

Measuring Impacts of HIV/AIDS on African Rural Economies

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Professor Jayne introduced his presentation by saying that as agricultural economists doing rural survey work he and his colleagues saw that many households were afflicted by deaths from AIDS and felt it was important to look at the impact of the disease on rural livelihoods. Donors such as USAID also realised that there was an opportunity to analyse the effects of AIDS on rural households using survey data. Therefore, Jayne, along with others at Michigan State University and local African collaborators developed ways of monitoring households over time to see how they responded to the disease.

Macro models have tried to predict the impact of HIV/AIDS on economic growth. Recently the economist Jeffrey Sachs estimated that developing countries afflicted with the disease were averaging 30% lower GDP growth than they would have had without it. However, macroeconomic estimates of the impacts of AIDS vary greatly, and their estimates are only as reliable as the assumptions they make regarding how households respond to the disease.

The study set out to get an empirical picture and to look at how households respond and what makes them respond in different ways. It looks at five countries: Kenya, Malawi, Mozambique, Rwanda and Zambia. In the last three countries it is based on nationally representative samples but not in the first two. However, in these two countries there is panel data tracking the same households.

Slide five shows a fairly consistent match between mortality and HIV prevalence levels.

The data sometimes gives the impression (slide eight) that afflicted households are better off than those not afflicted in the absence of panel data showing their situation before affliction. In many cases, however, afflicted households tended to be better off to begin with and experienced a noticeable decline in welfare but this is not evident without baseline information. This underlines the importance of panel analysis as opposed to cross sectional data, which is prone to giving perplexing results such as this.

The data also shows that afflicted households have certain characteristics. Earlier studies have showed that afflicted households generally had a higher income to begin with, along with better education. These characteristics may have provided more opportunities for sexual activity.

More recent evidence suggests different vectors. The highest prevalence levels are increasingly found in the lowest income sector. One reason may be that women who experience greater difficulty meeting their needs may be more vulnerable and more prone to risky action. Younger women are also more commonly afflicted than before.

In Zambia the pattern is different with wealthy men still constituting the most afflicted group. This evidence indicates that different things are going on in different countries. It may also be affected by the timing of the surveys, which could not all be done at the same time.

In looking at factors that influence the severity of impacts on households there is strong evidence that initial vulnerability plays a major role. The samples were divided into four equal sized groups based on income. This showed that there were very few significant impacts on the top half of households in terms of income distribution but the impacts were devastating for the bottom group. This is not to suggest that there were no

impacts on wealthier households but there were no statistically significant impacts on food production, asset levels, livestock holding and other areas critical to livelihoods.

The sex of the deceased also played a role with evidence of more adverse effects from the death of a male head of household than from female heads or lower ranked males and females. Impacts on crop production were also most severe in the case of male heads of households. This appears counter-intuitive as women do most of the agricultural labour.

One reason is that when the male head of household is sick women in the household have to spend time providing care that would otherwise probably be spent in the fields. In addition some of the crops that males are involved with such as sugar cane may have higher returns than the crops produced by women. In the case of sugar cane production in Kenya it is necessary to have title to land in order to get support services and most women in Kenya do not have title deeds. So there are institutional factors that make it difficult for women to continue growing cane following the death of a male household head.

There was also no statistically significant drop in crop production in cases of death of an older person involved in agricultural production who was not a male household head. This is possibly because household heads were able to draw on the labour of other family members who might have been engaged in, for example, the informal sector.

The severity of the impacts on households also depends on who is affected. For example, in Zambia and Mozambique, most of those afflicted were not male or female household heads, whereas in Kenya most of the male deaths involved household heads. As a result the impacts of the disease are quite different in the two countries.

The results suggest that changes are needed in a number of areas of policy. A number of organisations have highlighted the need to introduce labour saving technologies in agriculture but the results indicate similar levels of labour availability and access to land in afflicted and non-afflicted households.

It is essential to maximise the productivity of land and the returns to labour given the high population densities and the small size of farms, often averaging less than one hectare. However, there is a concern also that the technology that reduces labour input may also decrease production. In some areas like northern Mozambique where population densities are low, the need for labor-saving technology may indeed be the case. This points to the need to look for the appropriate response for a particular situation rather than to adopt blanket policies.

In most highly affected countries there is a projected decline in population in the younger generations but in most countries in the region the momentum of underlying population growth will cancel out impact and there will not be a decline in the absolute numbers of people in the prime-age categories (20-55 years).

A cautious approach needs to be adopted in promoting the adoption of more nutritious foods such as sweet potato because although these foods may yield more nutrition per kilo they may not yield more nutrition per hectare of food cultivated or more nutrition per labor unit. One needs to look at the situation and at the economics of production.

All of research done so far looks at the household but there are also impacts on the community. Once the number of deaths reaches a critical mass this may unravel the substance of the community, which may lead to accelerating impacts. We may also be underestimating the impacts because of not taking into account the relationships between household impacts and community resilience, which then has feedback effects on households.

The Renewal Project (see details below) is undertaking some work in this area, including work in South Africa. Questions that need investigating include what determines community resilience and enables some communities to weather the impacts better than others. One hypothesis is that local traditions and institutions may have an important effect on community resilience.

Traditionally practices such as the integration of a deceased household head's wife and dependents into that of his brother played an important role in providing a social security net but in the era of AIDS this practice has become dysfunctional because of the risk of infection with HIV/AIDS. This practice is one reason why the disease has spread rapidly amongst the Luo people in Kenya and it has been discontinued in many areas. The result for women could actually be worse because without financial support and the ability to access land that comes with the widow-inheritance practice there may be an increased incentive for the widow to engage in risky behaviour to make ends meet. This could make her vulnerable to getting and transferring the disease.

Overall economic growth that raises livelihoods and incomes is probably one of the most important things to cushion the effects of disease. However, targeted assistance is also important and there has to be a balance between using resources to support longer term pro poor development versus immediate support for those affected by HIV/AIDS.

Discussion

- Are the results indicating greater impacts from the death of male household heads derived from work in patrilineal areas because in matrilineal areas the impacts are likely to be much worse if a women household head dies?
- Looking at existing households excludes those households that did not make it.
- Analyses need to look at labour saving in conjunction with labour management. In the case of sweet potatoes the leaves can also be harvested and eaten.

The evidence shows that household dissolution is less common than previously thought to be the case. In the past where households could not be found in follow up studies this was taken as evidence of dissolution. In practice it appears that the most common reason for failure to find households was that enumerators did not take the time to locate them. In this study out of seventy missing households only nine had actually dissolved. All the others were found, ex post, once more effort was put into the search.

What is the process that takes place when a women dies in a matrilineal household and why should this result in greater impact on the household?

Usually the man will go back to his area leaving the children behind following the death of a woman. The children will become the responsibility of an uncle. When a man dies the children stay with the woman.

It looks as if it is necessary to disaggregate the impacts on matrilineal and patrilineal households.

With smaller surveys disaggregating can lead to problems with the sample size.

On the labour saving issue the point is not to adopt blanket recommendations but to look at the specifics of different areas. The emphasis should be on a nuanced approach that looks at the needs of particular situations and specific circumstances. More detailed research needs to be done before concluding which crop is most appropriated because the most nutritious per kilo may not necessarily enable a household to produce the most food from the available land and labor. This does not mean that labour saving technology does not have a part to play but in some cases labour may not be the binding constraint on production. For example it may be money as a result of expenses associated with disease and funerals.

- What accounts for the higher percentage of household heads dying in Kenya than in Zambia? Did the study compare the ages of household heads in the two countries? Where those in Kenya younger and more sexually active?

The reasons were not established. It might be useful to do so.

- When were studies done? Were they done at the same time?

All the studies were done within a three-year period but not at the same time. In many cases they build on existing studies. The exception was in Malawi where the study extended from the late 1990s to the early 2000s.

The study showed a shift of affliction from wealthier and better educated households to poor households but don't the poor constitute the majority.

The study took the entire sample, ranked every household by income and then divided them into four equal groups. So the groups were all the same size though in relative terms most of the households were poor. The bottom 25% was the most afflicted.

- If there is to be trade off between long and short term investments who will decide on the balance? The private sector may have an interest in long-term investments but not much in short term targeted investment.

Yes. There are also investments in public goods like infrastructure and health that the private sector will not make. Typically government will have to decide on the investments and will need to look for a balance between long-term investments and shorter-term investments that will secure a safety net.

It is important to keep these findings quite strong and not to qualify them too much because people need to debate them. The findings that show the importance of the initial level of vulnerability are key because food security only becomes a problem with people who are vulnerable to start with. But the conventional approach is to target anyone who has the disease.

The ideas on new variant famine put forward by Alex de Waal are important. Many of the things happening in the region in terms of agriculture and vulnerability are not directly or solely connected with HIV/AIDS. We also need to look at changes in maize policy in Malawi and Zambia to understand the shifts in cropping patterns. Reductions in subsidy and support have also had an influence. For example the decline in fertiliser subsidies has played a role in the shift to cassava, which does not need it. Comparisons show that afflicted households are not moving into cassava production faster than households that are not afflicted.

The earlier view that HIV/AIDS was the only cause of increasing vulnerability has shifted and there is now an acknowledgement that there are many other reasons. However, the money that the focus on HIV/AIDS attracted has made it possible to show people that there are more drought resistant and more nutritious crops that they can grow.

Another important element has been the realisation that the region never really recovered after the drought and famine in 1992. The thinking on new variant famine helped to stimulate the debate.

- Do vulnerability assessments take the impacts of HIV/AIDS into account?

They were not really designed to study the impact of HIV/AIDS. They mostly look at the impact of without asking direct questions about HIV/AIDS. However, they do show a connection between HIV/AIDS and food security. This needs to be taken further with a study that looks at the type of households likely to be most affected. The methodology currently in use is not suited to longitudinal studies, as it does not go back to the same households.

Institutional relations are often overlooked in major policy initiatives. For example in South Africa the new land rights act does not take into account the possible impacts of HIV/AIDS and how changes in landholding in communal areas may impact on safety nets in these areas.

A study in southern Zimbabwe has shown the importance of remittances from urban areas for livelihoods in rural areas. In South Africa it is not known how much communal land contributes to household livelihoods. What impact will there be if someone employed in an urban area has to come back to help out in a rural area?

It is the right tactic to use resources to reduce vulnerability but we need to look more closely at the issue of safety nets and how to protect people who have fallen through for HIV/AIDS and other reasons.

Economic growth is necessary but so are policies that target vulnerability. The long-term goals of education, improved governance and agricultural development will be compromised unless countries deal with the crisis. The study has focused on the micro level but the political economy of aid and international relations also play a role. It is an ongoing debate.

Renewal network recently set up in South Africa to bring together those involved in research and advocacy.

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MSU web site containing reports: http://www.aec.msu.edu/agecon/fs2/adult_death/index.htm

Renewal Regional Network on HIV/AIDS, Rural Livelihoods and Food Security

RENEWAL brings together national networks of agricultural institutions; public, private, nongovernmental, and farmer organizations; and partners working on AIDS and health issues. RENEWAL is facilitated by the International Food Policy Research Institute (IFPRI) and focuses on Sub-Saharan Africa.

Website: <http://www.ifpri.org/renewal/index.htm>