

Ethnic migration between area groups in England and Wales

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Minority ethnic populations in England and Wales have been increasing steadily as a share of the total population since the 1991 Census. In this paper, we are interested in how internal migration has changed as a possible consequence. Our analysis focuses on the movements between 12 area groups, as defined by the Office for National Statistics, and addresses the following three research questions: (1) how has internal migration in England and Wales evolved from 1991 to 2004; (2) what are the main differences in the movements between the White (majority) population and the ethnic minority population; and (3) how do migration patterns differ when ethnicity, education and employment statuses are considered together? The data come from the 1991 to 2004 National Health Service Central Registers, the 1999–2004 patient registers and the 2001 Census. We find strong stability in the migration patterns of the total population over time. However, large differences appear when the flows are disaggregated by ethnicity and further by education and employment. Education level is an important factor influencing the migration patterns for the White population, whereas employment status is a much more important factor for the ethnic minority population.

Key words: *internal migration, area groups, ethnic population redistribution, England and Wales*

Introduction

Unlike the majority White population, ethnic minority populations in England and Wales have been growing rapidly for the past 30 years (Rees and Butt 2004). They also have very different spatial patterns of residence (McCulloch 2007; Owen 1997). In this paper, we analyse migration between area groups in England and Wales with the aim to better understand how populations are redistributing in response to increased ethnic diversity. In particular, we address the following three research questions: (1) how has internal migration in England and Wales changed from 1991 to 2004; (2) what are the main differences in the movements between the White population and the ethnic minority population; and (3) how do migration patterns differ when ethnicity, education and employment statuses are

considered together? In answering these questions, we provide a basis for ultimately understanding the complex relationships between immigration and internal migration.

This research adds to the work of several researchers who have analysed the internal migration patterns in the United Kingdom during the 1980s and early 1990s (e.g. Champion 1996; Fotheringham *et al.* 2000 2004; Owen 1997; Robinson 1993; Stillwell *et al.* 1992) and, more recently, the changes occurring in ethnic population distributions and growth patterns reflected in the most recent 2001 Census (e.g. Dorling and Rees 2003; Rees and Butt 2004; McCulloch 2007), including the exploration of the relationships between recent immigration and internal migration (Finney and Simpson 2008; Hatton and Tani 2005; Stillwell and Duke-Williams 2005). What separates this analysis from earlier ones is the focus on

analysing origin–destination-specific flows between area groups and over time.

The study of ethnic migration is important for several reasons. First, many ethnic minority populations tend to be disadvantaged because of their relatively lower socioeconomic levels caused by being recent arrivals in the host country or by living in ethnically segregated areas. So, the study of internal migration provides researchers and policymakers with indicators on how well minority ethnic populations are currently mixing with the majority population. Second, the study of ethnic migration provides us with information on how the population is redistributing itself across the country, allowing one to assess both where areas of growth are (or will be) and whether this growth is ethnic-specific. Finally, as pointed out by Finney and Simpson (2008) and Stillwell *et al.* (2008), very little is known about the internal migration behaviour of different ethnic populations in the United Kingdom. Finney and Simpson's study of 13 ethnic groups in Britain, using 2001 Census data, focused on the determinants of migration and distances moved. They found that most of the differences in migration rates between different ethnic groups could be explained by socioeconomic condition and urban location and that the White population moved longer distances than did other ethnic populations. We add to this research by examining the movements between certain area groups, shedding light on the origin–destination preferences of the White and ethnic minority groups.

This work can also be linked and compared to research carried out on the relationships between immigration and internal migration in other countries, such as the United States. Evidence for the relationships has been varied. Some studies have found that no relationship exists, that is, foreign-born and native-born migrants respond in similar ways to various opportunities (e.g. Wright *et al.* 1996). Others have found relationships that result in low-skilled native-born 'flight' from places that attract large numbers of immigrants (e.g. Frey 1996; Frey and Liaw 1998). Most likely, both 'push' and 'pull' operations are occurring simultaneously.

To identify linkages between immigration and internal migration within England and Wales, we need an account of migrants and their areas of origin and destination. Specific characteristics of these migrants are known to be responsible for differences in the exhibited patterns (see, for example, Fotheringham *et al.* 2004; Finney and Simpson 2008). Important factors that influence differentiating

migration patterns are, for example, place of residence, current position in the life course, health, socioeconomic status and ethnicity. In general, highly educated persons and those with relatively better incomes tend to migrate more and longer distances than those with lower educations and less money. Finally, for our study, we expect the White populations to have different and more varied social networks than the ethnic minority populations, who are more concentrated in terms of where they live.

To explore the patterns of ethnic migration in England and Wales, we first study the internal migration of the total population over time to see if there have been any major shifts in the patterns, particularly in areas associated with substantial ethnic population change. We then examine the major differences that exist between White and ethnic minority migration patterns, disaggregated by high and low education groups and employed and unemployed groups. Our aim is to provide a better understanding of the internal migration mechanisms coinciding with broad ethnic population change and redistribution.

Migration flow data and area groups

In England and Wales, the most reliable internal migration data come from the decennial censuses and the National Health Service Central Register (NHSCR). Census information contain much of the detail needed for analyses of ethnic migration patterns, but are only collected every 10 years and contain some problems of incomparability between censuses for certain variables (Stillwell and Duke-Williams 2007). Migration data from the NHSCR are available annually but with minimal information on migrant behaviour (i.e. only origin, destination, age and sex are available) and with a tendency to miss important population groups, such as young adult males, who are known to be less inclined to register (Fotheringham *et al.* 2004). However, the registration data do provide a good and up-to-date source of internal migration as nearly all residents in England and Wales are patients of a general practitioner employed by the NHS, including those who may also have private healthcare provision. Furthermore, the average delay between moving house and registering with a new general practitioner is about 1 month (ONS 2005a).

To answer the three research questions set out in the introduction of this paper, we obtained data on migration from the NHSCR from 1991 to 2004 and from the 2001 Census for England and Wales. The

inclusion of Scotland and Northern Ireland complicate the analysis because they have separate data collection systems with slightly different ethnic group definitions (see Rees 2008 for comparison). The NHSCR data are useful for examining the migration trends of the total population over time and are used to address the first research question. The years 1991–2004 represent a period where ethnic diversity increased continually and substantially in England and Wales (Rees and Butt 2004). The analysis ends in 2004 because, in that year, the European Union added eight Eastern European countries to its membership, which, for England and Wales, resulted in both increased immigration from these areas and likely changes in the (White) internal migration patterns. To keep things simple, we exclude the migration flows after 2004.

Data from the 2001 Census in England and Wales are used to address the second and third research questions on the main differences in the movements of White and ethnic minority populations and the differences in the patterns when ethnicity, education and employment statuses are considered together, respectively. Specifically, the origin–destination-specific migration data for both ethnic groups were obtained from a 2001 Census CD-ROM provided by the Office for National Statistics (ONS 2004, Table MG103). These flows represent changes in local authority residence at the time of the census by local authority residence 1 year earlier. Persons with origins or destinations outside England and Wales are not included, nor are those who moved within the same local authority. At present, these data provide the most recent and comprehensive information on internal migration flows, allowing us, for example, to examine destination-specific migration patterns by ethnicity, education and employment.

Migration data were also obtained from the Small Area Microdata (SAM) sample, a 5 per cent public use sample of the 2001 Census for analysing ethnic migration for persons aged 16 to 49 years by education (i.e. high education level and lower education level) and employment (employed and unemployed). The obtainment of a university degree is the criterion for the high education level and unemployed persons represent persons currently seeking work. Full-time students and other economically inactive people (e.g. retirees) are excluded as they have different motivations and reasons for migrating than do the employed or currently seeking sectors of the population. For sample size reasons, the SAM sample only provides migration between the regions and local

authorities, meaning we could only compare the destination choices of the migrants and not the complete origin–destination-specific patterns.

Ethnic groups

We examine the migration patterns between two broad ethnic groups: a majority White ethnic group and an ethnic minority group that combines Indian, Pakistani and Other South Asian, Chinese, Black, Mixed and Other ethnic groups. This disaggregation masks much of the diversity found in both the White and ethnic minority populations. Finney and Simpson, for example, find that ‘the Chinese and Other groups have the highest migration rates, followed by Black, White and South Asian groups in both 1991 and 2001’ (2008, 81). In the next sentence, they state that

the Black Caribbean group has a lower migration rate than other Black groups, . . . the Other Asian group has a higher migration rate than Indian, Pakistani and Bangladeshi groups, . . . [and] the Other White group . . . has a much higher migration rate than the White Briton and White Irish groups. (2008, 81)

These findings (and others) should be considered when assessing the results presented in this paper. However, while our disaggregation is rather crude, it does allow us to focus on the origin–destination-specific flows and the changes in the overall migration patterns resulting from substantial increases in ethnic minority populations (i.e. other than White). In the future, we hope to continue this analysis by comparing the internal migration patterns of more specific ethnic groups, such as the 13 groups selected in Finney and Simpson (2008).

Area groups

The NHSCR and 2001 Census data, collected or estimated at the local authority district level (representing 376 spatial units), were aggregated into 12 area groups for the analyses of internal migration in England and Wales. The classification scheme comes from researchers at the Office for National Statistics (ONS 2005b), who selected 42 variables representing demographic structure, household composition, housing, socioeconomic character, employment and industry sector and then applied Ward’s Clustering method to identify the distinct groups (see Vickers and Rees 2007 for a detailed discussion of this methodology but applied to a different geography). The purpose of constructing these area groups was to gain an ‘efficient’ representation

of the 2001 Census data, that is, each area group contains several local authority districts with similar population characteristics. We use this classification scheme to identify the types of places migrants choose, given their origin area group. Note there are many other classification schemes that we could have adopted – the simplest being an urban and rural classification scheme. We chose this one because it was readily available from the Office for National Statistics (ONS) and because it identified areas that contained large proportions of ethnic minorities. It also follows the work by Raymer *et al.* (2007), who used these area groups to analyse elderly retirement and return migration. See also Rees *et al.* (1996) for application of area groups to analyse 1991 Census

migration data. Finally, the main advantage of analysing migration between area groups, other than simplifying the data, is that it allows the researcher to focus on the types of places various migrants are choosing. We argue that this is very important for both the study of ethnic migration and for situations, such as this, where researchers are limited in the data available to them.

The 12 ONS area groups, representing local authority districts, are described in Table 1 in terms of geographic location within England and Wales and the input variable indicators that scored particularly high or low in the clustering process. The indicators are based on the cluster summaries provided by ONS (2005b). We have also included the percentages of

Table 1 Description of area groups in England and Wales

Group	Location	Description	% Ethnic minority 1991/2001	% of England and Wales population 2001
Regional Centres (RC)	Built-up areas throughout England and Wales	<i>High indications:</i> flats; one-person households; students <i>Low indications:</i> household size	3.8/6.0	9.2
Centres with Industry (CI)	Concentrated in and near Manchester and Birmingham	<i>High indications:</i> terraced housing; no central heating; ethnic minorities	13.8/19.2	10.8
Thriving London Periphery (TLP)	London periphery and Oxford and Cambridge	<i>High indications:</i> population density; one-person households; students; 25–44-year-olds; professional or managerial occupations; higher education qualification; public transport use; persons born outside UK <i>Low indications:</i> 5–14 and 45–64-year-olds; routine occupations	7.7/12.8	2.9
London Suburbs (LSUB)	Outer London plus Luton and Slough	<i>High indications:</i> population density; 0–4 and 25–44 year olds; flats; persons per room; public transport use; persons born outside UK; ethnic minorities <i>Low indications:</i> 45–64-year-olds; detached housing; women working part-time; two adult households with no children	21.1/31.5	5.4
London Centre (LCTR)	Inner London plus Hammersmith and Fulham	<i>High indications:</i> population density; 25–44-year-olds; unemployed; students; professional, managerial or finance industry occupations; higher education qualification; persons per room; one-person households; rentals; flats; public transport use; persons born outside UK; ethnic minorities <i>Low indications:</i> 5–14 and 45–64-year-olds; detached housing; household size; women working part-time; wholesale, retail, manufacturing, mining, quarrying or construction occupations; two adult households with no children	21.0/27.5	2.6

Table 1 *Continued*

Group	Location	Description	% Ethnic minority 1991/2001	% of England and Wales population 2001
London Cosmopolitan (LCOS)	Inner London and Brent	<i>High indications:</i> population density; rentals; 0–4 and 25–44-year-olds; higher education qualification; students; single parent households; unemployment; men working part-time; persons per room; one-person households; flats; public transport use; persons born outside UK; ethnic minorities <i>Low indications:</i> women working part-time; 45–64-year-olds; two adult households with no children; detached housing; wholesale, retail, manufacturing, mining, quarrying or construction occupations; single-pensioner households	32.4/42.9	3.2
Prospering Smaller Towns (PST)	Concentrated in the middle of England	No high or low indications	1.5/2.4	23.6
New and Growing Towns (NGT)	Spread through southern England	No high or low indications	4.7/6.8	6.0
Prospering Southern England (PSE)	Home counties and around	<i>High indications:</i> two or more car households; professional or managerial occupations <i>Low indications:</i> people of working age suffering from limiting long-term illness; unemployment; routine occupations	2.6/4.3	9.3
Coastal and Countryside (CC)	Along the coast and some inland areas	<i>High indications:</i> 45–64-year-olds; agricultural, fishing, health, social, hotel, catering, mining, quarrying or construction occupations; men working part-time; working from home; no central heating; detached housing; rentals; single pensioner households; separated, divorced or widowed <i>Low indications:</i> population density; 0–44-year-olds; ethnic minorities; household size; persons per room; professional, managerial or finance occupations; public transport; students	0.7/1.2	9.0
Industrial Hinterlands (IH)	M8 corridor, north-east England and a belt through south Wales	<i>High indications:</i> people of working age suffering from limiting long-term illness	1.4/2.1	9.0
Manufacturing Towns (MT)	Concentrated in southern Yorkshire	No high or low indications	1.6/2.4	9.0
England and Wales			5.9/8.7	100.0

Note: A UK local authority map of these area groups can be downloaded at: http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/la/maps.asp

Source: ONS (2005b, Cluster Summaries)

Table 2 Migration (in thousands) between area groups in England and Wales, total population, Census 2001

Origin	Destination												Total
	RC	CI	TLP	LS	LCTR	LCOS	PST	NGT	PSE	CC	IH	MT	
RC	17	18	5	7	7	6	59	7	16	21	19	16	198
CI	18	42	3	6	4	5	64	7	7	12	8	21	197
TLP	6	3	6	12	8	6	14	5	26	6	1	1	95
LSUB	9	8	18	23	16	20	19	14	26	8	2	2	164
LCTR	5	3	9	23	34	30	9	4	11	4	1	1	133
LCOS	6	6	8	32	22	23	8	8	8	4	1	2	128
PST	64	54	11	10	10	8	177	33	43	48	25	37	519
NGT	9	6	4	6	3	3	40	16	24	10	2	5	129
PSE	22	8	19	14	10	7	59	23	73	21	4	6	265
CC	26	10	3	3	3	2	43	6	12	46	8	8	170
IH	19	8	2	2	1	1	28	2	4	10	26	13	117
MT	16	19	1	2	1	1	38	4	5	10	12	23	133
Total	217	184	90	141	119	113	558	127	255	198	109	136	2246

the total population in each area group and the percentages of ethnic minorities for both 1991 and 2001. When interpreting these results, the reader should take these descriptions into account and note that the London area groups are located in close proximity to each other. Based on this proximity alone, we would expect the interactions between these area groups to be high. For the purposes of this paper, the migration patterns we are most interested in are those involving areas with large proportions of ethnic minorities (i.e. the three London area groups and Centres with Industry) and those that are considered to be attractive to the majority White population (i.e. Prospering Smaller Towns, Prospering Southern England and Coastal and Countryside).

To provide a basis for examining the migration flows between the 12 area groups, consider the data set out in Table 2, which represents the total population and the 2000–2001 period. The area group that received and sent the most migrants during 2000–2001 was Prospering Smaller Towns, accounting for 23 per cent of all out-migration (i.e. 519 000/2 246 000) and 25 per cent of all in-migration (i.e. 558 000/2 246 000). This large amount is not surprising as this area group also represented about 24 per cent of the population in 2001 (see Table 1). The area group that received and sent the least amount of migrants was Thriving London Periphery, accounting for only 4 per cent of the flows in both directions (or 90–95 000 out of 2 246 000). Again, this is not surprising given its relatively small popu-

lation size. Other interesting patterns include, for example, that nearly a third of all migrants from Centres with Industry migrated to Prospering Smaller Towns (i.e. 64 000 out of 197 000), whereas only about 10 per cent of all migrants from London Suburbs did so (i.e. 19 000 out of 164 000). Twenty-five per cent of all migrants from London Cosmopolitan went to London Suburbs (i.e. 32 000 out of 128 000); however, only about 1 per cent of all migrants from Manufacturing Towns (i.e. 2000 out of 133 000), which were located further away, did the same.

Time series

The construction of an annual time series of NHSCR migration data at the area group level was complicated by the geographies at which the data were collected and the fact that they changed over time. As mentioned in the previous subsection, area groups are constructed from data collected at the local authority level. The Office for National Statistics produces two migration data sets based on health service registers (ONS 2005a). The first, considered to be more reliable, is the NHSCR data. These data represent 98 Family Health Service Authorities (FHSA) for the 1991–1998 period, 84 combined FHSA and Health Authorities (HAs) for the 1999–2000 period and 104 HAs for the 2001–2004 period. The second is the patient register data, which are collected at the local authority district level but only for 1999–2004. The NHSCR data capture all moves within a year, whereas the patient register data only capture annual transitions, meaning that those who moved

during the year or were born during the year are missed. Also, the patient register data are combined with information from the NHSCR to account for some missingness in the patterns. For this paper, we use the NHSCR to analyse in-migration and out-migration over time (i.e. 1991–2004) and the patient register data to analyse origin–destination-specific movements over time (i.e. 1999–2004).

The construction of a consistent annual time series of NHSCR migration flows from 1991 to 2004 required adapting the NHSCR geographies to the 12 ONS groups, which was complicated by three factors. First, the NHSCR migration data represented flows between FHSAs or HAs and not local authority districts, which were used by ONS to construct the 12 area groups. Second, the NHSCR data were collected at different geographies over time. Third, both FHSAs and HAs are larger than local authority districts (i.e. in 2001 there were 104 HAs and 376 local authorities).

To obtain consistent migration flows between area groups over time, we constructed three lookup tables that matched local authority districts with the NHSCR data collected during 1991–1998 (i.e. FHSAs), 1999–2000 (i.e. combined FHSAs and HAs) and 2001–2004 (HAs). We then used the percentages of England and Wales' population living in each local authority, obtained from the 2001 Census, as weights to disaggregate the total flows between FHSAs or HAs into local authority district flows, which could then be aggregated into area groups. When local authority district boundaries crossed two or more FHSAs or HAs, we used the relative sizes of migration from or to these areas to split the population size in the local authority district. Our matching procedure was unable to account for migration between local authorities within a particular FHSA or HA. However, we believe this method provides a good approximation of the in-migration and out-migration for each area group, particularly if the migration patterns are expressed as proportions (see Figure 2). Another option would have been to use the patient register data for the 1999–2004 period instead of the two NHSCR data sets. However, we decided not to do this because of the different measurements of migration captured by the NHSCR and the patient register data.

Ethnic population change, 1991–2001

As shown in Table 1, almost a quarter of the total population in 2001 lived in Prospering Smaller Towns. The least populated area groups were Thriving

London Periphery, London Centre and London Cosmopolitan, with each having about 3 per cent of the total population living in those areas. The remaining eight area groups each contained between 5 and 11 per cent of the total population. Between 1991 and 2001, the minority ethnic percentage of the population increased from 5.9 per cent to 8.7 per cent, with the greatest percentages found in London Cosmopolitan (32–43 per cent), London Suburbs (21–32 per cent), London Centre (21–28 per cent), Centres with Industry (14–19 per cent) and Thriving London Periphery (8–13 per cent).

As illustrated in Figure 1, all area groups experienced growth in their minority ethnic populations. On the other hand, Centres with Industry, London Suburbs, London Cosmopolitan and Industrial Hinterlands all exhibited declines in their White populations. With the exception of Industrial Hinterlands, these areas also represented those with the highest levels of minority ethnic population growth. Furthermore, the White population exhibited its highest levels of population growth in areas with relatively modest levels of ethnic minority population growth, i.e. in Prospering Smaller Towns, New and Growing Towns, Prospering South East and Coastal and Countryside.

While the above analysis demonstrates the changing ethnic population geography across area groups, it ignores the increasing diversity of the ethnic minority population that occurred between 1991 and 2001 (McCulloch 2007), as well as the different levels of population growth that occurred within each broad ethnic group. In an article published in this journal, Rees and Butt (2004, 177–8) analysed the growth rates of minority ethnic groups in England from 1991 to 2001. They found that while Whites only grew by 0.2 per cent, minority ethnic groups grew by 39.1 per cent. Moreover, the highest levels of population growth occurred amongst the Black African ethnic group, which grew by 140.5 per cent. Other ethnic groups with relatively high growth rates during this period were Bangladeshis (75.8 per cent), Pakistanis (55.6 per cent) and Chinese (51.4 per cent).

Area group migration from 1991 to 2004

The proportions of migration from and to each area group from 1991 to 2004 are set out in Figure 2, allowing us to compare the relative shares over time. The proportions of migration from London Centre, Coastal and Countryside and Industrial Hinterlands

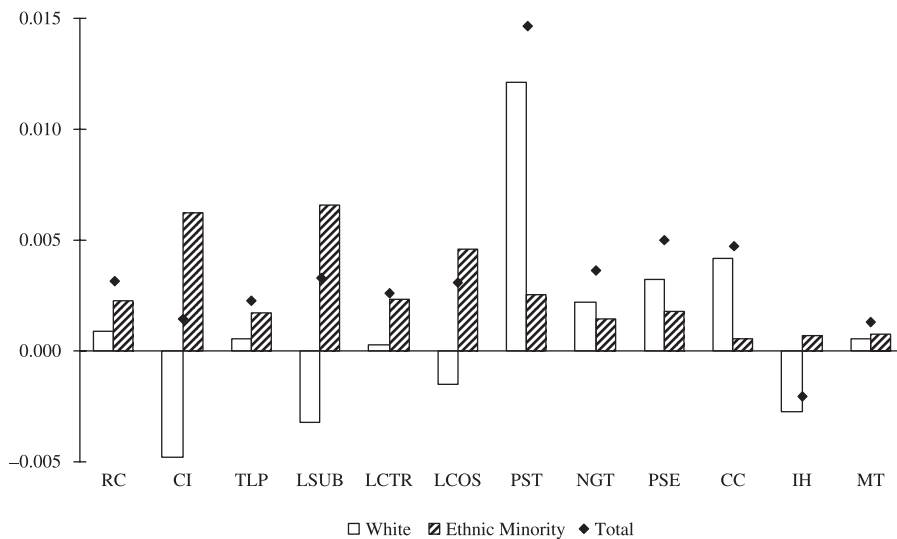


Figure 1 Average annual population growth rates for White and ethnic minority groups in England and Wales by area group, 1991–2001

Note: Rates are calculated with 1991 populations as denominators

Source: 1991 and 2001 Censuses

steadily declined (see Figure 2A), whereas there were increases in the proportions from London Suburbs, London Cosmopolitan, New and Growing Towns and Prospering Southern England (particularly since 2000). As for the proportions to each destination (Figure 2B), there were small declines in the proportions of migration to Centres with Industry, London Suburbs, London Centre and London Cosmopolitan, a large drop between 2000 and 2001 in Prospering Southern England and increases in Prospering Smaller Towns, New and Growing Towns, Industrial Hinterlands (since 2000) and Manufacturing Towns (since 1995). Despite our simple method to overcome the inconsistencies in geography over time, which may be responsible for some of the slight 'jumps' in the patterns between 1998 and 1999 and between 2000 and 2001, the patterns remained remarkably stable during the entire 14-year period.

The origin–destination-specific proportions of migration also exhibited considerable stability. Here, we only illustrate the 1999–2004 patient register data that were collected at the local authority district level and then aggregated to the 12 area groups. Our first example, set out in Figure 3, represents migration from and to London Suburbs, which is an area group with a high proportion of ethnic minorities. Here, the largest share of migrants

to London Suburbs came from local authorities in other London Suburbs (16–18 per cent), London Centre (15 per cent) and London Cosmopolitan (24–26 per cent). General increases were found in the proportions from London Suburbs and London Cosmopolitan, with corresponding declines from Prospering Smaller Towns and Prospering Southern England. The proportions of migration from London Suburbs to each area group destination (Figure 3B) exhibited different patterns than those found in Figure 3A. First, the overall patterns were more evenly distributed. Second, unlike the proportions from each area group origin, there were no major changes exhibited over time, with the (slight) exceptions of migration to other local authorities in London Suburbs, Industrial Hinterlands and Manufacturing Towns.

As another example of migration patterns from and to areas with relatively large numbers of ethnic minorities, the proportions of migration from and to London Cosmopolitan are set out in Figure 4. Again, the most important origins and destinations, in both cases, were the main London area groups, i.e. London Suburbs, London Centre and London Cosmopolitan. The destinations of migrants from London Cosmopolitan were also relatively focused with the highest proportions of migrants going to London Suburbs. As for the patterns over time, the majority of proportions

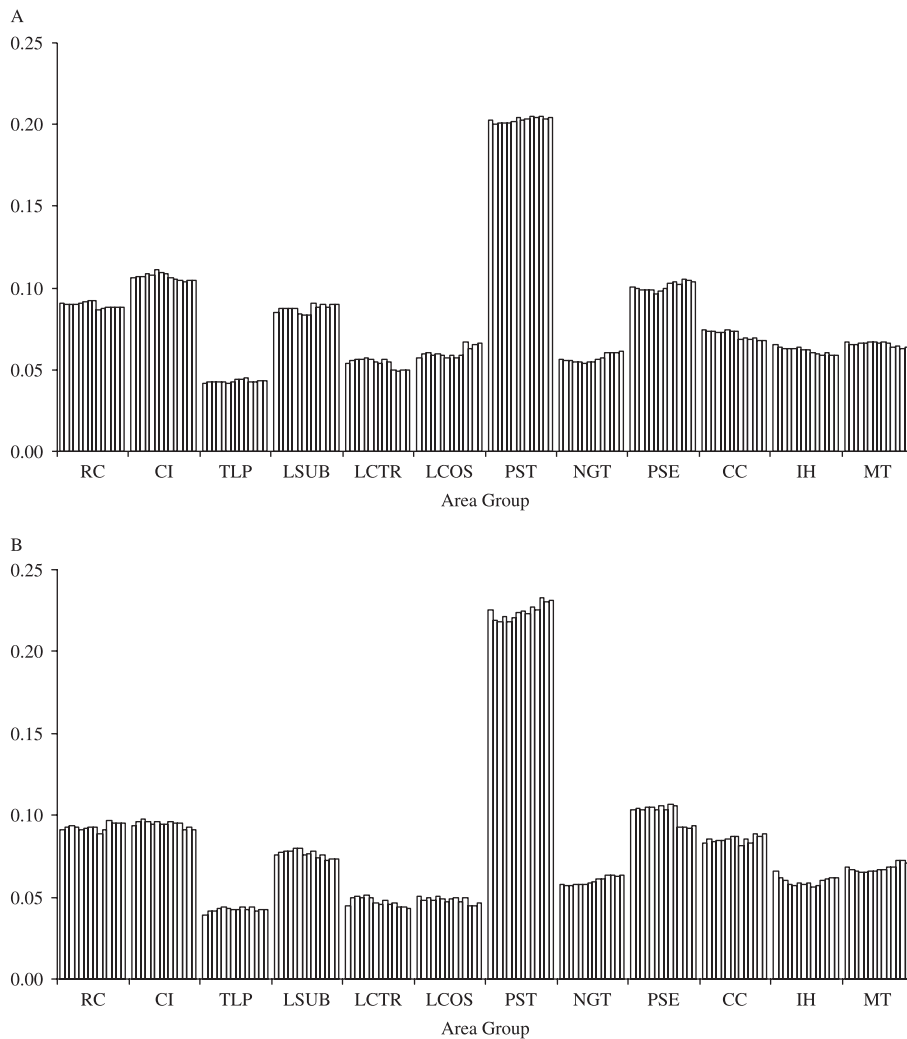


Figure 2 The proportions of migration from (A) and to (B) each area group in England and Wales, 1991–2004
Source: 1991–2004 NHSCR (adjusted for different geographies)

remained stable, with some exceptions (e.g. the decreases in the shares from London Cosmopolitan to other local authorities in London Cosmopolitan and increases in the shares to New and Growing Towns in Figure 4B).

In Figure 5, the proportions of migrants from each area group to Prospering Smaller Towns, Prospering Southern England and Coastal and Countryside are set out for the 1999–2004 period. These three area groups represent local authority districts with low percentages of ethnic minorities. Here we find very different patterns than those presented in Figures 3 and 4 but, again, strong stability in the patterns over

time. More than 30 per cent of migrants to Prospering Smaller Towns came from other local authorities in the same area group. A similar pattern exists for Prospering Southern England, but with higher proportions from London area groups. For migration to Coastal and Countryside, however, the proportions coming from Prospering Smaller Towns and Coastal and Countryside were about the same (both around 25 per cent).

The above analyses inform us that the migration patterns for the total population have been relatively stable in proportional terms, even when specific origin–destination patterns are considered. There do

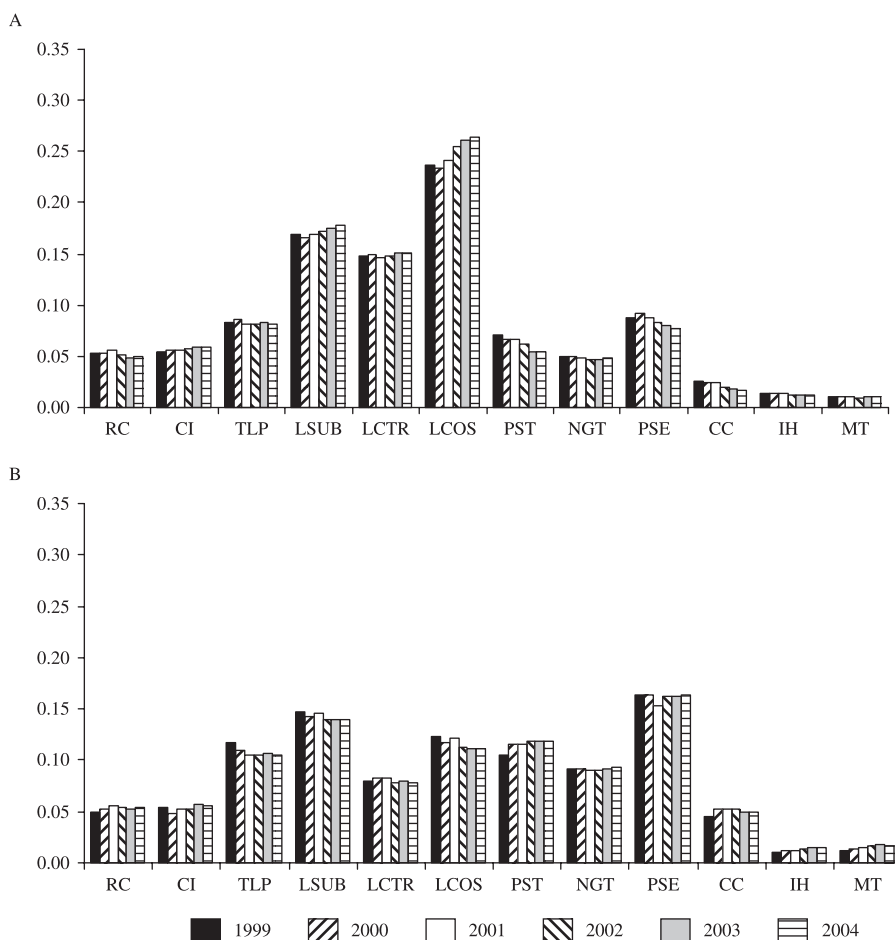


Figure 3 The proportions of migration to (A) and from (B) London Suburbs, 1999–2004

Source: 1999–2004 Patient Register Data

not appear to be any dramatic changes occurring in the overall migration patterns as a consequence of increased ethnic diversity. Of course, an increase in the number of ethnic minorities in a particular area group would imply an increase in migration from that area group to other area groups – but because of the size of the majority White population, we would expect the patterns to slowly evolve over time (at least for these 12 area groups).

Finally, although not covered in this paper, there are important age-related factors at work. For example, the migration to London, Centres with Industry and Manufacturing Towns is likely to be dominated by young adults moving for work-related reasons, whereas much of the migration to Coastal and Countryside is likely to be return or retirement migration

of older persons. These patterns are also affected by the age composition of the populations, with the White population being considerably older than the ethnic minority populations. See Finney and Simpson (2008) and Stillwell *et al.* (2008) for recent analyses of age-specific patterns of ethnic migration.

Ethnic migration between area groups

In this section, the migration patterns of the White and ethnic minority groups are examined for the 2000–2001 period. We begin by describing the differences in net migration patterns and then show the differences in the proportions of migration to each area group and in the origin–destination proportions from two particular area groups. Note

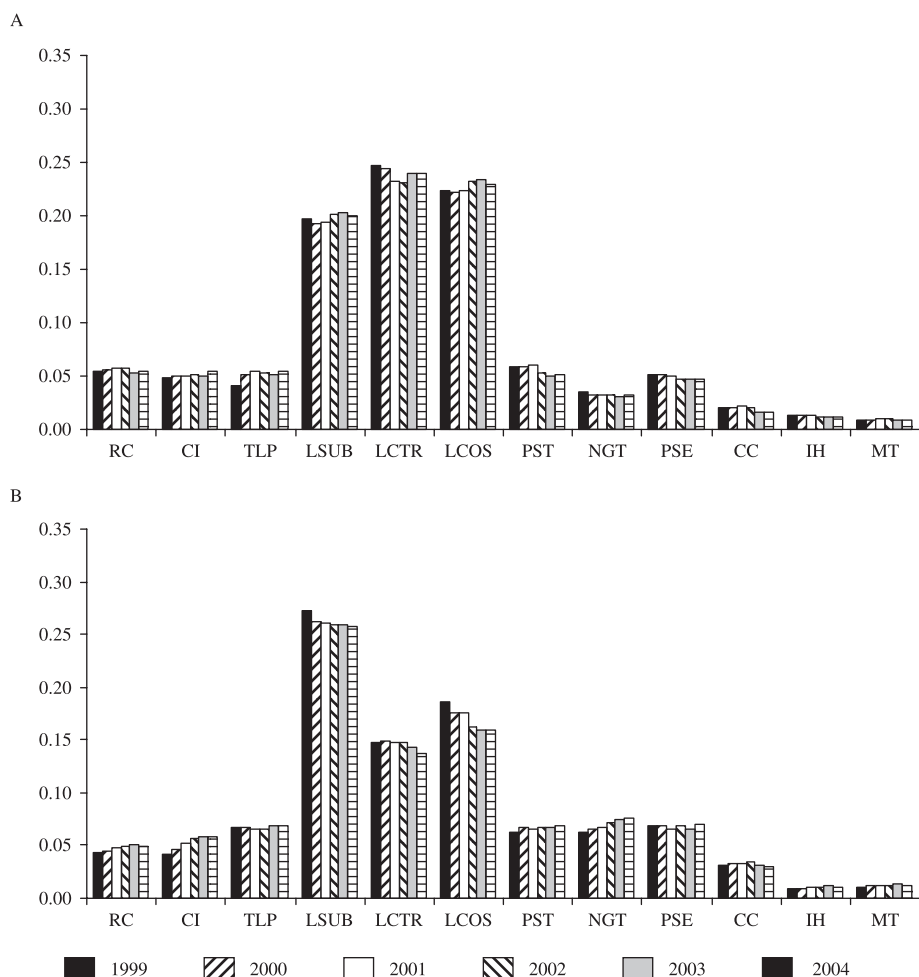


Figure 4 The proportions of migration to (A) and from (B) London Cosmopolitan, 1999–2004
Source: 1999–2004 Patient Register Data

that during 2000–2001 the White population exhibited slightly lower levels of migration moving across local authority boundaries than did the ethnic minority population (i.e. 4.2 per cent compared with 4.8 per cent). However, many of the ethnic minority moves were likely to be of a short-distance nature (Finney and Simpson 2008).

The net migration totals set out in Figure 6 show that areas of gain or decline were very different for Whites and ethnic minorities in Centres with Industry, Thriving London Periphery, London Suburbs, New and Growing Towns and Prospering Southern England. In all of these cases, net migration was positive for ethnic minority migration and negative for White migration. Not surprisingly, given the much larger share

of the population, the levels of overall net migration were dominated by the White population.

To provide a different picture of the ethnic migration patterns, the proportions of migration to each area group are set out in Figure 7. Here, the White population exhibited lower proportions migrating to the London areas (particularly to London Suburbs) and to Centres with Industry (i.e. areas with high percentages of minorities), whereas they exhibited much higher proportions migrating to Prospering Smaller Towns, Prospering Southern England and Coastal and Countryside (i.e. areas with low percentages of ethnic minorities). Much of this difference can be explained by the different population distributions each ethnic group has (see Table 1 for comparison).

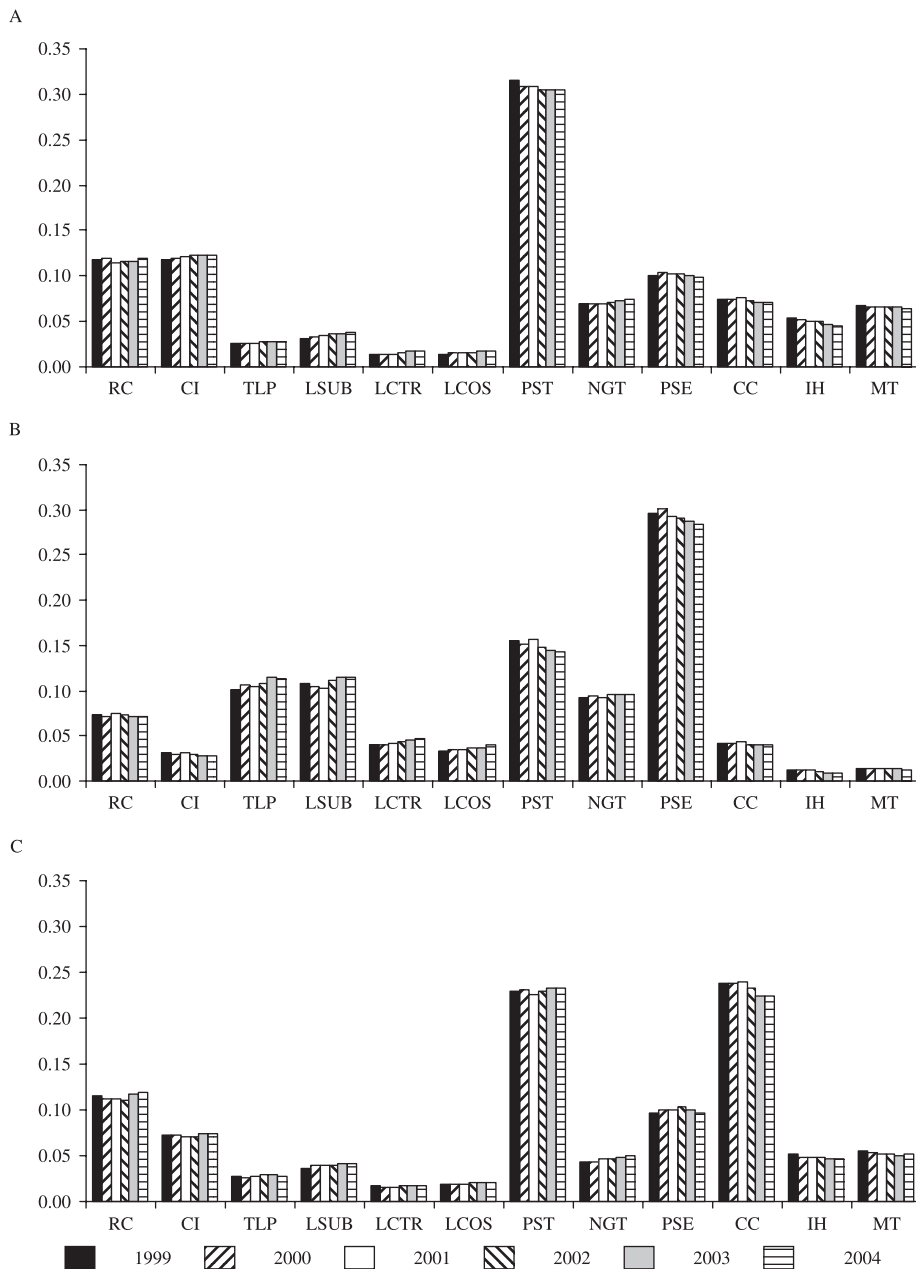


Figure 5 Proportions of migration from each area group to (A) Prospering Smaller Towns, (B) Prospering Southern England and (C) Coastal and Countryside, 1999–2004
 Source: 1999–2004 Patient Register Data

Finally, we examine the origin–destination-specific patterns of ethnic migration. For illustration purposes, we focus on the flows from London Cosmopolitan, with its high concentration of ethnic

minorities, and Prospering Southern England, with its relatively low concentration of ethnic minorities. The proportions of migration from these two area groups to each destination are presented in Figure 8.

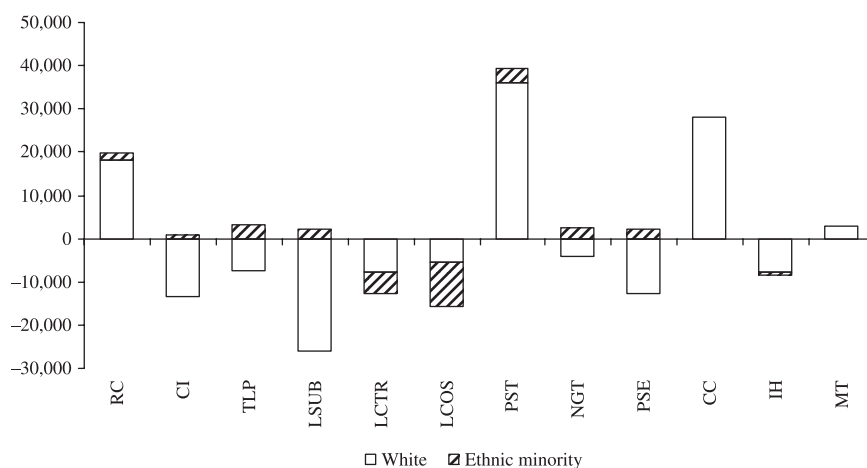


Figure 6 Net migration totals by area group and ethnicity, England and Wales, 2001

Source: 2001 Census

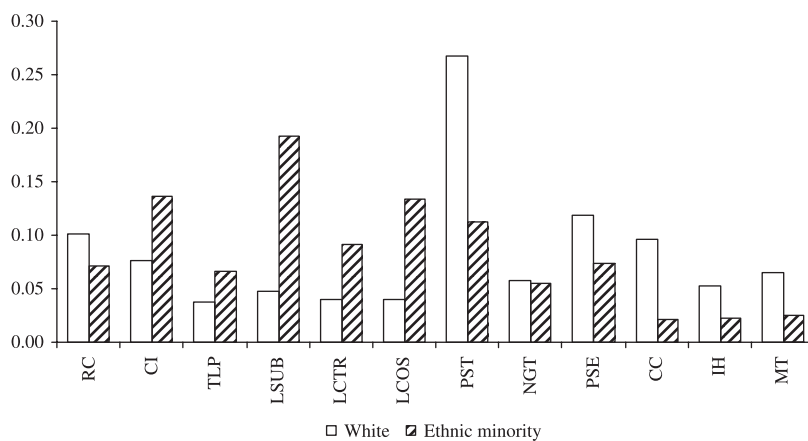


Figure 7 The proportions of migration to each area group by ethnicity, England and Wales, 2001

Source: 2001 Census

For both Whites and ethnic minorities from London Cosmopolitan, the preferred destinations were clearly the three main London area groups. The main difference in the patterns exhibited by Whites is that they exhibited much higher proportions migrating outside London, with the exception of the proportions to Centres with Industry. Ethnic minorities from London Cosmopolitan had a very strong preference for London Suburbs with nearly 40 per cent of all migrants moving there. As for migration from Prospering Southern England, Whites exhibited higher proportions migrating to Prospering Smaller Towns, Prospering Southern England and Coastal and

Countryside, whereas ethnic minorities exhibited higher proportions migrating to Centres with Industry, Thriving London Periphery, London Suburbs, London Centre and London Cosmopolitan.

The above analyses demonstrate that White and ethnic minority patterns of area group migration are very different from each other in terms of net migration totals, proportions to each destination and origin–destination-specific patterns. The current population distribution of each ethnic group is clearly an important factor for these patterns. Next, we compare the destination-specific patterns, controlling for education and employment status.

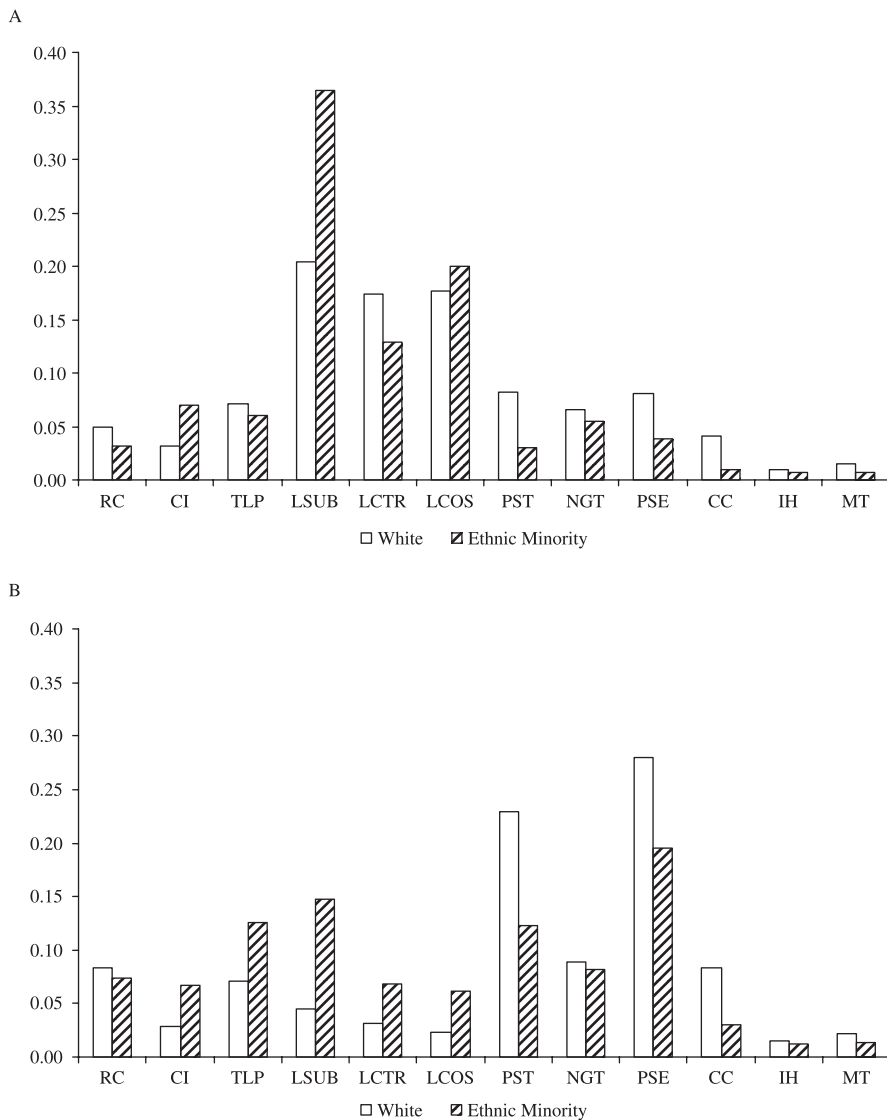


Figure 8 The proportions of migration from (A) London Cosmopolitan and (B) Prospering Southern England to each area group by ethnicity, England and Wales, 2001
 Source: 2001 Census

Ethnic migration by education and employment status

The 2001 SAM was used to obtain area group migration patterns of migrants aged 16–49 years by ethnicity, education and employment status. The three-level breakdown makes the pattern of ethnic migration more complex and interesting. We illustrate this in Figures 9 and 10 by examining the proportions

of migration to each area group for Whites and ethnic minorities, respectively. Unfortunately, because of sample size limitations of the SAM, we were unable to analyse the migration patterns between area groups.

The proportions of White migration to each area group by education and employment statuses are set out in Figure 9. For this ethnic group, high education and employment statuses translated into higher proportions of migration to the three London area

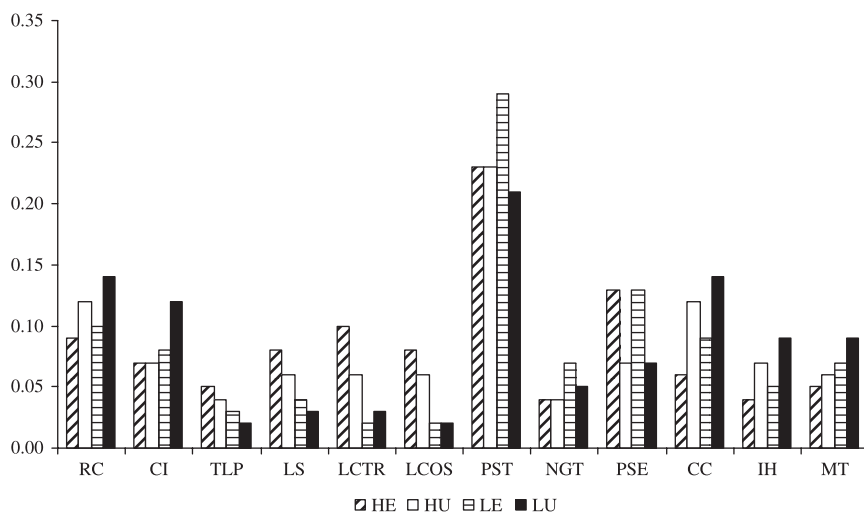


Figure 9 Proportions of White migration to each area group in England and Wales by education and employment statuses, 2001

Note: HE = high education, employed; HU = high education, unemployed; LE = low education, employed; LU = low education, unemployed

Source: 2001 Census Small Area Microdata sample

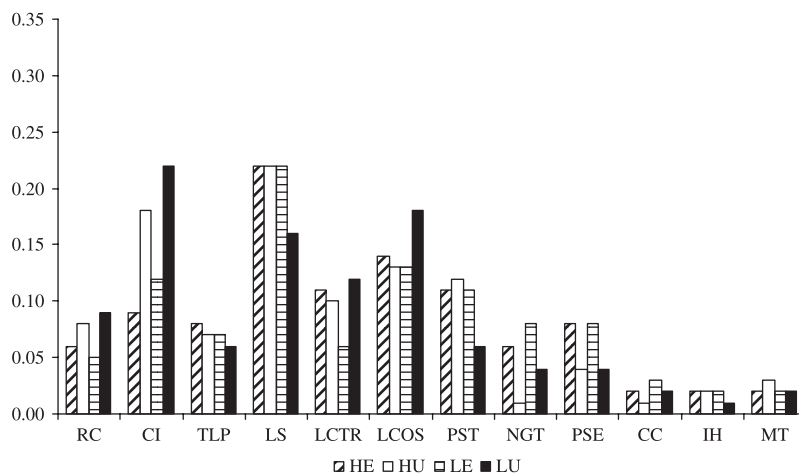


Figure 10 Proportions of ethnic minority migration to each area group in England and Wales by education and employment statuses, 2001

Note: HE = high education, employed; HU = high education, unemployed; LE = low education, employed; LU = low education, unemployed

Source: 2001 Census Small Area Microdata sample

groups and to Thriving London Periphery. This was the opposite situation for migration to Manufacturing Towns, Centres with Industry, Regional Centres, Industrial Hinterlands and Coastal and Countryside. For migration to Prospering Southern England, only

employment status mattered. Education level had no effect. Finally, for Prospering Smaller Towns and New and Growing Towns, those with low education and employed statuses exhibited the highest proportions migrating to these places.

The proportions of ethnic minority migration to each area group by education and employment statuses are set out in Figure 10. These patterns are somewhat different from the corresponding White patterns above. For the three London area groups, those with low education and unemployed statuses had relatively lower proportions migrating to London Suburbs but relatively higher proportions migrating to London Cosmopolitan. For London Centre, it was those with low education and employed statuses that exhibited the lowest proportions migrating there. Interestingly, ethnic minorities with unemployment status exhibited lower proportions migrating to New and Growing Towns, Coastal and Countryside and Prospering Southern England, but higher proportions migrating to Regional Centres and Centres with Industry. Except for Coastal and Countryside, these patterns were similar to those of the White population, particularly to those with low education.

In summary, education and employment matters in terms of destination choice, but differently for the two ethnic populations. For Whites, those with a high education status were more selective in their choice of destinations than were those without a high education qualification. For ethnic minorities, education level did not appear to make as much difference in the migration patterns. Employment status did not affect the destination preferences for Whites with high education, whereas it was important for ethnic minorities. For example, ethnic minorities with an unemployed status had much higher proportions migrating to Centres with Industry compared with those who had employed status. For the White population with low education, unemployed status meant that they were more selective in their destination choices than those with employed status, who were the least selective out of all migrants in this analysis. For ethnic minorities with low education status, the opposite was true.

Conclusion

In this paper we have addressed three research questions on the internal migration patterns between area groups in England and Wales, and have found some interesting results related to patterns over time and across two broad ethnic groups. These findings can be used to better understand the mechanisms underlying the complex relationships between ethnic population change and further population redistribution by internal migration.

Our first research question discussed the changing patterns of internal migration in England and Wales

from 1991 to 2004. To address this, we relied on data obtained by the National Health Service, which represents the total population. Our findings show that there have not been any dramatic changes in the overall migration patterns as a possible consequence of increased ethnic diversity. In fact, the patterns have been slowly evolving over time – at least for the 12 area groups we considered. The second research question focused on the main differences in the movements between the White population and the ethnic minority population. Here, we relied on information collected from the 2001 Census and found major differences between the two ethnic groups. Finally, we examined the migration patterns of Whites and ethnic minorities by education and employment statuses using data collected from the Small Area Microdata sample of the 2001 Census. We found that education and employment are important in terms of destination choice, but they work differently for the two ethnic populations. Education level is an important factor for the White population, whereas employment status was much more important for the ethnic minority population.

Our analysis has focused on migration between area groups. This allowed us to direct our attention on the types of places migrants choose. More traditional analyses of migration have tended to focus on distances moved or migration occurring between geographic regions – with no real clear indication of the types of places migrants were leaving or choosing. That is not to say the analysis of migration between geographic regions should be replaced with area groupings, which has its own set of limitations (e.g. it ignores some of the important geographic effects). We would argue that, ideally, both analyses should be used together to better understand the migration patterns of, say, ethnic groups. We hope to illustrate this in future work, along with the examination of migration patterns for more specific ethnic groups, such as the 13 covered in Finney and Simpson (2008).

In conclusion, there is still much to know about the different types of migration occurring in England and Wales, as well as in other places throughout the world. Our paper has emphasised two important dimensions of migration: time and origin–destination interactions. Unfortunately, both aspects are limited, to some extent, by the data available to us. The analysis of patterns over time is problematic as both spatial units and variable definitions may change, requiring researchers to develop methods to harmonise

data for analysis (see, for example, Bell *et al.* 2002; Rees and Butt 2004). Analysis of origin–destination movements are often constrained by confidentiality rules (Stillwell and Duke-Williams 2007). We have attempted to make the best use of the available data to illustrate the complex migration patterns occurring amongst Whites and ethnic minorities in England and Wales.

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