

# The Macroeconomics of AIDS and ART

Nicoli Nattrass

AIDS and Society Research Unit  
University of Cape Town

School of Economics  
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AIDS AND SOCIETY RESEARCH UNIT (ASRU)

University of Cape Town ▪ Private Bag Rondebosch 7701 ▪ South Africa  
Tel: 021 650 4656 ▪ Fax: 021 650 4657 ▪ Web: [www.cssr.uct.ac.za](http://www.cssr.uct.ac.za)



# Obvious economic effects

- AIDS-affected **households** suffer from income losses, increased health care costs, lower savings, poorer education of children.
- AIDS-affected **firms** suffer from productivity losses, increased costs, rising wages, lower profits.
- **Government** budget deficits grow with rising health and welfare costs, falling staff productivity.



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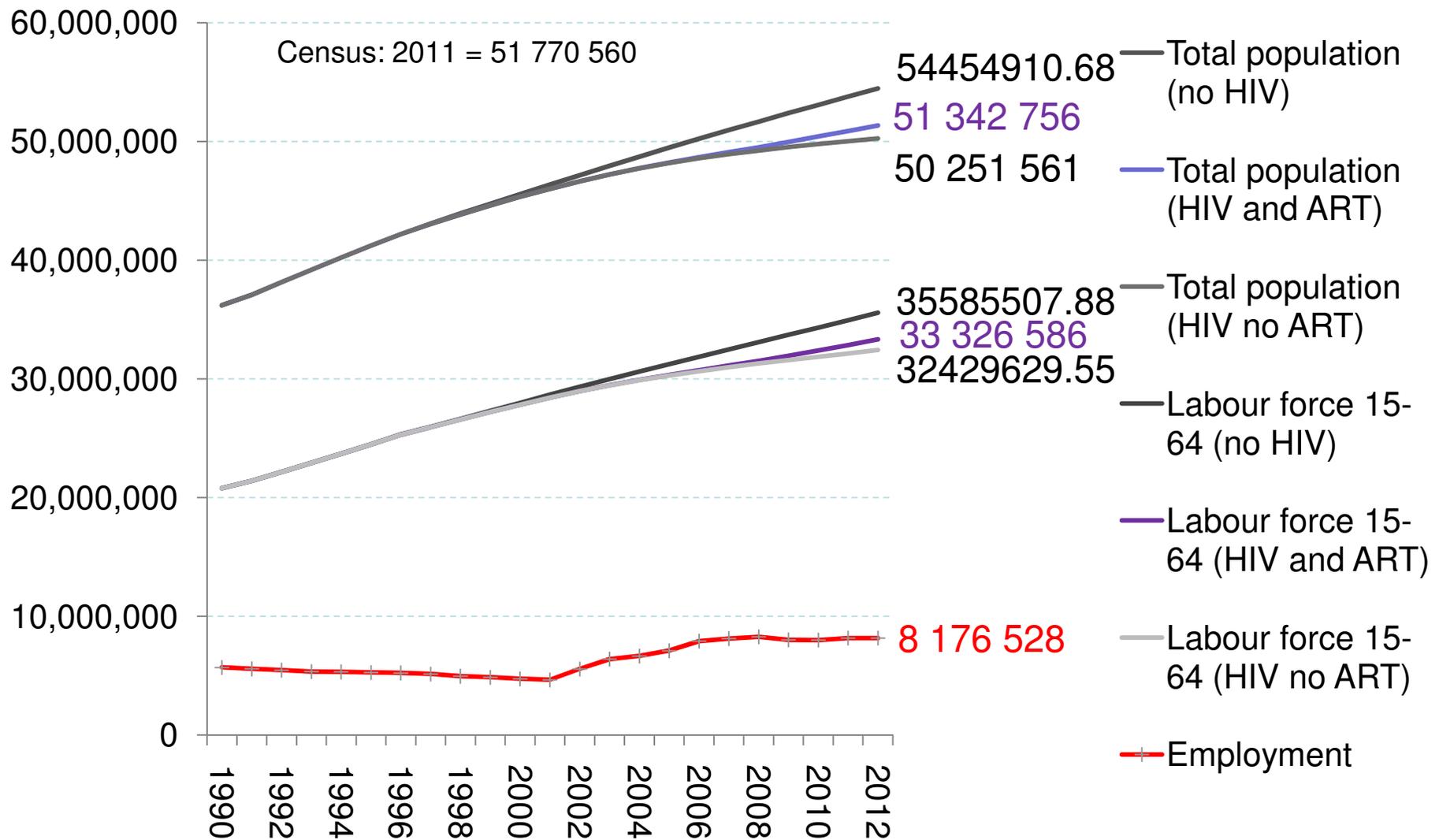
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## THE GIFT OF THE DYING: THE TRAGEDY OF AIDS AND THE WELFARE OF FUTURE AFRICAN GENERATIONS\*

ALWYN YOUNG

This paper simulates the impact of the AIDS epidemic on future living standards in South Africa. I emphasize two competing effects. On the one hand, the epidemic is likely to have a detrimental impact on the human capital accumulation of orphaned children. On the other hand, widespread community infection lowers fertility, both directly, through a reduction in the willingness to engage in unprotected sexual activity, and indirectly, by increasing the scarcity of labor and the value of a woman's time. I find that even with the most pessimistic assumptions concerning reductions in educational attainment, the fertility effect dominates. The AIDS epidemic, on net, enhances the future per capita consumption possibilities of the South African economy.

'The AIDS epidemic is a humanitarian disaster of millennial proportions, one that cries out for assistance. It is not, however, an economic disaster' (page 460)



The ASSA2008 model predicts there are 3.2 million fewer people in SA in 2012 because of AIDS (annual pop growth was 3% between 1990-2012 instead of 3.5%). Young estimated SA would stay below 50 million for 30 more years as rising wages (due to labour shortages) encourages women to have fewer children. But the labour force has been growing at 4%, employment at 3% and unemployment remains high.

# Economic narratives with similar population assumptions generate radically different predictions....

- Growth falls by 0.3% and per capita incomes **rise**.  
(Quattek,, 2000;)
- Growth falls by 1.6% and per capita incomes **fall**.  
(Arndt and Lewis. 2000) .

Key issues include: assumed productivity losses and inter-generational effects; and whether rising government budget deficits are expansionary (boost total spending and stimulate output and employment) or simply generate inflation, higher interest rates and lower private investment.

# 'Over-lapping generations' models predict dire long-term effects

- Bell et al (2006) argue in the *World Bank Research Observer* that the premature deaths of parents undermines the human capital of orphans so severely that the economy will shrink to half its size in four generations.
- Necessary interventions would cost 4% of GDP)



Alwyn Young has similar negative effects from orphanhood, but these are more than compensated for by assumed lower fertility....

# Modelling the impact of ART



- Smit and Ellis (2008) using the Bureau for Economic Research Macroeconomic model of South Africa, costing data from Cleary and Boule, and demographic data from ASSA, that a 50% ART rollout reverses about a fifth of the economic costs of AIDS in SA and that program costs are more than made up for by higher tax revenues and lower welfare payments.
- It could have taken more account of the cost savings of ART (fewer new HIV infections, fewer opportunistic infections and reduced health costs)



Jeffrey Sachs on the moral imperative and affordability of combatting AIDS:

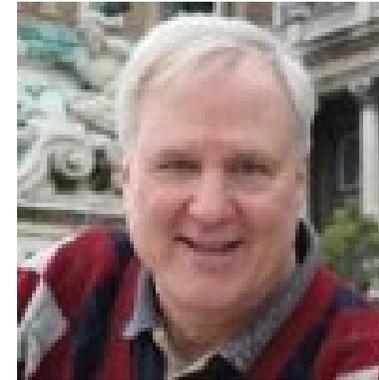
“take all of what we need for poor countries; we’re talking about 40 billion bucks or so, not just for AIDS but for all primary health systems. \$40 billion? That’s 20 days of Pentagon spending. So let ‘em take a month off, c’mon!”

The WHO Commission on the Macroeconomics of Health (2001) argued that health spending, including on ART, would be growth-enhancing.

But the debate continues as to whether ART is the best way of achieving better health outcomes....

World Bank, July 2012

<http://www.lauriegarrett.com/index.php/en/blog/3220/#&panel1-1>

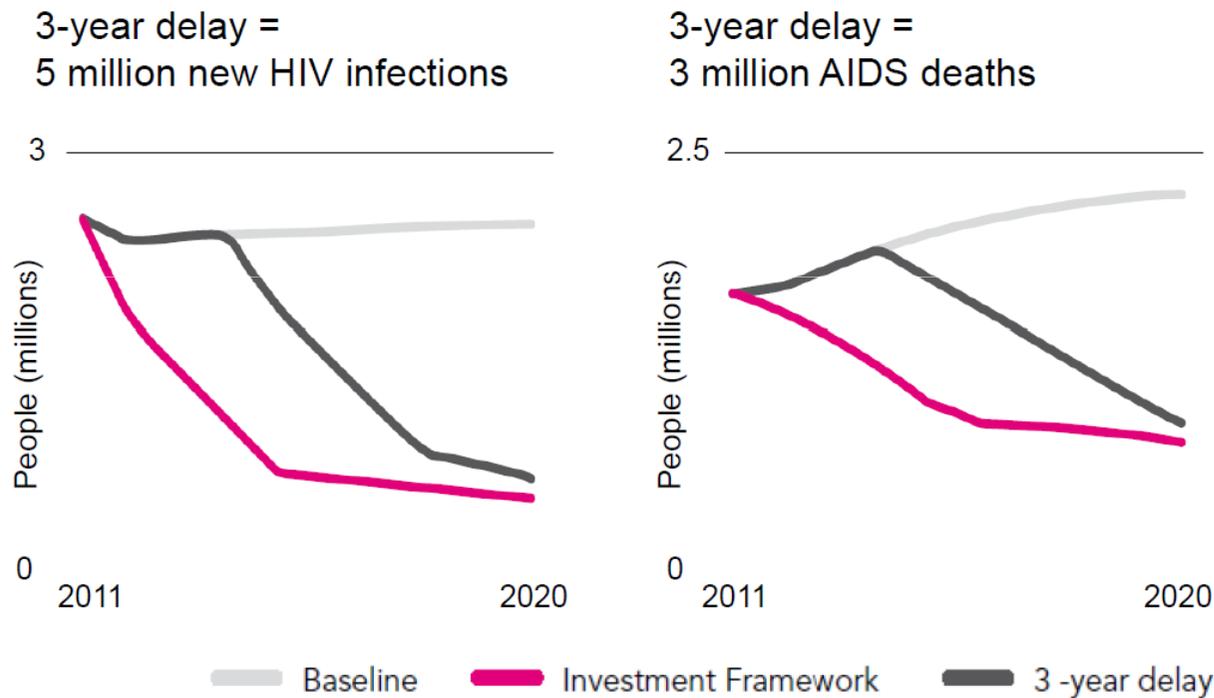


Mead Over takes the view of a domestic finance minister in a resource-constrained environment.

“Resources are scarce for him. He’s looking at how many life-years can be saved with his money – child health or more for HIV? Which do you do? It’s true that \$150 can save one child’s life from mother-to-child transmission of HIV. But 20 kids’ lives can be saved by investing that \$150 in vaccines.”

UNAIDS is emphasising the need for greater efficiencies in the AIDS response (its new 'investment framework') but continues to warn about the costs of inaction.....

### The costs of inaction



Sources: Schwartländer B et al. Lancet, 2011, 377:2031–2041;  
John Stover, Futures Institute, personal communication, May 2012.

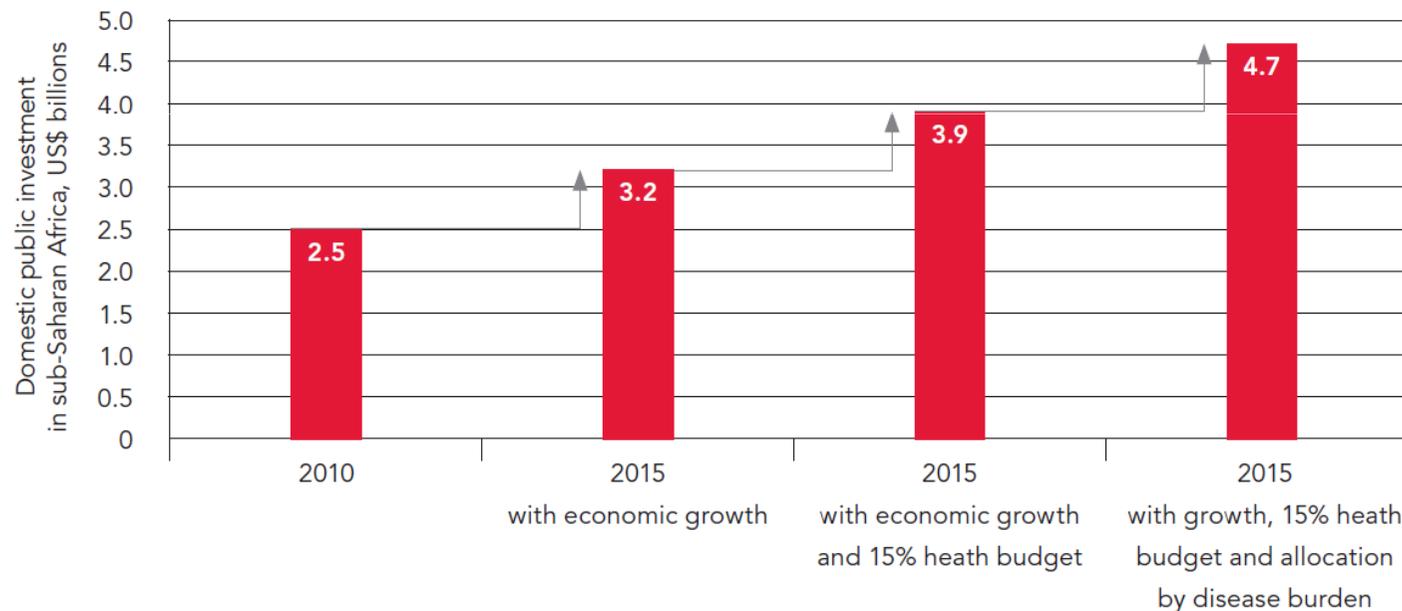


[http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/20120718\\_togetherwewillendaids\\_en.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/20120718_togetherwewillendaids_en.pdf)

UNAIDS is also emphasising the need to generate more resources from African governments for health spending (to supplement flat and falling donor funding) and for evidenced-based, cost-effective policy.

Three options for increasing domestic public HIV investment in Africa

Source: UNAIDS.



But how easy is it to move from evidence-based studies and economic studies of cost-effectiveness into policy? Political judgement really matters.....

*If we successfully raised an additional US\$10 billion over the next 5 years to combat HIV/AIDS in sub-Saharan Africa, how could it best be spent?*



Professor [Ernest Aryeetey](#), Vice Chancellor, University of Ghana;



Professor [Paul Collier](#), Director, Centre for the Study of African Economies, Oxford University;



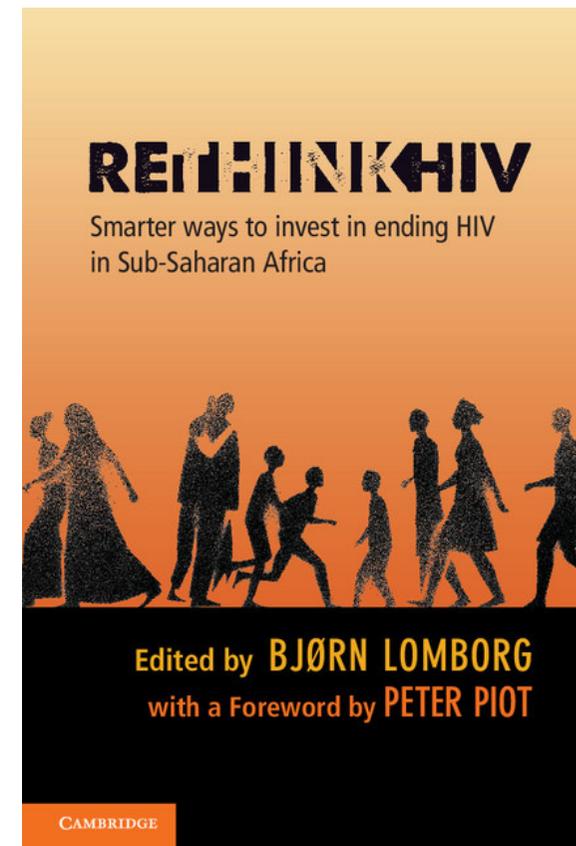
Professor [Edward Prescott](#), Arizona State University (Nobel laureate);



Professor [Thomas Schelling](#), University of Maryland (Nobel laureate)



Professor [Vernon L. Smith](#), Chapman University (Nobel laureate)



# Expert Panel (\$2 bill per year over 5 years)

1. Scale up vaccine research (\$500 mil)
2. Infant male circumcision (\$3,150 mil)
3. Mother to child transmission prevention (\$140 mil)
4. Blood safety (\$2 mil)
5. Scale up ART starting with the most sick and most infectious patients (\$6,208)

# Global Fund Forum ('senior figures' in the fight against AIDS)

1. Male circumcision for young adults (EP: 7)
2. Scale up ART starting with the most sick and most infectious patients (EP: 5)
3. Mother to child transmission prevention (EP: 3)
4. Accelerate AIDS vaccine development (EP: 1)
5. Conditional cash transfers for girls in school (EP: 10)

<http://www.rethinkhiv.com/priorities/118-global-fund-forum>

# African Civil Society (ICASA 2011)

1. Mother to child transmission prevention (EP: 3, GFF: 3)
2. Scale up ART starting with the most sick and most infectious patients (EP: 5, GFF 2)
3. Conditional cash transfers for girls in school (EP: 10, GFF: 5)
4. Abuja Goals fund: making donor funds dependent on meeting the Abuja target of 15% govt spending on health (EP: 18, GFF: 8)
5. Safe blood transfusions (EP: 4, GFF: 6))

<http://www.rethinkhiv.com/priorities/133-african-civil-society-forum2>

# In Sum

- Micro-level studies show negative economic effects of AIDS. Macro models differ in how these impacts affect the economy as a whole.
- Micro and macro studies show economic benefits of rollout out ART.
- But policy prioritisation remains difficult and varies depending on framing, constituency, and political mobilisation

