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The Structure of Internal Migration in Australia

In contrast to its sister fields of fertility and mortality, remarkably little attention has been given to the way internal migration varies over time, either in intensity or in spatial structure. This is partly attributable to the lack of suitable time series data, but it also reflects the dearth of statistical measures that capture the multiple dimensions of population movement. Studies of internal migration typically concentrate on a single observation period and, where temporal comparisons have been made, they generally involve simple comparisons of gross interregional flows, or net redistribution. Few attempts have been made to apply statistically rigorous methods to examine the changing spatial patterns of population movement within countries, or to explore the underlying reasons for the changes that are observed.

The work reported here addresses this deficiency by applying selected measures from the battery of indicators developed by Bell et al (2002; Rees et al 2000) to the Australian Internal Migration (AIM) database. The latter is a unique dataset containing migration flows by age and sex between 69 regions of Australia over five sequential intercensal periods from 1976 to 2001. The indicators encompass four key dimensions of population mobility - intensity, distance, connectivity and impact – each of which, it is argued, provide a discrete perspective on population movement. Although originally devised to facilitate international comparisons, these measures are readily applicable and well-suited to the task of comparing changes in migration structure within a single country over time. The dataset comprises period-cohort migration transitions disaggregated by five year age groups on a zonal system harmonised to adjust for shifts in spatial boundaries between five yearly Census intervals (Blake et al 2000).

We use bespoke programs to compute two measures for each of the four dimensions of migration identified above: crude and age standardised migration intensities; median migration distance and distance decay functions from spatial interaction models; the Gini index and the coefficient of variation; the migration effectiveness index and the net migration rate. We compare measures for each of the five intercensal periods, 1976-81 to 1996-2001, focusing initially on aggregate, system-wide figures, then turning attention to the changing pattern of results for each measure across the 69 regions. Finally we examine the changes in selected indicators for key age groups and birth cohorts.

Preliminary results reveal systematic shifts in some dimensions of internal migration, but countervailing trends in others. At a system-wide level, migration effectiveness and net redistribution have fallen progressively, while overall movement intensities have been

maintained. At the regional level, trends are more volatile but there is evidence of shifts in interregional linkages and patterns of redistribution, both between city and country and between north and south. We interpret the observed changes in the context of demographic shifts, including population ageing, and the transformation of the Australian space-economy over the past three decades. The paper concludes by identifying options for further refinement of measures to better capture the spatial structure of migration, and their extension to alternative spatial settings and sources of migration data.

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