



Small area population estimation: Estimating population size at ward level in 2014 in South Africa

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The census is the traditional source of population figures at various levels. Census figures however are technically outdated immediately they are released because planners require figures for the present and possibly for future dates. In an attempt to meet this demand different organisations and researchers produce population estimates and projections. These estimates however are usually at higher geographical levels and often do not meet the planning needs of administrators at lower geographical levels. In view of this, this study provides small area population estimation for 2014 at ward levels in South Africa using top-down hierarchical demographic modelling. The study used the 2011 South Africa Census to estimate current levels of fertility, mortality as well as current trends in net migration at a higher geographical level. Historical trends in fertility and mortality were based on the 1996 Census, 1997 and 1998 October Household Surveys as well as the 2007 Community Survey data. A top down hierarchical demographic modelling approach was used in the estimation. The results indicate that that 20 of the largest wards as at mid-2014 were located in South Africa's metropolitan areas. Nineteen of the 20 largest wards are currently growing at a rate of over 4% per annum and if this trend continues, eighteen of these wards will double their current population size in less than 15 years.

Keywords: Small area estimation; population estimates; hierarchical demographic modelling; South Africa.