## Health determinants of migration in Africa

Urban growth in sub-Saharan Africa is fuelled largely by sustained rural-urban migration of adult men and women mostly seeking to find jobs and other livelihood opportunities in urban areas. For example, half of the migrants to Nairobi came between 17 and 23 years old or so, and that did not change much over the past 40 years (Agwanda et al. 2008). Most of the migrants come as young adults, usually after secondary school. A majority of migrants comes to Nairobi to look for employment, while a minority comes for vocational or higher education.

The fall in employment opportunities did not result in a slow-down in the capital city's growth as a whole. Over the 1970s to the 1990s, Nairobi grew at a relatively constant rate, varying only from 4.7% to 4.9% a year. However the growth rate of the population in active age started to decline in the 1990s. Whereas it was above Nairobi population growth rate (5.1% a year in the 1970s and 5.2% in the 1980s) it went below in the 1990s (4.7%). The growth rate of the population in active age remained high for women and even slightly increased from the 1970s (5.7%) to the 1990s (6.0%), but for men, it went down from 4.8% in the 1970s and the 1980s to 3.9% in the 1990s. As the major labour market in Kenya, Nairobi is still attractive to many migrants—especially because other urban centres do not offer much of an alternative—but much less than in the past. This could be an indication that unemployment and lack of opportunity in the formal sector served as a deterrent to male migrants, especially in the 1990s when the economic crisis seems to have struck hard on the workers. It appears that female migration is less sensitive to the labour market situation as the female labour participation rate (51%) is much lower than for males (84%).

Many of the migrants' children are either born or raised outside Nairobi, notably when starting school and until they finish secondary education. This explains why there has always been an abnormally low proportion of children aged less than 15 in Nairobi (31% in 1999) compared to Kenya as a whole (44%). The low fertility and the specific living arrangements of the family are meant to lower the cost of education, which is not easily accessible to most city dwellers.

The demographic surveillance system situated in Nairobi slums gives us an opportunity to fathom the migration-health relation. In the slums, the under-5 crude mortality rate is only 60 per 1000 in 2003-2005 when migration is not taken into account (Konseiga et al. 2008). It would be in the vicinity of 160 per 1000 when controlling for migration, i.e. considering the living conditions prevailing in the slums only. Under-5 crude mortality rate was estimated by DHS-2003 at 149 per 1000 in the lowest wealth/assets quintiles in Kenya (i.e. close to our estimate for the slum controlling for migration effect).

Slums are indeed conducive to higher mortality risks while child migration is very likely a response of the migrants to the health hazards that their children face in receiving areas. The demographic surveillance system situated in Agincourt, a South African rural district, gives us another opportunity to examine the effect of health on migration, but this time in a sending area. The paper first examines the determinants of migration for different age and sex categories in the two sites (Nairobi and Agincourt). When available, the determinants include health indicators. In a second part, the paper examines the consequence of migration on child mortality estimates. The paper identifies the likely strategies that parents adopt to minimize the health hazards that their children face, and how these strategies form part of a circular migration system.