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HIV, Ethno-Linguistic Heterogeneity and Risky Behavior

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Objectivos (Objectives):

UNAIDS has estimated that over 33 million people are living with HIV/AIDS and 70% of this amount are concentrated in sub-Saharan Africa. In public health policies, budget constraint of developing countries usually leads leaders to choose between Treatment and Prevention policies. What policy makers in public health should take into account is the two trade-offs in Anti-Retroviral Therapy policy design: from one hand allowing people to live longer and from the other hand increasing the probability of infecting other individuals. In this case, Treatment policy might worsen public health if adequate prevention policies are not provided. This analysis focuses on trying to individuate specific characteristics of communities, like ethno-linguistic fractionalization, which might need particular prevention policies when Anti-Retroviral therapy is provided.

The paper concentrates on analyzing sexual factors that facilitate the spread of HIV. We assume that sexual behavior can be described by rational principles. Agents, when they take into account social sanctions, choose optimal risky sexual behavior lower than the one when they don't take into account social sanctions.

Metodologia (Methodology):

We use data from the DHS household surveys between 2003-2006: Burkina Faso 2003, Cameroon 2004, Ethiopia 2005, Ghana 2003, Kenya 2003, Malawi 2004, Mali 2006, Niger 2006 and Senegal 2005. They are surveys conducted in a number of countries in Africa beginning from the late 1980s and focusing on fertility, contraception and child health. Lately, the AIDS Indicator Survey (AIS) has been conducted together with the DHS and questions about sexual behaviors like extramarital sex, premarital sex, sex within marriage and their HIV status has been included. We compute ethno-linguistic fractionalization at cluster level (enumeration areas) and we find strong correlation between risky sexual behavior of women and heterogeneity. The reason we choose women is sexual behavior of women is subject to social sanction in many societies rather than men's'. Moreover, response rate and willingness to test for HIV is higher for women than for men. Our result is robust to including exogenous socio-economic control variables as education, wealth, age, etc... By risky behavior we mean practices and sexual attitudes that are related to the HIV/AIDS epidemic. These variables are for instance number of extramarital relation, last condom use, last sex was spouse and age at first sex.

Resultados (Results):

There is a positive impact of heterogeneity on the number of extramarital relation. Once we control for ethno-linguistic heterogeneity there is no significant impact of religious heterogeneity on extramarital relations. There seems to be a positive association between alternative risky behaviors and ethno-linguistic heterogeneity even though it is not always significant. Social heterogeneity have a stronger and more significant effect on the probability of being HIV positive.

Conclusões (Conclusions):

Ethno-linguistic fractionalization favors HIV epidemics through two channels (reputational effect and Information effect): By reducing social sanction for risky sexual behavior, by reducing the probability of detecting risky sexual behavior in a community and thus favoring hidden risky behaviors and, finally, by reducing the probability of having reliable information on partner's sexual behavior or HIV status. Thus, there is a positive association between heterogeneity and risky sexual behavior if the reputational effect prevails and consequently on HIV status of individuals. From our data it seems that the reputation effect prevails as extramarital sex seems to increase when ethno-linguistic heterogeneity increases.