

The East Midlands in 2010: The East Midlands Demography

A report prepared by *emda*

2010

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The East Midlands Demography

1. Introduction

This chapter of 'The East Midlands in 2010' profiles the region's current population structure and discusses recent and likely future changes. It compares the East Midlands region to other English regions and to trends in England and the UK as a whole. It also draws sub-regional comparisons by looking at the nine County and Unitary Authority areas, as well as the Housing Market Areas used in the Regional Spatial Strategy and the Government's classification of urban and rural areas. The geographies used in this section are described in more detail in Annex 1.

Section 2 presents a snapshot of the East Midlands population in mid-2008. This demonstrates that the East Midlands has one of the smallest populations in England, has one of the lowest population densities and is the third most 'rural' of the nine regions. The region's population structure is similar to the national average, but with a slightly higher proportion of men and a higher share of the population in the pensionable age group. There are higher proportions of older people in the rural areas in Lincolnshire and Derbyshire, and higher proportions in the school and working age groups in the cities and the south of the region. The East Midlands has a slightly smaller proportion of people who would describe themselves as belonging to a Black or Minority Ethnic (BME) group than average, and almost a third of these individuals live in Leicester, which also has the youngest age profile in the region.

Section 3 describes population trends over the decade 1998 to 2008, when the East Midlands was the only northern or midlands region to experience population growth in excess of the national average. Rates of population growth have been particularly high in Lincolnshire, Northamptonshire and Rutland, whilst they have been very modest in Leicester, Derby and Nottinghamshire. The population has grown faster in rural areas in the east and south of the region, and more slowly in the more urbanised north of the region. The pensionable age group has grown particularly significantly, whilst the number of residents in the school age group has fallen over the decade. However, the region has also experienced an above average rate of growth in its working age population. Although migration is still the most significant component of population change, rising birth rates and falling death rates have resulted in natural change making an increasing contribution, accounting for well over a third of population growth in recent years.

Section 4 analyses projections for future population change to 2031, with particular emphasis on the decade 2006 to 2016. The East Midlands is projected to experience the most rapid rate of population growth of any English region. Within the region, Northamptonshire is projected to grow fastest whilst Derbyshire is expected to experience the slowest rate of growth. Rural areas in the south and the east of the region are projected to experience stronger population growth than the more urbanised north. Both the working age and pensionable age groups are projected to grow at a faster rate in the East Midlands than in any other English region, and the school age group

could grow at a faster rate in the region than in England overall. Due to the strong growth in the working age group, dependency ratios are projected to remain fairly stable across much of the region, with the exception of Lincolnshire and Rutland, which could experience significant increases in aged dependency ratios. This could have consequences for both economic activity and service provision. Natural change is projected to become more significant as birth rates continue to increase and mortality rates fall. International migration is projected to level off and migration from other regions is projected to become increasingly important.

2. The East Midlands population

The East Midlands Government Office Region (GOR) is made up of nine Upper Tier Local Authority areas: the County Councils of Derbyshire, Leicestershire, Lincolnshire, Northamptonshire and Nottinghamshire; and the Unitary Authorities of Nottingham City, Leicester City, Derby City and Rutland. The region's main population centres are the cities of Leicester, Nottingham, Derby, and Lincoln and the town of Northampton.

The Office for National Statistics publishes annual estimates of the resident population known as the Mid-Year Population Estimates (MYE). From the year of the last Census, each MYE takes the estimate of the resident population in a given geographical area from 30th June the previous year, ages the population by one year, adds those who have been born in the previous 12 months and subtracts those who have died. This element is reasonably precise, because there is an accurate record of births and deaths in a given year. The other major factor in producing the MYE is migration, which is likely to have a wider margin of error, although data on migration has improved markedly in recent years.¹

2.1 Total population

According to the 2008 MYE, the East Midlands had a resident population of 4,433,000. This is 8.6% of the total for England.

Chart 1 shows that the East Midlands is one of the smallest regions in England in terms of population, with only the North East accounting for a smaller share of the national total (at 2.6 million, or 5.0%). The chart also shows that:

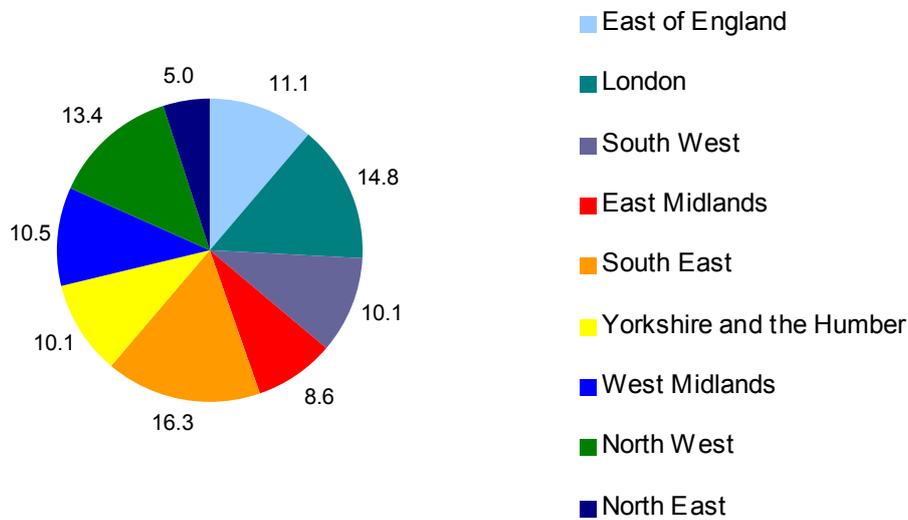
- The South East accounts for the largest share of the population in England, with 8.4 million residents, or 16.3% of the national total, whilst London has the next largest share, at 14.8%; and

¹ Estimates of international migrants (defined as someone who changes their country of residence for at least a year) moving into or out of an area are based on the International Passenger Survey (IPS), collected at the UK's main air and sea ports, and Home Office administrative sources, such as asylum applications. Estimates of people moving within the UK ('domestic' or 'internal' migration) are principally based on GP registrations and local changes in electoral registrations.

Note that short-term international migrants (someone who moves to a country other than their own for a period of less than one year) are not included in the Mid-Year Estimates.

- The Greater South East (describing London, the South East and the East of England) accounts for 42.2% of the total population of England.

Chart 1: Share of total England population by region, 2008 (%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, from NOMIS, 22nd October, 2009.

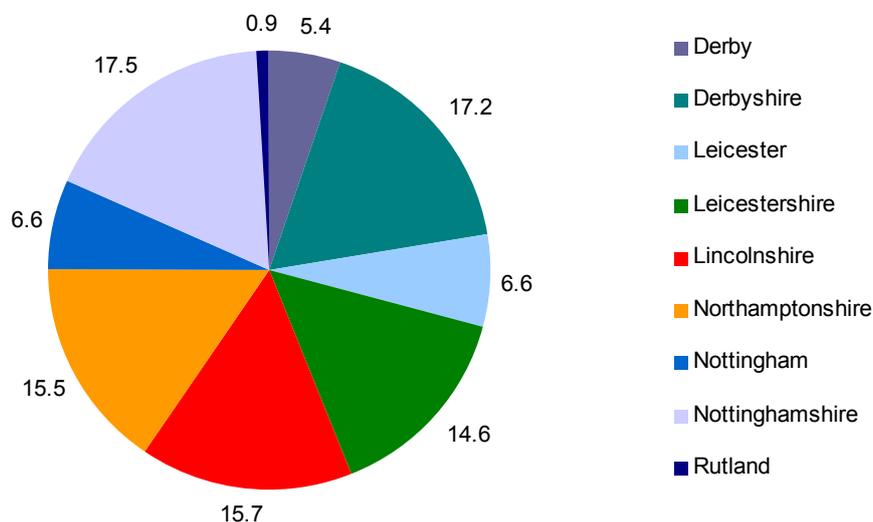
Nottinghamshire is the largest of the nine County and Unitary Authority in the East Midlands, with a population of 776,500 in 2008, accounting for 17.5% of the regional total. This does not include the Unitary Authority of Nottingham City,² which accounts for an additional 292,400 people, or 6.6% of the regional total. Chart 2 shows how this compares to the other County and Unitary Authorities in the region:

- Derbyshire has the second largest population, at 762,100 people, or 17.2% of the total for the East Midlands. Derby City accounts for an additional 239,200 people, or 5.4% of the regional total;
- The populations of Lincolnshire, Northamptonshire, and Leicestershire Counties are similar, with populations of 698,000 (15.7%), 685,000 (15.5%), and 645,800 (14.6%) respectively. However, the figure for Leicestershire does not include the Unitary Authority of Leicester City, which accounts for a further 294,700 (6.6% of the total) – the largest of the three city Unitary Authorities;

² Note that the areas used in this section refer to the administrative boundaries of Nottingham, Leicester and Derby City Unitary Authorities, rather than functional geographies or 'conurbations'. The term 'conurbation' refers to a contiguous urban area, covering both the city and its suburbs, which can extend beyond the administrative boundary of the Unitary Authority. The conurbation of Nottingham is known to be particularly 'under-bounded' by the administrative area. The 'Greater Nottingham' area has been used in local research and delivery, combining Nottingham City UA with the Local Authority Districts of Rushcliffe, Gedling and Broxtowe along with several wards covering the suburb of Hucknall which fall within the Ashfield District. However, in the interests of both comparability and statistical availability we refer to the administrative boundaries throughout this Chapter. Therefore it needs to be born in mind that some of the data referenced in this section may under-represent the population expected to be resident in given 'conurbations'.

- Together, the three city Unitary Authorities account for 18.6% of the region's total population, or 826,300 people; and
- The County of Rutland is the smallest in the region, with only 39,200 people, 0.9% of the East Midlands' total.

Chart 2: Share of total East Midlands population by LA/UA, 2008 (%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, from NOMIS, 22nd October, 2009.

2.2 Population density and rural and urban area classifications

The East Midlands covers a surface area of 15,607 square kilometres. This makes it the fourth largest English region in terms of surface area. The East Midlands had the second lowest population density, at 284 people per square km in 2008, compared to an average for England of 395 people per square km. Only the South West has a lower population density, at 219 people per square km. London is a significant outlier in this respect, with a population density of 4,847 people per square km.

Population density varies significantly across the region, but is unsurprisingly highest in the three city Unitary Authorities. Leicester City has the highest population density, with 4,037 people per square km. Population density in the Counties is much lower. It is highest in Nottinghamshire, at 372 people per square km, reflecting the more urbanised areas north of Nottingham City, whilst Lincolnshire, which covers the largest surface area, has a very low population density, at 118 people per square km.³

The East Midlands' relatively low population density means that it is one of the most 'rural' regions in England. There are two approaches to defining areas

³ ONS, 'Regional Snapshot Archive', 2009 (for regional surface area in square km) and ONS Crown Copyright, 'Mid Year Population Estimates', 2008 (for population).

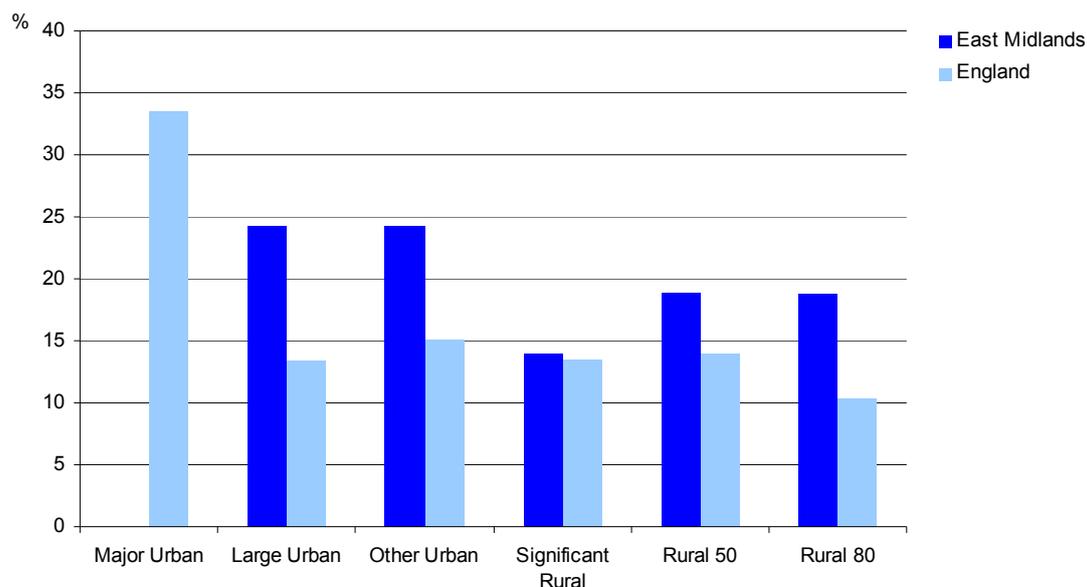
according to how 'rural' or 'urban' they are which are currently in use, which are described in more detail in Annex 1.

The first is a detailed approach which defines small areas (Census Output Areas) according to the density of settlement within that area, from 'sparse' through to 'less sparse'. As this definition is based on small areas, data is only available from the 2001 Census. However, this is identified by Defra as the preferred method for estimating the number of people living in rural and urban areas because it identifies the pattern of settlement density. According to this approach, in 2001:

- The East Midlands was the third most rural region in England, with 29.5% of residents living in rural settlements;
- This is over 10 percentage points higher than the average for England, of 19.4%; and
- On this measure, the South West is the most rural region, with 34% of residents living in rural settlements, followed by the East of England, with 31%.

Chart 3 illustrates the share of the population regionally and nationally living in areas classified by a second approach, based on Local Authority Districts. This 'district classification' method is not an ideal method for counting population in given types of settlement, as it groups entire districts according to the proportion of residents living in a dominant settlement type (so 'Rural 80' districts are those where at least 80% of residents live in rural settlements and market towns). Therefore residents within a district classed as 'rural' may well be living in a relatively densely populated town (such as residents of Skegness within the 'Rural 80' district of East Lindsey). However, to provide estimates more recent than the 2001 Census, to compare change over time, and to discuss variables based on sample surveys (such as the Annual Population Survey, which are only robust to Local Authority District level), the district classification will be referred to throughout this document, and the classifications for each of the 40 Unitary and Local Authority Districts in the region are shown in Map 1.

Chart 3: Population by DEFRA District Classification, 2008 (%)

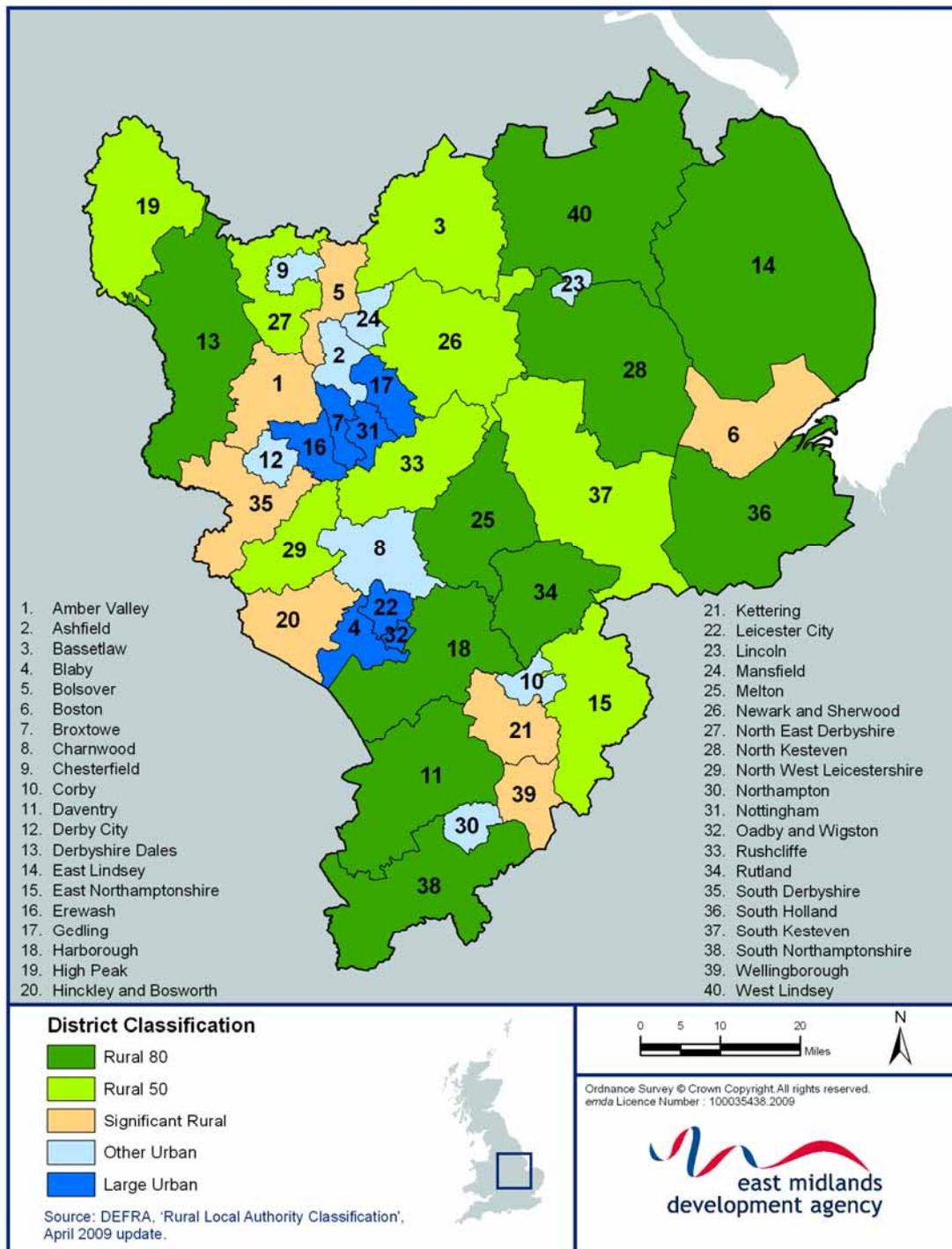


Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, from NOMIS, 24th December, 2009, and DEFRA, 'Rural Local Authority Classification, April 2009 update.

The distribution of the East Midlands population by Defra district classification, compared to the average for England, is illustrated by Chart 3, as follows:

- The East Midlands has no districts classified as 'Major Urban'. In England as a whole, 33.5% of the population in 2008 were resident in districts classified as such;
- The region has larger proportions living in 'Large Urban' and 'Other Urban' districts than the national average, at 24.2% of the East Midlands population in both cases (compared to 13.4% and 15.1% respectively in England). Examples of the seven 'Large Urban' districts are Nottingham or Erewash (between Nottingham and Derby), and examples of the eight 'Other Urban' districts include Ashfield, Charnwood and Lincoln;
- The proportion of the population living in 'Significant Rural' districts in the East Midlands is similar to the national average, at 14% in the region and 13.6% in England. Examples of the seven districts in this group include Kettering, Boston and Bolsover;
- The East Midlands also has higher proportions of the population in 'Rural 50' and 'Rural 80' districts, at 18.9% and 18.8% of the 2008 population respectively (compared to 14% and 10.4% in England overall). Examples of the eight 'Rural 50' districts include Bassetlaw and High Peak and examples of the ten 'Rural 80' districts include Daventry and East Lindsey; and
- Overall, 51.6% of the East Midlands population in 2008 were resident within districts classed as rural (although, as stated above, many will be living in urban settlements) compared to 37.9% in England overall, whilst 48.4% of the region's residents lived in districts classed as urban, compared to 62.1% nationally.

Map 1: Defra Urban and Rural District Classification, 2009



Key Points: Total population size and distribution

- The East Midlands had a population of 4.4 million residents in 2008, 8.6% of the total for England. The region has the second smallest population of the nine English regions.
- Nottinghamshire is the largest Local Authority area in the region, accounting for 17.5% of the total population in the East Midlands. Together the three city Unitary Authority areas of Derby, Nottingham and Leicester account for 18.6% of the region's total population, or 826,300 people. Rutland is the smallest, accounting for less than 1% of the total regional population.
- The East Midlands is the fourth largest English region in terms of surface area, covering 15,607 km², but has the second lowest population density, at only 284 people per km², compared to the average for England of 395 people per km².
- The East Midlands was the third most rural region in England, with 29.5% of residents living in rural settlements according to the 2001 Census.
- At a district level, 51.6% of the East Midlands population in 2008 lived in districts classed as rural, compared to 37.9% nationally.

2.3 Population structure

This sub-section looks into the structure of the region's population in more detail. Firstly, it looks at how the demographic profile of the East Midlands and its constituent sub-regions compare in terms of age and gender, before assessing ethnicity and country of birth. Three sources are used in this analysis. For age and gender, the 2008 MYE is used as before. To discuss ethnicity, the recent ONS experimental statistics for 2007 will be used, whilst the Annual Population Survey (APS) for 2008 will be used to look at country of birth.

A key categorisation used in this analysis is the broad age ranges conventionally used in describing demographic trends. These are:

- The school age group (aged between less than one year and 15 years);
- The working age group (aged between 16 and below the current state pension age, 59 for women and 64 for men); and
- The pensionable age (current state pension age and over – 60 and over for women and 65 and over for men).

2.3.1 Age and gender

The structure of the East Midlands population by age and gender is fairly similar to the profile for England:

- In the East Midlands in 2008, 49.5% of the population are male. This is a slightly higher proportion of the region's population than in England as a whole (49.2%);

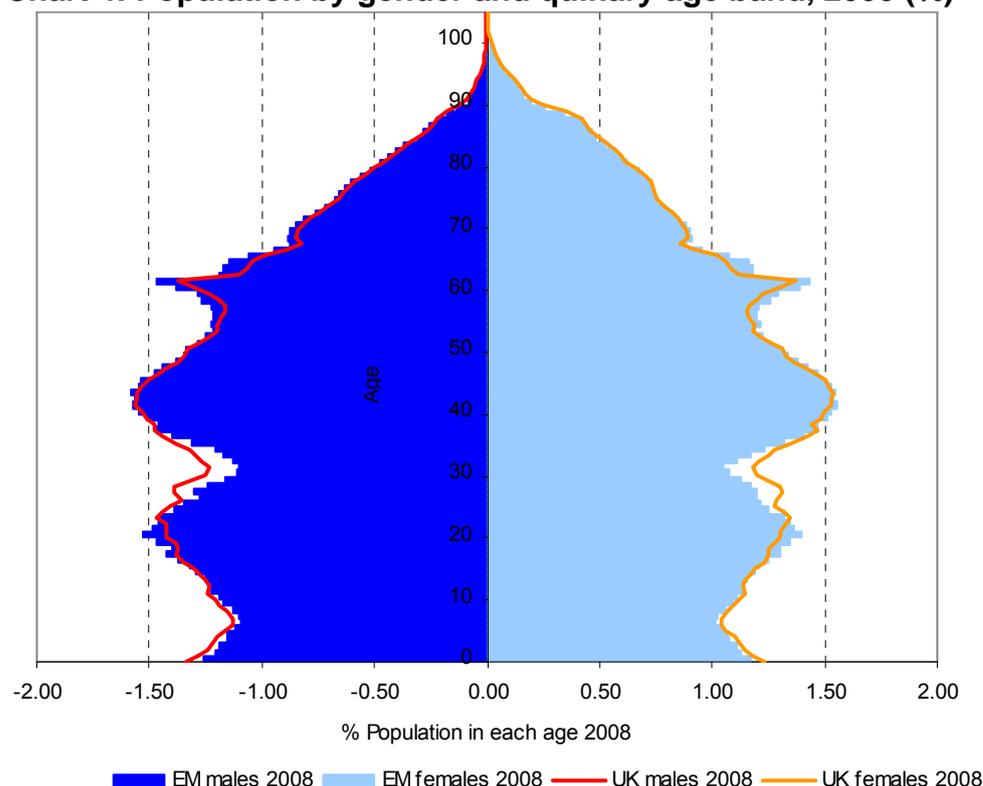
- Women make up just over half the population in all English regions. In the East Midlands, 50.5% of the population are female;
- Alongside London, the East Midlands has the lowest proportion of the population who are female of all English regions; and
- Of all the English regions, women make up the largest share of the North East's population, at 51.1%.

Chart 4 shows the population by five-year age band in the East Midlands. The profile of the region's population by age and gender is fairly similar to the national average (in this case the UK), with some notable exceptions:

- The region has a significantly smaller proportion of both males and females in the 25-29 and 30-34 age bands than in the UK. Males in the 25-29 age band account for 3.1% of the region's population whilst females in that age band account for 3.0%, compared to 3.4% for males and 3.3% for females in the UK. In the 30-34 age band, males and females each account for 2.8% of the regional total, compared to 3.1% for both males and females nationally; and
- The region has a slightly higher proportion of the population in the 55-59 and 60-64 age bands. Male 55-59 year olds and female 55-59 year olds each account for 3.1% of the East Midlands' population, compared to 2.9% and 3% respectively for males and females in the UK overall. In the case of 60-64 year olds, males account for 3.1% and females account for 3.2% of the total population of the East Midlands, compared to the national average of 2.9% and 3% respectively for males and females.

The structure of the region's population by 5-year age band, as shown in Chart 4, reflects significant variations in birth rates since the Second World War, which will be described in more detail later in this section. In both the East Midlands and nationally, the large proportion of 60-64 year olds illustrates the cohort born in the post-war 'baby-boom', and their children in the 35-44 age bands, whilst the lower proportions in the 25-34 age bands reflects the lower birth rates in the 1970s and early 1980s. As birth rates have again increased over the last two decades, there are increasing numbers in the younger age bands.

Chart 4: Population by gender and quinary age band, 2008 (%)



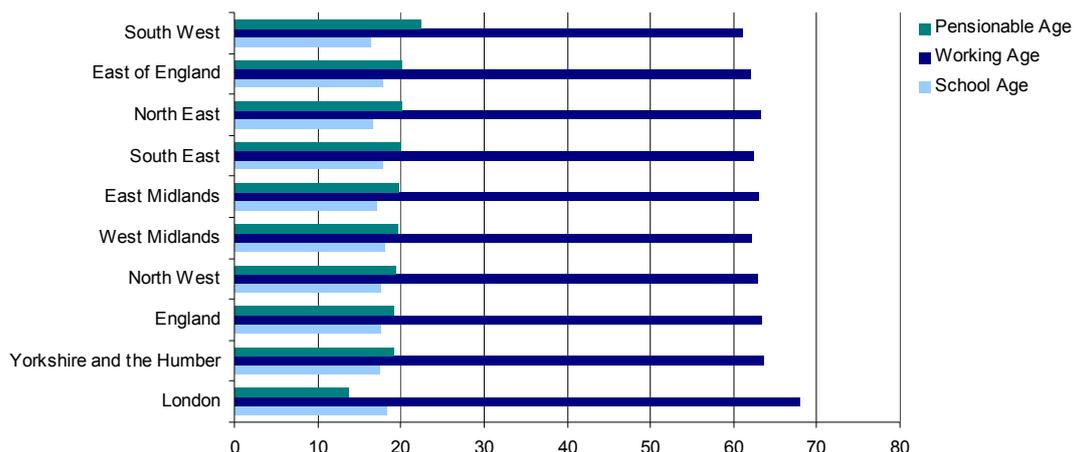
Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, analysis provided by the East Midlands ONS Regional Team, 30th October, 2009.

Chart 5 shows that the age structure by broad age band is similar across the English regions, with the exception of London. In the East Midlands, 17.1% of the population in 2008 were in the school age group, 63.1% were in the working age group, and 19.7% were of pensionable age. When compared to England as a whole, the East Midlands has a slightly older age profile. In England in 2008, 17.6% were in the school age group, 63.3% were in the working age group, and 19.1% were in the pensionable age group.

However, the national average is skewed by the atypical age profile of London, where 67.9% of residents were in the working age group and only 13.8% were in the pensionable age group.

The South West has the oldest age profile, with 22.5% in the pensionable age group. The East Midlands currently has a lower proportion in the pensionable age group than the South West, the East of England, the South East, and the North East. The discussion of population projections later in this section suggests that this picture is likely to change significantly in future years.

Chart 5: Population by broad age group, 2008 (%)

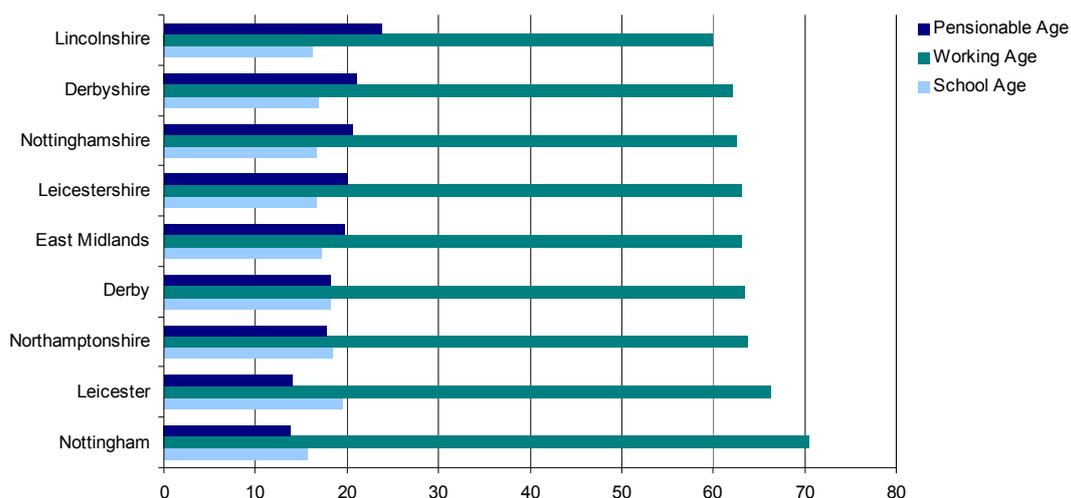


Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, from NOMIS, 21st January, 2010.

Chart 6 shows the population by broad age band within the East Midlands:

- Leicester City has the youngest overall age profile, with the highest proportion of residents in the school age group, at 19.6%, the second highest in the working age group, at 66.3%, and the second lowest proportion in the pensionable age group, at 14%; and
- Lincolnshire has the oldest age profile, with 23.9% of its resident population in the pensionable age group and the lowest proportion in the working age group, at 59.9%.

Chart 6: Population by broad age group by LA/UA, 2008(%)

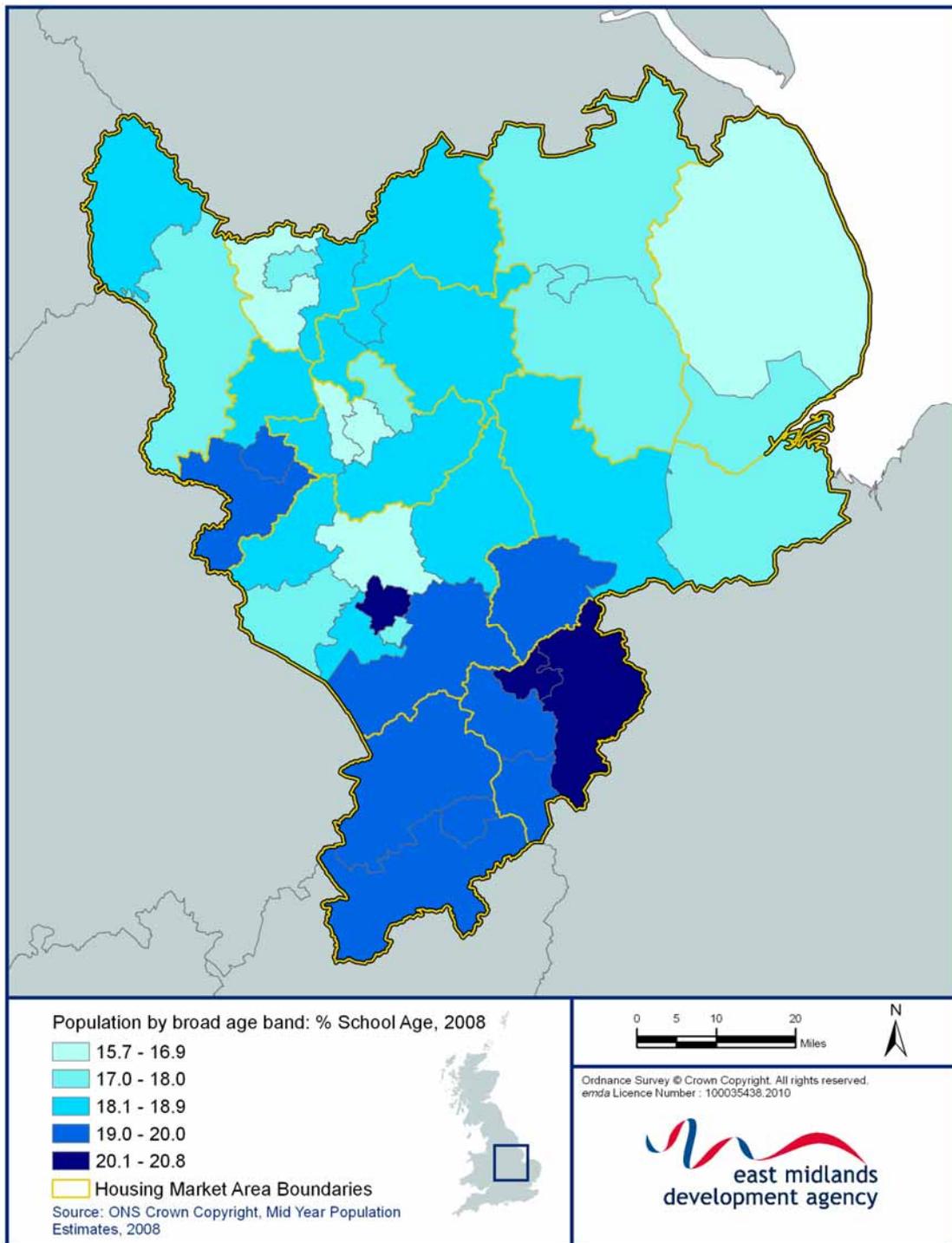


Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, from NOMIS, 21st January, 2010.

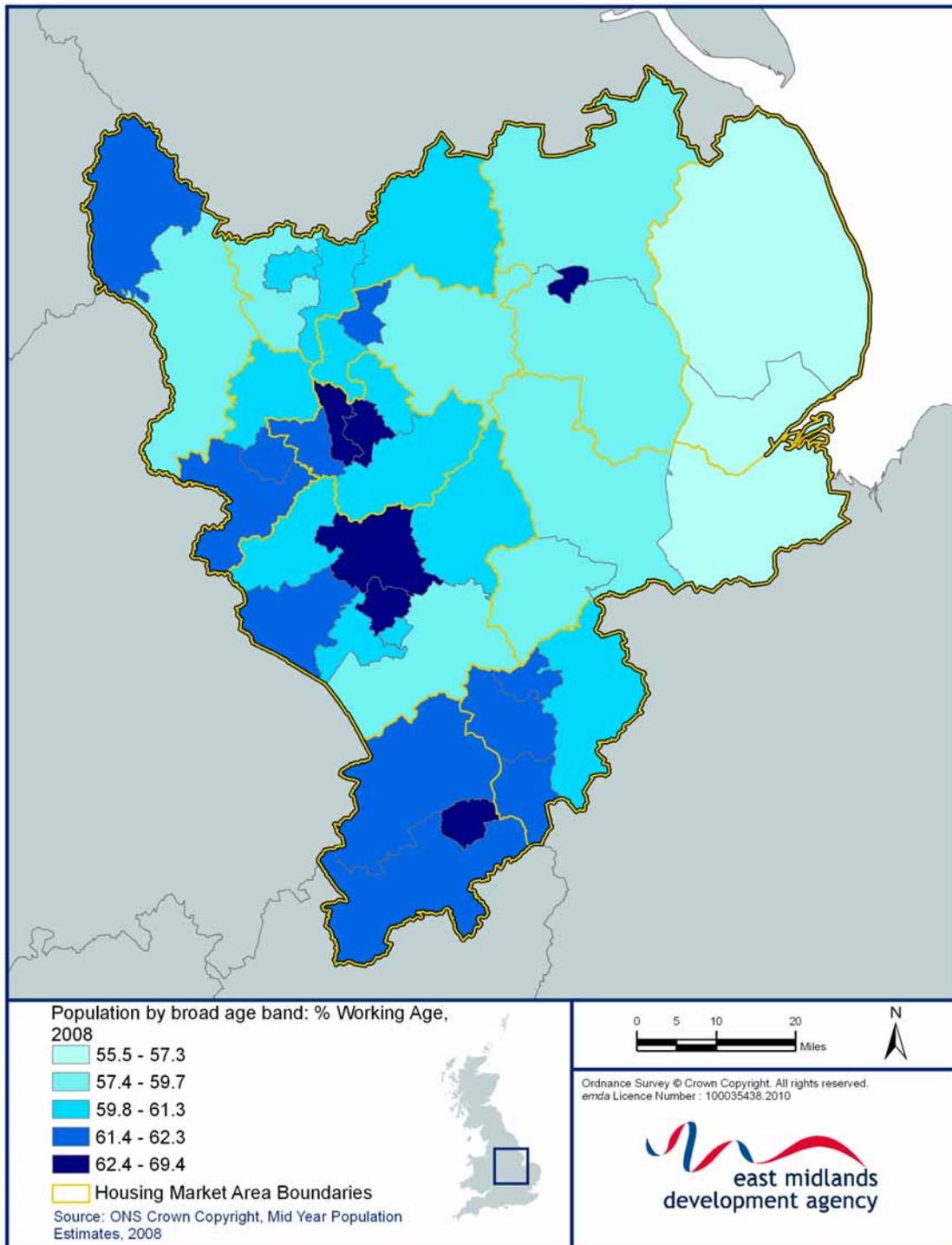
In general terms, with the exception of the three cities, the south of the region has a younger age profile, whilst the north and east of the region generally has an older population.

Maps 2 to 4 show the proportion of the population by Local Authority District for each of the three broad age bands respectively. These present a clear picture of how the age profile of the population changes significantly across the region. Map 2 shows that the highest proportions of the school age group are concentrated in districts in the south of the region, in Northamptonshire and Leicester City in particular, with far lower proportions in the north east of the region. Map 3 shows high proportions of the working age group in the three cities and the west and south of the region. Finally, Map 4 shows that high proportions of the pensionable age group are concentrated in the more rural areas of the region, especially the coastal Lincolnshire districts of East Lindsey, Boston and South Holland.

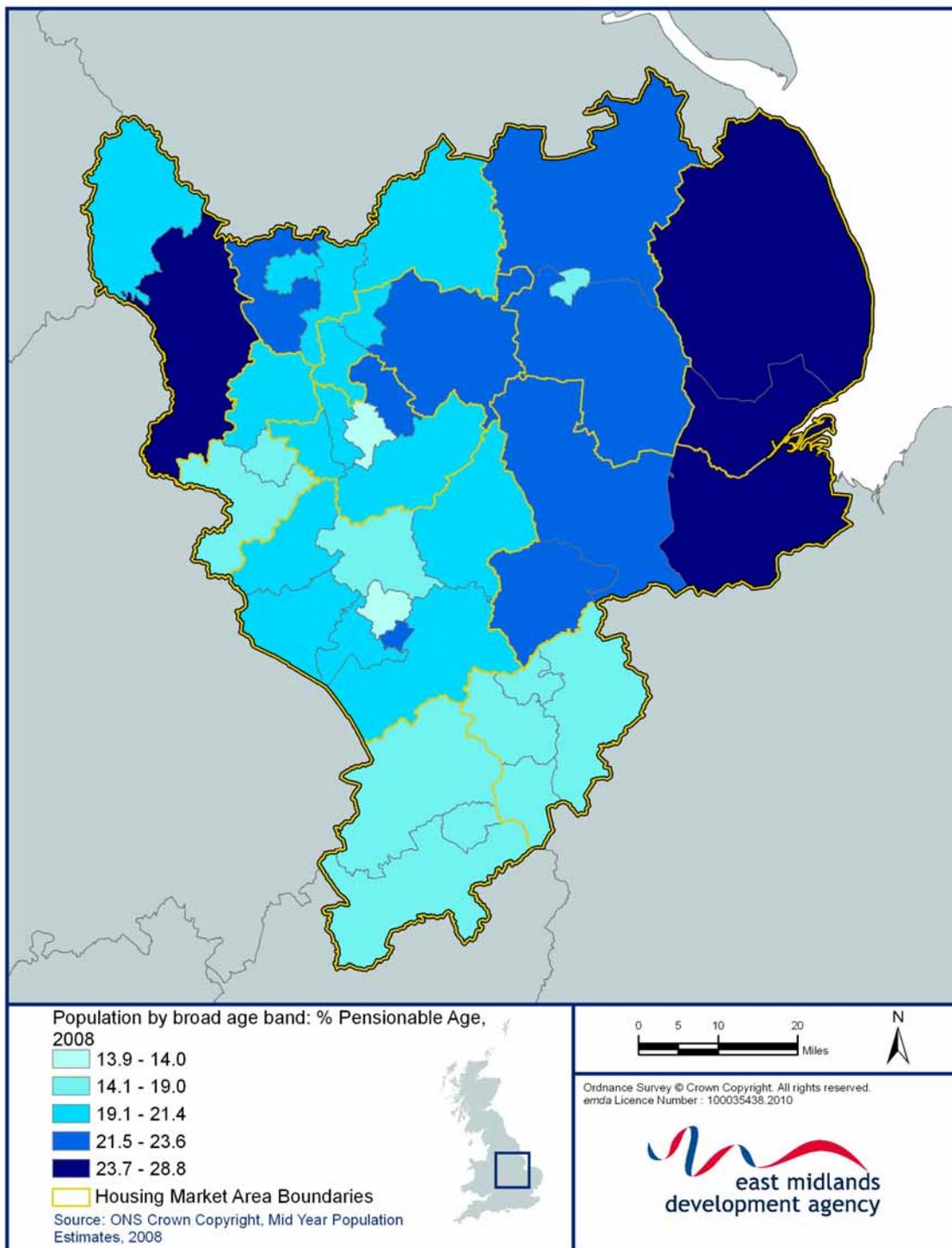
Map 2: Population in the school age group by LA/UA, 2008 (%)



Map 3: Population in the working age group by LA/UA, 2008 (%)



Map 4: Population in the pensionable age group by LA/UA, 2008 (%)



2.3.2 Ethnicity

The following section profiles the region's population by ethnic group. In line with practice recommended by the Equality and Human Rights Commission, this section uses the 16-way classification of ethnic group developed for the 2001 Census.⁴ These groups are based on the principle of self-classification, where respondents were prompted to state what they considered their ethnic group to be.⁵

Table 1: Population by broad ethnic group, 2007 (%)

Area	White	Mixed	Asian or Asian British	Black or Black British	Chinese or Other Ethnic Group
North East	95.5	0.8	2.2	0.6	0.9
North West	92.1	1.2	4.4	1.1	1.1
Yorkshire and the Humber	90.6	1.3	5.7	1.3	1.2
East Midlands	90.9	1.4	5.0	1.5	1.1
West Midlands	86.1	1.8	8.4	2.5	1.2
East of England	91.6	1.5	3.6	1.9	1.3
London	69.0	3.5	13.3	10.6	3.5
South East	92.0	1.5	3.5	1.6	1.4
South West	95.3	1.1	1.6	0.9	1.0
England	88.2	1.7	5.7	2.8	1.5

Source: ONS Crown Copyright, Estimated resident population by Ethnic Group (experimental statistics) 2007.

Table 1 presents the population of the English regions by 5 broad ethnic groups (the detailed 16-way classification aggregated up to 'White', 'Mixed', 'Asian or Asian British', 'Black or Black British', and 'Chinese or Other Ethnic Group')⁶ based on the 2007 Mid-Year Estimate. It is also convention to refer to the 4 non-White groups in this classification as 'Black and Minority Ethnic' groups, or 'BME groups'.

⁴ See: Equality and Human Rights Commission, 'Ethnic Monitoring: A Guide for Public Authorities', and Office for National Statistics, 'Ethnic Group Statistics: A guide for the collection and classification of ethnicity data', 2003.

⁵ The approach is a cohort component methodology constrained to Mid-Year Population Estimates. Consideration is given to the modelling of the ethnic dimension of mortality; fertility (and the allocation of ethnic group to infants); switching between ethnic group categories; and the various aspects of migration, with particular attention given to the application of commissioned Census data.

⁶ The 5 broad ethnic groups incorporate the 16 more detailed groups as follows:

White: includes categories 1-3 – 'White: British'; 'White: Irish', and; 'White: Other White'.

Mixed: includes categories 4-7 – 'Mixed: White and Black Caribbean'; 'Mixed: White and Black African'; 'Mixed: White and Asian', and; 'Mixed: Other Mixed'.

Asian or Asian British: includes categories 8-11 – 'Asian or Asian British: Indian'; 'Asian or Asian British: Pakistani'; 'Asian or Asian British: Bangladeshi', and; 'Asian or Asian British: Other Asian'.

Black or Black British: includes categories 12-14 – 'Black or Black British: Black Caribbean'; 'Black or Black British: Black African', and; 'Black or Black British: Other Black'.

Chinese or Other Ethnic Group: includes categories 15-16 – 'Chinese or other ethnic group: Chinese', and; 'Chinese or other ethnic group: Other Ethnic Group'.

Table 1 shows that:

- The East Midlands had the fourth lowest proportion of its population who would describe themselves as 'White', out of the nine English regions, at 90.9%. However, this is above the average for England overall, at 88.2%;
- This is because of the impact of London on the national average, which has by far the largest proportion of its population who would classify themselves as coming from a BME group, with 69% of its population classified as 'White';
- The East Midlands has a similar profile to the East of England, the South East, the North West and Yorkshire and the Humber, with between 90% and 92% of residents describing themselves as 'White'. The North East and the South West have very small proportions of residents who would describe themselves as belonging to a BME group, with 95.5% and 95.3% of residents describing themselves as 'White'. The West Midlands has a significantly higher proportion of BME residents than other northern or midlands regions; and
- In the East Midlands, residents who would describe themselves as 'Asian or Asian British' account for the largest BME group, at 5% of the total population in 2007, compared to 5.7% in England overall.

Table 2: England and East Midlands population by detailed (16 category) ethnic group, 2007

	England		East Midlands	
	000s	%	000s	%
White: British	42,736.00	83.6	3,873.20	88.0
White: Irish	570.5	1.1	34.9	0.8
White: Other White	1,776.30	3.5	92.9	2.1
Mixed: White and Black Caribbean	282.9	0.6	25.6	0.6
Mixed: White and Black African	114.3	0.2	6.6	0.2
Mixed: White and Asian	260.9	0.5	17.3	0.4
Mixed: Other Mixed	212	0.4	12.9	0.3
Asian or Asian British: Indian	1,316.00	2.6	147.2	3.3
Asian or Asian British: Pakistani	905.7	1.8	44	1.0
Asian or Asian British: Bangladeshi	353.9	0.7	12.1	0.3
Asian or Asian British: Other Asian	339.2	0.7	18.1	0.4
Black or Black British: Black Caribbean	599.7	1.2	31.4	0.7
Black or Black British: Black African	730.6	1.4	30.4	0.7
Black or Black British: Other Black	117.6	0.2	5.4	0.1
Chinese or Other Ethnic Group: Chinese	400.3	0.8	29.8	0.7
Chinese or Other Ethnic Group: Other	376.1	0.7	17.9	0.4
All Groups	51,092.0	100	4,399.6	100

Source: ONS Crown Copyright, Estimated resident population by Ethnic Group (experimental statistics) 2007.

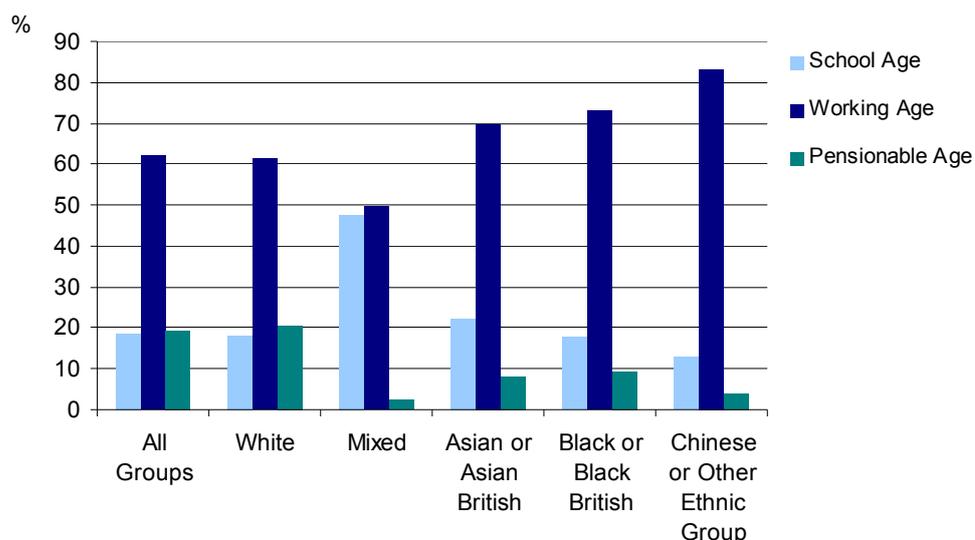
Table 2 shows the East Midlands population by detailed 16-way ethnic group compared to the profile for England overall. Although the East Midlands has a lower proportion of its population belonging to broad BME groups, the more detailed level of classification reveals some important differences compared to the national profile:

- The East Midlands has a larger proportion classifying themselves as belonging to the broad 'White: British' ethnic group but has lower than average proportions in both the 'White: Irish' and 'White: Other' groups, at 0.8% and 2.1% respectively compared to 1.1% and 3.5% in England as a whole; and
- The East Midlands has a higher proportion of residents who classify themselves as 'Asian or Asian British: Indian', at 3.3% compared to 2.6% in England as a whole. In 2007, this group is estimated to have accounted for approximately 147,200 individuals in the East Midlands, the largest group in the region after 'White: British'.

Chart 7 shows how the age structure of the population in the East Midlands varies across each broad ethnic group. The chart shows that in the East Midlands (as in England as a whole), BME groups have a much younger age profile than people who classified themselves as 'White':

- In 2007, 18% of the region's population in the 'White' broad ethnic group were school age, 61.4% were working age, and 20.6% were pensionable age. This was broadly in line with the age profile for the group in England overall, with the exception of the pensionable age group, which accounted for a slightly higher proportion in the East Midlands;
- The 'Mixed' broad ethnic group has the youngest age profile, with 47.8% in the school age group, 49.8% of working age, and only 2.6% of pensionable age in the East Midlands. In England, a slightly higher proportion of this group were working age, at 51.7%;
- The 'Asian or Asian British' age group has above average proportions in the school and working age groups in both the East Midlands and England overall. The 'Black or Black British' group has a particularly high proportion in the working age group in the East Midlands (72.9% compared to 68.9% in England overall); and
- People who would describe themselves as being in the 'Chinese or Other Ethnic Group' were more likely to be of working age than any other broad ethnic group, with 83.2% aged between 16 and 59/64 in the East Midlands compared to 81.4% for this group in England overall.

Chart 7: Broad ethnic group by age band in the East Midlands, 2007 (%)

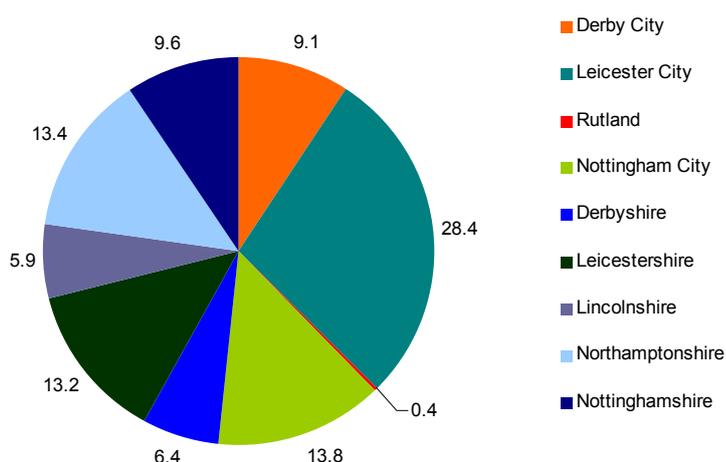


Source: ONS Crown Copyright, Estimated resident population by Ethnic Group (experimental statistics) 2007.

Looking at the East Midlands County and Unitary Authorities, Chart 8 illustrates the total share of the region's population who would classify themselves as belonging to a BME group. This shows that:

- Leicester City accounts for 28.4% of all residents of the East Midlands in BME groups. This is equivalent to approximately 113,400 individuals. Nottingham City accounts for the next largest share, at 13.8% of the regional total;
- Northamptonshire and Leicestershire also account for significant shares of the region's total population in BME groups, at 13.4% and 13.2% respectively; and
- Lincolnshire and Derbyshire account for relatively small proportions, at 5.9% and 6.4% of the region's total BME population respectively. Rutland, which accounts for 0.9% of the region's total population, accounts for only 0.4% of the region's BME population.

Chart 8: Share of total regional population in Black and Minority Ethnic groups by LA/UA, 2007



Source: ONS Crown Copyright, Estimated resident population by Ethnic Group (experimental statistics) 2007.

Table 3 shows how the population of the County and Unitary Authorities is structured according to broad ethnic groups:

- Leicester City has, by far, the largest representation of Black and Minority Ethnic groups in the region, with the 'Asian or Asian British' group accounting for the largest proportion, at 29.6% of the city's estimated resident population in 2007. Leicester City also had the largest proportion of residents who would classify themselves as 'Black or Black British', at 4.9%;
- Nottingham and Derby Cities also had higher proportions of residents who would classify themselves as belonging to a BME group in 2007. In Derby, 9.5% of residents were estimated to classify themselves as 'Asian or Asian British', whilst 4.7% of residents in Nottingham City would classify themselves as 'Black or Black British'; and
- The counties all had lower shares of the total population in BME groups than the East Midlands average. In Lincolnshire in 2007, only 1.2% of the population was estimated to be in the 'Asian or Asian British' group and 0.6% in the 'Black or Black British' group.

Table 3: Population by broad ethnic group by LA/UA, 2007 (%)

	White	Mixed	Asian or Asian British	Black or Black British	Chinese or Other Ethnic Group
Leicester UA	61.3	2.6	29.6	4.9	1.6
Nottingham UA	80.9	3.3	8.0	4.7	3.0
Derby UA	84.8	2.1	9.5	2.2	1.3
Leicestershire	91.7	1.2	5.1	0.9	1.1
Northamptonshire	92.2	1.6	3.3	1.8	1.2
Nottinghamshire	95.1	1.2	1.9	0.9	0.9
Rutland UA	95.8	1.0	1.6	0.8	0.5
Lincolnshire	96.6	0.9	1.2	0.6	0.7
Derbyshire	96.7	0.9	1.3	0.6	0.6
East Midlands	90.9	1.4	5.0	1.5	1.1
England	88.2	1.7	5.7	2.8	1.5

Source: ONS Crown Copyright, Estimated resident population by Ethnic Group (experimental statistics) 2007.

Key Points: Population profile by gender, age and ethnicity

- A slightly higher proportion of the East Midlands population are male than in England overall and the East Midlands has an older age profile than nationally.
- In 2008, 17.1% of the region's residents were in the school age group, 63.1% were in the working age group, and 19.7% were in the pensionable age group.
- Within the East Midlands, Leicester City has the youngest age profile with 19.6% in the school age group. Nottingham City has the highest proportion in the working age group and Lincolnshire has the oldest age profile, with 23.9% of residents in the pensionable age group.
- In terms of ethnicity, the East Midlands has a similar population profile to a number of other regions outside London, with over 90% of residents describing their ethnic group as 'White'. Residents who describe themselves as 'Asian or Asian British' make up the largest BME group in the region, accounting for 5% of the total population in 2007 population.
- BME population groups have a much younger age profile than the 'White' broad ethnic group.
- Leicester City accounts for the largest share of residents in the East Midlands who would classify themselves as belonging to a BME group, whilst Lincolnshire, Derbyshire and Rutland account for very small shares.

2.4 Population born outside the UK

To conclude this snapshot of the region's current demographic profile, this section will analyse the proportion of the resident population made up of individuals born outside the UK. This discussion provides some context for analysis on international migration, as an important component of historic and future demographic change.

International migration is a key driver of the changing demographic profile of the region. However, directly measuring the stock of international migrants is problematic, and requires use of proxy measures. At a regional level, the best available indicator is the country of birth variable within the 2008 Annual Population Survey.⁷ This is distinct from the preceding discussion of ethnicity, although the data enables us to split the population born outside the UK into 'White' and BME groups, and provides a broad proxy for the stock of international migrants in the region which can be compared to other regions and across County and Unitary Authorities. It is also important to note that the APS principally captures long-term migrants (usually referring to migrants resident in the UK for more than one year). Therefore this section does not describe 'short-term migrants', which are better captured by administrative data such as National Insurance Number registrations and the ONS' new estimates of short-term migration. These data are discussed in more detail in the Labour Market Chapter.

With these conditions in mind, this data enables broad statements to be made about migrant population groups. Chart 9 shows that:

- A total of 8.6% of the working age population normally resident in the East Midlands in 2008 were born outside the UK. This represents an increase of 1 percentage point on 2006. This is fairly typical for a region outside London, and compares closely to the East of England (9.6%) and Yorkshire and the Humber (7.7%);
- However, it is considerably below the proportion for England as a whole (12.1%), principally because of the impact of London – which is an extreme outlier, illustrating its continued importance as a destination for international migrants. In 2008, 33.3% London's population were born outside the UK, up from 31.5% in 2006; and

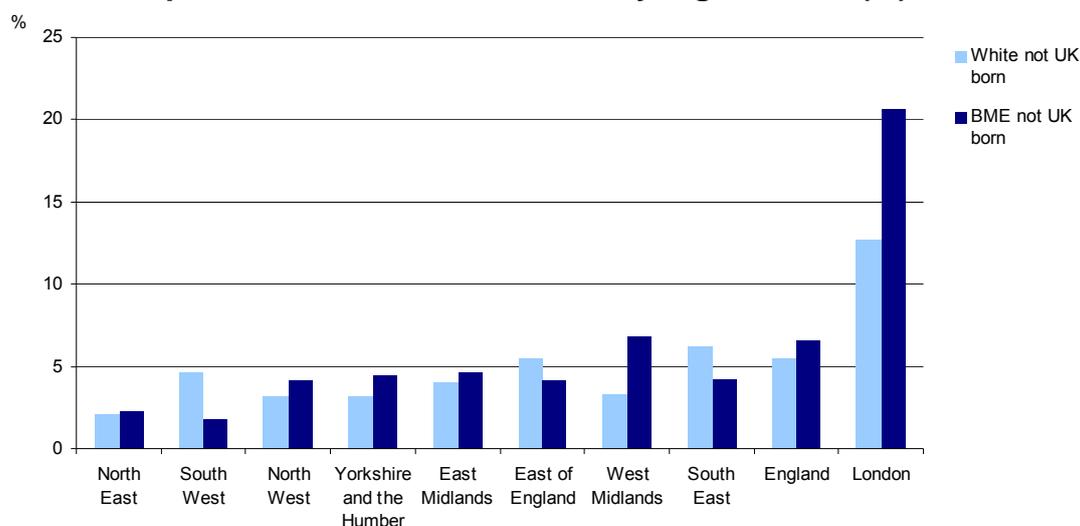
⁷ The APS is a sample survey, thus data derived from it are subject to sampling variability. This is particularly an issue for smaller population groups such as international migrants. The survey may undercount the numbers of people who were born overseas and does not include a number of groups. These include: people who have been resident in the UK for less than six months; students in halls who do not have a UK resident parent, and; people in most other types of communal establishments (e.g. hotels, boarding houses, hostels, mobile home sites, etc.). Moreover, the results are grossed to population estimates which exclude migrants staying for less than 12 months. The data must also be interpreted with care as it does not distinguish between established and relatively recent migrants, and the sample is insufficient for analysis by individual country of birth. Additionally, it does not identify the reason for migration (such as employment, family reasons, study, or asylum). Finally, it also includes children of UK nationals who were born overseas (such as children of armed forces personnel etc.). However, the APS is a large survey and provides the only reliable stock estimate of international migrants, as available administrative sources – such as National Insurance registrations – are subject to double counting, variable rates of take-up, and do not enable deregistration (so do not account for migrants who have since left the UK).

- The East Midlands has a fairly equal division between people who described themselves as 'White' born outside the UK (4%) and those who described themselves as belonging to a BME group born outside the UK (4.6%). This contrasts with London, and to a lesser extent the West Midlands, which have much larger proportions of the resident population born outside the UK describing themselves as belonging to a BME group.

This could indicate the increasing share of predominantly 'White' migrants from European Accession countries (the A8 countries plus Romania and Bulgaria) in the East Midlands non-UK born population.⁸ This group has tended to disperse to regions outside London more widely than previous tranches of immigration.⁹ This also means that A8 migrants have been more likely to move to more rural regions and sub-regions than other migrant groups.

Migrants from 'New-Commonwealth' countries, such as India and Pakistan, are more likely to move to areas with a history of immigration from these countries and thus well-established communities, like Leicester City. The employment characteristics of these groups are explored in more detail in the Labour Market and Deprivation and Economic Inclusion Chapters of 'The East Midlands in 2010'.

Chart 9: Population born outside the UK by region, 2008 (%)



Source: ONS Crown Copyright, 'Annual Population Survey', January 2008-December 2008, from NOMIS, 26th January, 2010.

⁸ The A8 countries refer to the central and eastern European countries that joined the enlarged European Union in May 2004: Poland, Lithuania, Latvia, Slovakia, Slovenia, Hungary and the Czech Republic. Only the UK, Ireland and Sweden chose not to impose restrictions on A8 nationals, which – along with the relatively buoyant labour market in the UK at the time – contributed to migrants from Poland in particular making up the biggest single movement of foreign nationals to the UK in the post-1945 period.

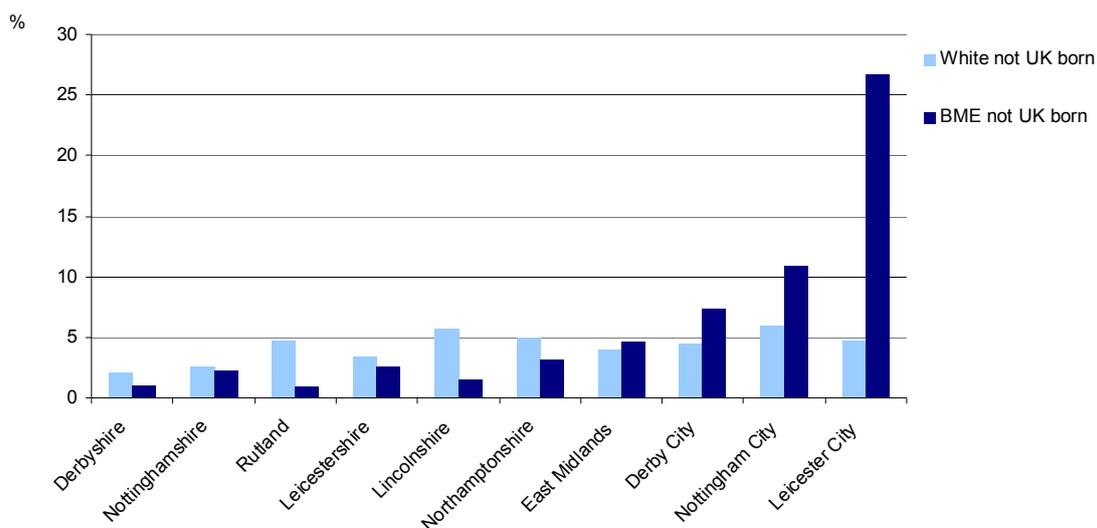
⁹ The Institute of Employment Research (IER), on behalf of *emda*, 'Migrant Workers in the East Midlands Labour Market', January 2007. This work is currently being updated, with additional exploration on the impacts of recession on international migration. This updated study will be published in early summer 2010.

Chart 10 shows how the share of the population born outside the UK varies across the County and Unitary Authorities in the East Midlands. This data should be interpreted with caution at this level. The confidence intervals can be quite large (as much as +/- 3 percentage points) due to the small sample size.

Leicester City has by far the largest share of its resident population born outside the UK, at 31.4%. This is split between 26.7% who described themselves as belonging to a BME group, and 4.7% who described themselves as 'White'. The areas of Nottingham and Derby also have larger shares of their resident population who are non-UK born compared to the regional average. In Nottingham, 16.8% of residents in 2008 were born outside the UK, with those describing themselves as belonging to a BME group accounting for 10.9% of all residents.

Conversely, the counties all have lower proportions of residents born outside the UK. Northamptonshire and Lincolnshire have higher shares of White non-UK born compared to BME non-UK born, possibly illustrating the importance of migrants from A8 countries to these areas, the majority of whom are White.

Chart 10: Population born outside the UK by County/UA, 2008 (%)



Source: ONS Crown Copyright, 'Annual Population Survey', January 2008-December 2008, from NOMIS, 26th January, 2010.

Key Points: Population born outside the UK

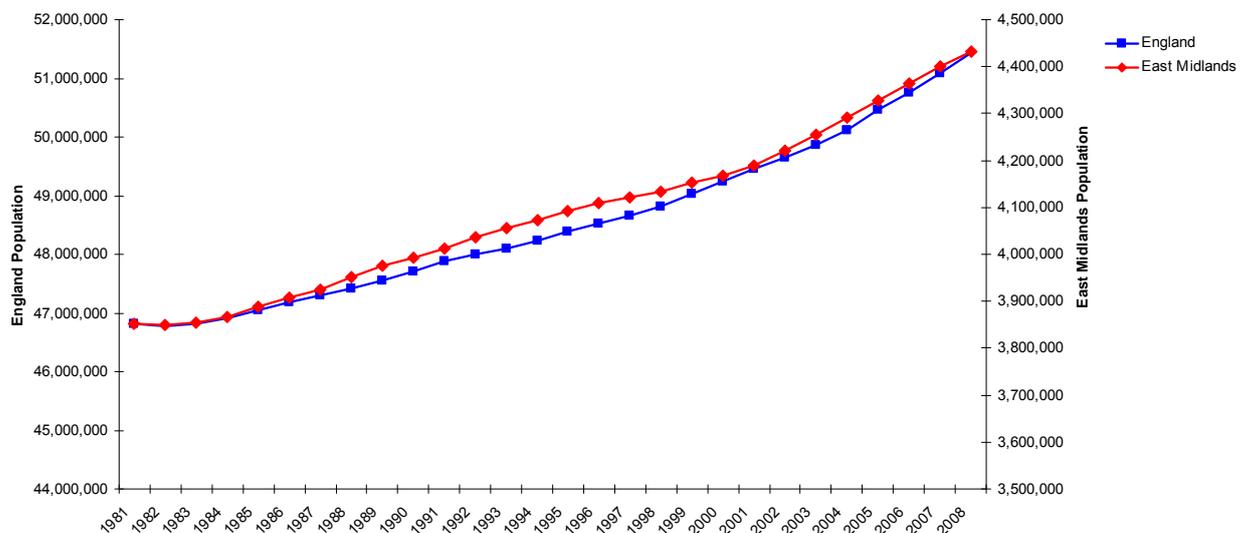
- In 2008, 8.6% of the region's resident population were born outside the UK, compared to 12.1% in England overall. However, this is fairly typical for a region outside London, as the English average is skewed by the fact that a third of London residents were born outside the UK.
- The East Midlands has a higher proportion of 'White' residents born outside the UK compared to those from BME groups relative to some other regions, possibly reflecting the impact of the post-2004 migration of predominantly white nationals from the Central and Eastern European EU Accession States.
- Leicester City has the largest proportion of residents born outside the UK, at 31.4%, but a large proportion are from BME groups, reflecting the continued importance of Leicester as a destination for migrants from New Commonwealth countries such as India and Pakistan.
- Conversely, Northamptonshire and Lincolnshire have higher proportions of 'White' non-UK born residents, possibly reflecting the greater tendency of A8 migrants to move to more rural areas for employment reasons, compared to other migrant groups with more established communities in urban areas like Leicester and Nottingham.

3. Recent population trends

The following sub-section looks at demographic trend data over recent years, comparing the 1998 and 2008 Mid-Year Population Estimates. This analysis is accompanied with a discussion of the components of population change, i.e. the balance between births and deaths and inward and outward migration.

3.1 Trends in total population

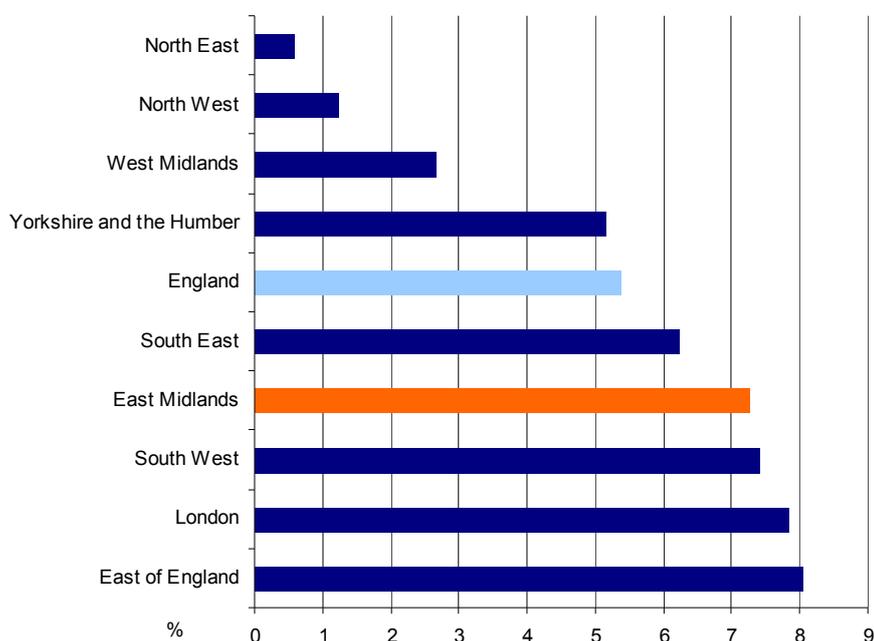
Chart 11: Long-term population trends in the East Midlands and England, 1981-2008 (thousands)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1981- 2008, from NOMIS, 22nd October, 2009.

Chart 11 shows that the East Midlands population has been increasing over a long period of time, and for much of the period from 1981 it has increased faster than the national average. In 1981, the East Midlands population was 3.9 million, accounting for 8.2% of the total population for England. By 2008, this share had increased to 8.6%, as the region's population reached 4.4 million. Chart 11 also shows that although the rate of population growth slowed in the late 1980s and early 1990s, and again at the end of the 1990s, periods of past economic downturn have not coincided with a cessation of population growth, either in the East Midlands, or nationally.

Chart 12: Total population growth by region, 1998-2008 (%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

Chart 12 shows the total change in population across the English regions between 1998 and 2008. Over the decade, the population of the East Midlands increased by approximately 300,400 residents from 4,132,600 in 1998. This represents a 7.3% increase, compared to a 5.4% increase in England overall. The East Midlands was the only northern or midlands region to experience population growth in excess of the national average. In addition, the chart shows that:

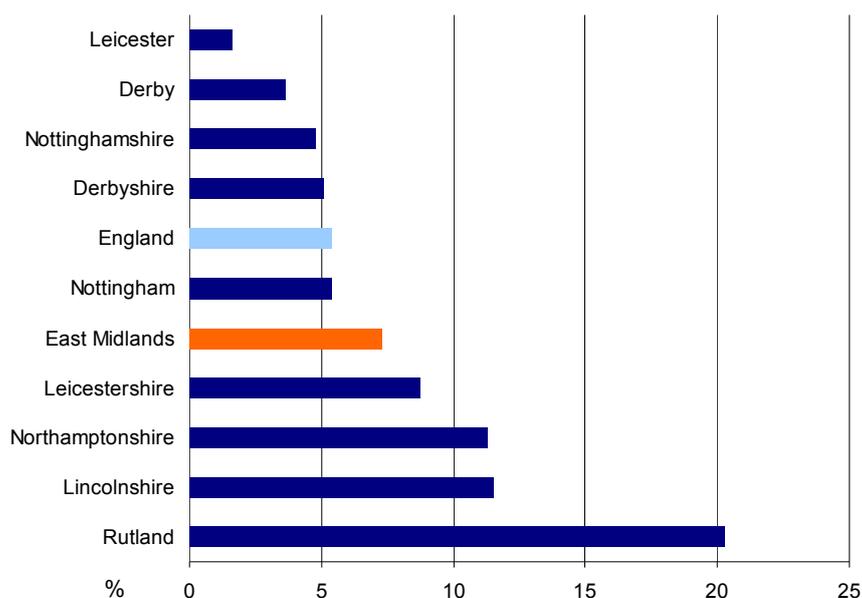
- The populations of the East of England and London grew the most over the decade, London by 7.8% (an additional 554,300 residents) and the East of England by 8% (an additional 426,700 residents); and
- The population of the North East grew least, by 0.6% (an increase of only 14,600). However, this represents a change compared to earlier time periods. The North East's population decreased year-on-year

between 1993 and 2001, before increasing year-on-year between 2002 and 2008.

Chart 13 demonstrates that, although all County and Unitary Authorities have experienced population growth over the decade 1998-2008, there have been very significant differences across the region:

- Rutland has experienced the largest percentage population increase, at 20.2%, but because of the small size of the area, this increase is quite small in absolute terms (6,600 individuals);
- Lincolnshire and Northamptonshire have both experienced very substantial increases in their resident populations. Lincolnshire grew by 11.5%, with 72,000 additional residents over the decade, whilst Northamptonshire grew by 11.3%, an additional 69,600 residents. Leicestershire also experienced growth in excess of the regional average, with an increase of 8.7%; and
- Leicester and Derby Cities both experienced relatively small population growth. Derby grew by 3.6% (8,300 additional residents) whilst Leicester City grew by 1.6% (4,700 additional residents).

Chart 13: Total population growth by County/UA, 1998-2008 (%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

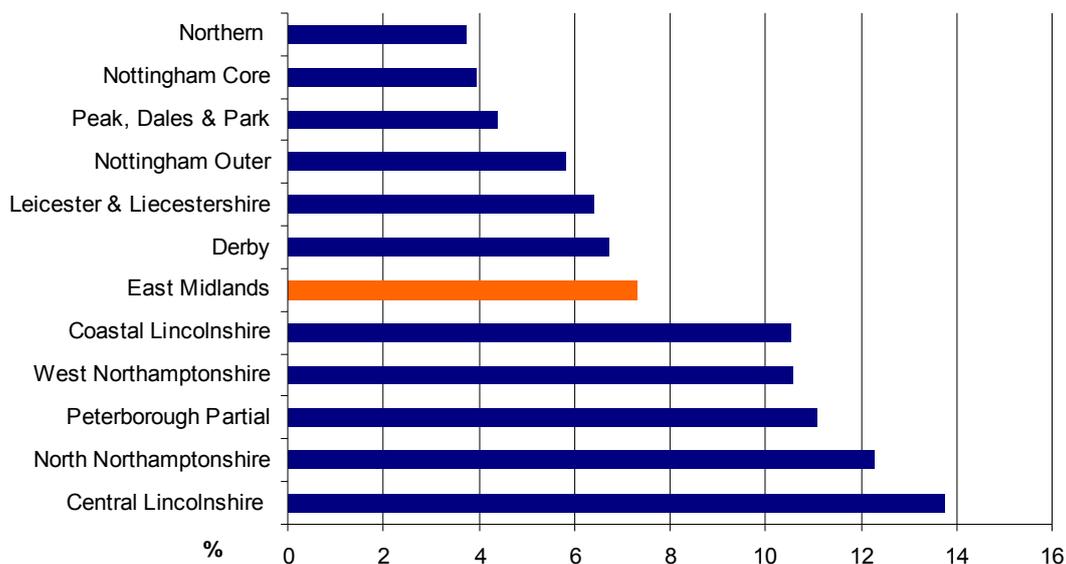
In the context of recent trends in population change, it is useful to compare Housing Market Areas (see Annex 1) with the analysis by County and Unitary Authorities area, as HMA boundaries which dissect a number of counties illustrate key local variations in growth, as shown in Chart 14. All HMAs experienced positive population change over the decade:

- The fastest growth rates over the decade were experienced by HMAs in the south and east of the region, in Northamptonshire and Lincolnshire. The HMA with the fastest growth over the decade was Central Lincolnshire, which experienced growth of 13.8%. This growth

rate significantly exceeded that of Coastal Lincolnshire HMA, which grew by 10.5%;

- The North Northamptonshire and Peterborough Partial HMAs also experienced growth rates significantly higher than the regional average, at 12.3% and 11.1% respectively; and
- The Northern HMA experienced the lowest rate of growth over the period, increasing by only 3.7%. Nottingham Core also grew at a significantly slower rate than the regional average, at 3.9%. This is below the rate of growth experienced by Nottingham City UA (5.4%) because of the relative slow rates of growth in Gedling (0%), Erewash (2.8%) and Broxtowe (3.5%).

Chart 14: Total population growth by HMA, 1998-2008 (%)

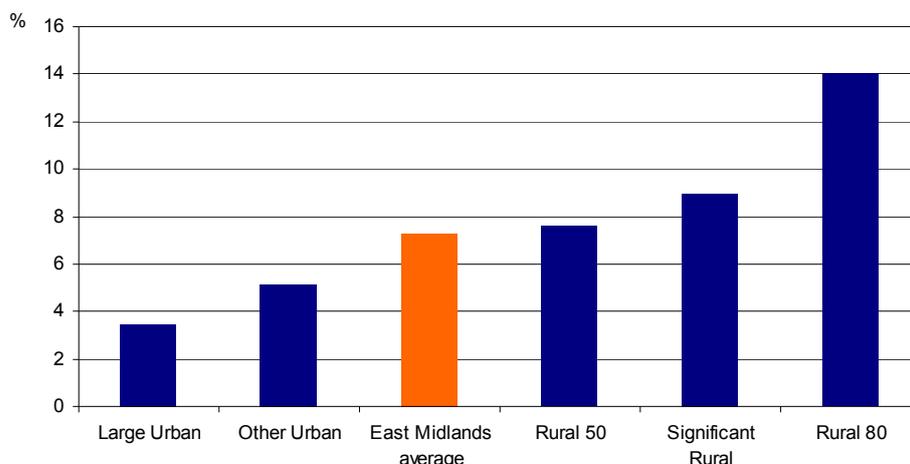


Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

The final geographical disaggregation in this section is the urban and rural district classifications. Chart 15 shows how population growth over the decade 1998-2008 varied according to extent of rurality:

- This very clearly shows that the rural categories of district all experienced faster than average growth, whilst the urban categories all grew at below average rates;
- The most 'rural' category of district, 'Rural 80', experienced a growth rate of 14% in the East Midlands, almost twice that of the regional average; and
- The most densely populated category of district, 'Large Urban' areas, experienced the slowest rate of growth, at 3.5% between 1998 and 2008, less than half the rate of the East Midlands overall.

Chart 15: Total population growth by urban and rural classification, 1998-2008 (%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

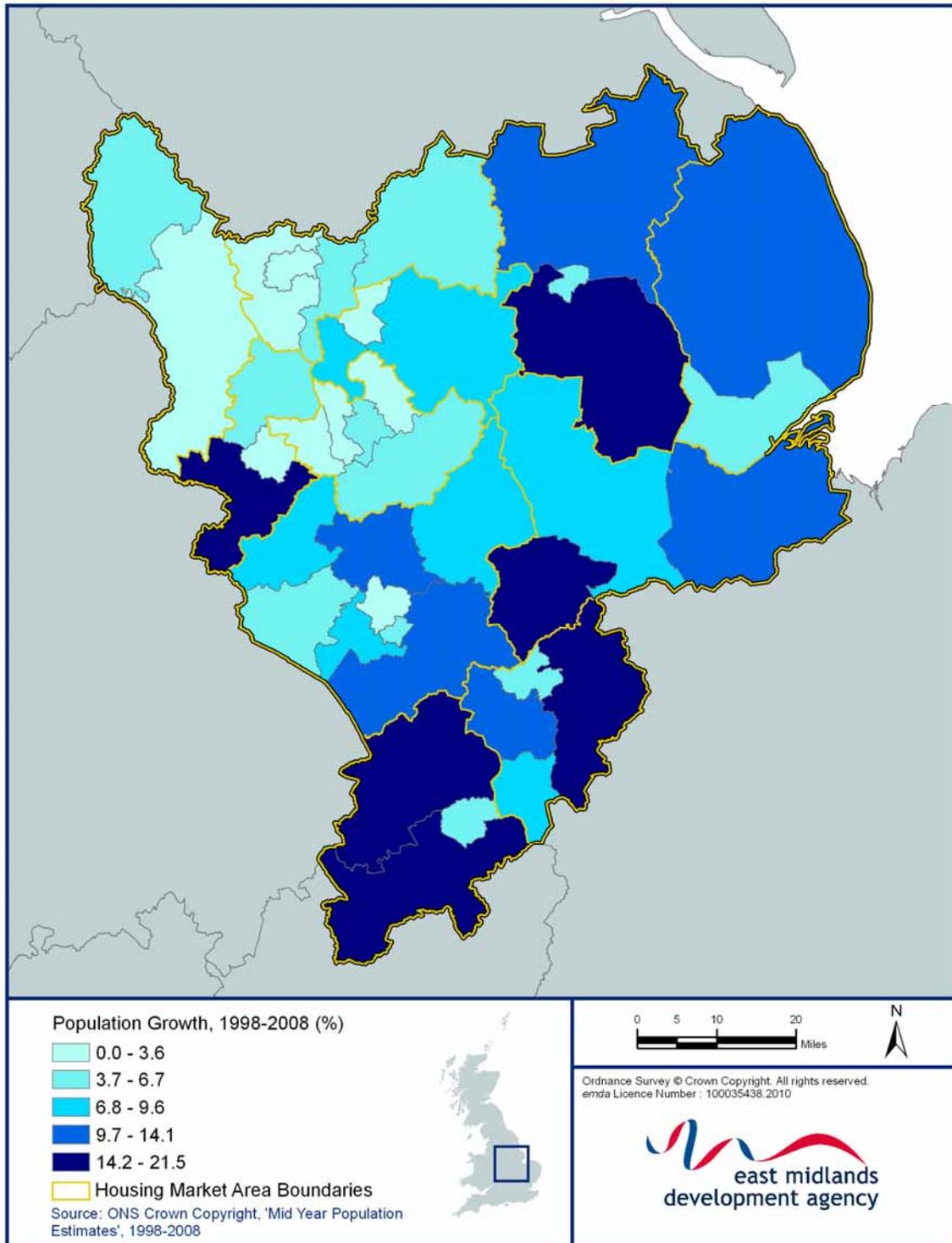
Map 5 shows population growth rates over the decade 1998-2008 by Local Authority District. This illustrates the concentration of strong population growth in the most southerly parts of the region and also the more accessible parts of Lincolnshire.

The strongest population growth, at 21.5% between 1998 and 2008, was in the Lincolnshire district of North Kesteven, just east of the A1 corridor, and containing the expanding market town of Sleaford. In the south of the region, the districts of South and East Northamptonshire grew at a similarly strong rate, at 19.4% and 19.2% respectively.

Conversely, Map 5 shows that areas in the north of the region, especially in the former Coalfield areas, grew at a much slower rate. The district of Gedling, north east of Nottingham, experienced zero population growth between 1998 and 2008, and Chesterfield and North East Derbyshire grew at only 1.6% and 1.7% respectively over the decade.

Generally speaking, the more rural parts of the region have experienced the fastest rates of population growth, whilst the more urbanised districts (especially those around the former Coalfields) have grown at a substantially slower rate.

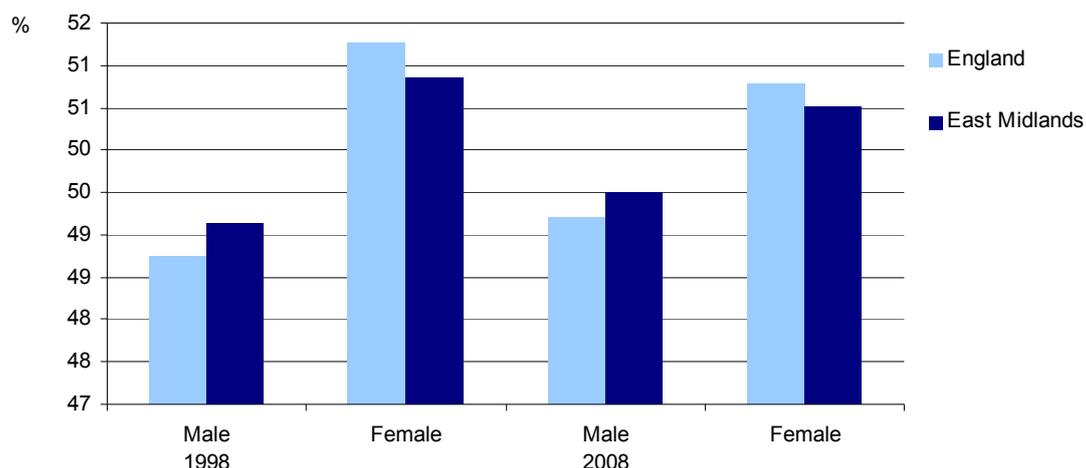
Map 5: Total population change by LAD/UA, 1998-2008 (%)



3.2 Population trends by gender, age and ethnicity

Chart 16 shows how the male and female shares of the total population in the East Midlands has changed over the decade and how this compares to England. Between 1998 and 2008 the proportion of the population accounted for by males has increased both in the East Midlands and nationally. In 1998 men accounted for 49.1% of the region's population, increasing to 49.5% in 2008. The change was similar in England overall, with the share of the population accounted for by men increasing from 48.7% to 49.2%. This is due to the increasing life expectancy of men over the decade, which has increased at a greater rate than female life expectancy (although this remains higher than men).¹⁰ Change in life expectancy is covered in more detail in the Chapter on Deprivation and Social Inclusion in '*The East Midlands in 2010*'. This means that there will be an increasing number of males in the pensionable age group, which will further increase demands on elder care services. This is explored later on in this Chapter (Section 4.3) when we look at dependency ratios.

Chart 16: % Population by gender, England and East Midlands, 1998-2008



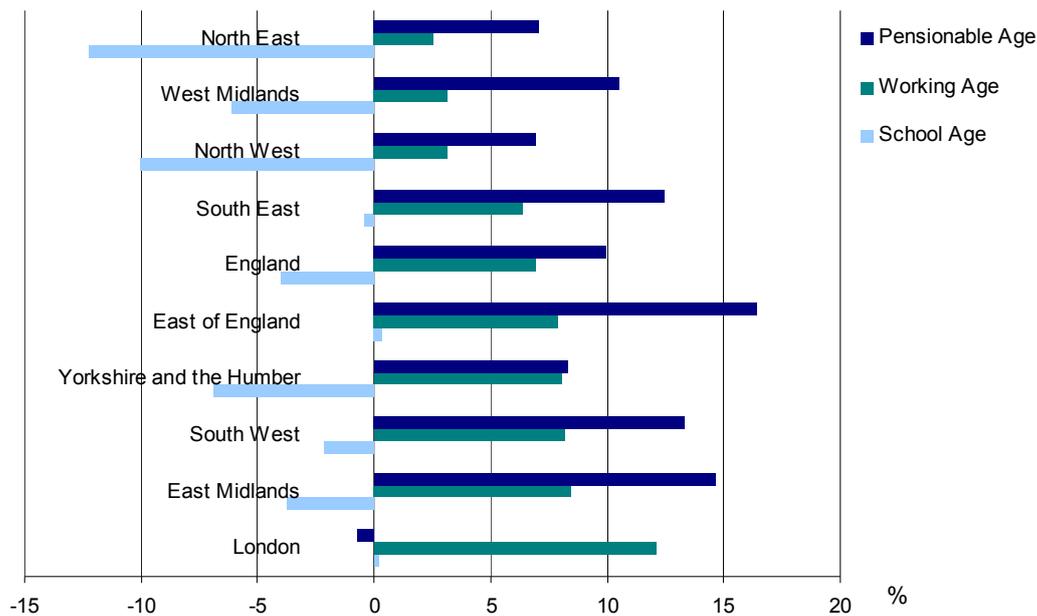
Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

Chart 17 shows how the rate of population growth has varied across the three broad age groups between 1998 and 2008. All regions have experienced growth in the working age population and most regions have experienced a growth in the pensionable age group:

- The pensionable age population has grown faster than the other two groups in all regions except for London (where it has fallen by -0.7%), whilst the school age population has fallen in all regions except for the East of England (where it has grown by only 0.3% over the decade) and London (where it has grown by 0.2%);
- The pensionable age group in the East Midlands increased by 14.6% (compared to 9.9% in England overall), which was the second fastest

- rate of growth for this age group of the nine English regions. This group grew by the fastest rate in the East of England, by 16.4%;
- The East Midlands also experienced the second strongest growth in the working age population over the decade, increasing by 8.4% (equivalent to 217,900 additional individuals in that age group compared to 1998) compared to 12.1% in London and 6.9% in England as a whole; and
 - The school age group decreased by -3.7% (with 29,400 fewer individuals in that age group in 2008 compared to 1998), which is slightly lower than the rate of decrease in England overall (-4%).

Chart 17: Population growth by broad age band, 1998-2008 (%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

These differing rates of growth have affected the age structure of the East Midlands population between 1998 and 2008. There has been a fall of 2 percentage points in the share of the population in the school age group, which has been offset by increases of 0.7 percentage points (from 62.4% to 63.1%) and 1.3 percentage points (from 18.5% to 19.7%) in the share accounted for by the working age and pensionable age groups respectively.

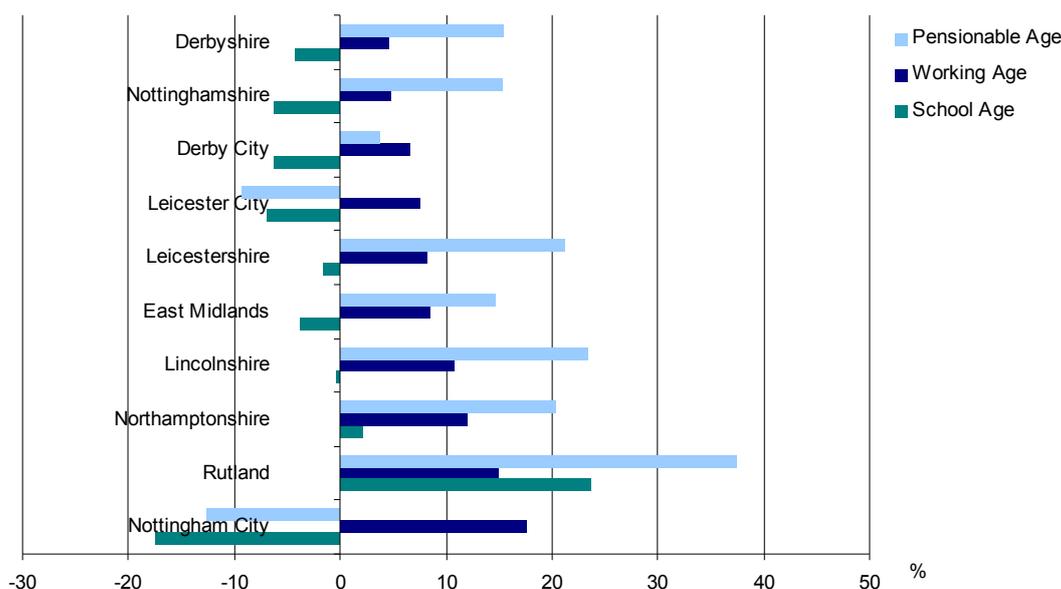
Chart 18 shows the percentage growth in population across the three broad age bands in the nine County and Unitary Authorities. Each has experienced growth in the working age group. However, in all five Counties and Rutland this rate of growth has been exceeded by the increase in the pensionable age population (although in absolute terms the increase in working age population often far exceeds the increase in the pensionable age group). The chart also shows that:

- Nottingham City has experienced the greatest rate of growth in its working age population, increasing by 17.5% over the decade (3,700 additional individuals). However, the population in the school and

pensionable age bands in the city both decreased significantly, by -17.4% and -12.5% respectively. Leicester City also experienced significant decreases in the number of residents in both the school age and pensionable age populations;

- Derbyshire and Nottinghamshire experienced the slowest rates of growth in the working age group, at 4.6% and 4.8% respectively over the decade, alongside decreases in the school age population. However, both experienced significant growth in the pensionable age group, suggesting significant population ageing;
- Northamptonshire has seen strong growth in both the working age group, by 11.9% (46,500 additional individuals) and the pensionable age group, by 20.4% (20,600 individuals), and has also seen a modest increase in the school age group, by 2.2%; and
- Rutland and Lincolnshire have both experienced very strong growth in their pensionable age populations. In Lincolnshire, the pensionable age group increased by 23.3% over the decade (31,500 additional individuals) compared to 10.8% in the working age group (40,700 additional individuals).

Chart 18: Population growth by broad age band by County/UA, 1998-2008(%)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1998-2008, from NOMIS, 19th October, 2009.

The final trend in recent population change in this section is the growth of different ethnic groups. The experimental statistics on ethnicity previously used in Section 2.3.2 also include time-series from 2001 to 2007.

As the population who describe their ethnicity as 'White' make up a significant majority of the population, this section will look at trends in this group initially, before looking in detail at trends within BME groups.

The estimated proportion of the population in the East Midlands who would describe themselves as 'White' (including 'White: other', which applies to

migrants from A8 countries) has fallen from 93.4% in 2001 to 90.9% in 2007. The trend in the region has followed the national trend very closely.

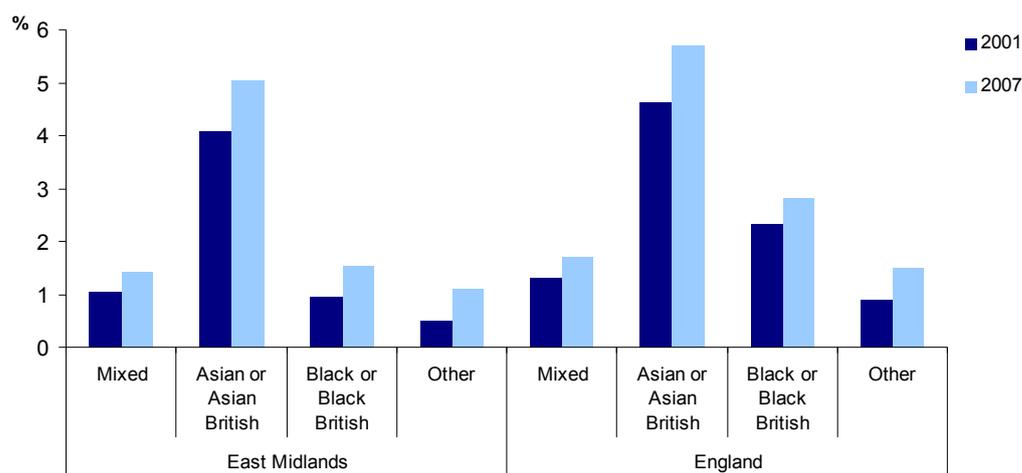
In numerical terms this population has increased over the five year period, from 3,913,700 East Midlands residents in 2001 to 4,001,000 in 2007. This is a growth of 2.2% over the six-year period, lower than the rate of total population change, which was 5%. Therefore a significant proportion of total population growth between 2001 and 2007 is due to growth in BME groups.

Chart 19 shows the changing share of the population accounted for by different BME groups. In numerical terms, the BME population has increased more than both the population in the 'White' broad ethnic group and the total population between 2001 and 2007.

In 2001, East Midlands residents who described themselves as belonging to a BME group totalled 276,100. In 2007, this was estimated to have increased to 398,700, a growth rate of 44.4% over the six year period. The chart also shows that:

- In the East Midlands in 2001, people who would describe themselves as belonging to a BME group made up 6.6% of the population. In 2007 this had increased to 9.1%. This compares to 9.2% in 2001 and 11.8% in 2007 in England overall; and
- The group that has increased most in terms of their share of the total population is the 'Asian or Asian British' group, which increased from 4.1% in 2001 to 5.0% in 2007. This group also increased its share of the total population most in England overall.

Chart 19: Population in the East Midlands and England in BME groups, 2001-2007 (%)



Source: ONS Crown Copyright, Estimated resident population by Ethnic Group (experimental statistics) 2001-2007.

Key Points: Recent population trends

- The East Midlands population has been increasing year-on-year since the mid-1980s, and for much of this period it has grown faster than the national average.
- Between 1998 and 2008, the East Midlands was the only northern or midlands region to experience population growth in excess of the national average, growing by 7.3% compared to 5.4% nationally.
- Within the East Midlands, all County and Unitary Authorities have experienced some population growth. The population of Rutland, Lincolnshire and Northamptonshire all grew strongly, by 20.2%, 11.5% and 11.3% respectively.
- Looking at Housing Market Areas illustrates the differences between cities and their wider conurbations and between central and coastal Lincolnshire. Central Lincolnshire HMA grew faster than Coastal Lincolnshire, at 13.8% and 10.5% respectively. The Northern HMA grew the least, by only 3.7%.
- Rural areas grew significantly faster on average than urban areas. 'Rural 80' districts experienced a growth rate of 14%, almost twice the regional average, whilst 'Large Urban' districts only grew by 3.5%, less than half the regional average.
- Increasing male life expectancy has seen the share of the population accounted for by men increase from 49.1% to 49.5% over the decade 1998 to 2008.
- Most English regions have experienced demographic ageing over the decade. The size of the pensionable age group has increased by 14.6% in the East Midlands, compared to 9.9% in England overall. However, the working age population has also increased strongly, by 8.4% in the region and 6.9% in England.
- This has meant that the share of the population accounted for by the pensionable age group in the region has increased from 18.5% to 19.7%.
- Nottingham City has experienced the greatest growth in the working age group, whilst Lincolnshire and Rutland have experienced the greatest growth in their respective pensionable age groups.
- Although increasing in absolute numbers, the proportion of the population in the 'White' ethnic broad group has decreased overall, from 93.4% to 90.9% between 2001 and 2007. BME groups have experienced faster than average population growth, and have thus increased from 6.6% to 9.2% of the total population between 2001 and 2007.

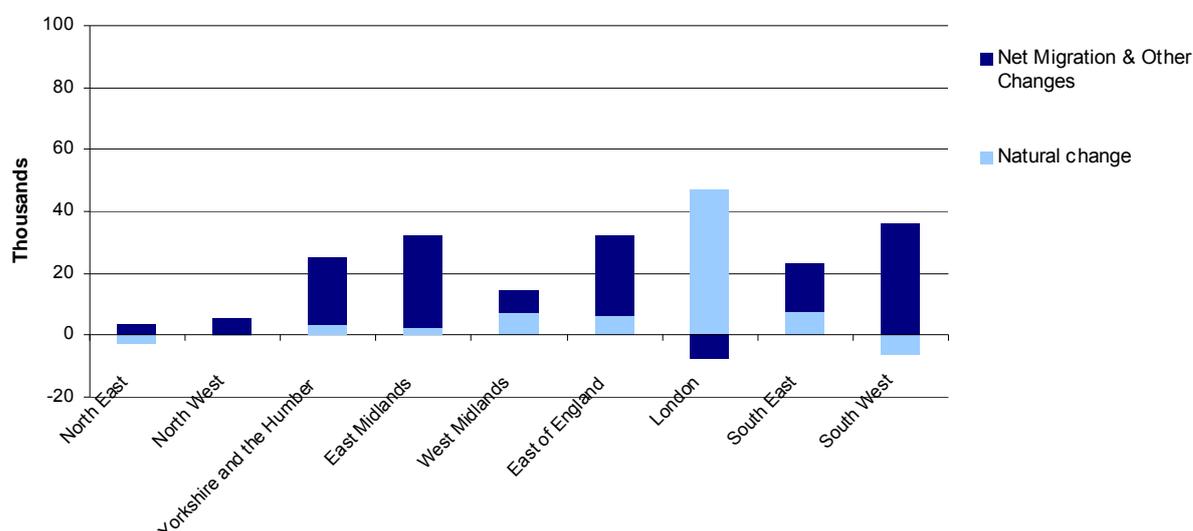
3.3 Components of population change

The rate of population growth in a given area is due to the balance between four factors: births and deaths (together known as 'natural change'), and outward and inward migration (together known as 'migration').

Estimates of the extent of these factors are the key inputs to each annual release of population estimates, as they enable the ONS to add and subtract residents for each year following the last Census.¹¹

Charts 20 and 21 illustrate the headline components of change released with each Mid Year Estimate (showing the volume of population growth since the previous mid-year due to natural change and 'net migration and other changes') for 2001-2002 and 2007-2008.¹²

Chart 20: Natural change and net migration by region, 2001-2002 (thousands)

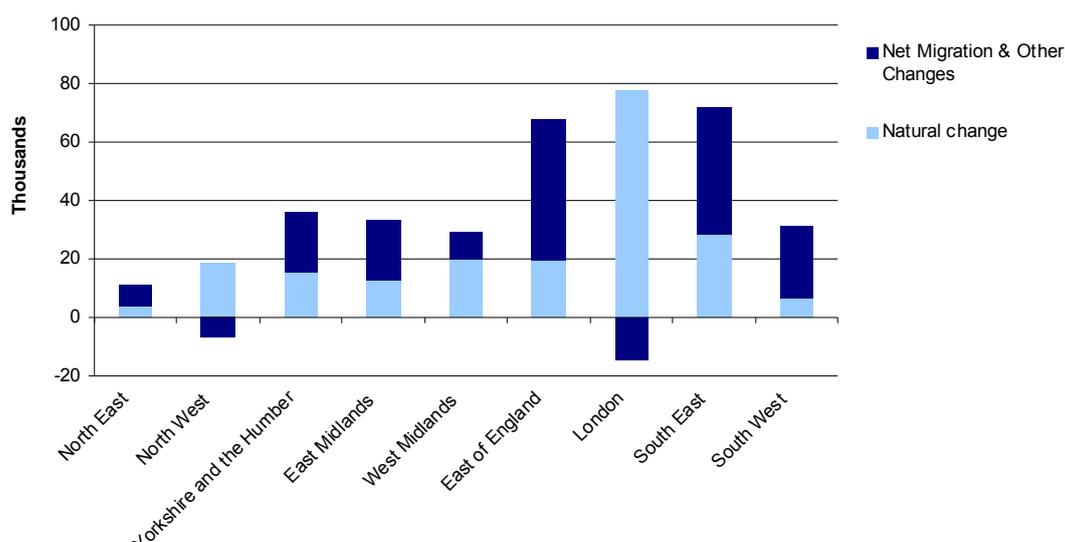


Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2001, Table 10: Local Authority Components of Change, 2008.

¹¹ Note that these estimates do not take into account population implications of current policy – such as planned house building activity – but only changes that have happened in previous years.

¹² Net migration expresses the balance of inward and outward migrants (combining both international and domestic flows). 'Other changes' includes population movement relating to communal establishments (an establishment providing managed residential accommodation, such as care homes) and armed forces personnel.

Chart 21: Natural change and net migration by region, 2007-2008 (thousands)



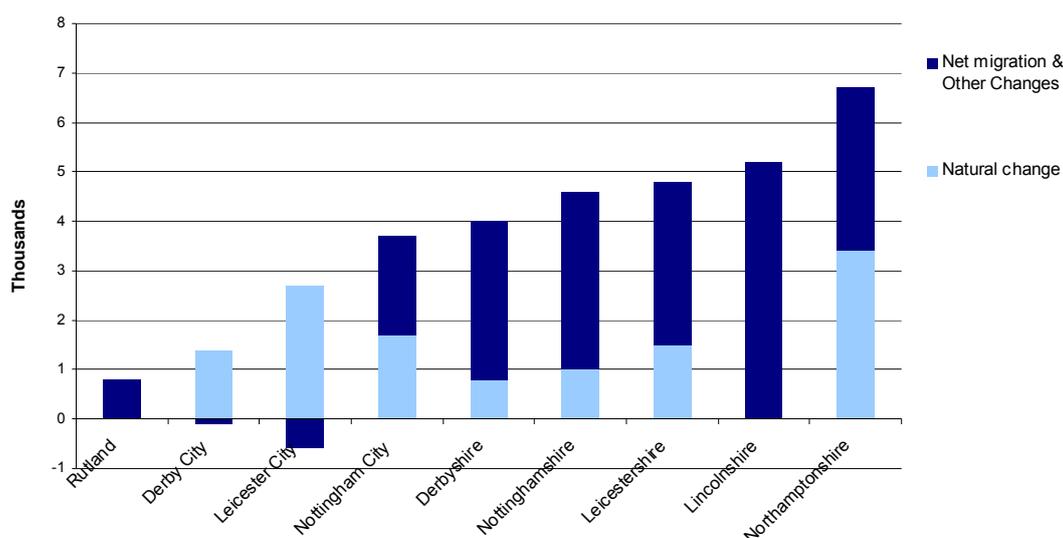
Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, Table 10: Local Authority Components of Change, 2009.

The charts show that there has been an almost universal increase in the importance of natural change across the English regions between 2001-2002 and 2007-2008. In detail, this shows the following:

- In the East Midlands, net migration and other changes accounted for 29,800 of the 32,000 additional residents in mid-2002 compared to mid-2001, or 93% of total change. By 2008 however, net migration and other changes accounted for only 62% of population growth, or 20,800 of the additional 33,300 residents since mid-2007;
- This trend was reflected in England overall. Net migration and other changes contributed 69% of the 202,600 additional residents between mid-2002 and mid-2001. In 2008, net migration and other changes contributed only 43%;
- In other regions, natural change provided a negative contribution between 2001 and 2002, with the South West losing 6,100 residents through natural change (i.e. 6,100 more deaths than live births that year), with net migration accounting for 120% of population growth. Only in London did natural change provide the larger contribution (with a negative net migration flow of -7,800 that year); and
- Between 2007 and 2008, natural change was positive in all regions, and provided the largest share in the North West and London (where it counteracted negative net migration) and the West Midlands (where it exceeded net migration, at 20,200 compared to 9,100 additional residents).

Chart 22 illustrates the balance between the two components of change for the region's County and Unitary Authorities between mid-2007 and mid-2008.

Chart 22: Natural change and net migration County/UA, 2007-2008 (thousands)



Source: ONS Crown Copyright, 'Mid Year Population Estimates', 2008, Table 10: Local Authority Components of Change, 2009.

This shows that the drivers of population growth across the region vary significantly:

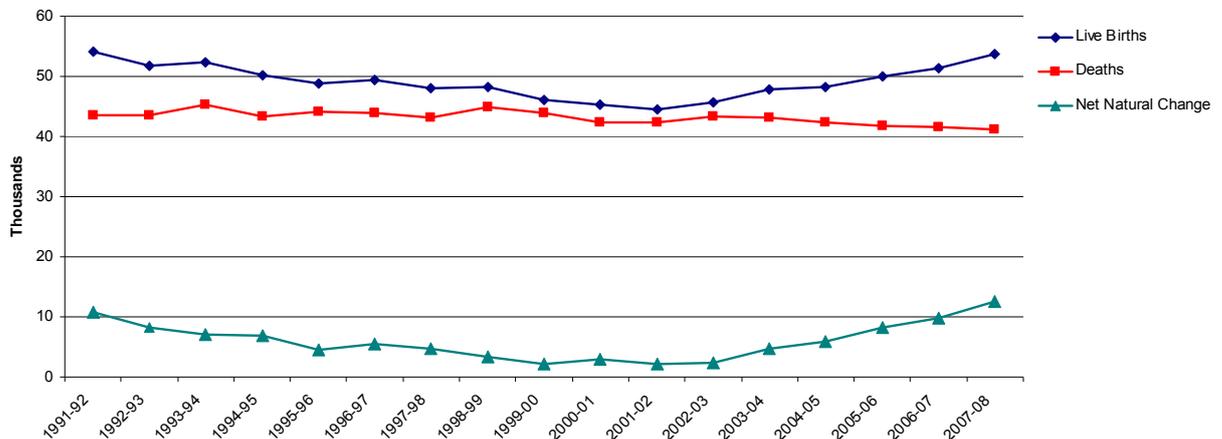
- Northamptonshire, the area with the largest volume of population increase between mid-2007 and mid-2008, experienced equal contributions from both components;
- However, Lincolnshire, which experienced a comparable **volume** of increase, and Rutland, which experienced a high **rate** of increase, both grew entirely because of migration. Both areas experienced zero natural change (i.e. parity between births and deaths). Rutland's population grew because of a positive net flow of 800 migrants over the 12 months, whilst Lincolnshire experienced positive net migration of 5,200; and
- Natural change overwhelmingly drove population growth in Leicester and Derby Cities. Leicester City lost 600 residents through negative net migration between mid-2007 and mid-2008. This was compensated by positive natural change of 2,700 (leading to a population growth of 2,100). Derby City lost 100 residents through negative net migration, so its total population growth in the 12 months of 1,300 was due to a natural change contribution of 1,400.

To understand recent increases in the importance of natural change as a component of population growth, Chart 23 illustrates long-term trends in live births and deaths alongside net natural change in the East Midlands. This shows that:

- Although live births in the region have exceeded deaths throughout the period since 1991-92, the net contribution of natural change fell between 1991-92 and 2001-02;
- The number of deaths remained fairly static up to 2002-03, around 43-45,000 per year. Therefore the fall in net natural change was due to

- a declining number of births, from 54,200 between mid-1991 and mid-1992 to 44,600 between mid-2001 and mid-2002; and
- However, net natural change began to increase year-on-year from 2002-2003 (from 2,400 per year to 12,500 in 2007-2008). This was because of both a strong increase in births per year combined with a steady decrease in deaths.

Chart 23: Natural change in the East Midlands: live births, deaths and net change, 1991-1992 to 2007-2008

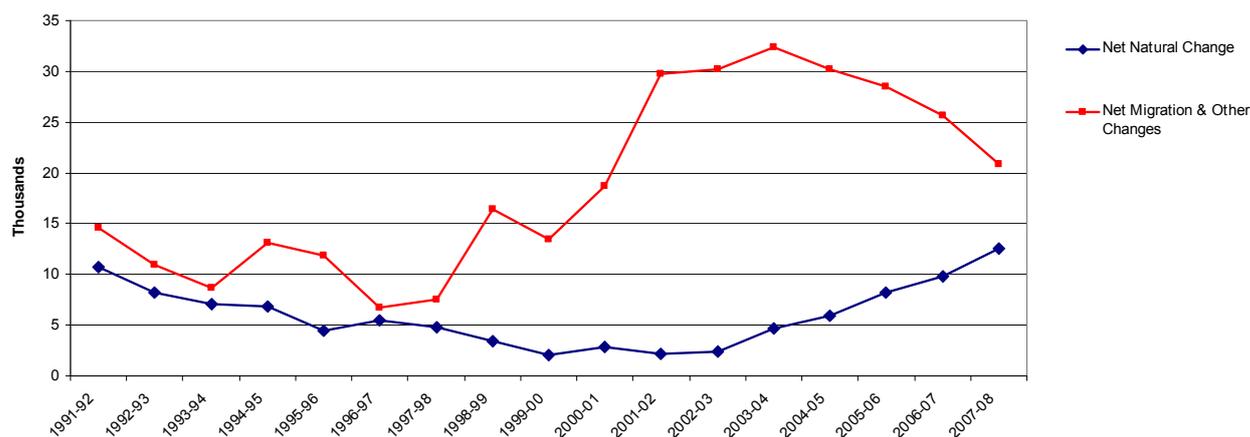


Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1992-2008, Table 10: Local Authority Components of Change, 2009.

Although the contribution of net migration to total population growth has exceeded natural change throughout the period since 1991-1992, the balance between the two components has changed significantly. Chart 24 illustrates that:

- The two components were relatively close between 1991-1992 and 1997-1998. Between mid-1991 and mid-1992, natural change accounted for 42.3% of population growth, and migration accounted for 57.7%;
- Net migration then grew rapidly from 1997-1998, and peaked at 32,400 additional residents between mid-2003 and mid-2004 (accounting for 92.6% of total population change); and
- The volume of net migration then fell to 20,800 between mid-2007 and mid-2008. As Chart 23 demonstrated, net natural change increased year-on-year from 2002-2003. By 2007-2008 it contributed 37.5% of total population change (with migration contributing 62.5%).

Chart 24: Net components of change in the East Midlands, 1991-1992 to 2007-2008 (thousands)



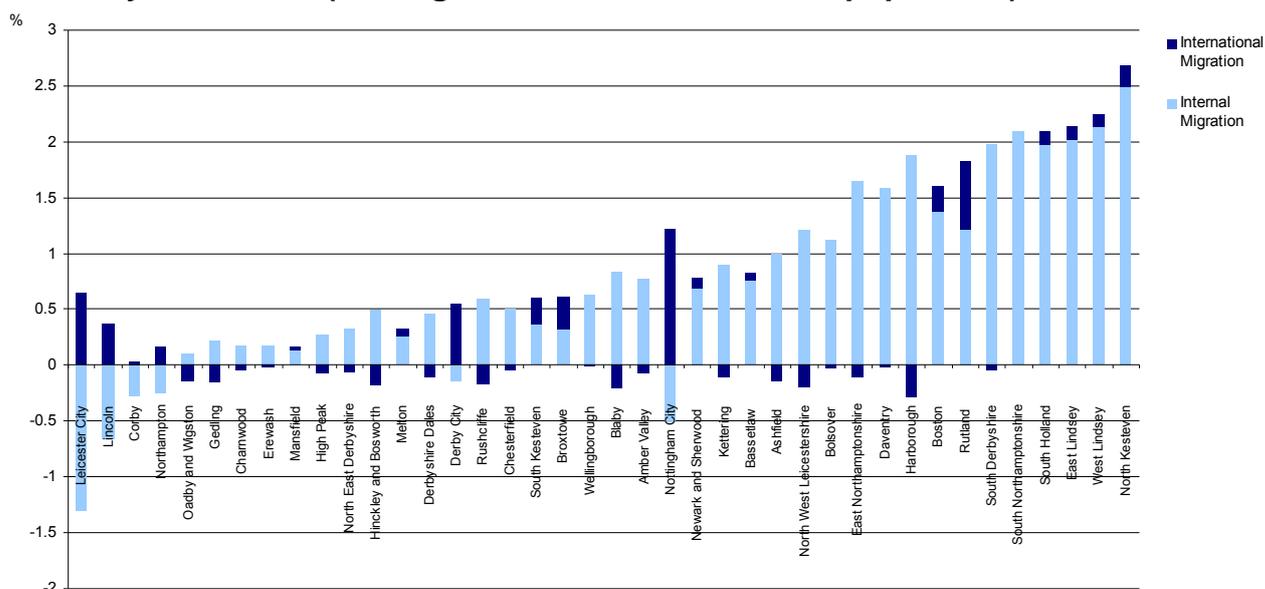
Source: ONS Crown Copyright, 'Mid Year Population Estimates', 1992-2008, Table 10: Local Authority Components of Change, 2009.

The recent trend in natural change is due to increasing life expectancies (especially for men) alongside a more recent increase in fertility rates. However, this component is closely interlinked to migration, as inward migration is a key driver in increasing birth rates, as migrants tend to have a younger age profile, and thus higher fertility rates, than non-migrants.

Migration is the more difficult of the two components to estimate, and is derived from a range of different sources, including the International Passenger Survey (IPS) for international migrants, and GP registration data and a range of other administrative sources for internal migrants. The most detailed estimates are published for individual Local Authority Districts, and include inflows and outflows for both international and internal migrants between each Mid-Year Estimate. Comparable data is not currently available for higher levels of geography, such as County and Unitary Authority areas or Government Office Regions, as some migrants move between Local Authorities within Counties or regions, thus their move is not across a county or regional boundary. For this reason, internal migration into and out of the higher level areas is not the sum of numbers moving into or out of the component lower level areas.¹³

¹³ ONS Crown Copyright, notes for 'Table 1: Migration indicators for local authority areas in England & Wales, mid-2001 to mid-2008', August 2009.

Chart 25: Balance of internal and international migrants by Local Authority, 2001-2002 (net migration as a % of mid-2002 population)

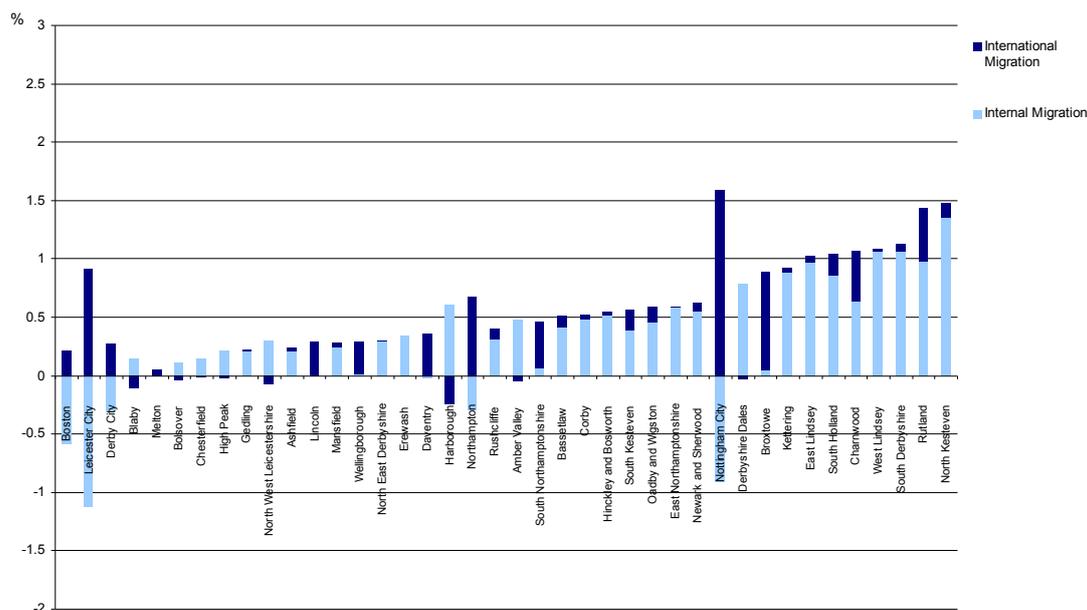


Source: ONS Crown Copyright, 'Migration indicators by local authority areas in England & Wales, mid-2001 to mid-2008', 2009.

Chart 25 shows net international and net internal migration as a percentage of the population across the 40 Local Authority Districts and Unitary Authorities in the East Midlands between mid-2001 and mid-2002, whilst Chart 26 shows this for mid-2007 to mid-2008. The overriding message from this data is that in almost all Local Authorities, for both time periods, internal migration (from other areas in the UK) makes up by far the largest share of net inward migration. Comparison between the two time periods also demonstrates that net migration in 2007-2008 was considerably less than in 2001-2002 in many districts. For example, in North Kesteven, the district that experienced the highest level of migration in both periods, net migration decreased from 2.7% of the total population in 2001-2002 to 1.5% in 2007-2008. In addition to this, the charts show that:

- In the balance of internal against international migration, a small number of districts stand out as exceptions, with international migration accounting for the larger share. These districts include Nottingham City, Leicester City, Derby City, Northampton and Broxtowe, which are all areas with large university student populations;
- Rural districts in the south and east of the region have the highest proportions of overall migration, and internal migration accounts for the largest share of this. In North Kesteven, net internal migration accounted for 2.5% of the 2002 resident population and 1.4% of the 2008 resident population, whilst net international migration accounted for 0.2% and 0.1% respectively; and
- Leicester City and Nottingham City have both experienced large net internal out-migration in both periods. In 2007-2008, net internal migration accounted for -1.1% of residents of Leicester City, and -0.9% of Nottingham City residents.

Chart 26: Balance of internal and international migrants by Local Authority, 2007-2008 (net migration as a % of mid-2008 population)

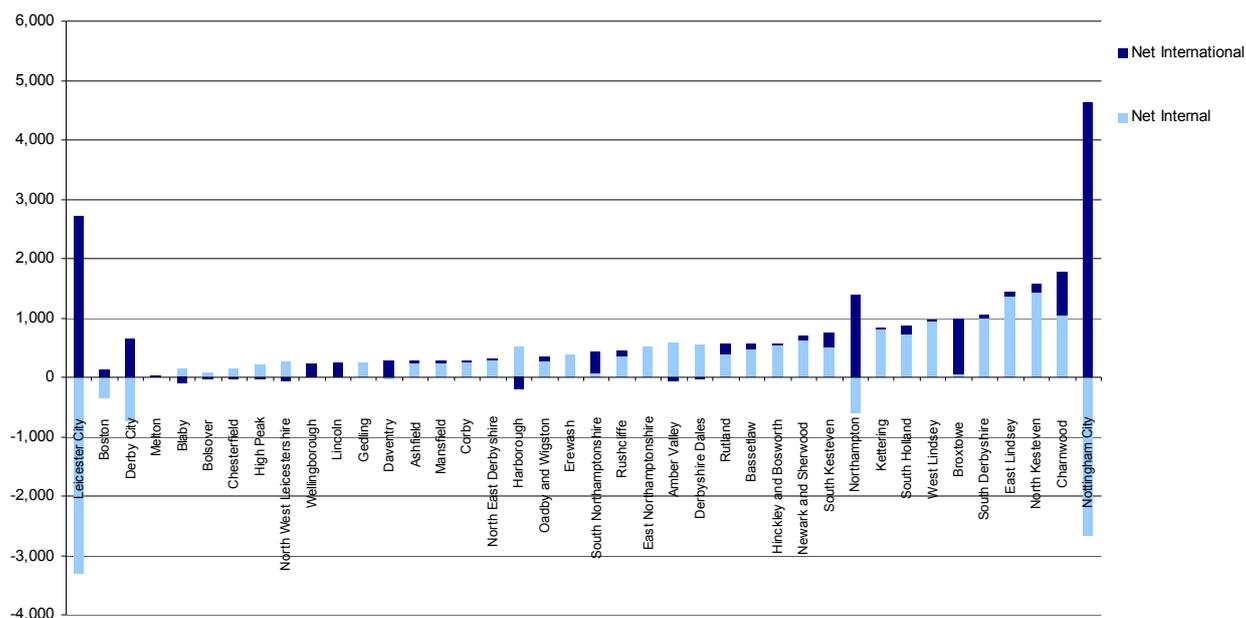


Source: ONS Crown Copyright, 'Migration indicators by local authority areas in England & Wales, mid-2001 to mid-2008', 2009.

Migration expressed as a proportion of the population allows comparison of internal and international migration across districts of varying population sizes, but disguises large variations in the volume of migration. Chart 27 presents net international and internal migration in volume terms for the period mid-2007 to mid-2008. This shows that:

- Nottingham City had by far the largest volume of in-migration. Although Nottingham experienced a net outflow of internal migrants, the inflow of international migrants was so large, at 4,631 additional residents, the total balance of migration, at 1,966, was higher than any other Local Authority District or Unitary Authority in the region;
- However, Leicester City, despite having a large net inflow of international migrants (2,701), experienced such a large net outflow of internal migrants that the total net-balance was negative. Between 2007 and 2008, Leicester lost a total of 606 residents due to net out migration, the largest total net-outflow of the region's Local Authority Districts or Unitary Authorities; and
- In most Local Authorities, internal migration accounts for the largest volume as well as share of migration. For example, in North Kesteven, 1,436 of the total net increase of 1,574 migrants was due to internal migration.

Chart 27: Volume of internal and international migrants by Local Authority, 2007-2008 (absolute numbers)



Source: ONS Crown Copyright, 'Migration indicators by local authority areas in England & Wales, mid-2001 to mid-2008', 2009.

Key Points: Components of recent population change

- Net population growth is a consequence of the balance between births and deaths ('natural change') and outward and inward migration. Collectively these factors are known as the 'components' of population change.
- Natural change has increased in importance in all regions between 2001-2002 and 2007-2008. In the East Midlands, natural change accounted for only 7% of population change between mid-2001 and mid-2002, but by 2007-2008 this share had increased to 38%.
- Since 2002-2003, the number of births in the East Midlands has been increasing, whilst the number of deaths has been falling. This is due to increasing life expectancies as well as recent increases in fertility rates.
- In Northamptonshire, the local area which has experienced the greatest volume of growth between mid-2007 and mid-2008, the contribution of natural change and migration was fairly equal. However in Lincolnshire, which experienced the second highest volume of growth, migration and other changes accounted for all of the increase in population.
- Detailed estimates of international migration and migration from other areas of the UK are available for the 40 Local Authority Districts in the region. In most cases, internal migration from elsewhere the UK significantly exceeded the volume of international migration. However in a small number of districts with large resident student populations, such as Nottingham, Leicester, Derby and Broxtowe, the reverse is true, with international migration accounting for the largest share of net-migration.

4. Future projections of population change

The following section looks at future prospects for population change, using the 2006-based Sub-National Population Projections (the 2006-based SNPP) published by the ONS in June 2008. These are trend-based projections of future population numbers that assume that future levels of births, deaths and migration will follow the trajectory of observed levels over the previous five years (2002 to 2006). They provide the Government's standard accepted estimate of future population levels. However, they take no account of local development policy, economic factors or capacity of areas to accommodate population. Their aim is simply to provide an indication of possible future population size and structure based on past trends.¹⁴

The trend-based approach used for the projections is consistent across all local areas. They cover a 25 year horizon, but the nature of projections means that there is greater degree of uncertainty the further ahead the projection is made. For this reason this section concentrates on the projections for 10 years from the base year (i.e. 2006 to 2016). The base year is 2006 MYE, which will differ from the 2008 MYE used to describe the current profile of the region's population earlier in the chapter.

4.1 Projections of total population change

The 2006-based SNPP projects that the East Midlands is expected to be the fastest growing English region between 2006 and 2016. The population of the region is projected to increase by 10.5%, to 4.8 million in 2016. This compares to average growth for England of 7.8%. This is shown in Table 4 and Chart 28.

Table 4: 2006-based Sub-National Population Projections – key data for the English regions

	2006 Population	2006-2016		2006-2026		2006-2031	
		000s	%	000s	%	000s	%
England	50,762.9	3,961.3	7.8	7,919.5	15.6	9,668.6	19.0
North East	2,555.7	82.7	3.2	174.2	6.8	213.4	8.3
North West	6,853.2	339.5	5.0	693.0	10.1	842.7	12.3
Yorkshire and the Humber	5,142.4	478.9	9.3	958.8	18.6	1,176.2	22.9
East Midlands	4,364.2	460.4	10.5	922.0	21.1	1,126.5	25.8
West Midlands	5,366.7	295.8	5.5	609.8	11.4	747.0	13.9
East of England	5,606.6	572.9	10.2	1,140.8	20.3	1,390.8	24.8
London	7,512.4	601.9	8.0	1,120.2	14.9	1,345.5	17.9
South East	8,237.8	632.8	7.7	1,285.5	15.6	1,576.0	19.1
South West	5,124.1	496.3	9.7	1,014.8	19.8	1,250.3	24.4

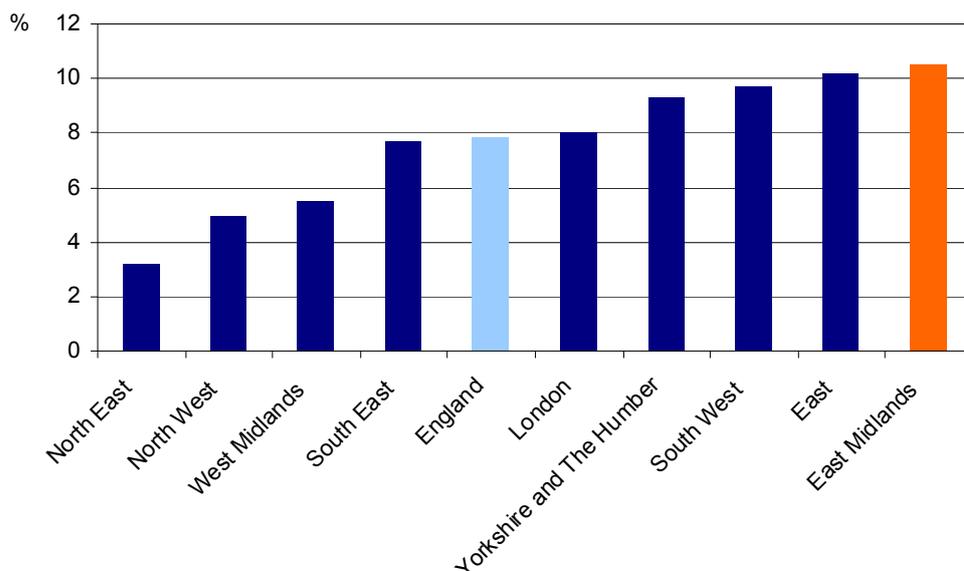
Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

¹⁴ The projections used in this document are the main, published 2006-based SNPP. This is sometimes referred to as the 'central projection', in reference to a number of variant projections published at national level, which include higher or lower migration and natural change assumptions than those used in the central projection. The assumptions underpinning the central projection are based on past trends, higher or lower variant projections change those assumptions in order to investigate different trajectories than those previously experienced.

The East of England is projected to be the second fastest growing region, increasing in population size by 10.2% over the 10 years to 2016. The South East is projected to remain the most populous region, with the highest population increase in absolute terms, rising by 0.6 million to 8.9 million.

The North East is the region projected to have the smallest increase in population (in both number and percentage) by 2016, up by 3.2% (less than 0.1 million) to 2.6 million.

Chart 28: Total projected population growth by region, 2006-2016 (%)

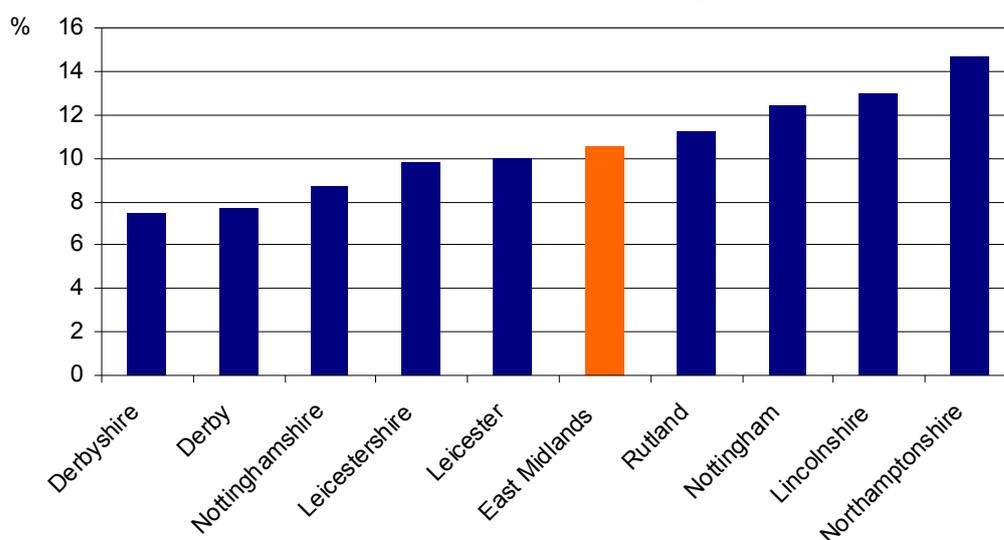


Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

Within the East Midlands, the Local Authorities in the south and east of the region are projected to experience the fastest growth rates, whilst those in the north and west of the region are projected to grow more slowly over the decade. Chart 29 shows that:

- Northamptonshire is projected to have the fastest growth rate between 2006 and 2016, at 14.7%, increasing from 669,300 to 767,400 residents over the decade;
- Lincolnshire is also projected to grow considerably, by 13%, from 686,300 to 775,500, 2.5 percentage points higher than average regional rate of growth. Nottingham City is also projected to grow at an above average rate, compared to the last decade (where it grew at a slower rate than the regional average). In 2016 the population of the city is projected to reach 321,900, an increase of 12.4% on 2006; and
- The lowest rates of growth are projected to be in Derbyshire, Derby City and Nottinghamshire, at 7.5%, 7.7% and 8.7% respectively over the decade. However, it is important to note that all three authorities are projected to grow at rates close to the national average. Even Derbyshire, with the lowest projected growth rate in the region, is still forecast to gain an additional 56,400 residents over the decade to 2016 (compared to 33,600 over the previous decade from 1996).

Chart 29: Total projected population growth by LA/UA, 2006-2016 (%)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

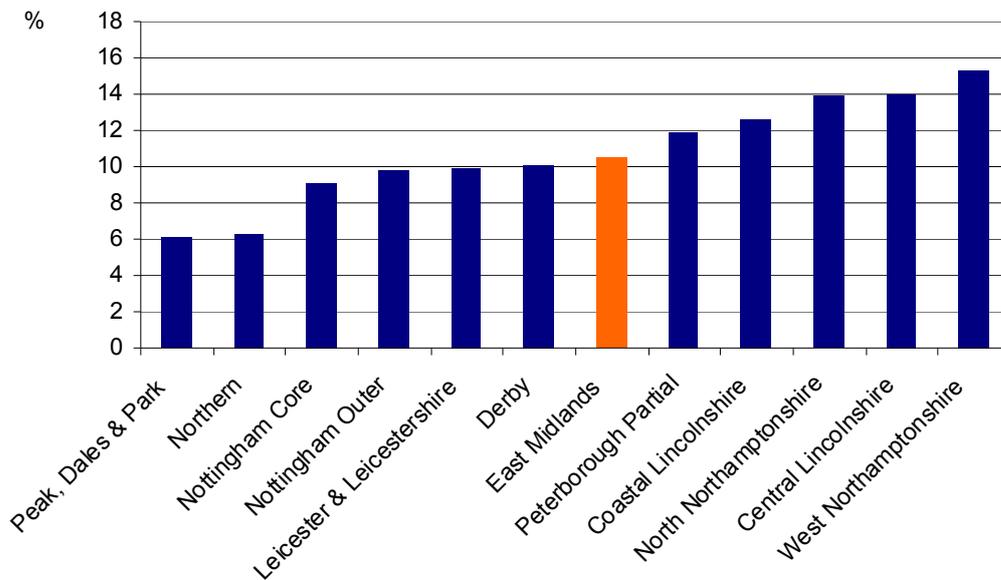
Chart 30 shows projected population growth rates between 2006 and 2016 for the region's Housing Market Areas (HMAs). In the previous discussion of recent growth since 1998, the division of the region into HMAs highlights the variation in population trends within counties (such as between Coastal and Central Lincolnshire) and the effect of combining city authority with districts that encompass their wider conurbation (Nottingham Core HMA compared to the Nottingham City Local Authority, for example). Key observations are as follows:

- The division of Northamptonshire into West and North Northamptonshire HMAs illustrates that the fastest growth is projected to be in the south of the county. West Northamptonshire is projected to grow by 15.3%, compared to 13.9% in North Northamptonshire HMA. West Northamptonshire is already the more populous of the two HMAs, and this growth rate will increase the relative population concentration in the south of the county further. Both HMAs are in the MKSM Growth Area;¹⁵
- In Lincolnshire, the projections suggest that, as in the case of past trends, the fastest future growth is projected to be in Central Lincolnshire, with significant but slower growth in the eastern, coastal districts. Central Lincolnshire is projected to experience population growth of 14%, compared to 12.6% in Coastal Lincolnshire. As in the case of Northamptonshire, Central Lincolnshire is already the more populous HMA so this growth pattern could increase concentration of population in the central part of the county;

¹⁵ The Milton Keynes South Midlands (MKSM) Growth Area is one of the Government's designated areas for large scale housing development in order to ease pressures on London and the South East and to provide affordable accommodation for key workers. It incorporates all of Northamptonshire in the East Midlands, along with Milton Keynes, Aylesbury Vale, Bedfordshire, and Luton in the South East and East of England.

- Projected growth over the decade is considerably lower in Nottingham Core HMA, at 9.1%, which is below the East Midlands average and third lowest of the regions' HMAs (when Nottingham City was third highest of the nine County and Unitary Authorities); and
- The Peak, Dales & Park HMA is projected to grow at the slowest rate (6.1%), and was the least populous of all 12 HMAs in 2006. Its relative share of the region's total population could therefore decline by 2016 (from 3.7% to 3.5%).

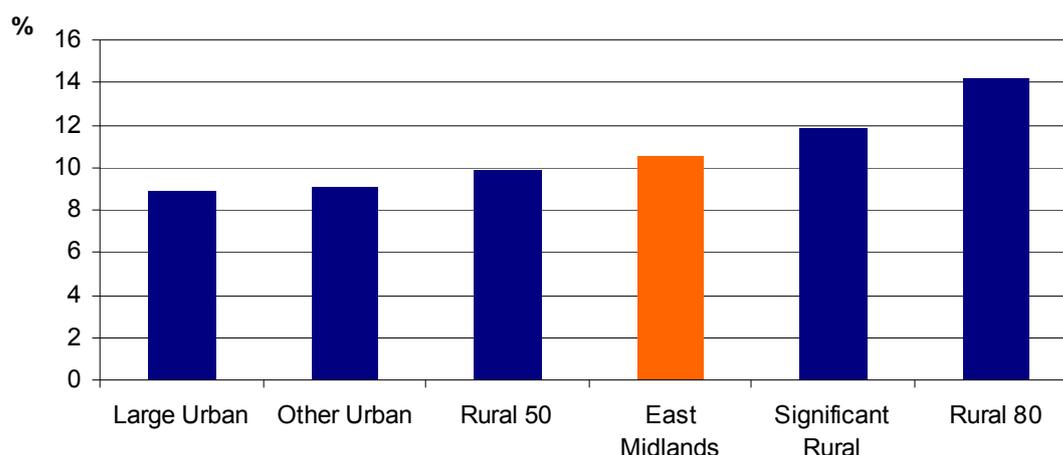
Chart 30: Total projected population growth by HMA, 2006-2016 (%)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

Chart 31 illustrates projected growth by the Defra urban and rural district classifications. This confirms the picture presented by the earlier analysis by County/UA and by HMA – that the most rural parts of the region are projected to experience the fastest rate of population growth. The average growth for the most rural district classification, 'Rural 80', is projected to be 14.2% between 2006 and 2016, almost 4 percentage points higher than the regional average. 'Significant Rural' districts are also projected to grow faster than average, at 11.9%. Both urban classifications in the East Midlands are projected to experience significantly slower rates of growth, at 9.1% for 'Other Urban' districts and 8.9% for 'Large Urban' districts.

Chart 31: Total projected population growth by urban and rural classification, 2006-2016 (%)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

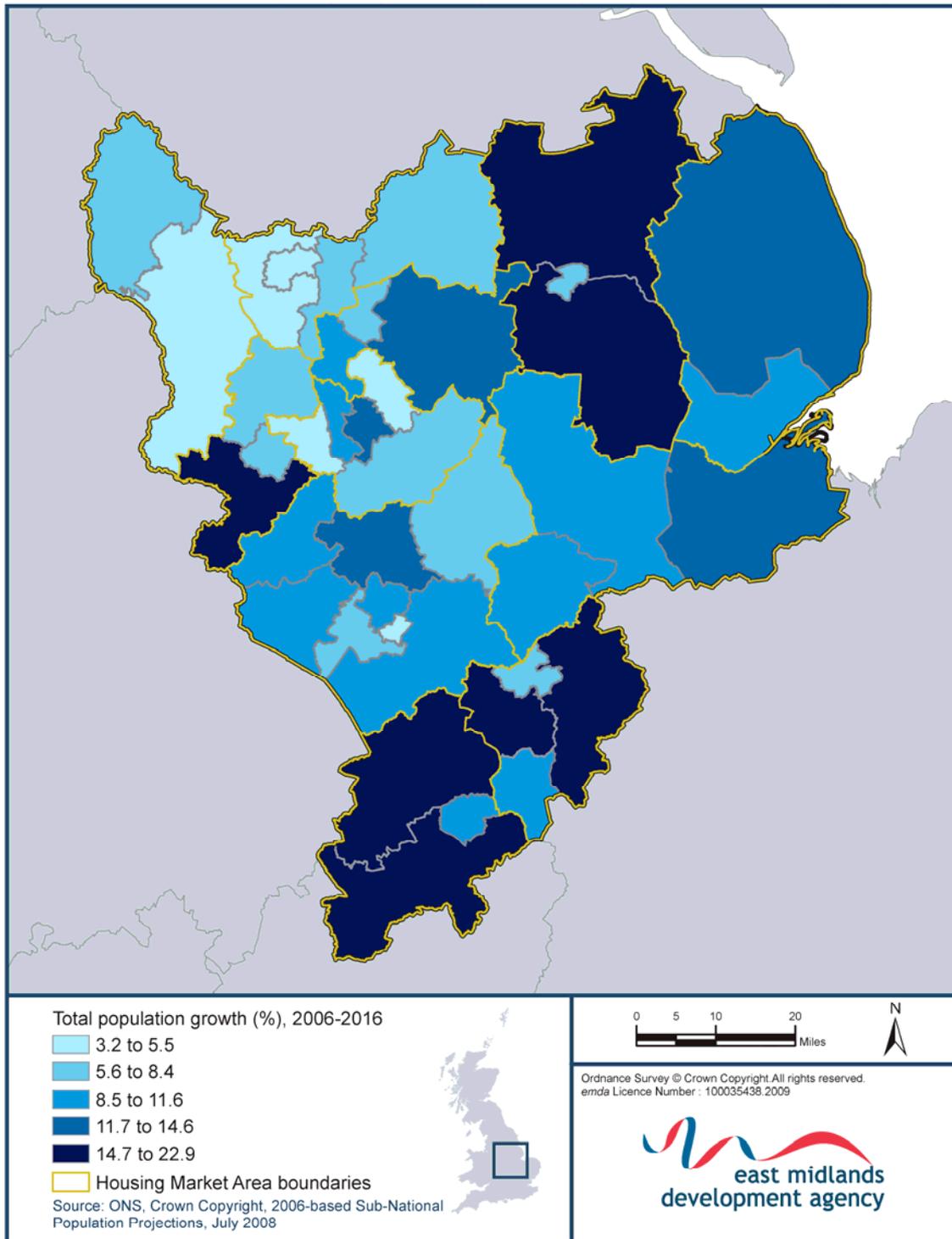
Map 6 shows projected growth rates for Local Authority Districts. This again shows high growth rates concentrated in the more rural south of the region. It also shows a stronger contrast between higher growth rates in the east compared to slower growth in the west of the region (again contrasting more rural with more urban areas).

South Northamptonshire, with a growth rate of 22.9% between 2006 and 2016, is projected to be the second fastest growing Local Authority in England (behind Camden). Daventry and East Northamptonshire are also projected to grow considerably faster than the regional average.

North Kesteven, in central Lincolnshire, is projected to be one of the fastest growing parts of the region (at a rate of 17.3%). Although the coastal districts of East Lindsey and Boston are both projected to grow at relatively strong rates (13.3% and 11% over the decade), this growth is significantly slower than North Kesteven.

The slowest growing areas are projected to be in the north of the region, particularly the Derbyshire Dales, at 3.3%, and North East Derbyshire, at 3.8%.

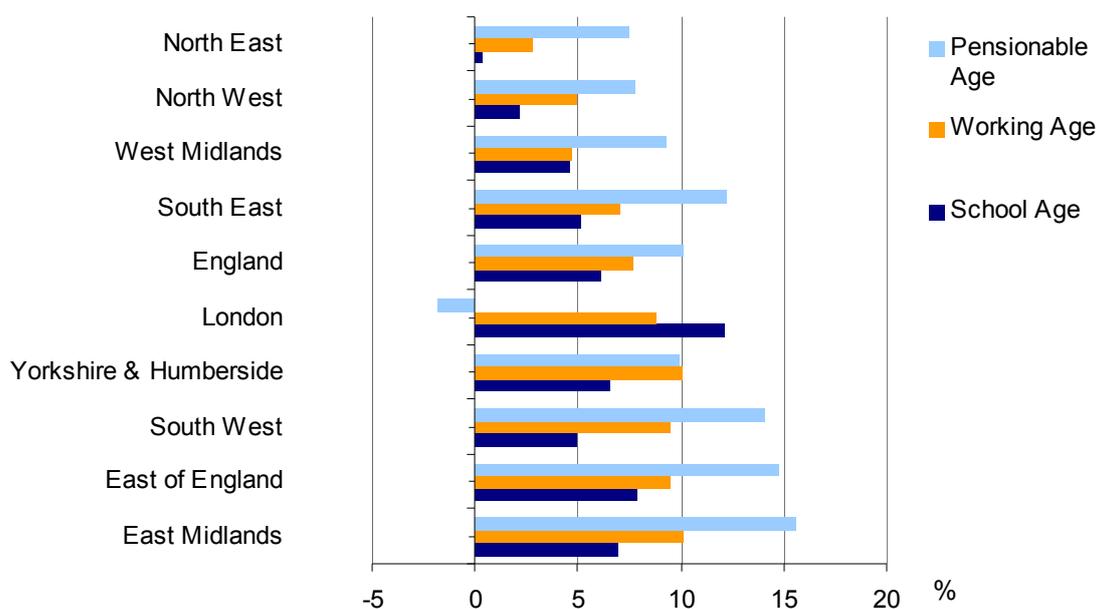
Map 6: Total projected population growth by LAD/UA, 2006-2016 (%)



4.2 Projections of future population change by age group

The SNPP provides detailed data by population age, enabling a discussion of how forecast population growth varies across the three broad age groups (school age, working age and pensionable age). The following projections take into account the implications of the changing legislation for the State Pension Age. Projections from 2006-2016 will be affected by legislation that will gradually extend the female state pension age to 65 between 2010 and 2020, bringing this into line with the male state pension age. This means that the projections for the broad age groups include progressive adjustments between the working age and pensionable age groups.¹⁶

Chart 32: Projected population growth by broad age band, 2006-2016 (%)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

Chart 32 shows that between 2006 and 2016, the East Midlands is projected to experience the fastest growth of all English regions both in the pensionable age group (15.6% compared to 10.1% in England overall) and the working age group (10.1% compared to 7.7% in England overall). The school age group is projected to grow at a slower rate (6.9%), although this still exceeds the growth of the age group in England overall (6.1%).

This profile of strong growth in the pensionable and working age groups and much slower growth in the school age group is similar to the East of England and the South West regions. London is projected to experience negative growth in the pensionable age group, with the strongest growth in the school age group (12.1%) of all English regions.

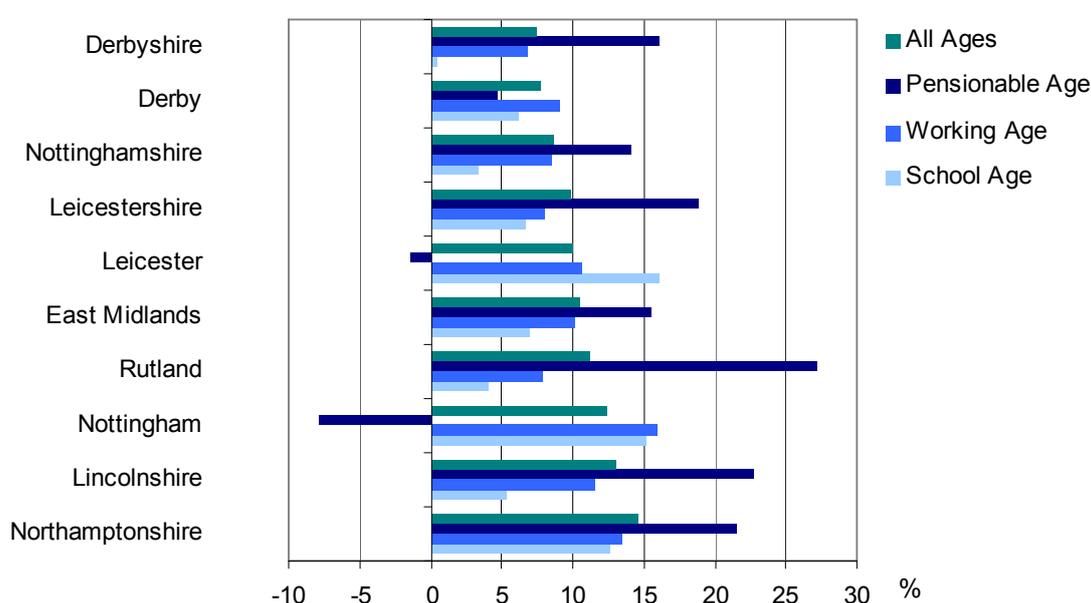
¹⁶ To account for the change in the state pension age initiated by the 2007 Pensions Act, the 2006-based population projections adjust the working age and pensionable age groups, using a matrix that allocates an increasing proportion of women aged between 60 and 64 to the working age group between 2010 and 2019.

The outcomes on these differential growth rates on the region's age profile are as follows:

- The school age group could decrease in share of the total population, from 18.8% in 2006 to 18.2% in 2016;
- The working age group could also decrease slightly, from 62.1% to 61.9%; and
- The pensionable age group could increase from 19.1% to 20.0% over the decade.¹⁷

The impact of these changes on dependency (the relationship between the working age and the other two economically 'dependent' age groups) will be discussed later on in this section.

Chart 33: Projected population growth by broad age band by County/UA, 2006-2016 (%)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

Chart 33 illustrates the projections for growth by broad age group across the East Midlands County and Unitary Authorities. The chart is arranged by total population growth, illustrating the very different profiles for growth across the region:

- Northamptonshire and Lincolnshire have the strongest overall projected growth rates in the region and both have very strong projected growth in the pensionable age group (21.5% and 22.8% respectively) but also strong growth in the working age group (13.5% and 11.6% respectively);
- Nottingham is forecast to have the third fastest growth rate in the region, but this is in spite of significant negative growth in the

¹⁷ These proportions will differ from those cited earlier in the chapter (based on the 2006 Mid-Year Estimates) due to rounding – with data from the 2006-based SNPP being rounded to the nearest 1,000.

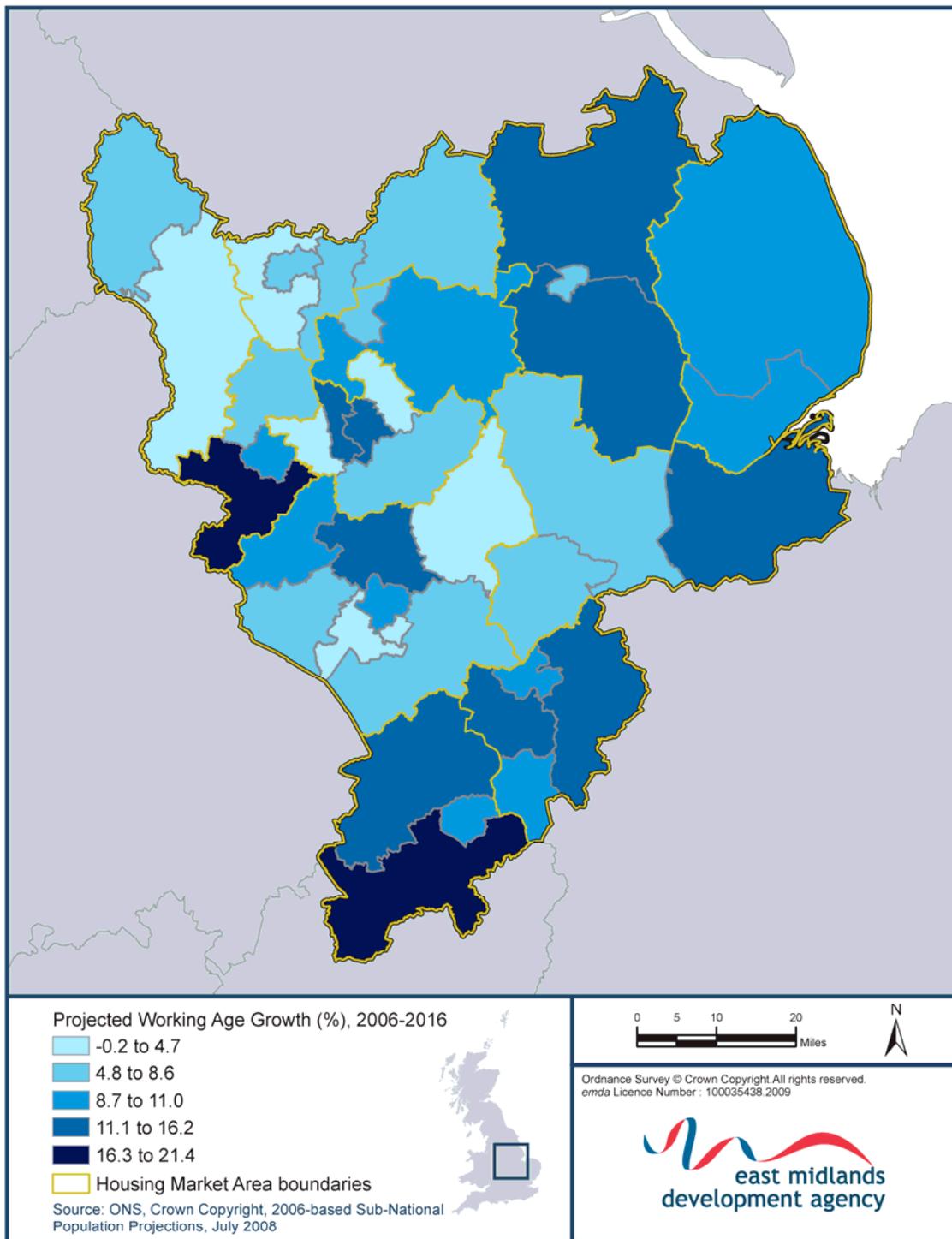
- pensionable age group (-7.8%) offset by very strong growth in the working age and school age groups (15.9% and 15.1% respectively);
- Rutland is projected to experience by far the fastest growth rate in the pensionable age group (27.2% over the decade), far outstripping growth in the working age (7.9%) and school age groups (4.1%); and
 - Leicester City is projected to see negative growth in the pensionable age growth, albeit at modest rate (-1.4%), whilst total growth is principally driven by the school age group (16%).

As Leicester City already has the youngest age profile in the region, this growth is likely to make this difference greater still – especially as many Local Authorities are projected to experience very small growth in their school age populations.

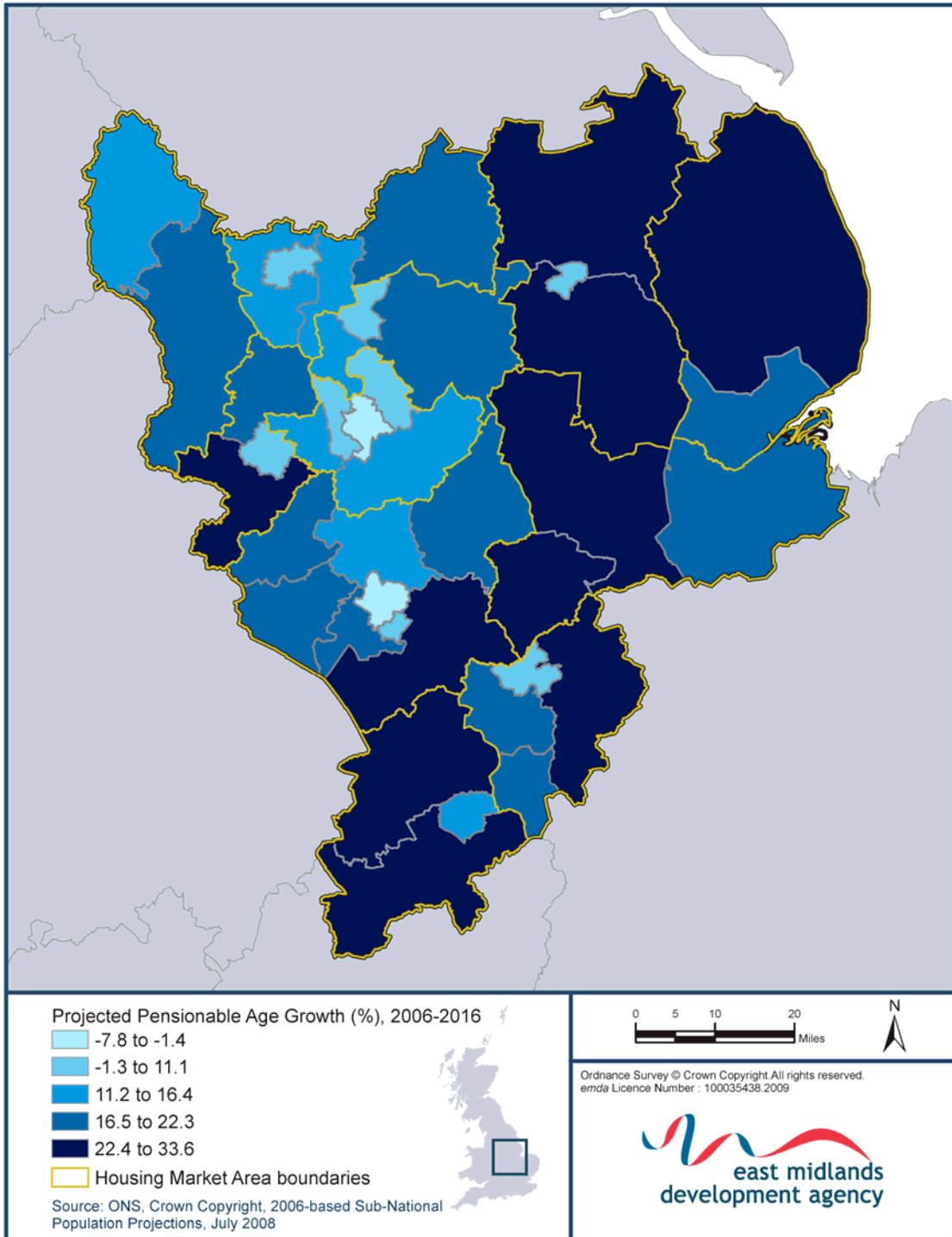
Maps 7 and 8 illustrate growth rates for the working age and pensionable age population groups by Local Authority District (school age is not shown as there is less variation in growth between most districts, with the exception of the strong growth in Leicester City and negative growth in parts of Lincolnshire). Map 7 shows that the fastest growth rates in the working age population could be in the south of the region and west Lincolnshire. South Northamptonshire is projected to experience a growth in its working age group of 21.4% between 2006 and 2016 and North Kesteven is expected to experience a growth rate of 16.2% in this group. South Derbyshire is also projected to experience strong growth in its working age population, at 18.8%. The slowest growth rates in this age group are projected to be in the far north of the region, with the working age population shrinking by -0.2% in the Derbyshire Dales over the decade.

Map 8 shows that the fastest rates of growth for the pensionable age group are projected for districts across Lincolnshire, but also in other more rural parts of the region, especially in the south. East Northamptonshire is projected to experience a growth rate of 33.6% for the pensionable age group, whilst this group in West Lindsey is projected to grow by 27.6% over the decade to 2016. The slowest rates of growth are again projected to be in the north of the region, but also in the three cities, with the pensionable age group in Nottingham City projected to decline by -7.8% over the decade.

Map 7: Projected population growth for the working age group, 2006-2016 (%)



Map 8: Projected population growth for the pensionable age group, 2006-2016 (%)



4.3 Impact of changing age profile on dependency ratios in the region

Chart 34: Estimated and projected age structure of the East Midlands population: mid-2008 & mid-2031

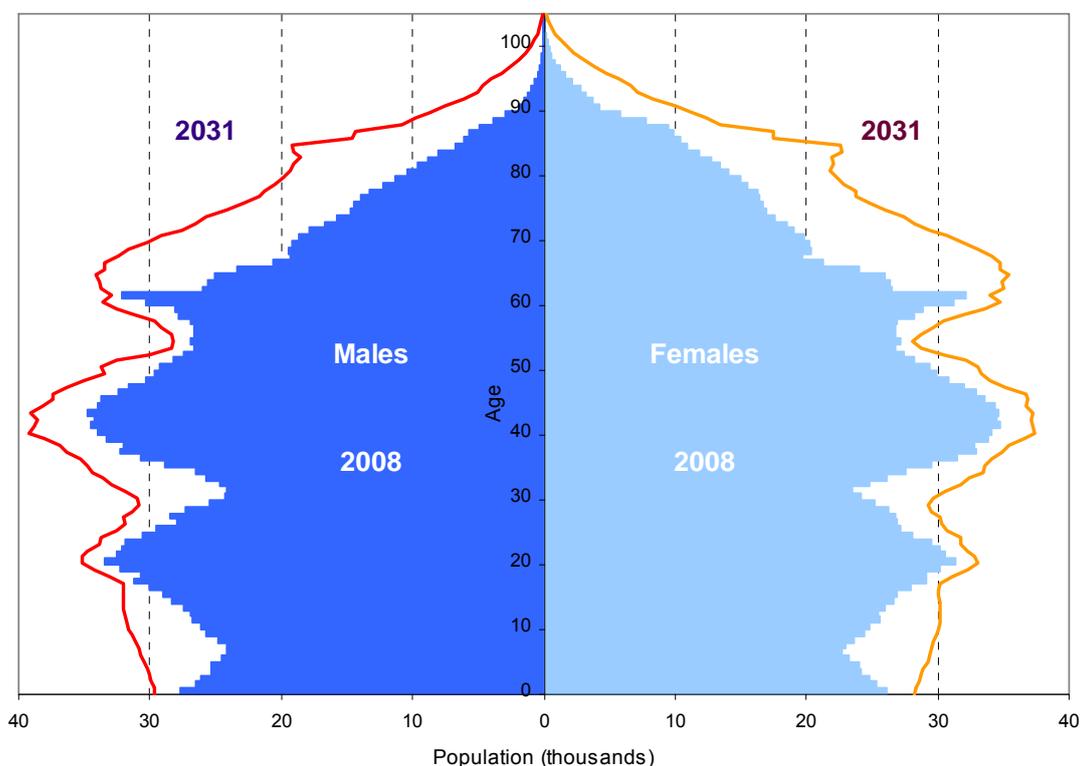


Chart 34 illustrates the long-term impacts implied by the 2006-based SNPP on the age profile of the East Midlands population, compared to the 2008 profile described earlier in this chapter. This chart shows that, although all age bands are projected to increase, the largest increases are to be expected amongst the upper age bands:

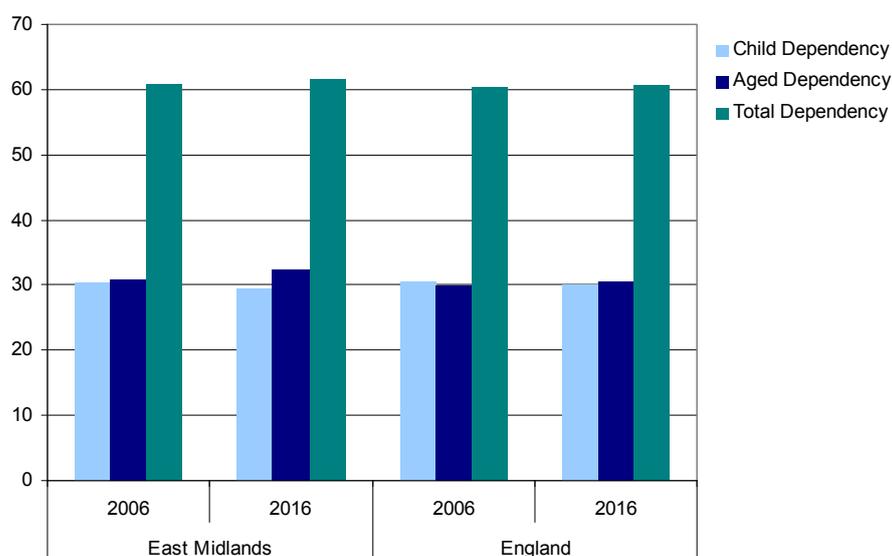
- The age groups that are projected to increase by the most, both in volume and percentage terms, are all in the upper age ranges. The 65-69 year old age group could increase by 121,400 individuals to 329,600, a growth of 58% between 2008 and 2031 (compared to a growth of 23% for all age groups over the period 2008-2031);
- Each subsequent age group is projected to increase by at least 50%, with the two oldest 5-year bands, 80-84 and 85 and over, projected to increase by 92% (or 98,800 additional individuals) and 137% (131,200 additional individuals) respectively; and
- Although growth in the younger age groups is projected to be less significant, there are a number of younger age bands projected to experience above average growth. In line with recent increasing birth rates, the 5-9 year age group is projected to increase by 25% (or 61,000 additional individuals), whilst 30-34 year olds are projected to increase by 26% (an additional 66,500 individuals).

Dependency ratios provide a useful means of assessing the impact of an area's changing age structure on its ability to support those parts of the

population that are 'dependent' on the working age group – i.e. children and pensioners. Through the three broad age groups used above, dependency ratios are calculated as follows:

- 'Child dependency': the school age group as a proportion of the working age group (school age/working age x 100);
- 'Aged dependency': the pensionable age group as a proportion of the working age group (pensionable age/working age x 100); and
- 'Total dependency': the sum of the school age and the pensionable age groups as a proportion of the working age group ((school age + pensionable age)/working age x 100).

Chart 35: Dependency ratios in the East Midlands and England, 2006 and 2016

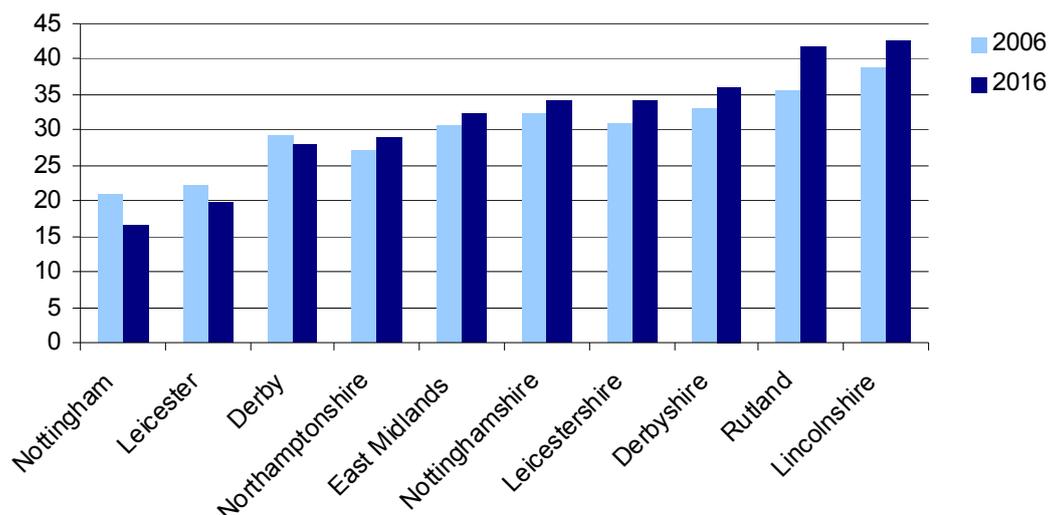


Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

Chart 35 shows that in the East Midlands aged dependency will increase significantly, whilst changes in child and total dependency ratios will be very slight.

Child dependency is projected to decrease in both the East Midlands and in England overall, as the working age population will grow more rapidly than the school age population over the decade. In the East Midlands, child dependency was 30.2% in 2006, and could fall to 29.4% in 2016 – compared to 30.6% (2006) and 30.1% (2016) in England overall. Aged dependency could increase from 30.8% to 32.3% in the East Midlands over the decade, compared to an increase from 29.9% to 30.6% in England overall. The outcome of these two trends is that total dependency could increase from 61% to 61.6% in the East Midlands, but could only increase by 0.2 percentage points to 60.7% in England overall.

Chart 36: Aged dependency by County/UA, 2006-2016



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', June 2008.

Looking at dependency within the region, Chart 36 shows aged dependency ratios for the County and Unitary Authorities – as it is in aged dependency that the largest changes are projected to occur in most authorities. This shows a clear difference between rural and urban Local Authorities in the region:

- Lincolnshire and Rutland are both projected to experience considerable increases in their aged dependency ratios over the decade – from 38.8% to 42.7% in Lincolnshire and from 35.5% to 41.9% in Rutland. These future changes in the balance of dependency are likely to have implications for both service provision and levels of economic activity; and
- Nottingham, Leicester and Derby Cities are all projected to experience a decrease in aged dependency. Aged dependency in Nottingham could decrease from 20.8% in 2006 to 16.5% in 2016, in Leicester it could fall from 22.1% to 19.7% and in Derby it could fall from 29.2% to 28%. This could lead to a decrease in total dependency ratios in all three cities. In the case of Leicester City, the strong growth in the school age population (and resulting increase in child dependency) could mean that the decrease in total dependency is slight.

Key Points: Projections of future population change

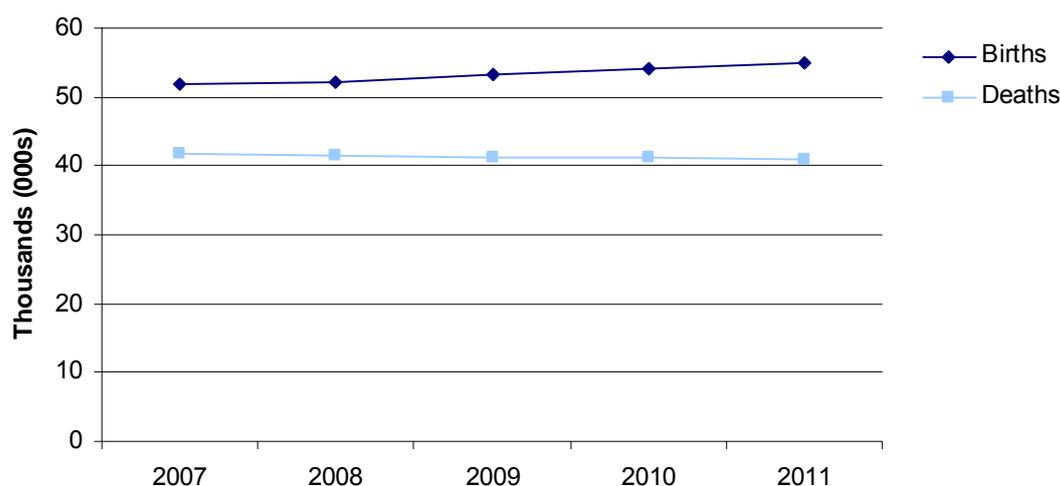
- The East Midlands is projected to experience the fastest population growth of any English region between 2006 and 2016, at a rate of 10.5% compared to 7.8% in England overall. This is equivalent to an additional 0.5 million residents over the decade.
- Northamptonshire is projected to be the fastest growing County or Unitary Authority. This is one of the fastest rates of growth of any Local Authority in England.
- Of the region's HMAs, West Northamptonshire is projected to grow at the fastest rate, at 15.3% over the decade. The Peak, Dales & Park HMA is projected to grow at the slowest rate, at 6.1%.
- The East Midlands is projected to experience the fastest growth of any English region in both the pensionable age and the working age groups. Between 2006 and 2016, the proportion of all East Midlands residents in the school age group could decrease from 18.8% to 18.2%, the proportion of the population in the working age group could also decrease from 62.1% to 61.9%, and the proportion in the pensionable age group could increase from 19.1% to 20%.
- Northamptonshire and Lincolnshire are both projected to experience strong growth in the pensionable age and working age groups, whilst both Nottingham and Leicester Cities are projected to experience a fall in the pensionable age group.
- The growth of the pensionable age group in the East Midlands overall could have significant implications for dependency in the region. Within the region, this could affect Lincolnshire and Rutland the most, whilst Nottingham, Leicester and Derby Cities could all see a decrease in aged dependency ratios.

4.4 Components of future population change

The 2006-based Sub-National Population Projections include tables on components of population change, enabling a discussion of the possible balance between natural change and migration in population growth in the future. Again it is important to emphasise that these data are based on recent trends, and do not account for the impact of future policy changes (such as immigration policy), housing or infrastructure development. They only indicate what could happen if recently observed trends were to continue.

Chart 37 shows births and deaths in the East Midlands projected five years on from 2006. This shows that the contribution of natural change is likely to grow over time, as the number of deaths continues to fall with increasing life expectancy, and the number of births continues to increase. This means that the net contribution of natural change to the regional population could increase from 10,200 additional residents in 2007 to 14,000 in 2011, and to 15,800 by 2016. This trend of increasing births rates and falling death rates is also projected for England overall.

Chart 37: Projected births and deaths in the East Midlands, 2007-2011 (thousands)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', Table 6: Natural change and Migration summaries', June 2008.

However, it is important to emphasise that this trend cannot be isolated from migration. As stated earlier, migration affects the balance of births and deaths because migrants have different age profiles than non-migrants. Migrants that have moved to most parts of the region are significantly younger than non-migrants, and thus have higher fertility rates (with exceptions such as parts of Lincolnshire and Rutland, which have experienced significant in-migration of older people). This is because a large proportion of migration is for economic reasons, so migrants tend to be in fertile age groups. Work done for *emda* by Experian in 2007 demonstrated that the overall impact of migration has been to decrease the average age of the region's population.¹⁸

A key area of discussion around the 2006-based SNPP has been the impact that post-2004 migration from the Central and Eastern European Accession states may have had on skewing the projected extent of inward international migration. It has been suggested that including 2 years of above trend international migration in the 5 years preceding the 2006 base year in the latest SNPP could provide a higher net international migration component than is reasonably likely to occur, given the likelihood (also supported by recent administrative data) that A8 migration to the UK, and to the East Midlands, will begin to tail off. In response to this it is important to confirm two decisions taken by the ONS in producing the 2006-based SNPP, which effectively render such concerns unjustified:

¹⁸ Experian, on behalf of *emda*, 'The Contribution of Migration Flows to Demographic Change in the East Midlands', March 2007.

International migration has increased the working age population in the region, whilst the outflow of older people overseas has also mitigated the ageing of the region's population. Whilst internal migration has acted to push up aged dependency ratios it has done so only marginally, as the region as a whole has been subject to substantial inflows of working age people from other regions as well as those of pensionable age. Nottingham and Leicester have witnessed a significant decline in the pensionable age population as a consequence of internal migration, while rural areas (particularly Rutland and Lincolnshire) have experienced an increase in both the working age and pensionable age population as a result.

- The projections only include long-term migrants (resident for more than one year). A large proportion of A8 migrants are treated as short-term migrants – and as thus not counted in the SNPP. The proportion classed as short or long-term migrants is based on figures used in the Mid-Year Population Estimates; and
- Furthermore, the SNPP sets international migration to tail off to nil-net migration (where out-migration equals in-migration) by 2012.

At a UK level, the Government Actuary's Department (GAD) and the ONS have published a number of variants on the 2006-based projections. In producing a zero net migration variant, the ONS demonstrate that migration has been the principal driver of the increasing contribution of natural change for this reason: even with zero net migration (i.e. in-migration artificially set to equal out-migration), some 69% of the projected population growth for the UK to 2031 would be directly or indirectly attributable to future net migration of all types.¹⁹

Chart 38 shows projected trends for inward and outward migration from the 2006-based Sub-National Population Projections for the East Midlands. This shows that inward international migration²⁰ to the region is projected to level off from 2008. The trend in outward international migration is projected to increase very slightly. Therefore, there will be a positive net gain from international migration of around 20,000 each year.

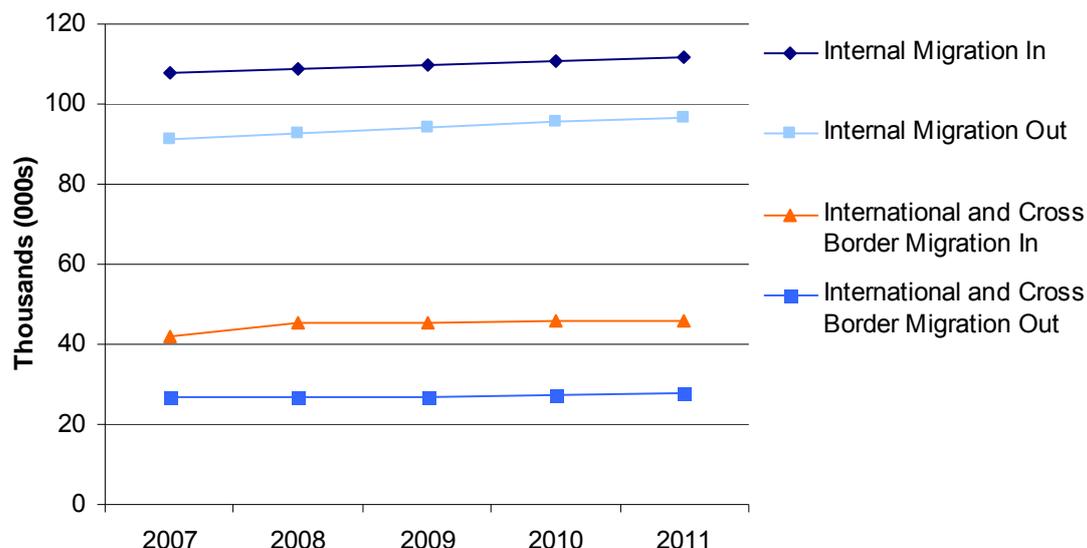
In terms of internal migration (from other English regions), both the inflow and the outflow are projected to increase, but, as Chart 38 illustrates, the outflow is projected to increase at a slightly faster rate, meaning that the balance of net internal migration will decrease. In 2007, the projections include 107,700 inward migrants from other English regions in that year, increasing to 111,500 by 2011 (an increase of 3,800). Outward migration to other English regions increases from 91,200 in 2007 to 96,500 (an increase of 5,300).

When international and internal migration flows are combined, the net contribution of migration peaks in 2008 (with the peak in the trend in international migration) at 34,900 additional residents that year, before decreasing year on year to 32,800 in 2011. By 2016, net migration is expected to decrease to 31,300.

¹⁹ Government Actuary's Department, 'Migration and Population Growth', article accompanying the 2006-based national population projections, 2007.

²⁰ This includes cross-border migration from other UK nations.

Chart 38: Projected internal and international migration in the East Midlands, 2007-2011 (thousands)

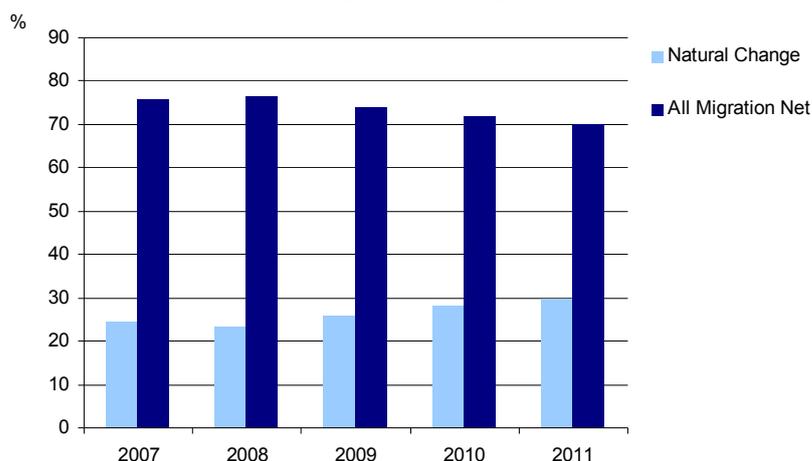


Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', Table 6: Natural Change and Migration Summaries', June 2008.

Chart 39 looks at the two components together, demonstrating the changing relative contribution over the five year period for which data is published. This shows that the balance of natural change compared to migration (both internal and international) is projected to shift over the period. The contribution of natural change could increase from 24.3% of total net population growth in 2007 to 29.9% in 2011. By 2016 it is projected to increase to 33.5%. However, it is still important to note that migration would still contribute by far the larger share in these projections (from three quarters in 2007 to two thirds by 2016), and, as stated above, is a key driver for increasing natural change (with migrants contributing to higher birth rates and lower death rates).

This trend is also the case in England overall, but to a lesser extent. It is important to note that the balance between the components is quite different, as the migration component for England does not include the internal migration between English regions (as this obviously does not affect the net change). In England over the period 2007 to 2011, the share of natural change in total population growth increases slightly from 53.7% to 54%, whilst migration decreases from 46.3% to 46%.

Chart 39: Projected share of total annual population change in the East Midlands, natural change and migration (%)

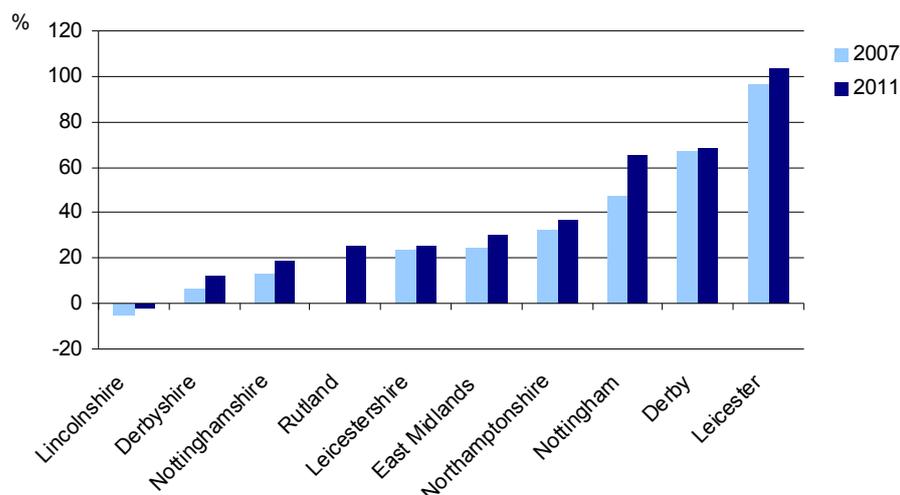


Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', Table 6: Natural change and Migration summaries...', June 2008.

Chart 40 summarises the changing balance between natural change and migration in the future for the region's County and Unitary Authorities by showing the proportion of total net growth accounted for by natural change alone, comparing the years 2007 to 2011. This shows that natural change could account for an increasing proportion of annual growth in 2011 compared to 2007 in all cases except for Lincolnshire (where, conversely, migration is increasing in relative terms):

- Leicester City is projected to experience negative net migration by 2011, losing around 100 people in the year. This is counteracted by natural change of 3,200 in 2011 (103% of total growth in that year);
- Nottingham and Derby are both projected to experience positive net migration, but this could decrease in relative share of total population growth over the period. Nottingham is projected to experience an absolute decline in net migration, from 1,900 additional residents in 2007 to 1,300 in 2011. Conversely, natural change in Nottingham is projected to increase from 1,700 to 2,500 between 2007 and 2011 (or from 47.2% to 65.8% of total annual growth);
- In Derby, migration is projected to increase between 2007 and 2011 – but the rate of growth is significantly lower than natural change. This means that the contribution of natural change in Derby could increase from 66.7% to 68.4% over five years. These trends in Nottingham and Derby are due to the young age profiles of both cities (and thus higher fertility) and out-migration of older people (leading to declining death rates); and
- In the other extreme, Lincolnshire – which is projected to experience the second fastest rate of total population in the region – is also projected to have a negative natural change contribution. Thus the full extent of population growth in the county could be driven by migration, which will account for 104.7% and 102.2% of total population growth in 2007 and 2011. This reflects the higher age profile of residents (especially in the Lincolnshire Coast) and thus lower fertility and higher death rates compared to elsewhere in the region.

Chart 40: Projected share of total annual population growth accounted for by natural change by County/UA, 2007 and 2011 (%)



Source: ONS Crown Copyright, '2006-Based Sub-National Population Projections', Table 6: Natural change and Migration summaries...', June 2008.

Key Points: Components of future population change

- The 2006-based projections suggest that the contribution of natural change to overall population growth is likely to grow over the next decade, with continued falls in the number of deaths and increasing birth rates. However, this trend cannot be separated from migration – as the two components are interdependent. Migrants tend to be younger, and more likely to start families, so migration is a factor in increasing net natural change.
- In the East Midlands, the contribution of natural change to total population growth will increase from 24.3% in 2007 to 33.5% in 2016. However, it is clear from this that migration will still continue to account for the largest share of population growth.
- Inward international migration to the region is projected to increase between 2006 and 2008, but then level off. Outward international migration is projected to increase slightly.
- In the case of internal migration between other English regions, both the outflow and inflow are projected to increase, but the outflow is projected to increase at a faster rate. This means that total net migration will make a decreasing, but still very significant, contribution to population growth over the decade 2006-2016.
- Leicester City is projected to experience net out-migration, which is counteracted by the increasing net contribution of natural change. Lincolnshire is projected to experience negative natural change alongside strong levels of migration.

5. Conclusions

Although the East Midlands has a relatively small population (4.4 million, or 8.6% of the total English population), it has experienced significant population growth in recent years. It is the only one of the northern or midlands regions to have experienced population growth in excess of the national average. However, the East Midlands remains one of the most sparsely populated regions in England, and much of this recent growth has been in more rural areas. The most densely populated areas of the region have experienced only modest rates of growth (Leicester, Nottingham and Derby).

In the future, the East Midlands is forecast to experience the fastest population growth of any English region. This growth is projected to be concentrated in the south and east of the region and in the more rural areas. The HMAs of West Northamptonshire, Central Lincolnshire, North Northamptonshire and Coastal Lincolnshire are projected to grow at particularly fast rates. Significant growth in rural areas to the south and east, and slower growth in the cities and the more urbanised north of the region suggests that the region's population could become increasingly dispersed if recent trends continue.

Although areas in Northamptonshire are projected to experience significant growth in their working age population, much of the growth in Lincolnshire and other more rural areas will be driven by the pensionable age group. This will have implications for economic activity, service provision, the type of dwellings required, and the kind of infrastructure required to support them. The age profile of the East Midlands is already slightly older than in England overall, but population projections suggest that this difference will become more significant over time.

However, it is important not to overstate the ageing population as a region-wide phenomenon. Strong growth in the working age population means that aged dependency will remain stable around the three cities and in the south of the region. Conversely, Leicester is projected to become younger over time, as high birth rates will contribute to the city being one of the few areas in England to experience a growing school age group. Population ageing is therefore a challenge that is likely to affect coastal Lincolnshire and parts of Derbyshire much more than the rest of the region.

In other parts of the region, the consequence of recent and forecast population changes is increased ethnic diversity. Overall, numbers of people who would categorise themselves as belonging to a BME group have grown faster than people who would categorise themselves as 'White'. Growth in the BME population has accounted for the largest share of overall population growth in some parts of the region, such as Leicester City. BME groups tend to have a much younger age profile than average, so this is associated with the increase in the school age group.

Migration has contributed to a more diverse and younger population in the East Midlands, and international migration has acted to slow population ageing in areas like Lincolnshire. However, with the exception of areas with

large student populations, such as Nottingham City and Broxtowe district, the scale of migration from other parts of the UK significantly outweighs the scale of international migration.

According to the most recent data, growth in migration appears to be levelling off. The final significant development observed in this chapter, therefore, has been the increasing contribution of natural change to overall population growth. As the region's birth rate increases, and the number of deaths falls year-on-year, natural change has accounted for an increasing share of population growth compared to migration, and is forecast to continue to do so. However, the two components cannot be separated, as migrants, being younger and thus more likely to start families, are a key driver of the increasing positive contribution of natural change.

In summary, recent population trends have seen the East Midlands become more dispersed and more diverse. Some of the areas that have experienced the largest population growth rates are more rural, and, in the case of coastal Lincolnshire, less well connected to the region's economic and administrative centres. These areas have also experienced the greatest growth in their pensionable age populations, whilst the working age has continued to grow in the better connected south and the three cities. The East Midlands has also undoubtedly been one of the fastest growing regions in England over the last 10 years, and if past trends continue, it will be the fastest growing region in future years.

Annex 1: Spatial definitions

There are a number of different spatial definitions used to describe trends in the size and nature of the population and housing in the region. All are based on existing administrative areas, to ensure availability of consistent and comparable data. At the highest geographical level, the nine English Government Office Regions will be used to compare trends in the East Midlands to trends elsewhere in England.

Within the East Midlands, the top level of sub-regional comparison will be the nine County and Unitary Authority areas. To identify more detailed spatial variations, key variables for the 36 Local Authority Districts (plus the 4 Unitary Authorities) will be illustrated on thematically shaded maps. In certain cases, broad comparisons will be made on an additional aggregation of Local Authority Districts and Unitary Authorities – the urban and rural district classification published by the Department for the Environment, Food and Rural Affairs (Defra).

The urban and rural district classification is one of two approaches for defining rurality recommended by Defra. In 2004, a classification was developed, based on Census Output Areas that identified settlement types and then measured how 'sparse' that area was, in terms of population density. This hierarchical 'settlement morphology' grouped Output Areas as urban or rural, then 'sparse' or 'less sparse', and then, for the rural OAs, into settlements such as 'small town and fringe', 'village', or 'dispersed'. Defra recommend the OA classification for measuring population (such as the proportion of population living in rural settlements), but recognise that it can only be used for data that is available at OA level – principally Census or administrative data (such as benefit claimants).²¹ For the purposes of comparisons over time and for use with sample surveys, Defra also commissioned a Local Authority District-based classification, which is used more widely in 'The East Midlands in 2010'. However, this second approach needs to be used with caution, as it classifies an entire district according to its dominant settlement type (so a 'Rural 80' district describes an area where at least 80% of the population live in rural areas – although up to 20% could live in settlements that could be described as 'urban').

In the district classification there are six urban/rural Local Authority (LA) Classifications:

Major Urban – which covers Local Authorities with either 100,000 people or 50% of their population living in urban settlements with a population greater than 750,000 (there are no Major Urban LAs in the East Midlands);

Large Urban – with either 50,000 people or 50% of population in urban settlements with between 250,000 and 750,000 people (there are 7 Large Urban LAs in the East Midlands);

²¹ See The Countryside Agency, Defra, ODPM, ONS, Welsh Assembly Government, 'Rural and Urban Area Classification 2004: An Introductory Guide', April 2005.

Other Urban – with less than 37,000 people or less than 26% of their population in rural settlements or market towns (there are 8 Other Urban LAs in the East Midlands);

Significant Rural – with more than 37,000 people or more than 26% of their population in rural settlements or market towns (there are 7 Significant Rural LAs in the East Midlands);

Rural-50 with at least 50% but less than 80% of their population in rural settlements and market towns (there are 8 Rural-50 LAs in the East Midlands), and;

Rural-80 – with at least 80% of their population in rural settlements and market towns (there are 10 Rural-80 LAs in the East Midlands).

A final level of geography covered in the Evidence Base is the Housing Market Areas (HMAs), which are: “geographical areas defined by household demand and preferences for housing. They reflect the key functional linkages between places where people live and work.”²² HMAs are aggregations of Unitary and Local Authority Districts used in the Regional Spatial Strategy (RSS). They cover an area containing the majority (70%) of all household moves and have a close relationship to sub-regional labour markets.²³ Table 1 and Map 1 show the LAs covered by each HMA.

²² Communities and Local Government, ‘*Identifying Sub-Regional Housing Market Areas Advice Note*’, 2007.

²³ DTZ Pieda Consulting, on behalf of the East Midlands Regional Assembly and the East Midlands Regional Housing Board, ‘*Identifying the Sub-Regional Housing Markets of the East Midlands*’, April 2005.

Table 1: East Midlands Regional Spatial Strategy Housing Market Areas (HMAs)

HMA	Local Authority Districts/Unitary Authorities
Central Lincolnshire	Lincoln
	North Kesteven
	West Lindsey
Coastal Lincolnshire	Boston
	East Lindsey
Derby	Derby
	Amber Valley
	South Derbyshire
Leicester & Leicestershire	Leicester
	Blaby
	Charnwood
	Harborough
	Hinckley and Bosworth
	Melton
	North West Leicestershire
	Oadby and Wigston
North Northamptonshire	Corby
	Kettering
	Wellingborough
	East Northamptonshire
Northern (Sheffield/Rotherham)	Bolsover
	Chesterfield
	North East Derbyshire
	Bassetlaw
Nottingham Core	Erewash
	Nottingham
	Broxtowe
	Gedling
	Rushcliffe
Nottingham Outer	Ashfield
	Mansfield
	Newark and Sherwood
Peak, Dales & Park	Derbyshire Dales
	High Peak (plus Peak District National Park Area)
Peterborough Partial	Rutland
	South Holland
	South Kesteven
Northampton (West Northamptonshire)	Northampton
	Daventry
	South Northamptonshire

Source: Intelligence East Midlands, on behalf of the East Midlands Regional Assembly, 'East Midlands Regional Plan – annual monitoring report 2006/7', 2008.

Map 1: The East Midlands Housing Market Areas (HMAs)

