Why are Elites Self-reproducing?

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- :   (-   )

- .

- Two-Tier Higher Education System

- or

- Dual system

- IVY LEAGUES : "
- TOP TEN

- GRANDES ECOLES :

- OXBRIDGE :

- (IDC) :

Massification: •

:   •
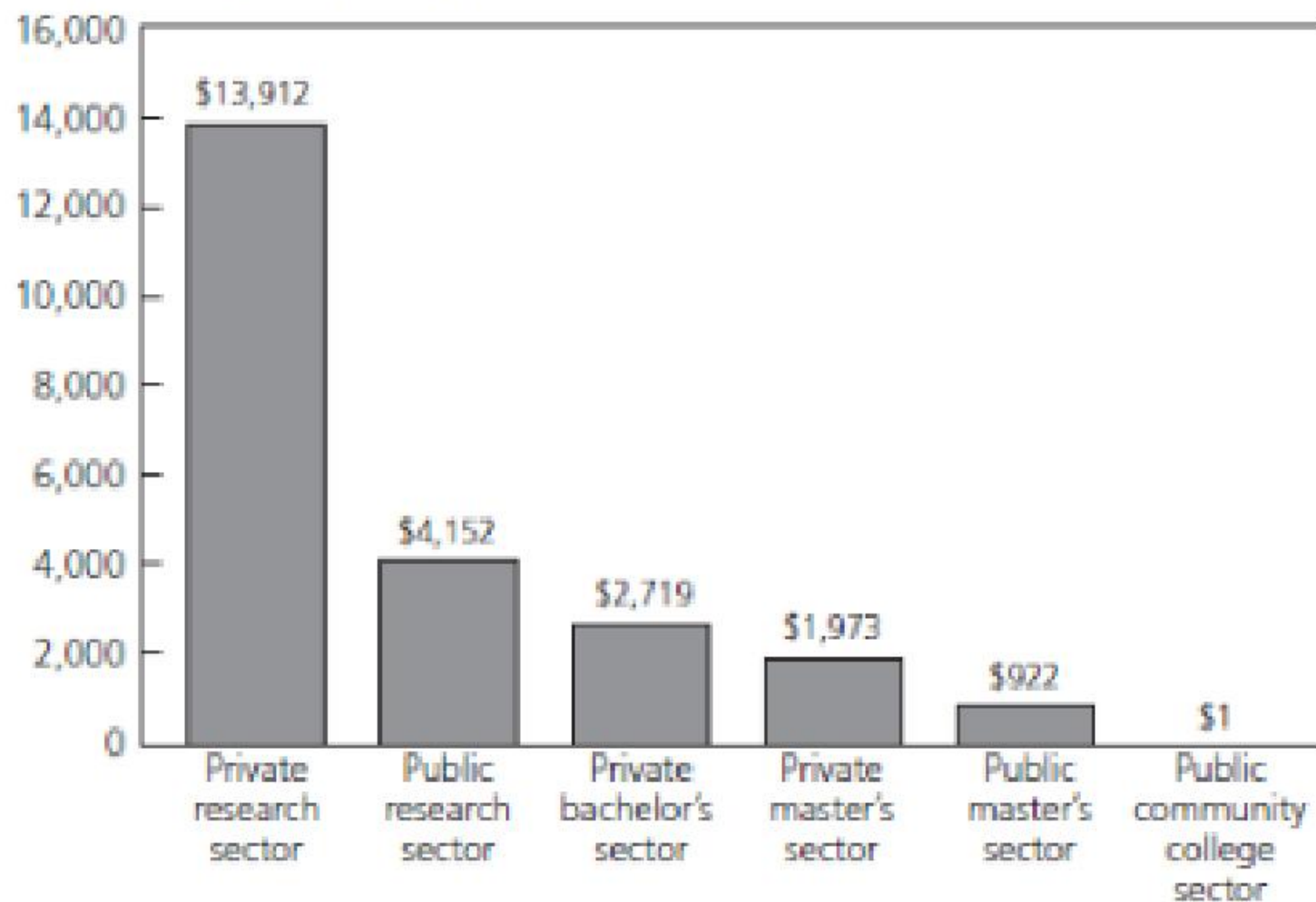
'
ÉLITE UNIVERSITY   •

1)

The differences in terms of selection and budget (expenditure per student) has increased in the last decades:

   a) The number of students has almost not increased in Elite universities, but increased a lot in Standard ones.

   b) The increase in the budget to tertiary education has primarily benefited to Elite establishments.

FIGURE 4
**Change in Per-Pupil Total Operating Expenditures,
Academic Year 1999–2009**

Ten-year change in spending per FTE student (in 2009 dollars)

Sector	Amount
Private research sector	$13,912
Public research sector	$4,152
Private bachelor's sector	$2,719
Private master's sector	$1,973
Public master's sector	$922
Public community college sector	$1

5 more facts:

Since WW2:

1) In several countries: Social mobility = Inverted-U curve, with a clear decrease in the last decade

UK: Blanden et al., 2004, 2007;

France: Lefranc, 2011, Ben Halima et al., 2014;

US: Aaronson & Mazumder, 2008

2) The countries that display a decrease in social mobility are those with an elitist higher education, i.e.:

    a) The democratization of tertiary education has come with the emergence of a dual higher education:
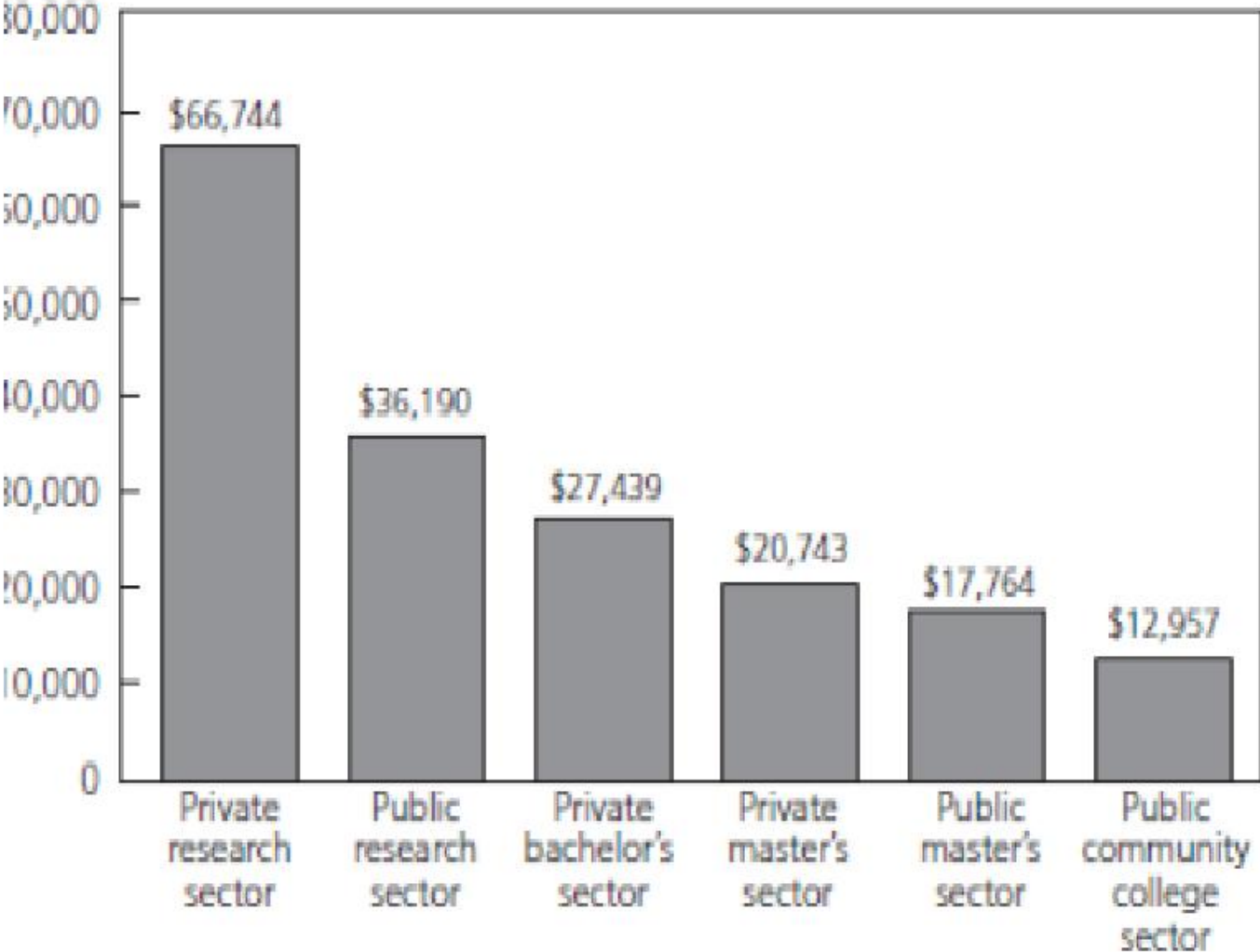
       Standard vs Elite Universities

Countries with elitist Higher Education: US, France, UK

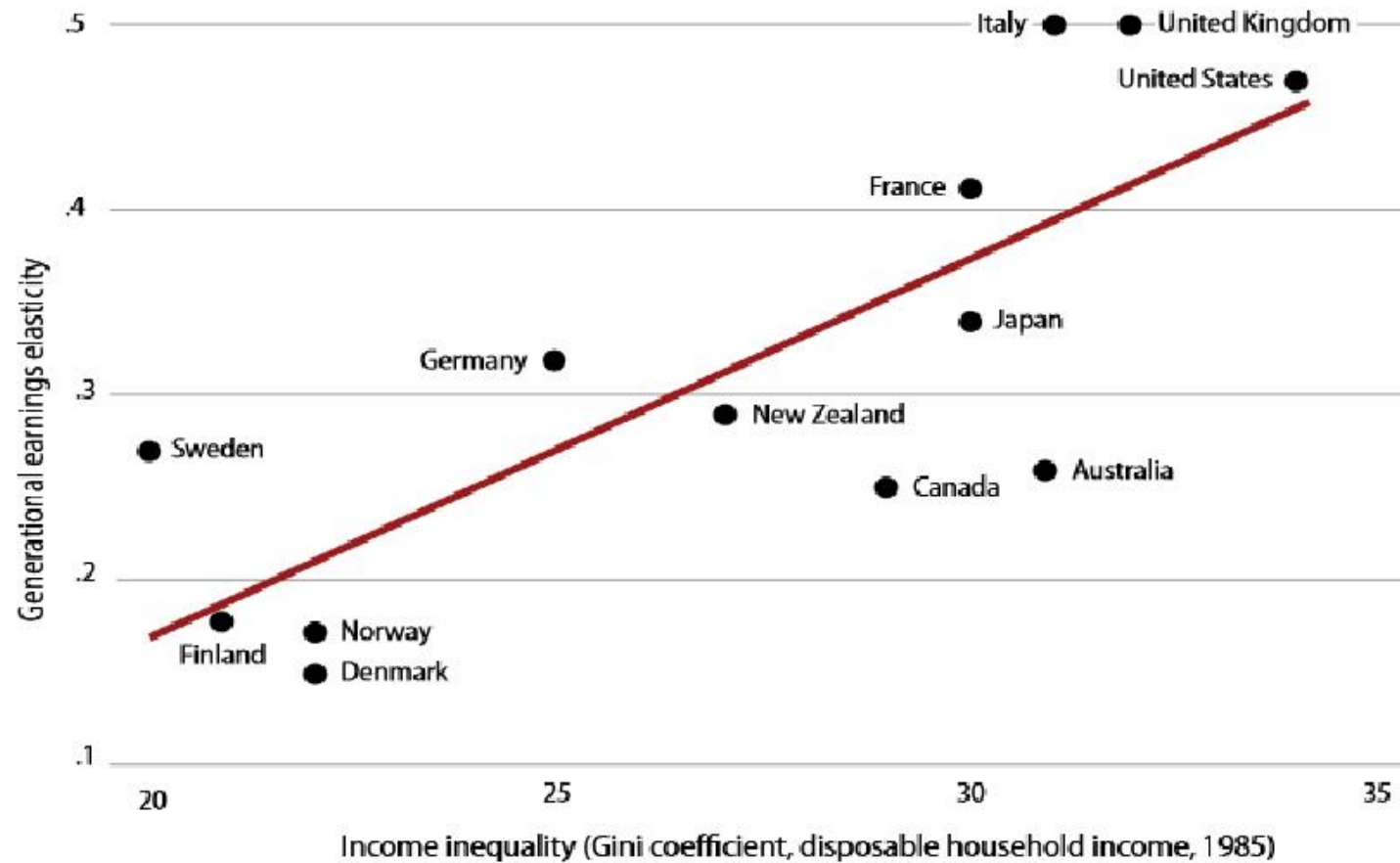   b) These two types of University differ in their selection procedures and in their expenditure per student

FIGURE 3
Per-Pupil Total Operating Expenditures, Academic Year 2009

Spending per FTE student (in 2009 dollars)

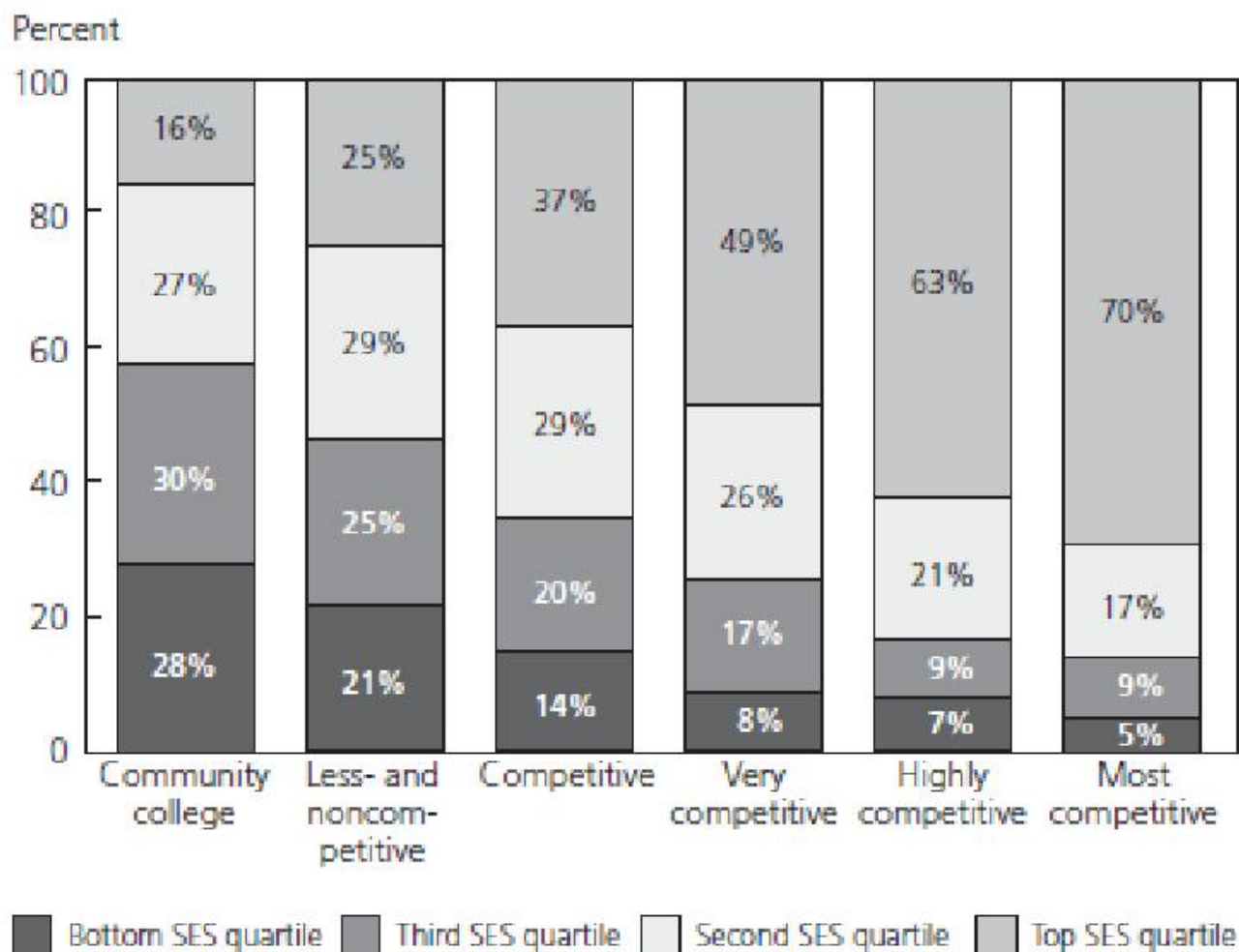| Sector	Amount
Private research sector	$66,744
Public research sector	$36,190
Private bachelor's sector	$27,439
Private master's sector	$20,743
Public master's sector	$17,764
Public community college sector	$12,957

3.

FIGURE 1

The Great Gatsby Curve

More inequality is associated with less mobility across the generations

Source: Miles Corak, "Inequality from Generation to Generation: The United States in Comparison." In Robert Rycroft, ed. The Economics of Inequality, Poverty, and Discrimination in the 21st Century (Santa Barbara, California: ABC-CLIO, 2013).
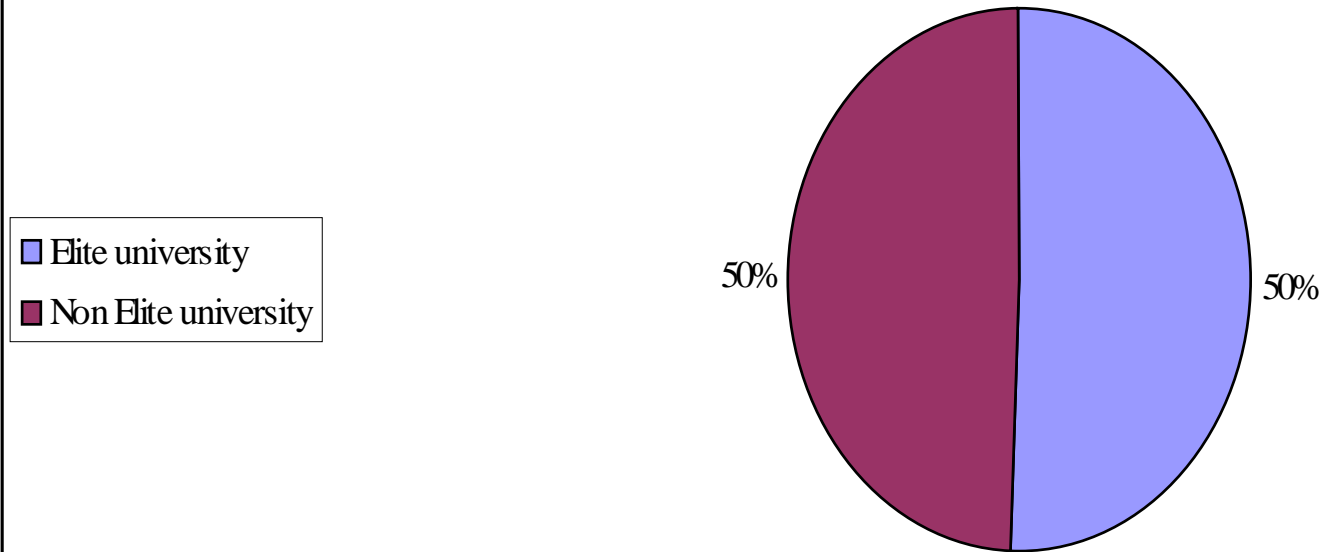
4) There is social stratification in the access to elite universities.

FIGURE 1
Socioeconomic Distribution at Colleges, by Selectivity, 2006

Percent

	Community college	Less- and noncompetitive	Competitive	Very competitive	Highly competitive	Most competitive
Top SES quartile	16%	25%	37%	49%	63%	70%
Second SES quartile	27%	29%	29%	26%	21%	17%
Third SES quartile	30%	25%	20%	17%	9%	9%
Bottom SES quartile	28%	21%	14%	8%	7%	5%

■ Bottom SES quartile ■ Third SES quartile □ Second SES quartile ■ Top SES quartile

5) ***Business elites are recruited from elite universities:***

Recruitment of Business elite in OECD countries

Elite university
Non Elite university

50%   50%

In this paper:

We explain the decrease in social mobility at the top (between the middle class and the elite) by:

1) the dual higher education system (different selection between elite and non-elite universities)

and

2) the increase in the budget gap

From an intergenerational model, we show that:

è The division of tertiary education between standard and elite universities generates social stratification in which the 'elite' is to a large extent self-reproducing,

è The higher the difference in expenditure per student between the standard and elite universities, the lower social mobility, the higher the elite self-reproduction.
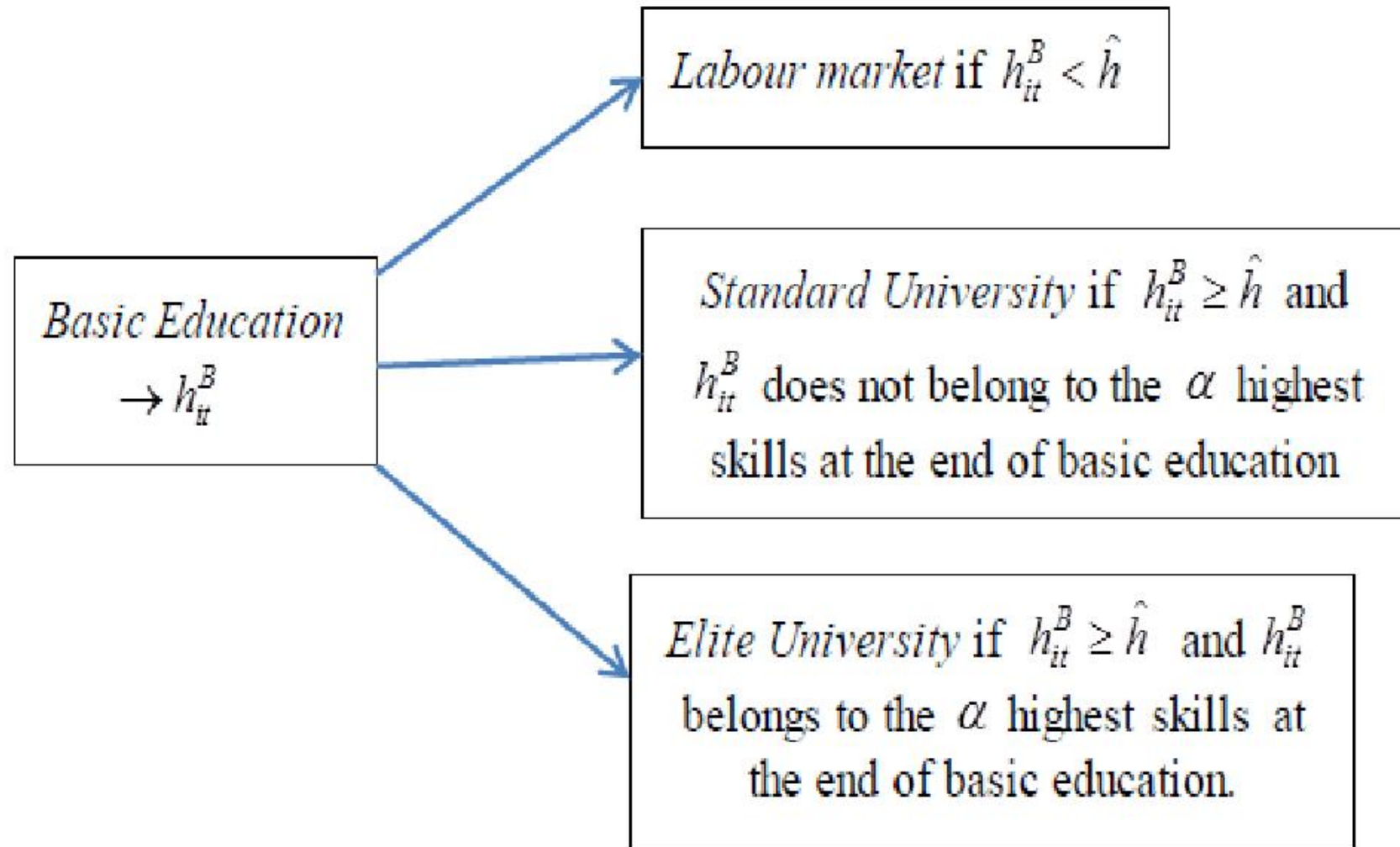
2. The Model

Figure 1. The individuals' choice

Basic Education: $h_{it}^{B} = a_{it} \left(h_{it-1}^{F} \right)^{h}, \qquad 0 < h < 1$

$$a_{it} \in \left[\underline{a}, \overline{a} \right]$$

a_{it} personal innate ability, randomly distributed

h_{it-1}^{F} parent's final skill

$$h_{it}^{S} = V_{S} h_{it}^{B} = V_{S} a_{it} \left(h_{it-1}^{F} \right)^{h}$$

$$h_{it}^{E} = V_{E} h_{it}^{B} = V_{E} a_{it} \left(h_{it-1}^{F} \right)^{h}$$

$$V_{E} > V_{S}$$
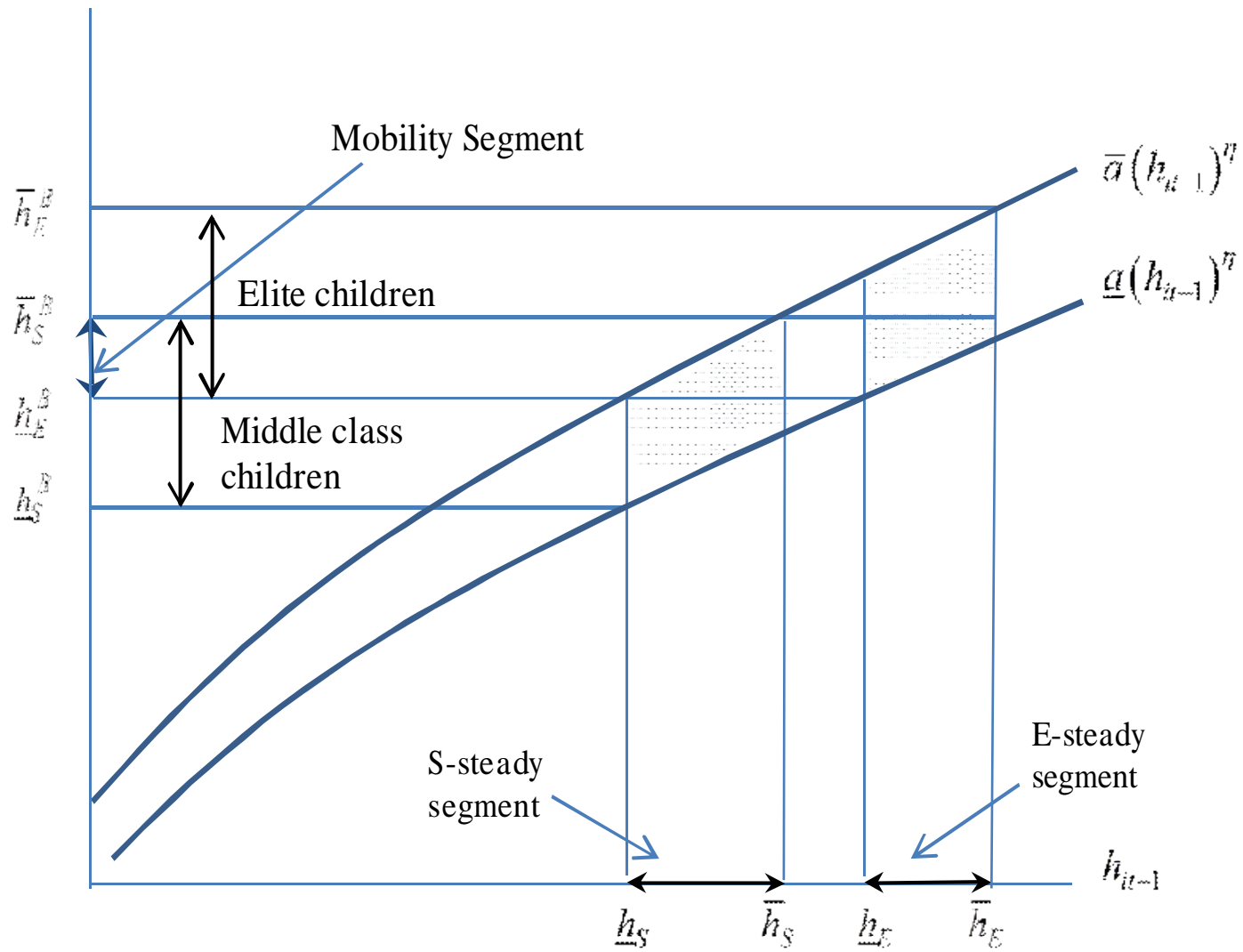
Social mobility at the top

è Social mobility at the top exists when children from the middle class enter the elite

è (à enter the elite university)

If the most skilled middle class child at the end of basic education is more skilled than the least skilled elite child at the end of basic education
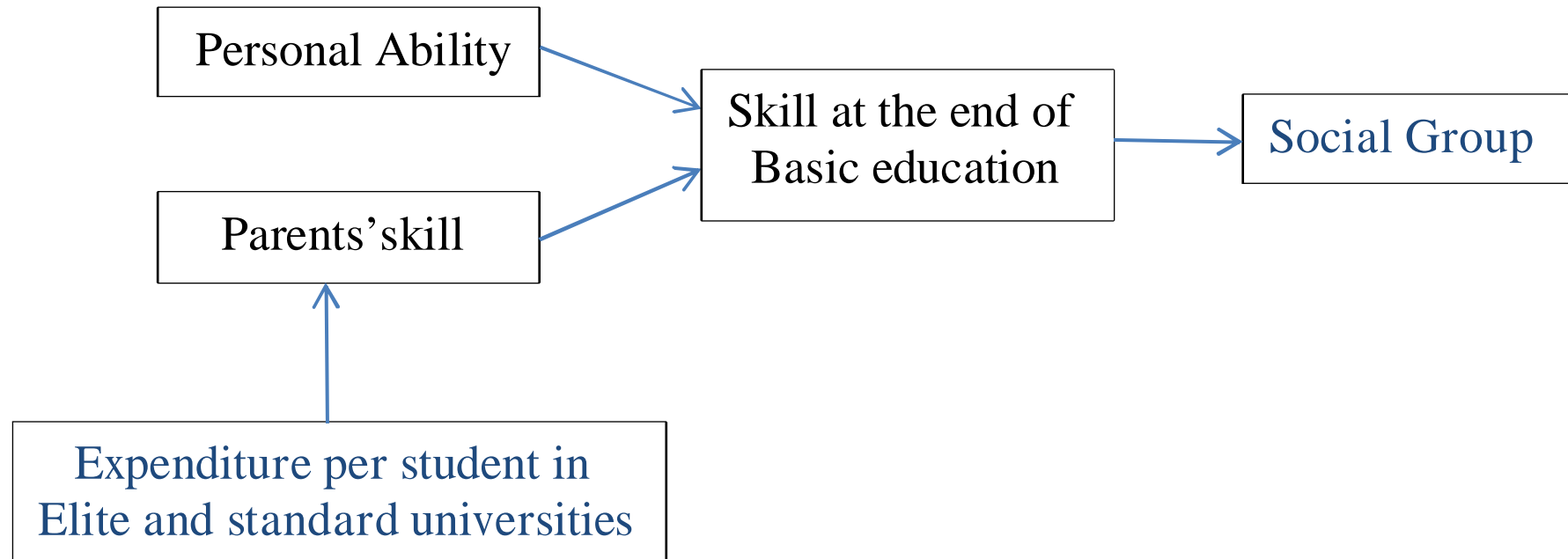
à social mobility at the top.

Mobility segment

$\overline{h}_{E}^{\beta}$

$\overline{h}_{S}^{\beta}$

$\underline{h}_{E}^{\beta}$

$\underline{h}_{S}^{\beta}$

Mobility Segment

Elite children

Middle class
children

$\overline{a}\left(h_{it-1}\right)^{\eta}$

$\underline{a}\left(h_{it-1}\right)^{\eta}$

S-steady
segment

E-steady
segment

h_{it-1}

$\underline{h}_{S}$ $\overline{h}_{S}$ $\underline{h}_{E}$ $\overline{h}_{E}$

Main Result:

An increase in the expenditure per student in the
    elite university

- lessens the middle class upward mobility

- and augments the elite self reproduction.
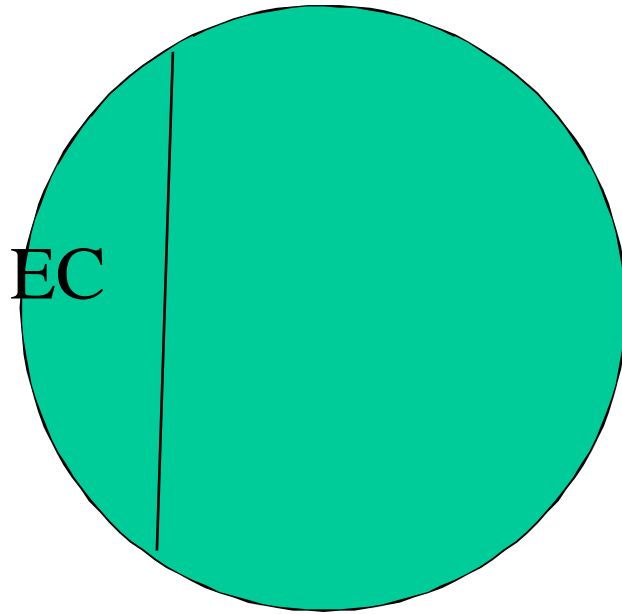
à less mobility at the top

Explanation

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┌─────────────────────┐
│   Personal Ability  │───────┐
└─────────────────────┘       │
                              ▼
                    ┌─────────────────────┐      ┌──────────────────┐
                    │   Skill at the end  │─────▶│   Social Group   │
                    │   of Basic education│      └──────────────────┘
┌─────────────────────┐  ▲  └─────────────────────┘
│   Parents'skill     │──┘
└─────────────────────┘
          ▲
          │
┌─────────────────────────────┐
│  Expenditure per student in │
│ Elite and standard universities │
└─────────────────────────────┘
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Data and simulations

Definition.

1) Elite replacement rate the proportion r of children from the elite who fall in the middle class and elite self-reproduction rate the proportion $b = 1 - r$ of children from the elite who remain in the elite.

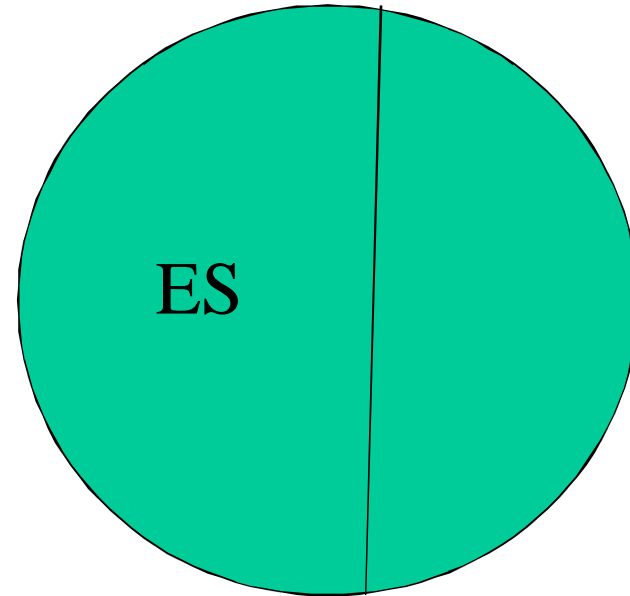2) Middle class upward mobility rate the proportion m of children from the middle class who enter the elite.

EC

PC

ES

PS

Population and elite ratio
..

elite's children
in elite school

4. Simulation (dynamics)

-We start from a purely egalitarian situation in which all individuals are initially (generation 0) endowed with the same skill.

-We simulate 3 scenarios:

a)Equal expenditure per student in S and E ('Equal')
b)Highly elitist education system ('Elite' =X 4)
c)Moderately elitist system ('In-between' =X 2)

Table 2. The Three scenarios

	V_S	V_E	$\underline{h}_S$	$\bar{h}_S$	$\underline{h}_E$	$\bar{h}_E$	$(\underline{a}V_S{}^{\eta})^{1/1-\eta}$ *
Egalitarian (Equal)	2.1	2.1	1.39	2.88	1.39	2.89	0.66
Elitist (Elit)	1.82	7.4	1.13	2.35	8.41	17.45	0.62
In-between (I-B)	2	4	1.30	2.69	3.49	7.25	0.65

* $\hat{h} \le \left(\underline{a}V_s{}^{\eta}\right)^{1/1-\eta}$ is the condition for children from the middle class never to fall in the lower class.
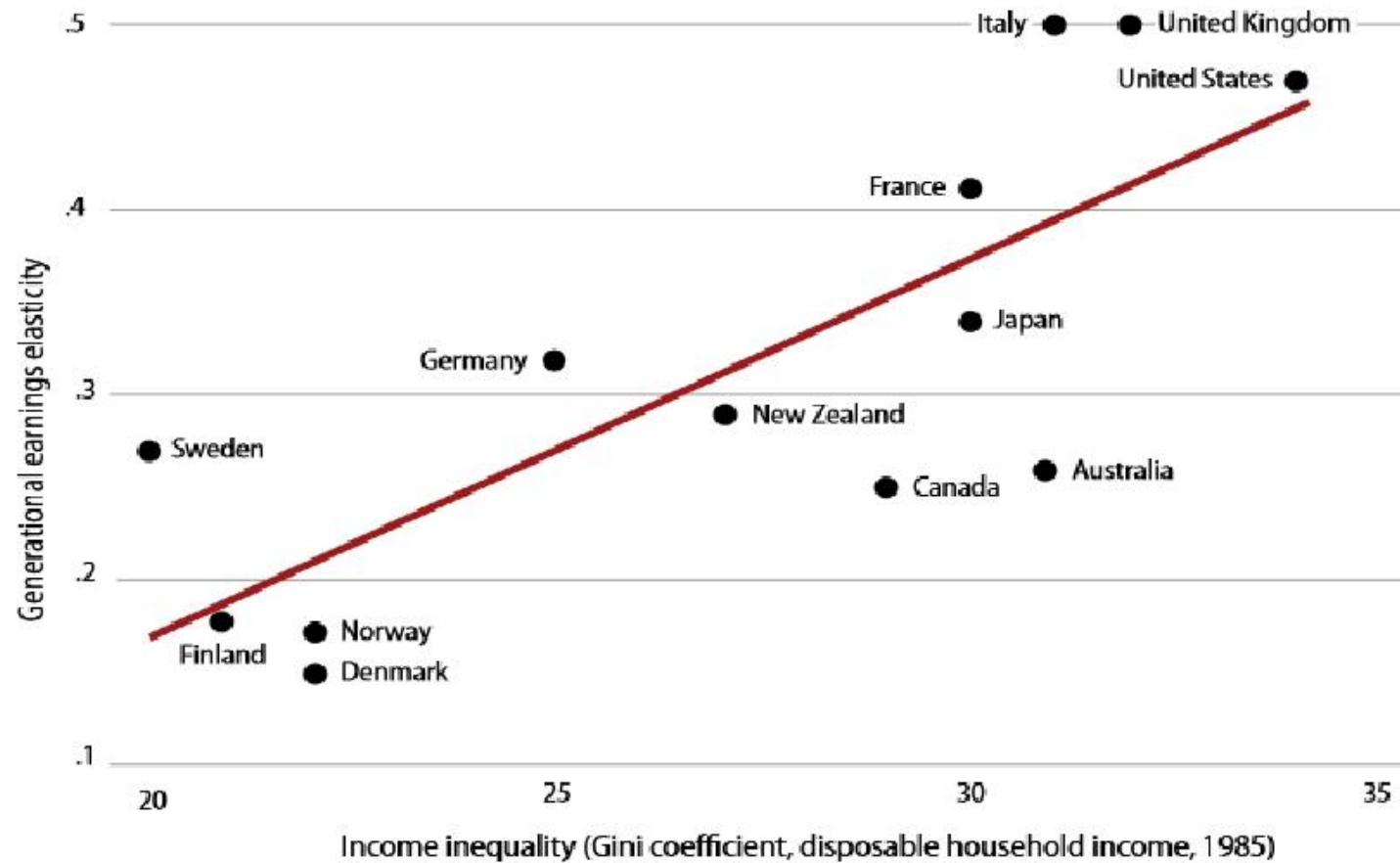
Mobility at the steady state

	Equal Opportunity	Equal (benchmark)	In-Between	Elite
(1) Elite self-reproduction β	5.0	17.7	66.9	96.6
(2) Middle class upward mobility μ	5.0	4.3	1.74	0.2
(1) / (2)	1	4.1	38.4	483

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