The internal migration propensities and net migration patterns of ethnic groups in Britain

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Abstract

Internal migration propensities of ethnic groups are examined using three types of census data. Special Migration Statistics show variation in aggregate propensities whereas commissioned age-specific flow data indicate age variations by ethnic group. Micro data from Samples of Anonymised Records confirm low Asian propensities and suggest convergence between 1991 and 2001. Inter-district net migration reveals familiar counterurbanisation trends for whites but more complex patterns for non-whites. Evidence suggests white net migration at this scale is greater in areas with higher non-white population shares which themselves experience higher non-white immigration rates.

Keywords: ethnic populations; whites; non-whites; internal migration; England; Wales; Britain.

Introduction

Whilst there has been keen research interest in recent years in ethnic populations (e.g. Scott *et al.*, 2001; Rees and Butt, 2004; Simpson, 2004; Johnson *et al.*, 2002; 2006; Phillips, 2006), relatively little work has been reported on the internal migration of ethnic groups in Britain, despite the importance of this component in local population dynamics and its role in community development and sustainability. This is not to say that studies of ethnic group migration in Britain do not exist. Champion (2005) has reviewed ethnic and other variations in migration using 2001 Census data, for example, and Finney and Simpson (2008) have recently published analyses of ethnic group migration at the national level, based on 2001 Census microdata.

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In this paper, we examine the propensities and patterns of 'ethnomigration' in Britain using three types of census data introduced in the next section. Differences in national migration volumes and intensities between ethnic groups are identified and age differentials are presented using data at the district scale for migrants during the 12 month period before the 2001 Census. Because of problems with boundary changes during the 1990s, micro data provide a useful source of national data for comparing migration probabilities between censuses. Spatial patterns of net migration are presented at the district scale and particular attention is paid to the relationship between white net migration, population composition and non-white immigration.

Data sets

The term 'foreigner' is seldom used in research on migration within Britain. Although the British census records the number of people born outside Britain, internal migration data are classified by ethnic group rather than place of birth. Consequently, the ethnic groups used in this paper are those defined in the Special Migration Statistics (SMS), the main source of origin-destination data and do not allow the distinction between internal migrants who were born in Britain and those who were born elsewhere. The SMS from the 2001 Census were produced at three levels: local authority districts, wards and output areas (Stillwell and Duke-Williams, 2003), with only limited levels of ethnic classification. SMS Table MG103 uses seven ethnic groups as follows: white; Indian; Pakistani and other South Asian (POSA); Chinese; black; mixed; and other. The classification is limited to white and non-white at ward level and there is no ethnic breakdown at output area scale.

No cross-classification of ethnic migrants by age group is available at the district scale from the SMS. In response to this limitation, specially commissioned data (Table CO711) were obtained from the Office of National Statistics (ONS) that provide counts of migrants in the seven ethnic groups disaggregated by seven age groups relating to key stages in

the life course (0-15; 16-19; 20-24; 30-44; 45-59; 60+) and including flows between households and communal establishments. The commissioned table contained flows between 376 districts in England and Wales (33 London boroughs, 36 metropolitan districts, 68 unitary authorities and 239 other local authorities) whereas the SMS data provide flows for these districts and also 32 council areas in Scotland.

Analysis of ethnic migration change between 1991 and 2001 is complicated because of the changing census ethnic group classification, the measurement of migration, the adjustment methods to reduce the risk of disclosure and the impact on boundaries of local government reorganisation (Stillwell and Duke-Williams, 2007). Given these difficulties, the analysis of change is restricted to the national level and makes use of the Individual Licensed Sample of Anonymised Records (SAR), a 3% sample of the population in 2001 and a 2% sample in 1991. One key advantage of the SARs is the opportunity to derive variables consistent for 1991 and 2001 that the literature shows to be related to the propensity to migrate: social class, educational achievement (degree), tenure (owners, public renters, private renters, communal), employment status (active, unemployed, other) and health (reported limiting long-term illness). In this instance, it is the age and ethnic group variables that are of most interest and we seek to establish what changes have occurred since 1991.

Ethnic group variations in migration propensity

The SMS show that, in 2000-01, over 6 million individuals moved usual residence, equivalent to approximately 1 in 10 of the population, and 91% of these migrants were white. Amongst the non-white minorities, the black group had the largest share of inter-district migration (2.5%) whereas the POSA group had the largest share of shorter, intra-district flows (2.4%). More Chinese migrants travelled between districts than within them. The volume of migration was actually higher than the figures shown in Table 1 suggest because they exclude those persons, estimated to be around

455,700, for whom no usual address was recorded at the beginning of the 12 month period before the 2001 Census.

Table 1: Ethnic group populations, migration volumes and shares, Britain, 2000-01

Ethnic group	Ethnic populations	%	Migration between districts	%
White	52,481,200	91.9	2,215,010	90.4
Indian	1,051,844	1.8	50,997	2.1
POSA	1,276,892	2.2	44,567	1.8
Chinese	243,258	0.4	19,476	0.8
Black	1,147,597	2.0	61,748	2.5
Mixed	673,796	1.2	40,930	1.7
Other	229,324	0.4	17,498	0.7
Total	*57,103,911*	*100.0*	*2,450,226*	*100.0*

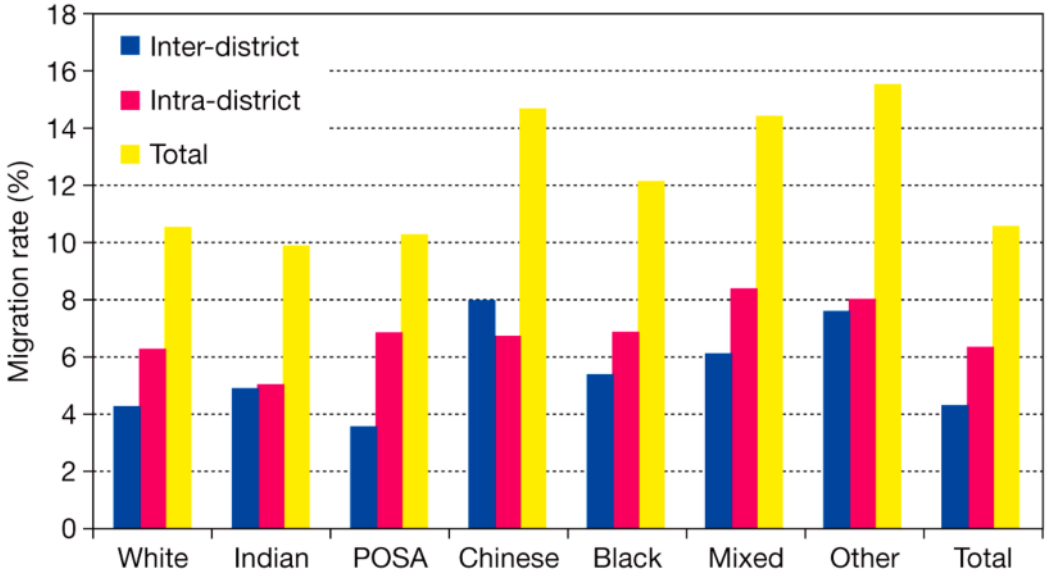
Ethnic group	Migration within districts	%	Total migration	%
White	3,295,652	91.4	5,510,662	91.0
Indian	52,460	1.5	103,457	1.7
POSA	87,051	2.4	131,618	2.2
Chinese	16,317	0.5	35,793	0.6
Black	78,063	2.2	139,811	2.3
Mixed	56,519	1.6	97,449	1.6
Other	18,380	0.5	35,878	0.6
Total	*3,604,442*	*100.0*	*6,054,668*	*100.0*

Sources: Standard Table and SMS Table MG103.

Whilst the statistics in Table 1 are useful in providing evidence of the comparative magnitude of migration by each ethnic group, migration intensities are a more comparable indicator of propensities to migrate. Rates of migration computed using end-of-period populations reveal that higher migration intensities are experienced by the smaller ethnic groups (Figure 1). The Chinese, mixed and other non-white groups have the highest total migration rates with the Chinese having rates of inter-district migration that are almost twice the national average. On the other hand, Indians have

migration rates that are lower than the white-British and the POSA group has particularly low rates of movement between districts. The aggregate migration rates are almost identical with the white rates, indicating the extent to which white migration is the predominant flow.

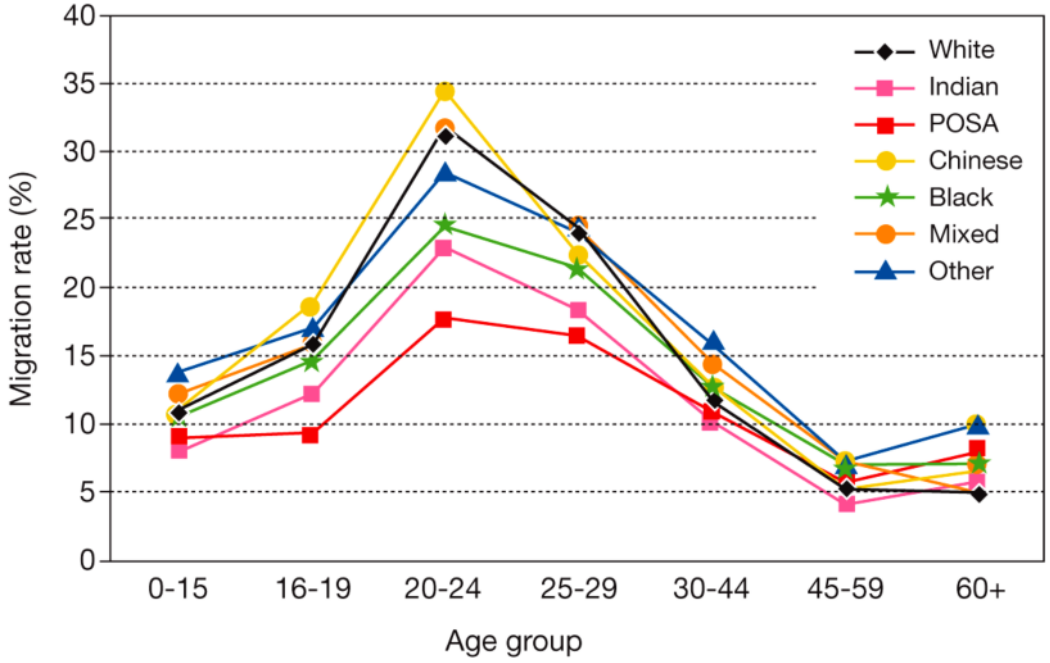
Figure 1: Migration rates by ethnic group, Britain, 2000-01



Source: SMS Table MG103.

Variations in age-specific rates between ethnic groups (Figure 2) can be derived from data obtained from the commissioned table. We note in Figure 1 that the propensities to migrate for the two Asian groups, the Indians and POSAs were the lowest, despite the relatively high magnitude of the flows involved. Figure 3 suggests that these groups experience the lowest migration rates in almost all ages and the rate differentials are most noticeable at ages 16-19, 20-24 and 25-29. At age 20-24, the POSA rate is only about 17%, less than half the rate of migration for the Chinese, the most mobile group at this age and at age 16-19 years also. Whites tend to have relatively high rates of migration at younger ages but lower propensities in middle and older ages.

Figure 2: Age-specific migration rates by ethnic group, England and Wales, 2000-01



Source: Commissioned Table CO711.

Migration probabilities using micro data

Whilst the SMS and commissioned tables allow some analysis of district migration by ethnicity and age, we turn to the SARs to confirm these findings for 2001 and to examine change between 1991 and 2001. The flexibility of the micro data (Dale *et al.*, 2000) allows variables to be derived so that the classification of ethnic groups in the macro data table is matched as closely as possible in the SAR. Since other aspects influence the likelihood of migration (Boyle *et al.*, 2002), the aim here is to model the probability of migration by ethnic group, age and sex, controlling for additional migration relevant variables such as social class, educational achievement (degree), tenure (owners, public renters, private renters, communal), employment status (active, unemployed, other) and health (reported limiting long-term illness).

A binary logistic regression model is appropriate with the dichotomous outcome (did not/did migrate during the year before the census) and explanatory variables that are categorical. Model outputs include the odds ratio (Table 1) which shows the influence of a variable category compared

with a reference level of that variable (e.g. the odds of an outcome for blacks compared with those for whites). The odds ratios can be converted to probabilities of the outcome based on (combinations of) variable characteristics. Binary logistic regression models for both 1991 and 2001 were fitted to estimate the probabilities of migration by age, sex and ethnic group whilst controlling for other variables which may influence migration.

Table 1: Odds ratios for migration variables in logistic model using SAR data

Variable category	Variable	Odds ratio 1991	Odds ratio 2001
Ethnic group			
- White is reference	Indian	0.88**	0.81**
	POSA	0.91**	0.80**
	Chinese	1.18***	0.87**
	Black	1.12***	1.00ns
	Other	1.51***	1.03ns
Age group			
- 0-15 is reference	16-19	1.15***	1.15**
	20-24	2.38***	2.34**
	25-29	1.95***	1.69**
	30-44	0.87***	0.90**
	45-59	0.38***	0.40**
	60+	0.29***	0.29**
Sex			
- Male is reference	Female	1.05***	1.02**

*** significant at 99% level; ** significant at 95% level; ns not significant

The odds ratios in the models show a large element of agreement with the differentials identified from the macro data. Compared with the white reference group, South Asian groups were less likely to migrate in both 1991 and 2001, though the difference by 2001 was less. In 1991, Chinese, black and other non-white groups were more likely to migrate than the white group but by 2001, the Chinese were less likely and for the black and others there was little differ-

ence. The only anomaly with the macro data is with the lower than expected odds ratio in 2001 for the Chinese. These comparisons must be set in the context that the modelled probability of whites migrating rose between 1991 and 2001; with those aged 20-24 increasing from 19.3% in 1991 to 24.6% in 2001. The age-specific odds ratios compared with the 0-15 group indicate an increase in the likelihood of migrating to age 20-24 before declining from being almost two and a half times more likely to migrate at age 20-24 to being almost three quarters less likely to migrate at age 60+. There is a small, but significant difference by sex with females more likely to migrate than males. Differences in migration probabilities between groups reduced during the last decade of the twentieth century. All groups experience an overall rise except the Chinese and other non-white groups whose modelled rates for those aged 20-24 fell by 1.4% and 3.8% respectively. The evidence indicates convergence between ethnic groups over the period.

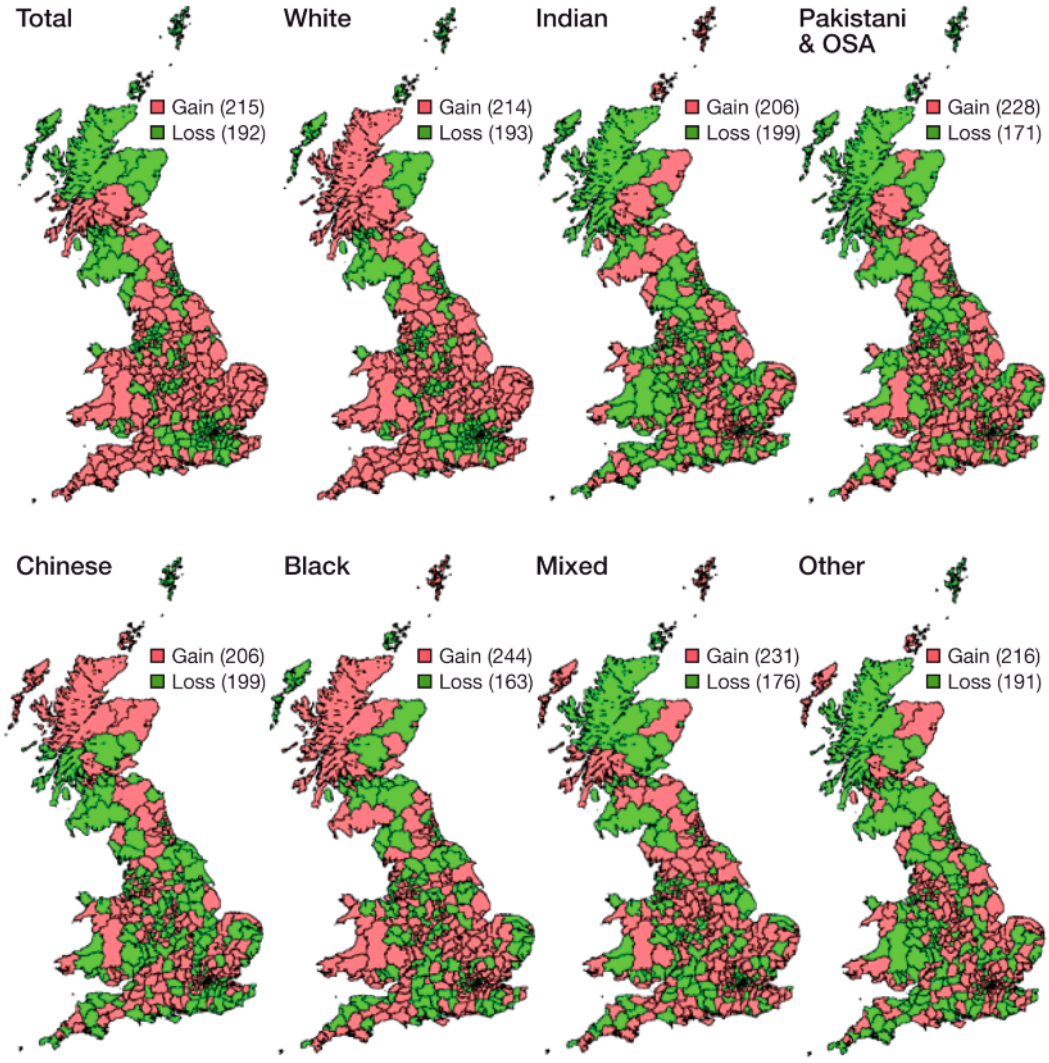
Spatial patterns of ethnic migration

Geographical patterns of migration are the result of the combination of complex processes involving various sets of driving forces that influence different population subgroups. Here we use net migration balances to provide some indication of spatial variation. The pattern of net migration for white migrants is characterized by net losses in metropolitan areas and net gains in rural Britain (Figure 3), whereas significant net migration gains and losses for the non-white population are confined to urban areas and their immediate surrounds. White net migration dominates the total net migration pattern, concealing variations in the non-white patterns of redistribution. More districts gained migrants in net terms than lost migrants in each ethnic group, even though the patterns varied significantly.

Overall, London lost over 50,000 net migrants in 2000-01 whereas other local authorities (rural England) gained a similar number; metropolitan districts lost around 20,000

migrants whereas unitary authorities and council areas in Scotland collectively gained a similar number in net terms.

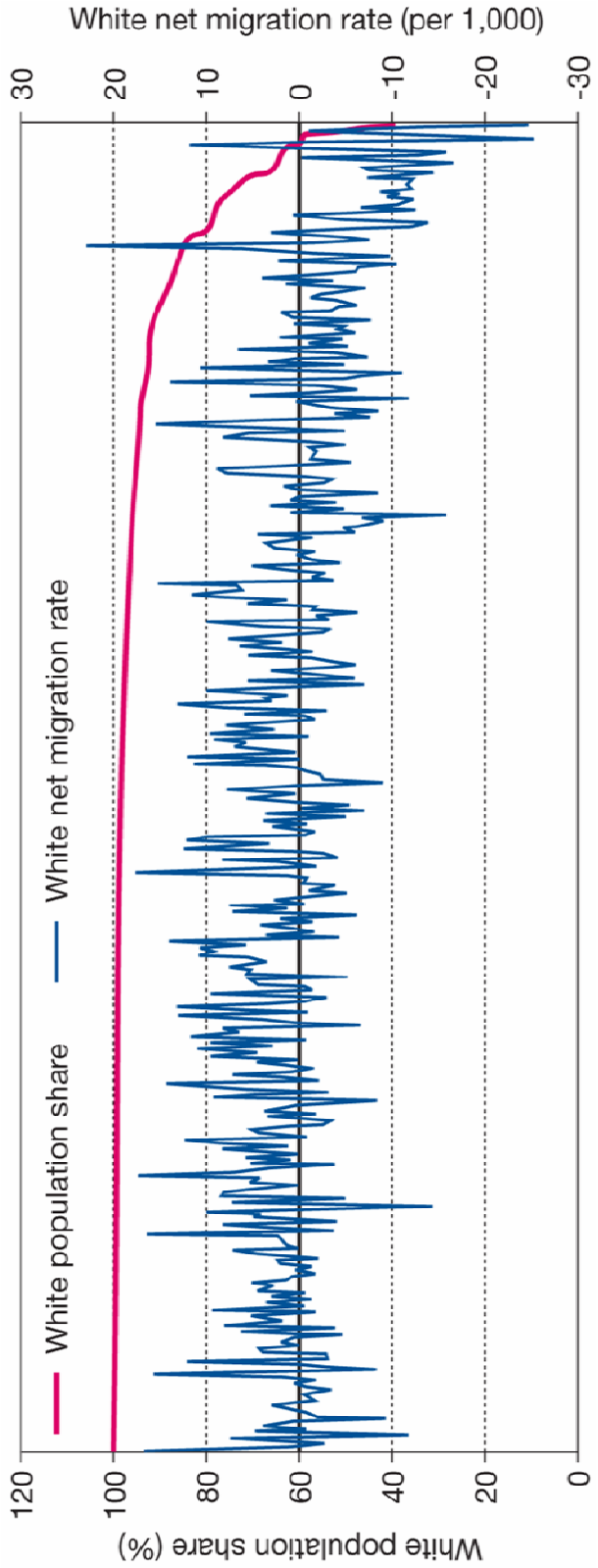
Figure 3: Net migration balances by ethnic group and district, 2000-01



Source: SMS Table MG103.

Net migration patterns by ethnic group based on a district-type classification are discussed in more detail by Stillwell and Hussain (2008) and an analysis of inter-district flows using Vickers *et al.* (2003) national district classification as a framework for summarizing age-specific ethnic net migration in England and Wales is available in Hussain and Stillwell (2008).

Figure 4: White net migration rates and population shares, districts, Britain, 2001



Sources: SMS and Standard Tables, 2001.

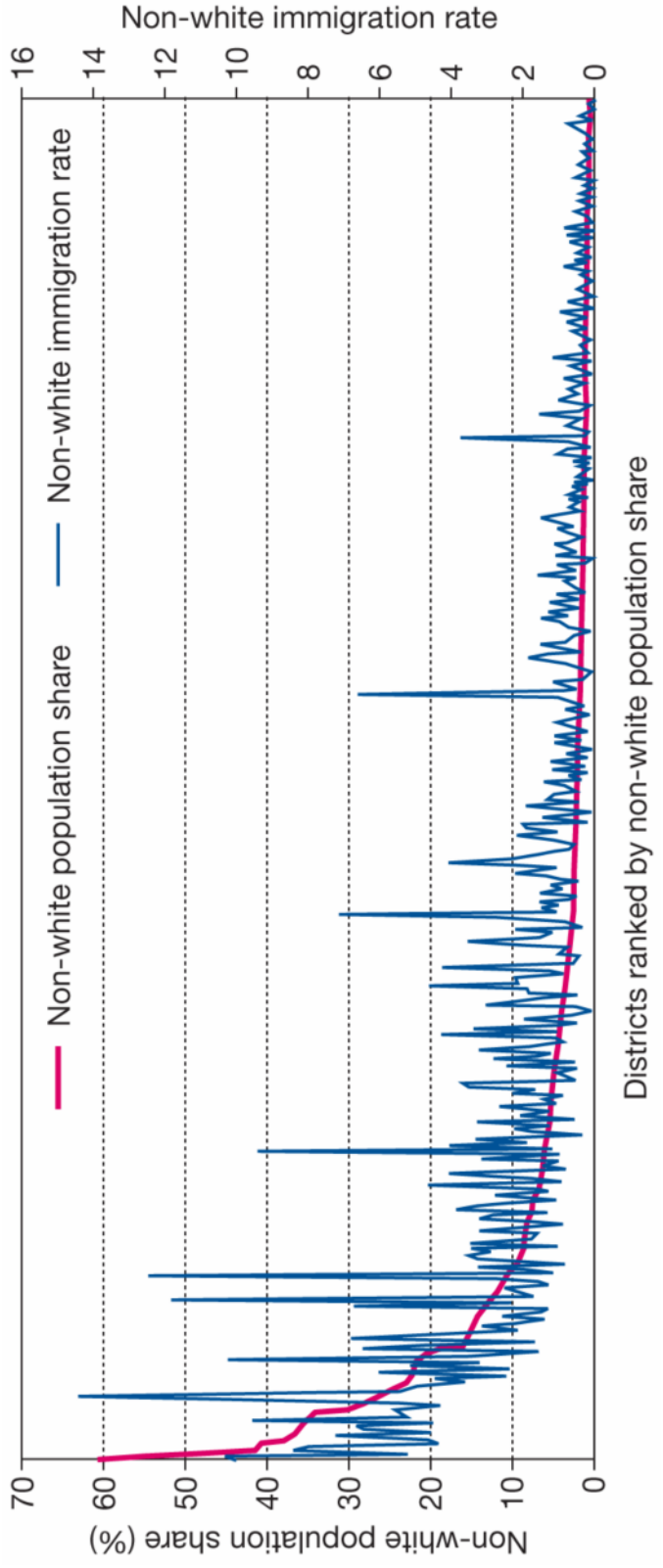
Net migration, population complexion and immigration

In the USA, there has been considerable research and debate surrounding the phenomenon of 'white flight' dating from the investigations of Tauber and Tauber (1965) and with notable contributions from Frey (1996) and Ellis and Wright (1998). In Frey's view, increased immigration and settlement of non-white populations had prompted intolerant white communities to leave areas of increasing non-whiteness. In the context of this paper, we ask: (i) whether districts whose populations contain larger shares of non-white ethnic groups are those that experience higher levels of white net migration loss, and (ii) whether districts with higher shares of non-whites in their populations are those that have higher rates of non-white immigration.

Each district was initially ranked on the basis of its white population share and rates of net migration for each district have been plotted simultaneously, shown by the much more haphazard series of points in Figure 4. The horizontal line represents zero net migration. To the right of the vertical line are the 74 districts whose white population shares are below the national figure of 91.9%. Despite significant variation in net migration rates between districts, there is an observable trend towards higher negative net migration balances with increasing shares of non-white residents. So it appears that whites were leaving areas where non-white presence was greater in 2000-01, but this is not to state that 'white flight' was definitely occurring because we know nothing about the motivations behind the migrations involved.

In Figure 5, the districts have been ranked according to the proportion of their populations that are non-white and these proportions are plotted together with the corresponding non-white immigration rates. Although there are significant fluctuations in the immigration rates from district to district, the trend does suggest that non-white immigration rates are higher in areas with lower white shares. This is to be expected as new migrants from overseas seek the security and social contacts associated with areas already settled by members of their own ethnic group.

Figure 5: Non-white population shares and immigration rates, districts, Britain, 2001



Sources: SMS and Standard Tables, 2001.

Conclusions

This paper provides new insights into the differences in the intensities and geographical patterns of internal 'etno-migration' in Britain. The research has drawn on a three different migration data sources, all of which are products of the census. In reflecting on the value of migration data from different sources, we conclude that the SMS are a valuable source of macro data on migration flows that have good spatial coverage but only provide uni-dimensional counts, i.e. separate counts of migrants by ethnic group or by age but no cross-classification of migration by ethnicity and age. They also suffer from small cell adjustment and this is a major consideration when commissioning special tables in which flows are likely to be small. The SAR micro data that have been used in this analysis, on the other hand, have excellent cross-classification potential and no adjustment limitations but are constrained by poorer spatial coverage.

We conclude that the micro data modelling has produced odds ratios of migration probabilities that are largely consistent with our descriptive analysis of migration rates computed from macro data. These differentials are accentuated when age-specific propensities are considered. The differences between ethnic group migration intensities are most noticeable in the 20-24 age range although the gap between the rates for both Asian groups and others is apparent for those in the two younger groups. It is particularly interesting to note that POSA migrants aged 16-19 are only marginally higher than those aged 0-15. Given the inclusion of students in the 2001 Census migration counts, we conclude that POSAs are less inclined to move away from home to study in higher education or in fact to leave home aged 20-24. Evidence from elsewhere (Phillips *et al.,* 2004; Johnson *et al.*, 2006) indicates that Bangladeshis have the highest levels of segregation amongst all ethnic groups. The Chinese, on the other hand, are Britain's most migratory ethnic group in the 16-24 age range, at least as far as the macro data are concerned.

We have chosen to examine spatial patterns of ethnic group migration using net flows as the measurement variable and observed that total net migration balances are dominated by white counterurbanisation whilst net migration losses and gains for non-white ethnic groups are more concentrated in metropolitan parts of the country and the losses and gains in rural areas are relatively small. This results in a different patchwork of district gains and losses for each ethnic group. London experienced major net migration losses in 2000-01, a large proportion of which was white, although the capital city also experienced net losses of migrants in the larger non-white groups. Many of the London boroughs are amongst the major white net migration losers, and our analysis suggests that white migrants in 2000-01 were leaving areas at higher rates where the percentage non-white was larger and these areas were those that have the highest rates of non-white immigration. Further analysis of migration propensities and patterns using commissioned data at ward level for London is reported in Stillwell (2008).

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