k)$$

- No first-order effect on  $r'(k)$ .
- $c'(k)$ ?
- $s(k)$  should decrease with  $k$  because the risk of default increasing with  $k$ .
- All depends on  $q(k)$

# Effect on conditional probability of attainment $q(k)$

- Rational terms
  - Return rate is lower for everyone (unless passing through on unskilled)
  - The decrease is higher for the students of the most advantaged group
  - If the return were the same, then rational students from lowest background should less decrease their attainment.
- Behavioral economic effect
  - Debt aversion increasing with  $k$ ?
  - Lab/field test about 'classical debt'
  - Will people understand and believe/trust in the state?
  - Will nudges help?

# Tentative conclusion

- Free higher education cannot dominate
- Income contingent loans: good effect on subsidizing, ambiguous effect on attainment/completion
- No clear winner for all equity criteria. ICL is not enough to dominate.
- Income contingent loans should be coupled with more generous fellowships and active application programs toward low SES (*Sciences Po Paris*)