

**HIV/AIDS, Human Capacity, and  
Institutions:  
Sustaining Economic Growth**

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## **1. Introduction**

HIV/AIDS systematically undermines human capacity and weakens institutions thereby diminishing a country's potential for economic growth.

Process is cumulative: longer the epidemic progresses, more difficult restoring the former growth path.

As growth declines, economy has fewer resources (human, financial, physical, and institutional) to counteract the damage.

Reduces human capacity and weakens institutions further.

Economic dynamics -- 'running Adam Smith in reverse' as markets contract and economic opportunities diminish.

Social dynamics -- ‘running Hobbes in reverse’ as social capital erodes and ‘social contract’ unravels.

**Format:** Importance of human capacity and institutions for economic growth.

How HIV/AIDS affects human capacity and institutions.

Breaking the nexus between the spread of HIV/AIDS and economic growth.

Concluding comments and what USAID might consider.

## **2. Human Capacity, Institutions and Growth**

Capacity -- some notion of skill, competence, facility, ability, caliber, or proficiency (individuals and organizations)

Institutions and organizations used interchangeably.

Economic growth -- sustained increase in real (i.e., inflation-adjusted) per capita income.

[Economic growth is fundamental to economic development.]

Sources (or determinants) of economic growth

Long history – Adam Smith’s ‘pin factory’ – role of human capital (division of labor according to skill) and re-organization.

Growth accounting -- statistical technique to apportion relative contribution to income growth (over a specified period) to various 'sources' of growth.

Result: (a) accumulation of productive factors;  
(b) increase in efficiency of those factors;  
(c) more intensive use of available productive resources.

Improved human capacity and institutions (organizations) contribute to all three.

Growth and skill of worker force  
Improved skill and organization  
'Enabling environment' through reforms

Economists made a major effort to understand determinants of, and processes driving growth

Gunnar Myrdal -- 'cumulative causation.'

'Endogenous growth' (based on 'learning-by-doing')

Increasing returns and externalities to information generation and use of knowledge

Beneficial spillover (or knock-on) effects across activity and sectors that stimulate growth.

[HIV/AIDS spillover effects are negative]

Roemer "capacity to adjust -- flexible institutions that are capable of adjusting, often proactively.

North – reducing transaction costs

Kremer and Johnson – general increase in knowledge creation and expansion of networks that generate and use it

Krugman importance of agglomeration -- information generation and use tends to cluster

Easterly and Levine – clusters more important than factor accumulation [Clusters -- settings where transaction costs are low and linkages between firms and their employees are ‘dense’.]

Acemoglu -- Skilled workers add to productivity of networks – complementarities

Ramcharam -- Complementarities between skilled and unskilled workers.

Collier and Gunning – barriers to growth – used skills ineffectively, raised transaction costs by intervening.

Harry Johnson (early 1960s) general framework including role of human capacity and institutions -- “...generalized capital accumulation approach to economic development.”

Capital “...anything that yields a stream of income, and income as the product of capital”.

“...the growth of income that defines economic development is necessarily the result of the accumulation of capital, or of ‘investment’; but ‘investment’ in this context must be defined to include such diverse activities as adding to material capital, increasing the health, discipline, skill and education of the human population, moving labor into more productive occupations and locations, and applying existing knowledge or discoveries and applying new knowledge to increase the efficiency of productive processes. All such activities involve incurring costs, in the form of use of current resources, and investment in them is socially worth while if the rate of return over cost exceeds the general rate of interest, or the capital value of the additional income they yield exceed the cost of obtaining it.”

### **3.HIV/AIDS, Human Capacity and Institutions**

Human capacity and organization/institutions are 'sources' of growth.

HIV/AIDS erodes the processes that sustain human capacity formation and enhance the effectiveness of institutions.

Studies confirm the spread of HIV/AIDS lowers growth and reduces income.

Again: image of running the economic system backwards (or coming apart from the insides).

Central idea: HIV/AIDS undercuts economic growth by reducing the stock of human capital and, through erosion of institutions, undermines the productivity and effectiveness of that stock. The decline in growth, in turn, feeds back to further reduce human and institutional capacity.

Effects show up in investment [fits into Johnson framework].

Investment - "the flow of expenditures devoted to projects producing goods which are not intended for immediate consumption."

That is, current expenditure of resources in the expectation of a future return.

Profitable investments have positive net present value -- "the sum that results when the discounted value of an investment are subtracted from the discounted value of the expected returns."

**EXAMPLE:** Investment costs to increase human capacity -- training costs, subsistence costs (food, health insurance), foregone wages, and the opportunity cost of time. First two are actual (dollar, kwacha) expenses incurred. Third is equivalent to earnings of trainees if remained in their job (or had taken a job matched to their skill). Fourth is measure of psychic cost of

diverting time to training from other activities (sport, leisure). Rewards from enhanced capacity -- higher wages, increased job satisfaction, higher responsibility, and professional or social status. [Some can have opportunity cost]

Investment also required to raise the effectiveness of organizations/institutions. Costs include time and effort of numerous professionals to determine how to re-organize; implementation, including disruption or dislocation. Expected gain from reorganization - - institution better able to undertake its assigned (or assumed) functions. Often reflected in quality and quantity of the institution's output.

Investment (or 'capital-theoretic) approach is general, flexible, and robust.

Choice emerge from comparing expected benefits with costs; behavior based on choices

SOME EXAMPLES:

*Internal Migration*

*Borrowing*

*Saving*

*Job Search*

*Credit repayment*

*Purchase of a Long-term Financial Asset*

*Income remittances to relatives*

*International migration (i.e., brain drain)*

*Criminal activity*

*Lobbying lawmakers or officials*

*Bribery*

*Purchase of antiretroviral drugs:* Decision by an individual to gain access to treatment with antiretroviral (ARV) drugs involves comparing drug costs, regime compliance costs, and time involved with the expected reward from treatment. In this case, the decision horizon itself is a function of the efficacy of the treatment. This, of course, is not known in advance. Literature -- success of ARV treatment is highly dependent on the diligence of the regime and the willingness of the patient to avoid risky behavior.

*Scaling up HIV/AIDS activities:* Choice facing governments on whether and what HIV/AIDS activities to scale up are similar to any other public choice involving the allocation of scarce budgetary resources. That there are lives that can be saved or prolonged changes the urgency of the decision, not its nature. The costs incurred are the direct costs of organizing and staffing the activities being scaled up, and providing the complementary resources (vehicles, physical facilities, medical supplies and equipment). There are opportunity costs as well. These include the government programs foregone because budgetary resources are devoted to scaled up HIV/AIDS activities.

*Introducing Universal Primary Education:* Another dimension of ‘scaling up.’ [Is this the appropriate model for education?]

*Economic reform:* Always winners and losers.  
Always costs: issue is whether costs of adjusting  
or not adjusting.

*Environmental preservation:*

*Macroeconomic stability:*

List could be extended -- decisions on number of children, to evade taxes, honor contracts, cooperate with neighbors in joint production, establishing new enterprise, change production techniques, vote for a particular political party, acquire new information on production or consumption opportunities, take a holiday, or be married..

To reiterate: choices based on explicit (or implicit) weighing of costs against benefits.  
Decisions, in turn, determine economic behavior.

HIV/AIDS impinges on decisions and behavior derived from them by prematurely foreshortening the decision horizon.

Truncation of the decision horizon has several effects.

First, long-lived activities become unattractive, even if potential rewards are large.

Second, biases behavior towards activities with high short-term pay-offs.

Third, shifts decisions in favor of activities with low short-term costs.

Fourth, tends to preclude activities, such as cooperation, whose rewards, though often large, are uncertain.

Fifth, reduces willingness of decision makers to change present activities lest they incur large transition costs.

Sixth, it reduces the individual's wealth -- with lower wealth, an individual is typically more risk averse.

## **4. Consequences for Sustained Economic Growth**

Low HIV prevalence rates, tragic for those involved but not a macro phenomenon

Not so if prevalence rate is 20 to 30 percent of adult population [Botswana, Zambia, Zimbabwe, Kenya, Tanzania, and South Africa]

HIV/AIDS is a macroeconomic phenomenon – affects (virtually) all dimensions of human activity

How individuals and groups interact and transact, How they cooperate and coordinate  
How they fail to cooperate or, even conflict  
[Angola, Congo (Kinshasa) and Zimbabwe]

Investment framework -- directly connects current decisions and behavior to expectations about future events.

Keynes -- changing expectations about the future can have a potent effect on current behavior.

Keynes -- also understood that adverse expectations are self-reinforcing.

What can be done to counteract these macroeconomic effects?

What can be done to counterbalance the loss of human capacity and damage to institutions that these decisions imply?

How can the impact of HIV/AIDS on economic growth be moderated?

Cumulative impact of HIV/AIDS on African economies is well known.

[Health and education costs rise, hospital facilities and health services begin to be overwhelmed, skilled and unskilled workers die, etc...]

Less systematically analyzed -- types of responses to counteract and even rollback adverse effects of the epidemic.

Growth Accounting framework: efforts need to focus on --- boosting accumulation, improving efficiency, fully utilizing available resources.

Start from macroeconomic setting... guide ‘do no more harm’ (or ‘waste no more resources’).

Create the most ‘enabling environment’ possible for income generation, employment expansion, and wealth creation.

Bedrock principle -- achieve and sustain macroeconomic stability.

HIV/AIDS far too many hardships on infected and affected – should not be compounded by government-induced economic instability.

No done across Africa generally – e.g., Nigeria and Zambia – mismanagement continue

Other African countries do not have to follow their lead

In addition to stability

Need to encourage accumulation and improve the efficiency across the economy.

From GA framework that requires additional investment and reorganization.

Key element is increasing the *effective* supply of resources.

Response to scarcity --- three adjustments: first, substitute in favor of factors that more abundant; second, use the scarce good more efficiently (and intensively); augment the supply of the good from local or external sources.

When behavior has changed in ways that have adverse consequences for economic and institutional performance, need to change incentives and/or disincentives to re-direct behavior.

Re-combine the existing factors of production to use less of the scarce factor. [Requires reorganization of work schedules and routines] -  
- nurses aides; Malawi 'starter-pack'; books for teachers; use radio

[Not all substitutions are socially productive – shifting costs of distribution]

Shifting product mix away from commodities that intensively use the scarce factor –  
agricultural crops

At macro level – government cut its development agenda – lesson from currently rich and Asian countries; but donors/World Bank as barrier [1997 WDR on 'effective states']

A large agenda pre-programs failure

Improved efficiency can come in many forms – modify training approaches – did this in Zambia. But, general question: What changes are required – education, and techniques for managing, motivating, disciplining and otherwise dealing constructively with a workforce large numbers of whom are ill, dispirited, and becoming increasingly poor?

Jeffrey Sachs and others offer prospect of anti-retroviral treatment. But, Global Fund not meeting their estimates. What now? If we cannot treat every one, who do we treat?

Key issue is to take full advantage of existing skills and experience of those who are HIV-positive while they can contribute.

So far, too much attention focused on making up for the loss of personnel.

Problem is how to do it? Need collaborative research to find out...[EAGER model]

To boost investment, need to overcome chronic gloom and depression and boost confidence.. [Natsios comment]. How can this be done?

[Zambians remind every one that 30 percent prevalence means 70 are HIV-negative – it is true, and a perhaps start]

Missing ingredients in quest among African countries in response is need to innovate. [Help the whole economy even if HIV/AIDS not a problem.]

Brazilian farmer; ‘outrageous guess’; ‘patterns that connect’

Networking is key element... brings us back to collaborative research...

Institutional innovation, it may be important to revamp management practices to more effectively incorporate redundancy, flatten the hierarchy, develop parallel structures for monitoring and control

Work around hierarchy – break grip of Mbeki, Mugabe...

Innovation in health delivery – Can self-diagnosis and self-medication be made more effective?

FINALLY: it takes capacity to create capacity

Role for TA – work with African scholars; broader links to world research (builds local research capacity as it goes – result of EAGER project)

TA to underpin performance of key institutions...

## **5. Concluding Comments with Questions for USAID**

HIV/AIDS undermining human capacity and weakening institutions across Africa. Losses undercut economic growth. In turn, makes the generation of capacity to deal with the HIV/AIDS epidemic increasingly difficult. [So far on an implosive cycle.]

Investment framework – principal impact of HIV/AIDS is to truncate decision horizons

Has major impact on decisions and thus behavior.

Policy and actions need to counteract this

Accumulation; increase efficiency; used resources more effectively

Macroeconomic stability is essential  
Cut agenda to fit capacity constraints  
Substitute, reorganize, innovate [new ways to  
teach, manage...]  
Collaborate with, and draw on outsiders

## **FOR USAID?**

- a. What are lessons of 1999 conference?  
Any lessons from promises not fulfilled?
- b. In what way does ‘scaling up’ make sense? Where is the human and organizational capacity? Do we risk failure through over-reaching and over-extension?
- c. Can USAID coordinate with other donors to place technical assistance in strategic locations to shore up key institutions?
- d. What form of capacity building is relevant? How can the training cycle be shortened and the effectiveness of training increased? What management techniques are relevant to boost productivity?
- e. How can local scholars and researchers be engaged in the process of creating capacity and strengthening institutions?
- f. How can message be conveyed to African governments about macro stability?