

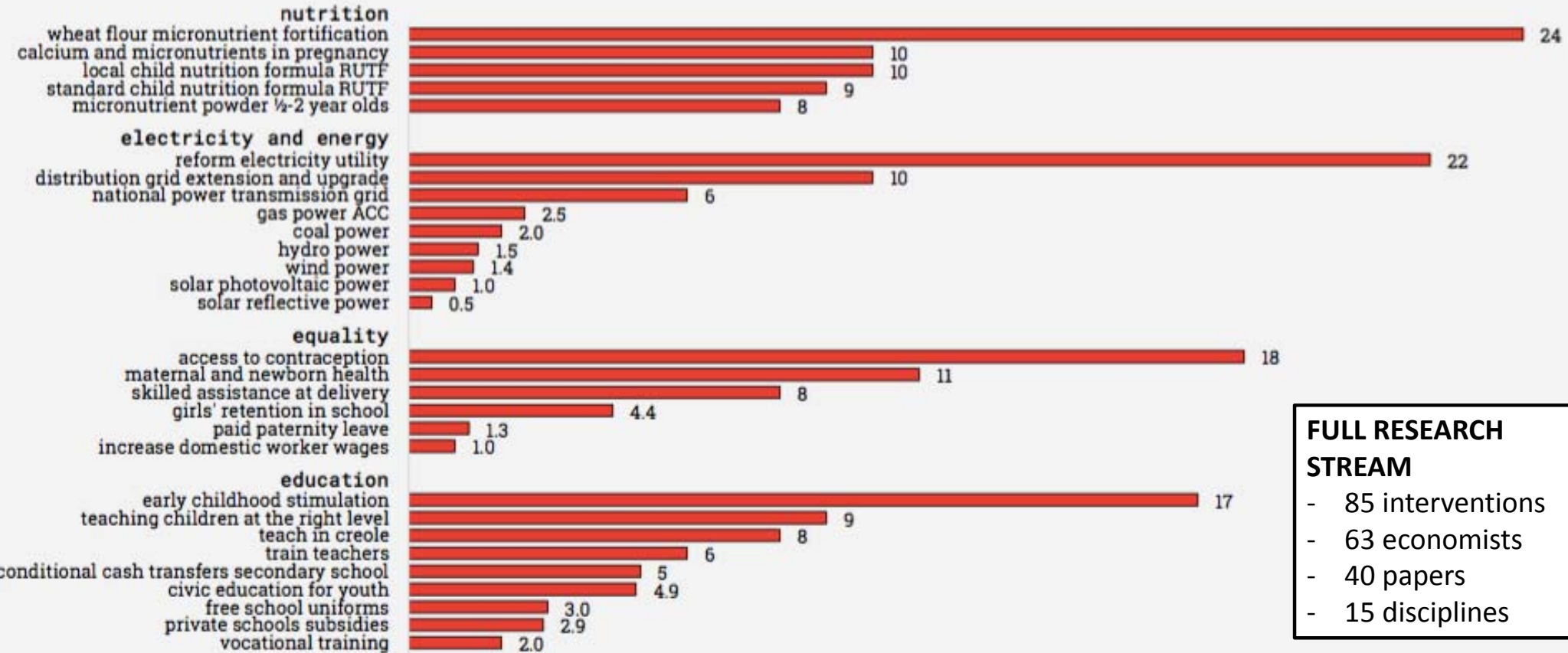
Valuing Non-Health Benefits of Education and Nutrition Interventions + a little bit about agriculture

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SOCIAL, ECONOMIC AND ENVIRONMENTAL BENEFITS FOR EVERY GOURDE SPENT



FULL RESEARCH STREAM

- 85 interventions
- 63 economists
- 40 papers
- 15 disciplines

Cost-benefit analysis in education and nutrition tends to focus on life time productivity benefits

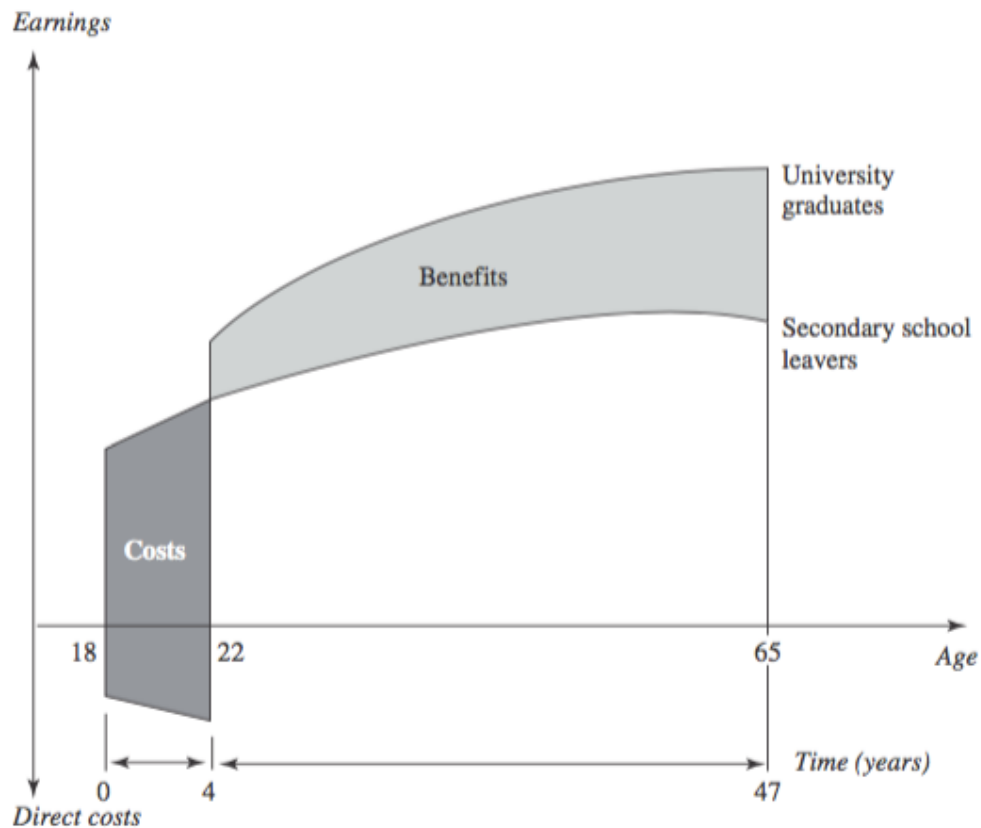
Education

- The primary benefit of education is that it makes an individual more productive
- Benefits are valued with reference to expected future income
- Concurrent health and other externalities are not considered

Nutrition

- Improved nutrition has a myriad of *immediate* cognitive and health benefits as well as *long term* productivity and health benefits
- Typically only long term productivity benefits are valued, couched in the human capital approach
- Health benefits are typically not considered

In education, the classic approach is to compare age-income profiles of adjacent education levels



Age-income profiles:

- Typically based on **wages** from cross-sectional household or labor market surveys
- Typically only formal sector wages, adjusted for experience, excluding benefits and in-kind goods like food and shelter
- Sometimes adjusted for future real growth in wages
- Rarely adjusted for unemployment and mortality

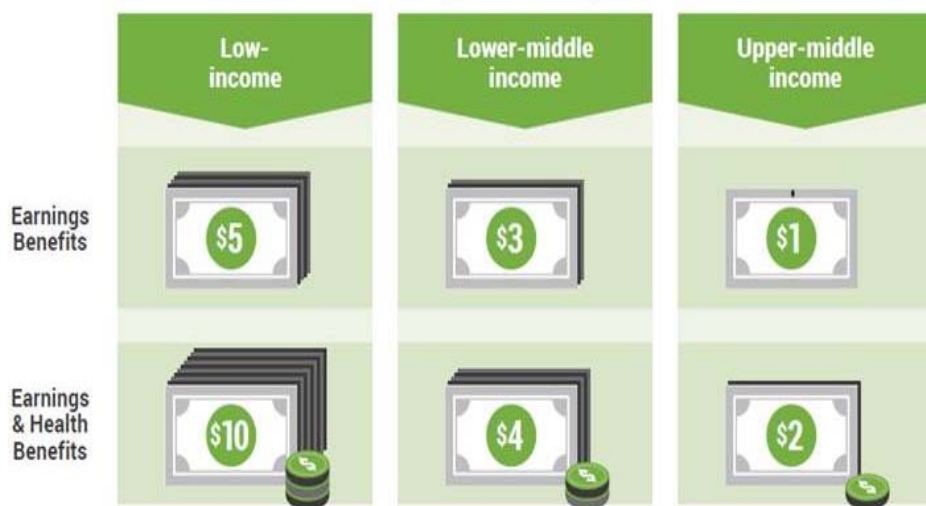
Potential to expand research on wider social impacts + linking benefits to education quality

1. Wider social impacts can be significant and are often excluded

2. Macro-economic evidence indicates that the main driver of growth is education quality, not quantity

Education is the smartest investment – benefit-cost ratios are high

For each \$1 invested in an additional year of schooling...



Source: Education Commission 2016, based on Schäferhoff et al., 2016

Figure 5 Test scores influence growth in both low- and high-income countries



Nutrition CBA tends to focus only on non-health benefits and downplay health benefits

| Effects of better nutrition | Supporting Literature | Ways to Monetize Benefits |
|--|---|---|
| HEALTH BENEFITS | | |
| Lower risk of infant child mortality and morbidity | Olofin et al. (2013) severely stunted children 5-6 times more likely to die | VSL, Monetization of DALYs |
| Lower risk of adult mortality and morbidity | Pendergast and Humphrey (2014) review literature, e.g. higher rate of metabolic disease from stunting | VSL, Monetization of DALYs |
| NON-HEALTH BENEFITS | | |
| Increased education attainment | Range of studies suggest stunting decreases schooling by 0.5-1.5 years | Future income from education based on age-earnings profiles |
| Increased wages in adulthood | Range of studies suggest stunting decreases adult wages by 10-30% | Apply average effect size from literature to current wages |
| Increased household consumption in adulthood | Hoddinott et al. (2013) show that non-stunted children have 66% higher HH consumption in adulthood | Apply effect size from Hoddinott et al. 2013 to current consumption or GNI levels |



Comments

- Health benefits tend to be absent in nutrition CBA
- 'Quick win' is to start incorporating them
- Consumption-productivity benefits are favored in CBA
- Primary research gap is one of evidence not methods -> would be good to have more evidence of long term effects

Agricultural benefits are yield improvements, on-farm income, consumer + producer surpluses

- Benefits typically measured:
 - market value of extra produce (e.g. from fertilizers, better seeds)
 - net farm income (e.g. from mechanization)
 - consumer and producer surpluses (e.g. from tariffs and subsidies on agricultural commodities)
- Benefits not typically measured:
 - Nutrition and health impacts from reduced hunger and greater food availability
 - Time savings