

The components of urban growth revisited

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The most systematic estimation of the components of urban growth in developing countries has been undertaken by the United Nations in 1980 and again in 1996¹. In both instances, the method used yielded estimates of the natural increase of urban areas and of net rural-urban migration (including reclassification). Separate estimates of urban fertility and urban mortality were not obtained, mainly because estimates of the components of urban growth were derived solely from commonly available data on the total population of a country and the corresponding urban population as enumerated by two consecutive censuses (that is, the method was based on intercensal comparisons). The estimation method used assumed a fixed urban-rural mortality differential, an assumption necessary to derive net rural-urban migration estimates that would not be biased by real mortality differentials. Given the paucity of reliable data on adult mortality in the majority of developing countries and the even greater scarcity of reliable information on mortality levels by urban and rural residence, the use of direct estimates of urban and rural mortality as input for the estimation procedure was not feasible for the vast majority of countries.

Partly because more appropriate estimates of mortality differentials in developing countries are not readily available and partly because the estimation of the components of urban growth relies on several census enumerations that may not be entirely comparable in terms of completeness of enumeration or degree of age misreporting, the estimates of net rural-urban migration obtained by the intercensal method may be biased. This paper investigates the existence of systematic biases in such estimates by using a variety of approaches, including the reconstruction of the urban population by means of cohort-component projections and the use of multi-state projections. In doing so, special attention is given to the derivation of fertility and mortality estimates specific to the urban population and to the validation of their adequacy in light of the reconstructed urban population.

Selected countries are used to illustrate various estimation approaches since not all developing countries have the data required to carry out the necessary consistency checks. However, the examples presented provide a useful basis to improve the methodology used in the analysis of population trends in populations that experience significant migration, a methodology that yields useful insights into the dynamics of urbanization in the developing world during the 20th century.

¹ United Nations, *Patterns of Urban and Rural Population Growth*, Sales No. E.79.XIII.9, New York, 1980; and United Nations, *How much do we know about urban growth in the late twentieth century?* in *World Economic and Social Survey 1996*, Sales No. E.96.II.C.1, New York, 1996, pp. 217-244.