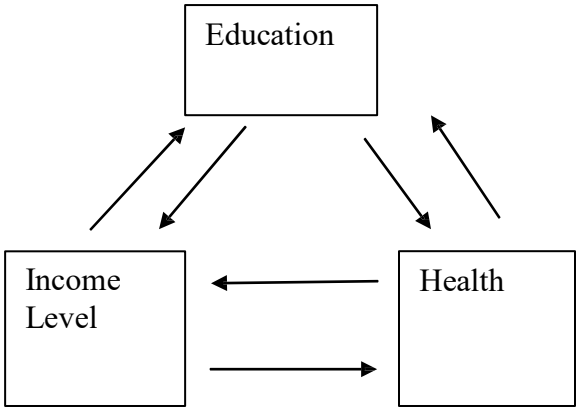
Human Capital: Education.



Health and education. Building up the capacities of human beings through better health and education.

Improved health and education are both objectives of development. Consider the HDI.

Improved health and education are also critical components of growth and development.

We are interested in both aspects of human capital both as a means and an ends of development.

Focus on education.

Consider the Millennium Development Goals and what was accomplished over time in terms of educational goals.

http://mdgs.un.org/unsd/mdg/Data.aspx

Goal 2. Achieve universal primary education

Target 3.
Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

Indicators
6. Net enrolment ratio in primary education (UNESCO)
7. Proportion of pupils starting grade 1 who reach grade 5 (UNESCO)[b]
8. Literacy rate of 15-24 year-olds (UNESCO)

Some evidence of international convergence in education measures (note contrast to income story).

A variety of measures suggest things are getting better in developing countries at a faster rate than in developed countries for some measures.

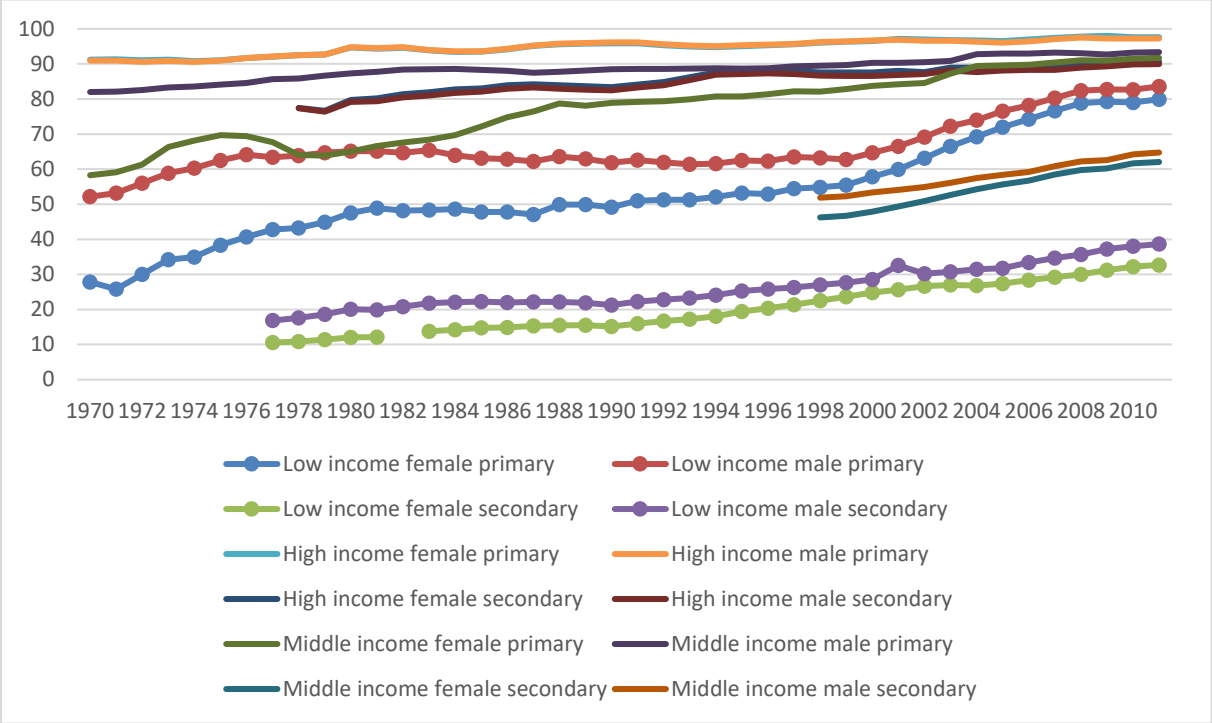
Note that convergence here can reflect the nature of the measure.

Contrast to income that has no inherent upper bound.

Also, leaves out qualitative difference once quantitative difference is no longer possible.

As a follow up, we can turn to the Sustainable Development Goals for education:
http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-4-quality-education.html

Data presented in net enrollment



Primary Enrollment Rate

Secondary Enrollment Rate

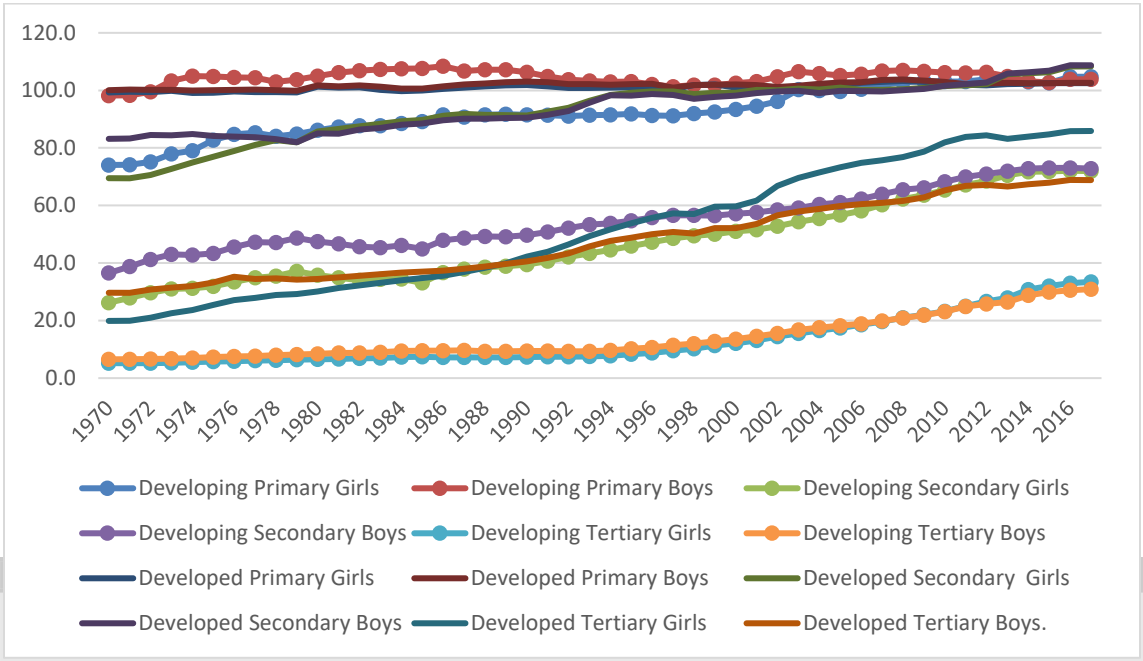
education enrolment ratios

Total enrolment, regardless of age, divided by the population of the age group which corresponds to a specific level of education. The net enrolment ratio is calculated by using only that part of the enrolment which corresponds to the age group of the level considered.

Reference

United Nations Educational, Scientific and Cultural Organization. Revised Recommendation concerning the International Standardization of Educational Statistics. Paris, 1978. Also contained in UNESCO Statistical Yearbook, chap. 2. Paris, annual.

Gross enrollment

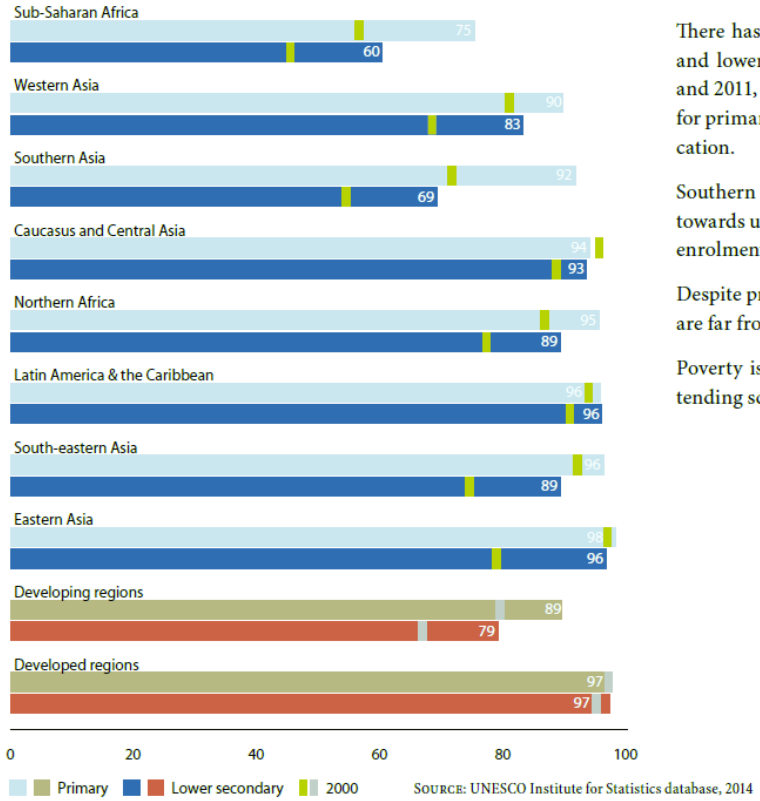


There is also progress on the female to male enrollment ratio implied by these trends.

GOAL 2 | Achieve universal primary education

Girls have made significant progress in primary and lower secondary enrolment, but with regional variations

Girls' adjusted net enrolment rates in primary and lower secondary education, 2000 and 2011 (Percentage)



There has been significant progress in girls' enrolment in both primary and lower secondary education in developing countries. Between 2000 and 2011, the net enrolment rate for girls increased from 79 to 89 per cent for primary education and from 67 to 79 per cent for lower secondary education.

Southern Asia and sub-Saharan Africa have made the greatest progress towards universal primary education for girls with an increase of their net enrolment by 20 and 19 percentage points, respectively.

Despite progress towards universal primary education for girls, countries are far from achieving universal enrolment in lower secondary education.

Poverty is the most important factor preventing girls and boys from attending school, but gender and location also play a role.

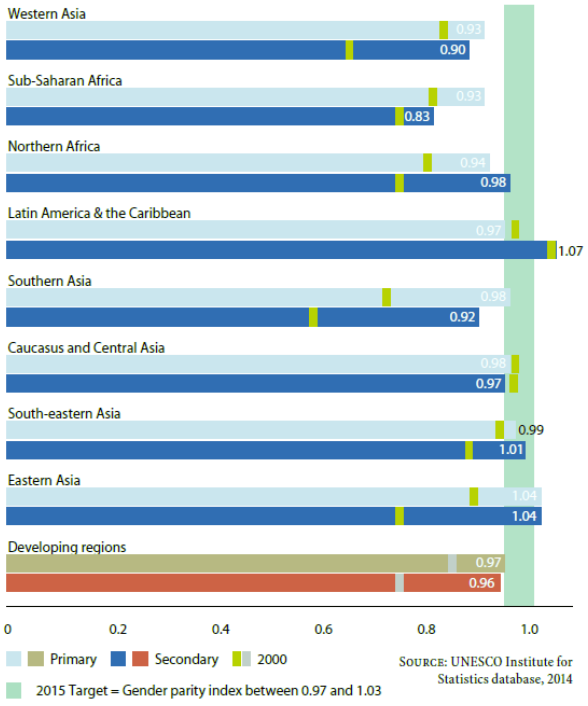
Gender parity in primary education has been reached and parity in secondary education is close to being achieved

Gender parity index for gross enrolment ratios in primary and secondary education, 2000 and 2011

Globally, gender parity in primary education has been reached. Developing countries as a whole achieved gender parity in gross enrolment in primary education in 2011, from 0.92 in 2000. Southern Asia has made significant progress, increasing the gender parity index (GPI) for gross enrolment from 0.84 in 2000 to 0.98 in 2011. In Western Asia, sub-Saharan Africa and Northern Africa, progress has been less remarkable but all three regions are moving towards parity.

In developing regions, the gender parity index for gross secondary enrolment has increased between 2000 and 2011 from 0.89 to 0.96. However, there are wide disparities across regions with the GPI ranging from a high of 1.07 in Latin America and the Caribbean (denoting an advantage for girls), to a low of 0.83 in sub-Saharan Africa.

While the progress on enrolment rates is welcome, improving learning outcomes and tackling barriers to girls' education, such as child marriage and violence against girls in the learning environment, are important challenges that need to be addressed.



MDG Gender Charts, 2014.

Returns to education.

Figure 8.1: Age-Earnings Profile
Figure 8.2: Financial Tradeoffs in Decision to Continue school
Table 8.1: returns to investment in education.

Primary education private rate of return:
22% OECD, 41 % Sub-Saharan Africa, 26% Latin America

Secondary education private rate of return:
12% OECD, 41 % SSA, 17% LA

Social rates of return look at pre-tax returns and cost of education is full amount of resources, not just that part paid for by the student.

Public goods aspect to education, but no valuation of spillovers.

Primary education social rate of return:
14% OECD, 24 % SSA, 18% LA

Secondary education social rate of return:
10% OECD, 18 % SSA, 13% LA and Asia

Consider the demand for education. In some sense, the demand for education is derived from the demand for different types of jobs that require education (the objective is not the education in and of itself, but what it can do for the individual).

Rising population, already unemployment and underemployment, limited formal sector job opportunities.

Why do people keep seeking education in such a situation?

Impact on increased income associated with that level of education.

Impact on increased probability of getting a job at this income level.

Both play a role in expected income.

Balance against the direct and opportunity of continuing education.

Education used as a sorting device by employers, signaling device by individuals.

Education as an alternative to unemployment, perhaps in the hope that things will get better in the future.

The supply side of education is usually driven by policy decisions by governments, so that is where we are focusing. Does the supply side make sense as a set of public policy decisions?

Distribution of students across education level as a contrast to the distribution of public recurrent expenditures on schooling:

	Preprimary	Primary	Secondary	Tertiary
Niger Students	2%	85%	12%	1%
Niger Expenditure	2%	49%	29%	20%
Madagascar Students	7%	80%	12%	2%
Madagascar Expenditure	1%	49%	29%	20%
Colombia Students	11%	46%	32%	11%
Colombia Expenditure	10%	43%	30%	16%
Brazil Students	13%	32%	45%	10%
Brazil Expenditure	9%	34%	36%	21%
Philippines Students	3%	60%	24%	13%
Philippines Expenditure	0%	61%	22%	14%
UAE Students	9%	37%	42%	12%
UAE Expenditure	7%	47%	45%	0%

UNESCO data, mostly 2003 data.

Global Education Digest from UNESCO (UIS)

http://www.uis.unesco.org/Education/Pages/global-education-digest.aspx

For some more statistics and a cross country set of comparisons look at UNESCO:

https://en.unesco.org/gem-report/

Spending per student in higher education in Africa: average is $44:$1 for the spending per tertiary student to spending per primary student. OECD average is around $2.00 to $2.50. Tanzania had $238 to $1 at one point!

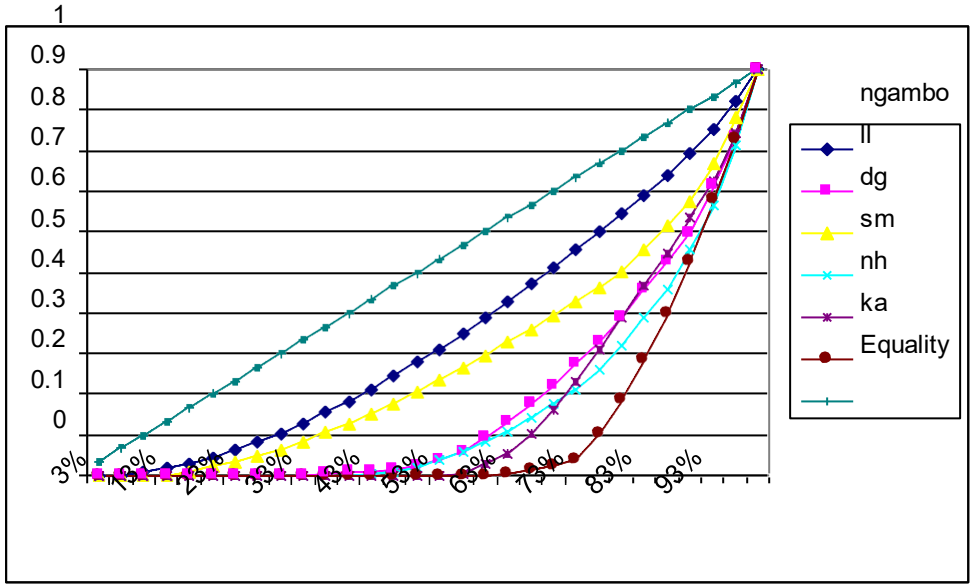
Inequalities in the distribution of education.

We can derive a Lorenz curve of education distribution.

What percent of the population has received what percent of the education?

Kenya data, all households in our sample. The average person in the household spent how many years in school? Distribution of the findings.

Gini of 0.61. Mean is 1.8 years (the average person in the household spent 1.8 years in school).



	N'gambo	Logologo	Dirib Gumbo	Sugata Marmar	North Horr	Kargi
Average Years	3.5	2.3	2.1	1.4	1.0	0.6
Gini	0.31	0.64	0.45	0.68	0.67	0.76

Overall relationship in cross country comparisons is that as average years of education goes up, the education Gini goes down. Perhaps not surprising, as there are limits to how long one can spend in school.

Low average education and high inequality in education are associated. This would suggest that education does not focus on primary to begin with.

Can increased education increase inequality? At some level, it may. Share of public resources for education divided by the share of the population.

Farmers: .49 (ME and NA) to .95 (OECD).
Blue collar: .35 (ME and NA) to 1.19 (Anglophone Africa)
White collar: 1.2 (OECD) to 5.93 (Francophone Africa).

Kids of already higher class families are the ones to get to higher education.

They can afford the direct costs, they can pass up the opportunity cost of child labor, they are in the city where the opportunities are…This could support the argument that education policy can lead to a transfer of wealth from the poorer to the wealthier.

WB calculates benefits incidence for public subsidies to education. Overall, the lowest 40% income class gets 43% benefit incidence from total education spending. However, for tertiary education this figure is 10%.

What about gender inequality in education?

Educational gender gap. Females receive less education than males in most developing countries though as noted above this gap has been closing.

Female literacy rate for all developing countries is 71% of male literacy rate for developing countries taken as a whole. Primary school enrolment approaches male levels, but secondary still has more ground to cover, while post secondary / tertiary has even more of a gap.

Note contrast to US situation where the gap is the other direction

Why might we think this is something that needs to be addressed?

1) Normative.
2) Educating females leads to lower population growth rates.
3) Educating females leads to better household nutrition.
4) Education of females leads to higher health standards.
5) Educating females leads to better education of daughters.
6) Higher marginal returns.
7) Females are disproportionately poor, so if education leads to jobs, addressing poverty and addressing female education are linked.

Missing women mystery. Demographic structure indicates the female to male ratio is related to culture and level of development.

Female: male ratio is around 1.05 in Europe, .91 in Pakistan. Not just poverty (SSA is 1.03), but interaction of culture, policy, and poverty