Improvements in Estimating Migration

Intelligence Update 12-2012

Introduction

On 17th November 2011 the Office for National Statistics (ONS) as part of their Migration Statistics Improvement Programme (MSIP) released their improved methodology for producing local authority long-term migration estimates within England and Wales.

This *Update* presents a brief overview of the improved migration methodology adopted by the ONS in respect to its impact on migration and population estimates.

Migration Statistics Improvement Programme (MSIP)

An improved methodology for estimating local authority long-term migration was released by the ONS on 17th November 2011. Alongside this, the ONS also released new local authority immigration estimates and population estimates. These were labelled as indicative estimates by the ONS so as to not confuse them with other immigration and population estimates.

Key features of the new method are:

- **Elimination of central tendency:** addressing the issue of migrants not settling where they state on arrival.
- **Better data distribution:** using a range of data sources to distribute the data.
- **Differentiation between migrant types:** taking into account the difference between 'first-time' and 'returning' migrants and splitting migrants into categories.

The ONS states that the new method is better for the following reasons:

- **Improved transparency:** it is easier to see the relationship between the source data and the estimates.
- **Improved timeliness:** the new method relates to the current reference year whereas previously the method was based on three years of data.
- **Known bias removed:** for example, the Labour Force Survey (LFS) does not cover communal establishments.
- **Improved accuracy:** correlation with the Annual Population Survey (APS) data is better.

As a result of the change in methodology and the removal of the LFS, immigration figures for some areas have been revised upwards, in particular in London. There have also been downward revisions for some local authorities. The ONS has produced improved LTIM (Long-term International Migration) by local authority for the past five years from mid 2006 to mid 2010 which are not National Statistics and have thus been labelled as 'indicative' estimates.

Existing methodology

The ONS uses the IPS (International Passenger Survey) to estimate migration which is based on a migrant's intentions and where they plan to live. This is the only UK migration source which uses the UN definition of an international migrant that states that this is someone who changes their country of usual residence for at least 12 months. Use of the IPS for immigration has an inherent bias effect, 'centralising tendency', as migrants do not tend to settle in the centres that they state when they enter the country.

As the IPS sample size is small, other sources and methods are used to distribute the data to local authority level, such as the LFS. The LFS should therefore be a better source with regard to where migrants choose to settle. However, the LFS is based on a smaller sample size and misses out certain important migrant groups such as students.

Improvements to methodology: 2005-2007

The immigration estimation methodology was improved in 2007 to try to address the centralising tendency issue. This consisted of three main changes:

- Introduction of a new 'intermediate geography' – the 'new migrant geography for in-migrants' (NMGi) which is based on groups of local authorities within regions to replace an obsolete health geography. This would produce IPS totals that can be distributed to lower geographies.
- To better address where migrants settle on a regional basis, local authority immigration estimates were constrained to the LFS regional migration distributions.
- 2001 Census migration data was used to distribute immigration flows at a local authority level.

This method was applied in England and Wales to all migrants with the exception of London where the method for distributing students and non-students differed slightly. Students were distributed directly from regional level to local authority level whereas non-students were distributed from regional to intermediate (NGMi) level first.

Improvements to methodology: 2010

The improvements made previously were carried forward with the exception of using 2001 Census data to distribute data. This was replaced with a modelling approach which used more recent data sources. This was due to changes in immigration and settlement patterns since the 2001 Census and because the enlargement of the European Union has resulted in a large increase in in-migration.

The modelling approach looks at the relationship between "the area-level survey variable and the covariates" with the assumption that this will apply nationally so that estimates for all local authorities can be obtained.

This method was considered an improvement and was therefore implemented although some inconsistencies remained and these were to be revisited in the next phase of the MSIP.

Improvements to methodology: 2011

Further improvements to the immigration distributional methodology were made and applied to mid 2005-06 to mid 2009-10 IPS data. With this improved method, the local authority estimates are based on distributions and not administrative counts, and the method also takes into account the difference between 'first-time' migrants and 'returning migrants'. The improved methodology also allows data sources to be linked by date of birth, sex and postcode which permits further corroboration of the data.

The IPS totals are split into five categories: children; workers; students; over 60s; and others. These are sorted into first-time migrants and returning migrants (split by UK born and non-UK born).

A range of administrative sources are then used to distribute the IPS splits with the aim of matching the IPS flows as closely as possible with the administration sources. The sources used are:

- **Migrant Worker Scan (MWS)** provides a count of foreign nationals applying for a NINo;
- **Lifetime Labour Market database (L2)** is used to estimate the proportion of the NINo count who are long-term migrant workers;
- **HESA administrative data** is used for distributing publicly funded Higher Education student flows;
- **HESA survey data** is used to distribute private Higher Education flows;
- **Department of Business, Innovation and Skills (BIS)** and **Welsh Government (WG)** are administrative data sources used to distribute Further Education student flows;
- **2001 Census data** for distributing UK-born returning migrant flows;
- **National Asylum Support Service (NASS)** data to distribute asylum seeker flows identified in the IPS; and
- **Flag 4** data from the GP Patient Register Database, to distribute the remaining migrants.

Further details can be found in the Research Report released by ONS entitled 'Improved immigration estimates to local authorities in England and Wales: overview of methodology'. The ONS also released separate Research Reports detailing the methods used for distributing migrant workers, migrant students, returning migrants and other migrants.

Impacts of MSIP on immigration estimates

This section considers the impacts of the new immigration distributional methodology on the number of immigrants in London. As mentioned previously, the ONS has labelled any new estimates resulting from the change in methodology as 'indicative'.

Table 1 shows the impact of the new methodology and compares the current and indicative immigration estimates for England and London. Overall, immigration in England has been revised downwards by about 0.4 per cent with the opposite for London, where immigration has been revised upwards by 16 per cent.

The estimates in Tables 1 to 4 have been rounded to hundreds but percentages have been calculated from unrounded data.

Table 1: Impact of immigration improvements, England and London, 2006 to 2010

	Current immigration LTIM estimate	Indicative immigration LTIM estimate	Indicative revision	Percentage indicative revision
England	2,531,200	2,521,800	-9,400	-0.4
London	813,000	942,800	129,800	+16.0

Source: Table 2.1, 'Impact assessment of improved immigration estimates on local authorities in England and Wales', ONS

Some of the largest local authority upward indicative revisions to immigration in terms of absolute numbers are in London. Table 2 shows the top 20 rankings. Thirteen of the top 20 are London boroughs (these are denoted in Table 2 in italics).

Table 2: Top 20 local authority upward indicative revisions to immigration (absolute), cumulative 2006 to 2010

	Current immigration LTIM estimate	Indicative immigration LTIM estimate	Indicative revision	Percentage indicative revision
Newham	*33,200*	*67,100*	*33,800*	*102*
Brent	*33,400*	*51,100*	*17,700*	*53*
Haringey	*22,200*	*38,500*	*16,300*	*73*
Islington	*27,700*	*38,400*	*10,600*	*38*
Tower Hamlets	*36,800*	*47,100*	*10,300*	*28*
Enfield	*13,900*	*22,300*	*8,400*	*60*
Waltham Forest	*24,800*	*32,000*	*7,200*	*29*
Coventry	26,200	33,000	6,800	26
Hounslow	*32,900*	*38,900*	*6,000*	*18*
Boston	2,300	7,500	5,100	218
Hackney	*18,100*	*23,000*	*4,900*	*27*
Sandwell	6,100	10,700	4,500	74
Southwark	*39,300*	*43,400*	*4,200*	*11*
Hillingdon	*16,300*	*20,400*	*4,100*	*25*
Aylesbury Vale	3,900	8,100	4,100	104
Guildford	11,800	15,700	3,900	33
Lewisham	*19,800*	*23,700*	*3,900*	*20*
Barnet	*31,500*	*35,300*	*3,700*	*12*
Bolton	4,600	8,200	3,700	81
County of Herefordshire	3,400	7,000	3,600	108

Source: Table 3.1, 'Impact assessment of improved immigration estimates on local authorities in England and Wales', ONS

In terms of downward indicative revisions, Table 3 shows that there are only two London boroughs in the top 20 (absolute numbers) – denoted by italics.

Table 3: Top 20 local authority downward indicative revisions to immigration (absolute), cumulative 2006 to 2010

	Current immigration LTIM estimate	Indicative immigration LTIM estimate	Indicative revision	Percentage indicative revision
Manchester	85,200	55,300	-29,900	-35
Cambridge	41,500	20,400	-21,100	-51
Leeds	59,700	42,200	-17,500	-29
City of Bristol	42,300	27,300	-14,900	-35
Sheffield	45,300	31,800	-13,600	-30
Norwich	22,900	10,900	-12,200	-52
Oxford	38,700	28,000	-10,700	-28
Westminster	*60,400*	*50,300*	*-10,200*	*-28*
Reading	27,100	17,100	-10,000	-37
Newcastle upon Tyne	39,300	30,300	-9,100	-23
Kensington and Chelsea	*35,400*	*27,600*	*-7,700*	*-22*
Bradford	31,700	24,300	-7,400	-23
Leicester	34,600	27,700	-7,000	-20
Portsmouth	18,500	11,800	-6,700	-36
Colchester	17,700	11,000	-6,700	-38
Nottingham	35,700	29,600	-6,100	-17
Southampton	29,200	23,200	-6,000	-21
York	16,100	10,600	-5,500	-34
Durham	12,100	6,600	-5,500	-45
Kingston upon Hull	17,700	12,500	-5,200	-29

Source: Table 3.3, 'Impact assessment of improved immigration estimates on local authorities in England and Wales', ONS

Overall, 15 out of 33 London boroughs have their revised immigration estimates in the top 20 local authority upward or downward revisions. Taking only these 15 boroughs into account, results in an overall increase of 113.2 thousand immigrants.

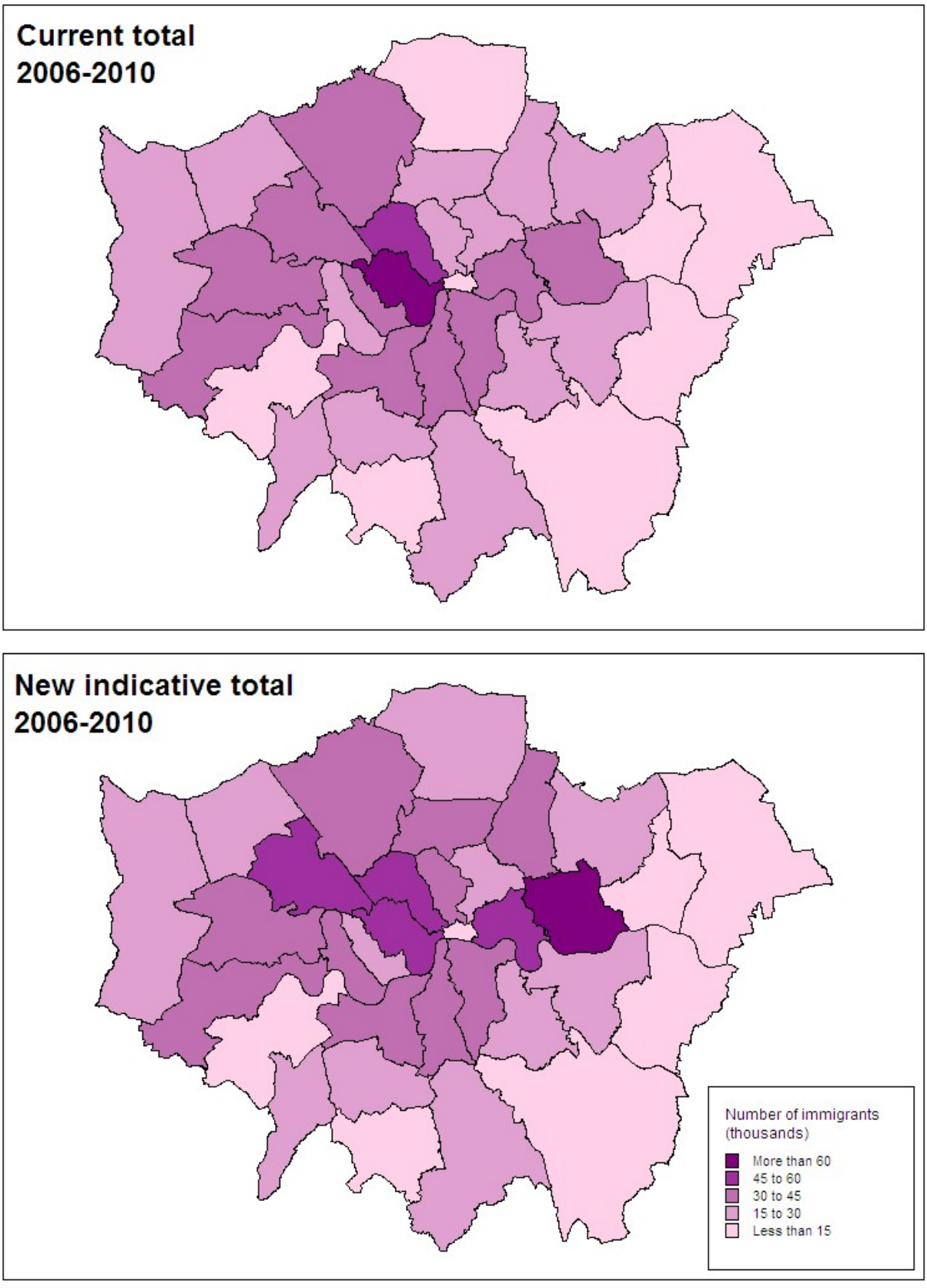
Table 4 gives the cumulative indicative immigration revisions for all London boroughs from 2006 to 2010. Figures 1 and 2 show this information (using non-rounded data) in map form.

Table 4: Indicative revisions to immigration (absolute), all London boroughs, cumulative 2006 to 2010

	Current immigration LTIM estimate	Indicative immigration LTIM estimate	Indicative revision	Percentage indicative revision
Camden	52,700	50,200	-2,400	-5
City of London	4,300	2,700	-1,600	-38
Hackney	18,100	23,000	4,900	27
Hammersmith and Fulham	27,800	30,900	3,100	11
Haringey	22,200	38,500	16,300	73
Islington	27,700	38,400	10,600	38
Kensington and Chelsea	35,400	27,600	-7,700	-22
Lambeth	32,900	36,100	3,100	9
Lewisham	19,800	23,700	3,900	20
Newham	33,200	67,100	33,800	102
Southwark	39,300	43,400	4,200	11
Tower Hamlets	36,800	47,100	10,300	28
Wandsworth	36,500	37,900	1,500	4
Westminster	60,400	50,300	-10,200	-17
Barking and Dagenham	11,400	14,700	3,300	29
Barnet	31,500	35,300	3,700	12
Bexley	4,600	6,000	1,400	30
Brent	33,400	51,100	17,700	53
Bromley	6,900	8,700	1,700	25
Croydon	21,800	22,400	600	3
Ealing	44,100	44,800	700	2
Enfield	13,900	22,300	8,400	60
Greenwich	20,800	23,800	3,000	14
Harrow	19,300	20,500	1,200	6
Havering	4,500	4,200	-200	-6
Hillingdon	16,300	20,400	4,100	25
Hounslow	32,900	38,900	6,000	18
Kingston upon Thames	16,000	17,000	900	5
Merton	25,600	24,200	-1,400	-5
Redbridge	19,200	20,500	1,200	6
Richmond upon Thames	12,900	13,000	0	0
Sutton	5,700	6,400	700	12
Waltham Forest	24,800	32,000	7,200	29

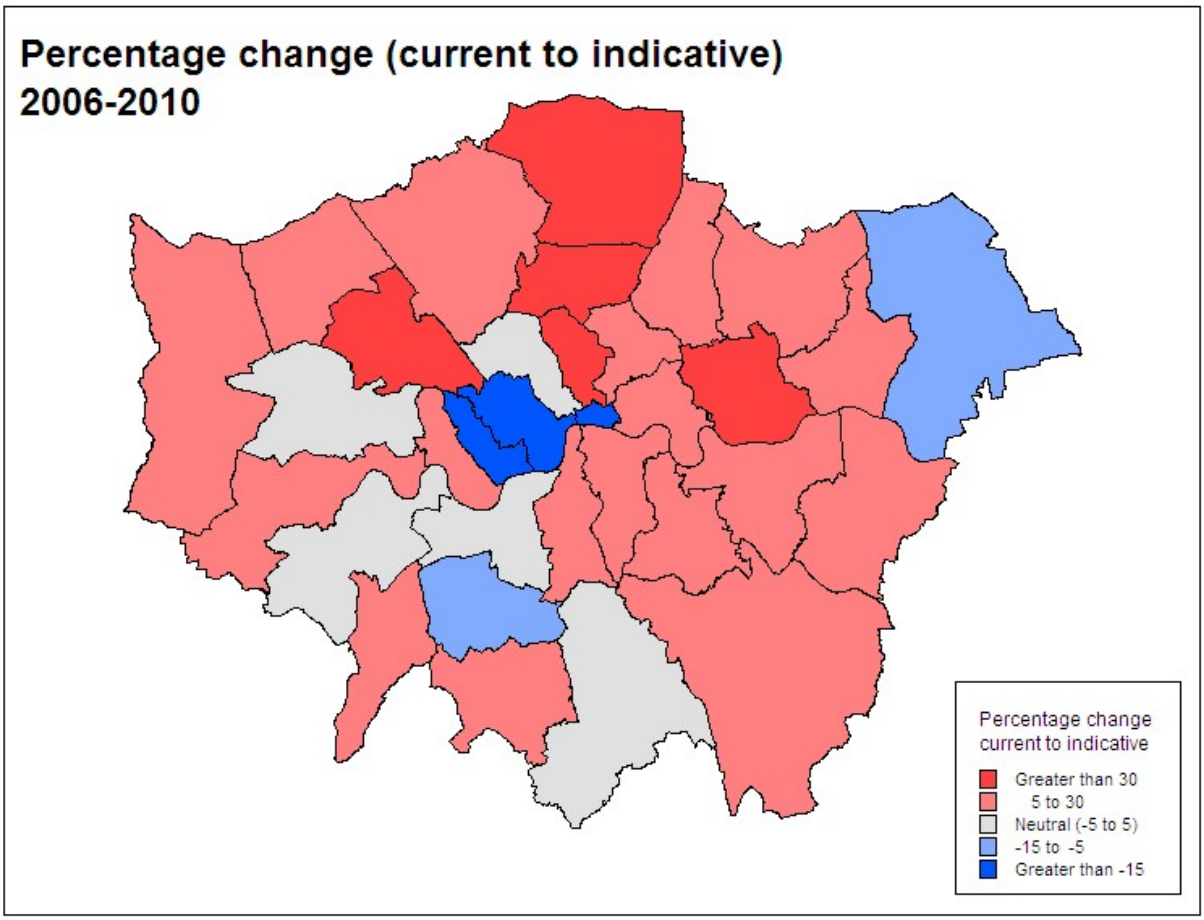
Source: Table A, 'Indicative Local Authority Immigration Impacts by Year (mid-2006 to mid-2010)', ONS

Figure 1: Current and indicative immigration estimates, all London boroughs, 2006 to 2010



Source: Table A, 'Indicative Local Authority Immigration Impacts by Year (mid-2006 to mid-2010)', ONS

Figure 2: Percentage change (current to indicative) immigration estimates, all London boroughs, 2006 to 2010



Source: Table A, 'Indicative Local Authority Immigration Impacts by Year (mid-2006 to mid-2010)', ONS

MSIP Indicative Migration Estimates

Indicative migration estimates have been split according to broad stream. The broad streams used by the ONS are:

- **Workers:** all non-UK born migrants to the UK including non-UK born returning migrants.
- **Students:** all non-UK born migrants to the UK including non-UK born returning migrants.
- **UK born returning migrants:** those born in the UK who have been resident outside of the UK and are now returning to live in the UK.
- **Asylum seekers:** based on existing asylum seeker adjustments.
- **Others:** children, those over 60 years of age and other non-working dependents.

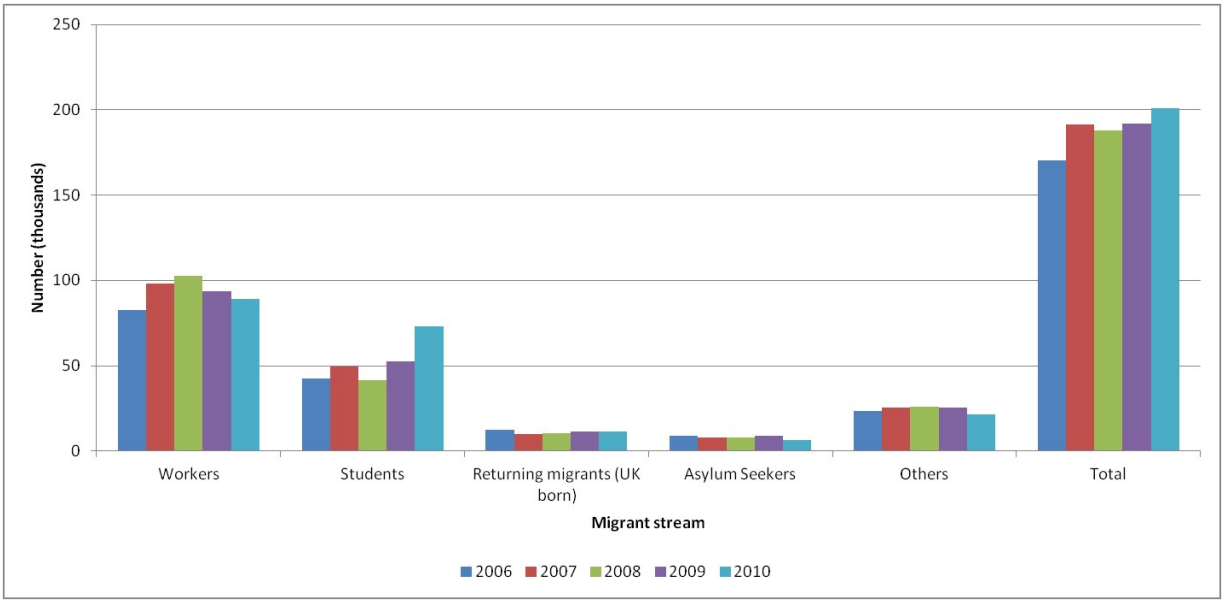
Indicative migration estimates have been released at a local authority basis for 2006 to 2010 split by the broad streams. Chart 1 for London shows that the total number of immigrants has risen from just over 170 thousand in 2006 to over 201 thousand in 2010. Workers make up nearly half of all immigrants to London (an average of 49 per cent over the five years) with worker numbers peaking in 2008 at over 102 thousand from nearly 83 thousand in 2006 but since falling to just under 90 thousand in 2010.

Student numbers however have been showing a rising trend from just over 42 thousand in 2006 (25 per cent of all immigrants) to over 73 thousand in 2010 (36 per cent of all immigrants). The number of returning migrants has remained relatively stable at around 11 thousand per year with a slight drop in 2007 to less than ten thousand.

The indicative migration estimates for London also shows that the number of asylum seekers has remained at around 8.5 thousand per year between 2006 and 2009 before dropping to just over six thousand in 2010.

Overall, the data shows that the number of workers has fallen since 2008 but that there has been a rise in student numbers which overall has contributed to the steady growth in migrants to London.

Chart 1: Immigration estimates by broad stream, London, mid-2006 to mid-2010

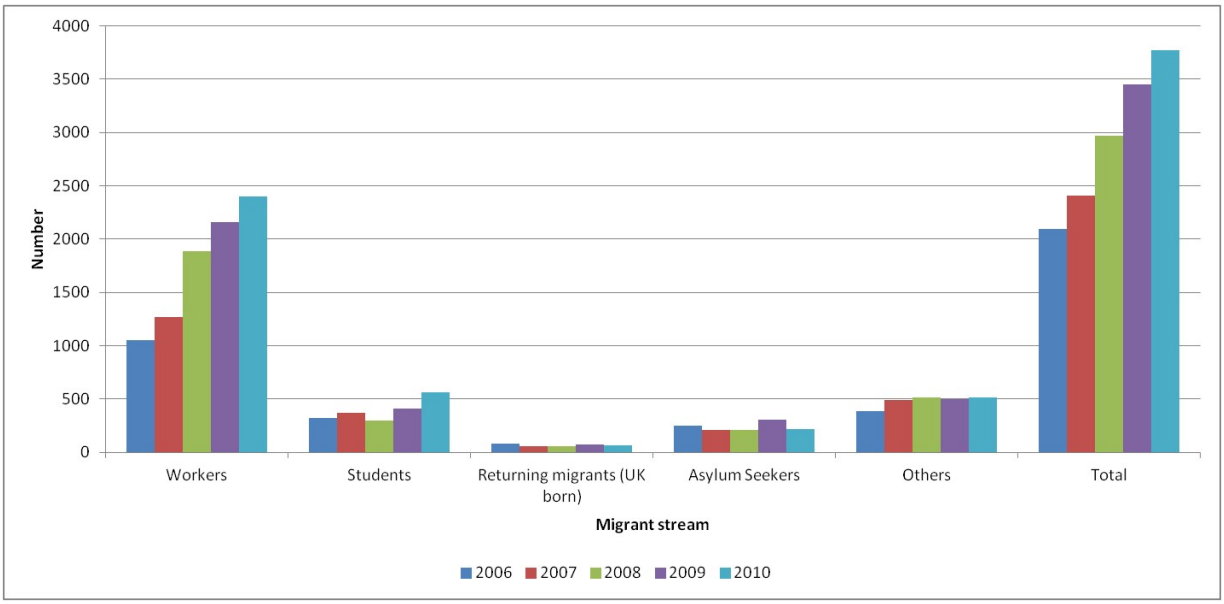


Source: Table D: Analysis of indicative immigration estimate by broad stream (mid-2006 to mid-2010), ONS.

At the local authority level there are differences in terms of the contribution of each of the broad streams towards the total immigration make-up for the area with some trends being apparent.

Barking and Dagenham, for example has seen a considerable increase in the amount of immigration over the five years from just over two thousand in 2006 to nearly four thousand by 2010 (Chart 2). The number of workers has also more than doubled from just over one thousand to 2.4 thousand in the five years. Workers in Barking and Dagenham make up the majority of immigrants to the borough.

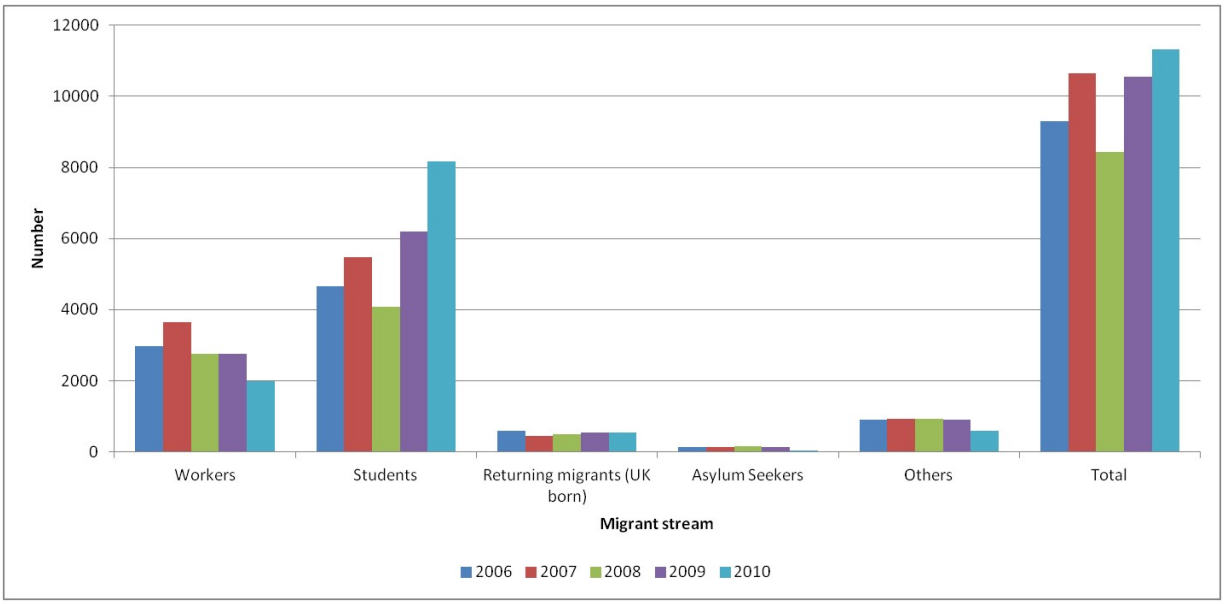
Chart 2: Immigration estimates by broad stream, Barking and Dagenham, mid-2006 to mid-2010



Source: Table D: Analysis of indicative immigration estimate by broad stream (mid-2006 to mid-2010), ONS.

As a contrast, the number of student migrants in Camden in 2010 account for over 80 per cent of all immigrants to the borough (Chart 3). Overall, the number of migrants in Camden has risen by some two thousand over the five years whereas the number of students has nearly doubled from just under 4.7 thousand to nearly 8.2 thousand and now contribute the most to the overall number of immigrants (72 per cent of all immigrants).

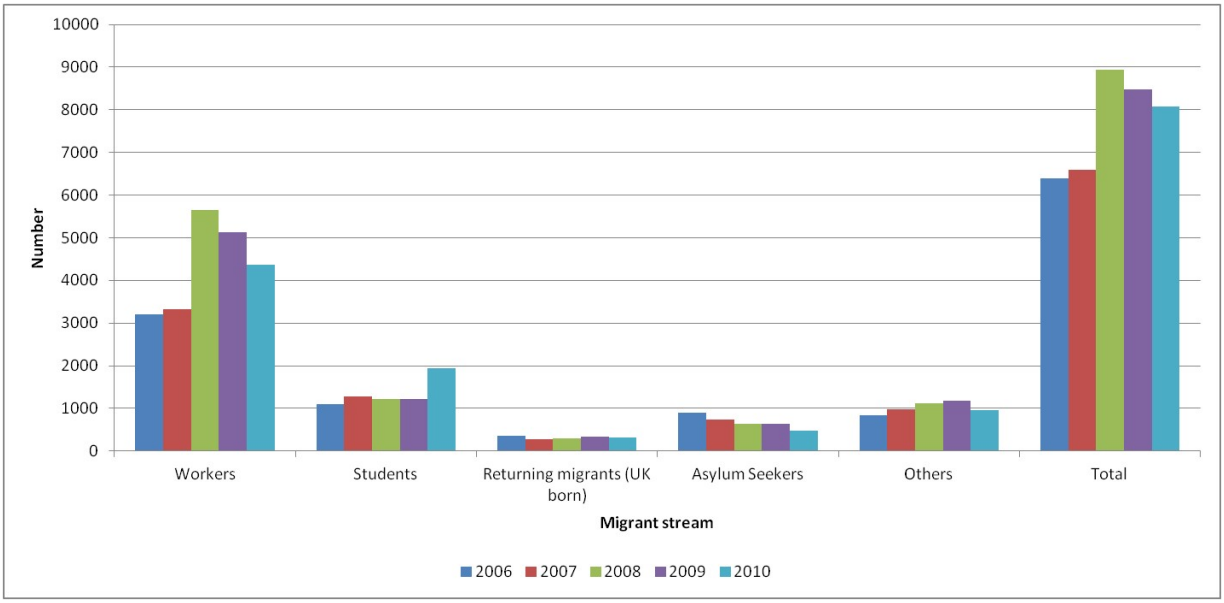
Chart 3: Immigration estimates by broad stream, Camden, mid-2006 to mid-2010



Source: Table D: Analysis of indicative immigration estimate by broad stream (mid-2006 to mid-2010), ONS.

In Haringey, overall immigration remained relatively constant during 2006 and 2007 before rising by about 1.5 thousand to just under nine thousand in 2008 (Chart 4). Since then the number of migrants has been declining steadily and in 2010 was about 8 thousand. This trend mirrors that of worker immigrant numbers to the borough. Student numbers nearly doubled in 2010 after remaining constant at around one thousand for the previous four years.

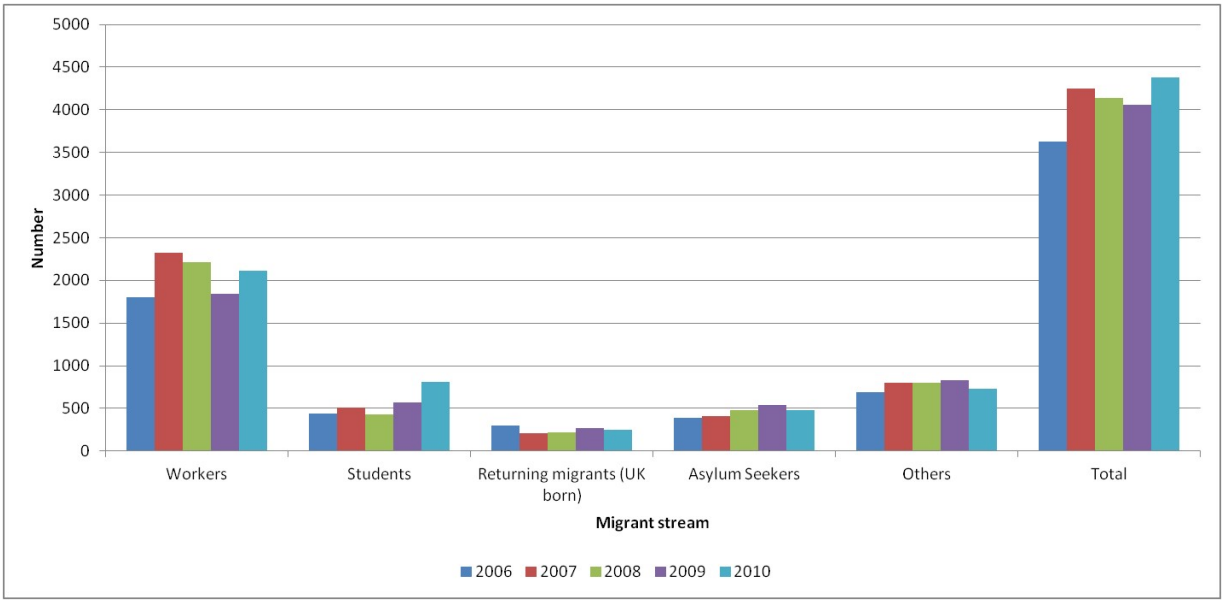
Chart 4: Immigration estimates by broad stream, Haringey, mid-2006 to mid-2010



Source: Table D: Analysis of indicative immigration estimate by broad stream (mid-2006 to mid-2010), ONS.

For other boroughs, there is a more even distribution between the different broad streams. Chart 5 shows that Redbridge has similar numbers of students, returning migrants, asylum seekers and others with between about 200 and 800 migrants per stream. However, workers still contribute around half of the overall number of immigrants to the borough (49 per cent in 2010).

Chart 5: Immigration estimates by broad stream, Redbridge, mid-2006 to mid-2010



Source: Table D: Analysis of indicative immigration estimate by broad stream (mid-2006 to mid-2010), ONS.

These examples highlight some of the trends in the composition of immigrants in London by borough. Generally, workers make up the majority of immigrants although there has been a significant increase in the number of students in many boroughs in 2010.

Appendix A shows the immigration estimates by broad stream for all London boroughs for the years mid-2006 to mid-2010.

Impacts of MSIP on mid-year population estimates

These immigration figures were used to produce revised mid-year population estimates. Other population components have also been revised as a result.

As with immigration, the ONS has released tables on the top local authorities for upward indicative revisions in population estimates. Table 5 shows that there are 10 London boroughs in the top 20 (identified by italics). Newham has seen the biggest increase at 32,000 people when comparing the 2005 mid-year population with the indicative revision for mid-2010. However, prior to the release of the indicative mid-year population for 2010, the 2010 mid-year population for Newham showed a fall of 1.3 per cent when compared to the 2005 mid-year population.

In terms of percentage increase, Tower Hamlets saw the biggest rise with a 16.2 per cent increase from the 2005 mid-year population to the indicative mid-2010 revision. The population was however also projected to increase by 11.1 per cent when using the 2010 mid-year population figures.

The revisions in Tables 5 and 6 have been rounded to hundreds but percentages have been calculated from unrounded data.

Table 5: Top 20 upward indicative revisions to the 2010 mid-year population estimates

	2010 mid-year population		Indicative revision mid-2010	Indicative revision mid-2010 (%)	2005 mid-year population	Population change 2005 to 2010 (%)	
	Published	Indicative				Published	Indicative
Newham	*240,100*	*272,100*	*32,000*	*13.3*	*243,300*	*-1.3*	*11.8*
Boston	59,000	63,900	4,900	8.2	58,800	0.4	8.7
Haringey	*225,000*	*238,900*	*13,900*	*6.2*	*224,400*	*0.3*	*6.5*
Brent	*256,600*	*272,400*	*15,800*	*6.2*	*257,600*	*-0.4*	*5.7*
Tower Hamlets	*237,900*	*248,700*	*10,800*	*4.5*	*214,100*	*11.1*	*16.2*
Islington	*194,100*	*202,200*	*8,100*	*4.2*	*184,600*	*5.1*	*9.5*
South Holland	84,600	87,400	2,900	3.4	81,800	3.4	6.9
Corby	55,800	57,600	1,800	3.2	53,500	4.3	7.6
Fenland	91,900	94,500	2,500	2.8	89,000	3.3	6.2
Waltham Forest	*227,100*	*233,300*	*6,100*	*2.7*	*218,700*	*3.8*	*6.6*
Enfield	*294,900*	*302,600*	*7,700*	*2.6*	*283,400*	*4.1*	*6.8*
Lancaster	141,100	144,200	3,100	2.2	139,900	0.8	3.0
Hounslow	*236,800*	*241,900*	*5,100*	*2.2*	*221,500*	*6.9*	*9.2*
Barking and Dagenham	*179,700*	*183,300*	*3,500*	*2.0*	*167,000*	*7.6*	*9.7*
Hackney	*219,200*	*223,500*	*4,300*	*2.0*	*208,600*	*5.1*	*7.1*
Herefordshire UA	179,300	182,800	3,500	1.9	177,000	1.3	3.3
Wrexham UA	133,600	136,100	2,600	1.9	130,100	2.7	4.7
Mid Bedfordshire	136,500	139,100	2,600	1.9	129,400	5.5	7.5
Coventry	315,700	321,700	6,000	1.9	303,500	4.0	6.0
Guildford	137,100	139,500	2,500	1.8	130,400	5.1	7.0

Source: Table 7.2, 'Impact assessment of improved immigration estimates on local authorities in England and Wales', ONS

Table 6 shows the top 20 downward revisions in terms of population. There are three London boroughs in the top 20 (shown in italics). Even though the population in both the City of London and Westminster was projected to rise over the five years, the indicative mid-2010 figures showed a fall in the population by 1 thousand for the City of London and 12 thousand for Westminster.

Kensington and Chelsea's population was revised downwards and was expected to fall for both the 2010 mid-year population (to 169.5 thousand) and indicative revision for mid-2010 (to 163.4

thousand), it was projected to be lower than was the case for the 2005 mid-year population (169.6 thousand).

Table 6: Top 20 downward indicative revisions to the 2010 mid-year population estimates

	2010 mid-year population		Indicative revision mid-2010	Indicative revision mid-2010 (%)	2005 mid-year population	Population change 2005 to 2010 (%)	
	Published	Indicative				Published	Indicative
Cambridge	125,700	105,500	-20,200	-16.0	110,700	13.5	-4.7
City of London	*11,700*	*10,700*	*-1,000*	*-8.6*	*8,700*	*35.0*	*23.4*
Norwich	143,500	132,200	-11,300	-7.9	126,600	13.3	4.4
Isles of Scilly	2,100	1,900	-200	-7.7	2,100	0.5	-7.3
Oxford	153,700	143,400	-10,300	-6.7	144,000	6.7	-0.5
Reading UA	154,200	144,300	-9,900	-6.4	142,700	8.1	1.1
Manchester	498,800	470,200	-28,500	-5.7	447,000	11.6	5.2
Richmondshire	53,000	50,200	-2,800	-5.2	49,300	7.5	1.8
Durham	97,900	93,000	-5,000	-5.1	88,100	11.1	5.5
Watford	86,000	81,900	-4,100	-4.7	79,300	8.4	3.3
Westminster	*253,100*	*241,100*	*-12,000*	*-4.7*	*234,200*	*8.1*	*3.0*
Forest Heath	64,300	61,400	-2,900	-4.5	59,600	7.9	3.0
Colchester	181,000	174,400	-6,600	-3.7	162,900	11.1	7.0
Kensington and Chelsea	*169,500*	*163,400*	*-6,100*	*-3.6*	*169,600*	*-0.1*	*-3.7*
City of Bristol	441,300	426,300	-15,000	-3.4	408,000	8.2	4.5
Newcastle upon Tyne	292,200	282,900	-9,300	-3.2	272,600	7.2	3.8
Rushmoor	92,000	89,200	-2,800	-3.0	88,000	4.5	1.3
Brentwood	74,800	72,600	-2,200	-2.9	70,200	6.5	3.4
Portsmouth UA	207,100	201,300	-5,800	-2.8	195,800	5.8	2.8
York UA	202,400	197,000	-5,500	-2.7	189,200	7.0	4.1

Source: Table 7.3, 'Impact assessment of improved immigration estimates on local authorities in England and Wales', ONS

Table 7 gives the indicative revisions to the 2010 mid-year population estimates for all London boroughs.

Table 7: Indicative revisions to the 2010 mid-year population estimates, all London boroughs

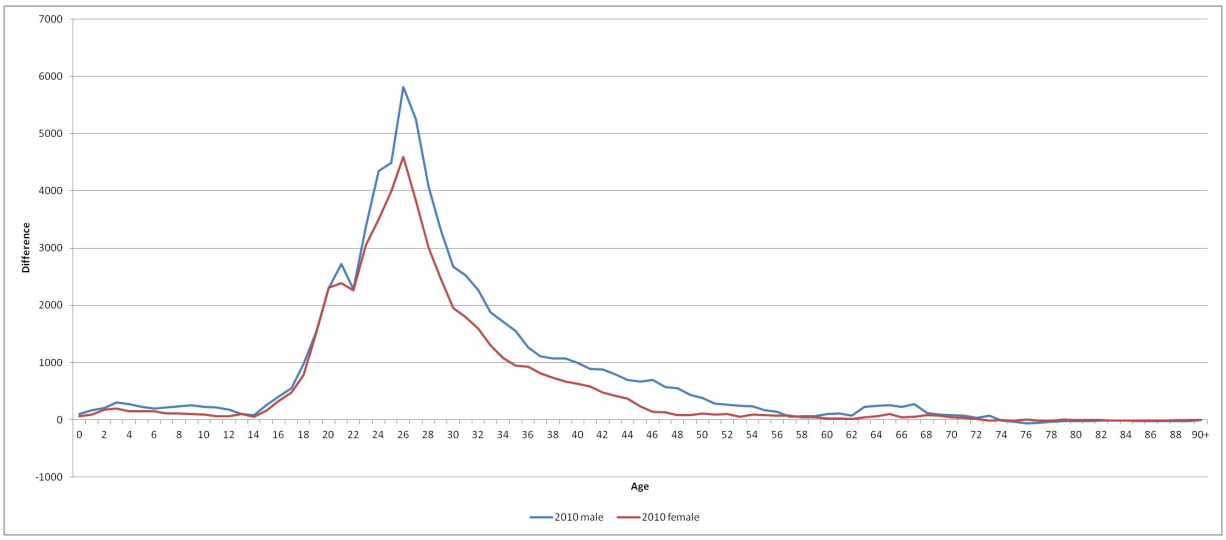
	2010 mid-year population		Indicative revision mid-2010	Indicative revision mid-2010 (%)
	Published	Indicative		
Camden	235,400	231,400	-4,000	-1.7
City of London	11,700	10,700	-1,000	-8.6
Hackney	219,200	223,500	4,300	2.0
Hammersmith and Fulham	169,700	170,900	1,200	0.7
Haringey	225,000	238,900	13,900	6.2
Islington	194,100	202,200	8,100	4.2
Kensington and Chelsea	169,500	163,400	-6,100	-3.6
Lambeth	284,500	288,700	4,200	1.5
Lewisham	266,500	270,600	4,100	1.5
Newham	240,100	272,100	32,000	13.3
Southwark	287,000	292,100	5,100	1.8
Tower Hamlets	237,900	248,700	10,800	4.5
Wandsworth	289,600	291,000	1,400	0.5
Westminster	253,100	241,100	-12,000	-4.7
Barking and Dagenham	179,700	183,300	3,500	2.0
Barnet	348,200	352,500	4,300	1.2
Bexley	228,000	229,700	1,700	0.8
Brent	256,600	272,400	15,800	6.2
Bromley	312,400	314,670	2,300	0.7
Croydon	345,600	347,000	1,400	0.4
Ealing	318,500	319,800	1,300	0.4
Enfield	294,900	302,600	7,700	2.6
Greenwich	228,500	231,100	2,600	1.1
Harrow	230,100	231,600	1,500	0.7
Havering	236,100	236,500	300	0.1
Hillingdon	266,100	269,800	3,600	1.4
Hounslow	236,800	241,900	5,100	2.2
Kingston upon Thames	169,000	170,600	1,700	1.0
Merton	208,900	208,800	0	0
Redbridge	270,500	272,700	2,200	0.8
Richmond upon Thames	190,900	191,500	600	0.3
Sutton	194,200	195,500	1,300	0.7
Waltham Forest	227,100	233,300	6,100	2.7

Source: Table H, 'Mid-2006 to Mid-2010 indicative population estimates: local authorities in England and Wales; total impact of indicative estimates', ONS

Impact on age structure

Chart 6 shows the difference between the indicative revision for mid-2010 and the 2010 mid-year population by single year of age split by gender for London. A positive difference signifies that the indicative revision is higher whereas a negative difference shows that the 2010 mid-year population figures are higher.

Chart 6: Difference between the indicative revision for mid-2010 and the 2010 mid-year population figures, single year of age by gender, London



Sources: Mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age and mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population, ONS

For London as a whole, the indicative figures mostly give a higher population than the 2010 mid-year figures. The only exceptions are for those over the age of 74 but these numbers are negligible. The largest differences are for 26 year old males and 27 year old females where the indicative figures are higher by nearly six thousand and five thousand people respectively. The pattern in the differences between the data are the same for both genders although are more pronounced for males.

Between the boroughs there are three main patterns that emerge. These are

- **Single peak:** 2010 mid-year figures are higher;
- **Single peak:** indicative revisions are higher; or
- **Double peak:** 2010 mid-year figures are higher for one age group with indicative revisions being higher for another.

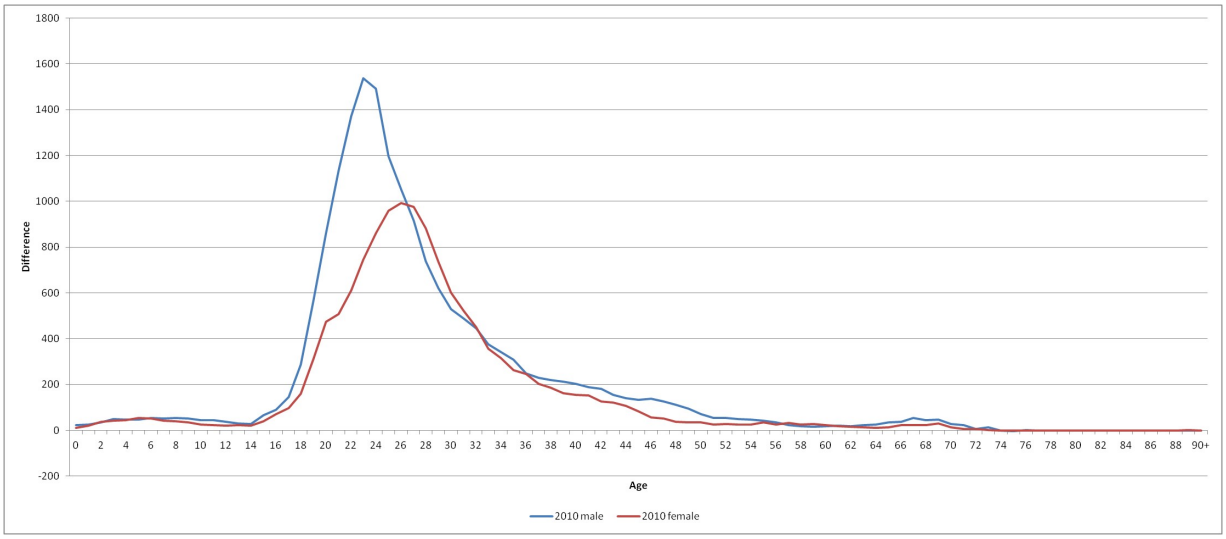
Comparing the indicative revisions with the corresponding year's mid-year population figures for each borough shows that there are differences. These patterns are described below with respect to Newham, Westminster and Wandsworth. Charts (split by gender) comparing the difference by single year of age for each year can be found for London and the three boroughs in Appendix C.

Newham's population has been revised upwards by 32 thousand and for the majority of ages the indicative figures are higher than the 2010 mid-year figures (Chart 7). The exceptions to this are

those over the age of about 74 where the two figures mostly match. The largest difference is for males aged 23 where there are about 1.5 thousand more males using the indicative figures.

Between the ages of 18 and 40, there are between 200 and 1.5 thousand more males using the indicative revisions per single year of age. The number of females is also higher and follows a similar pattern as for males but is less pronounced. At its peak (age 27), there are nearly 1 thousand more females using the indicative revisions than the 2010-mid year figures. For children aged 0-15, there are about 40 more children per single year of age per gender with the indicative revisions.

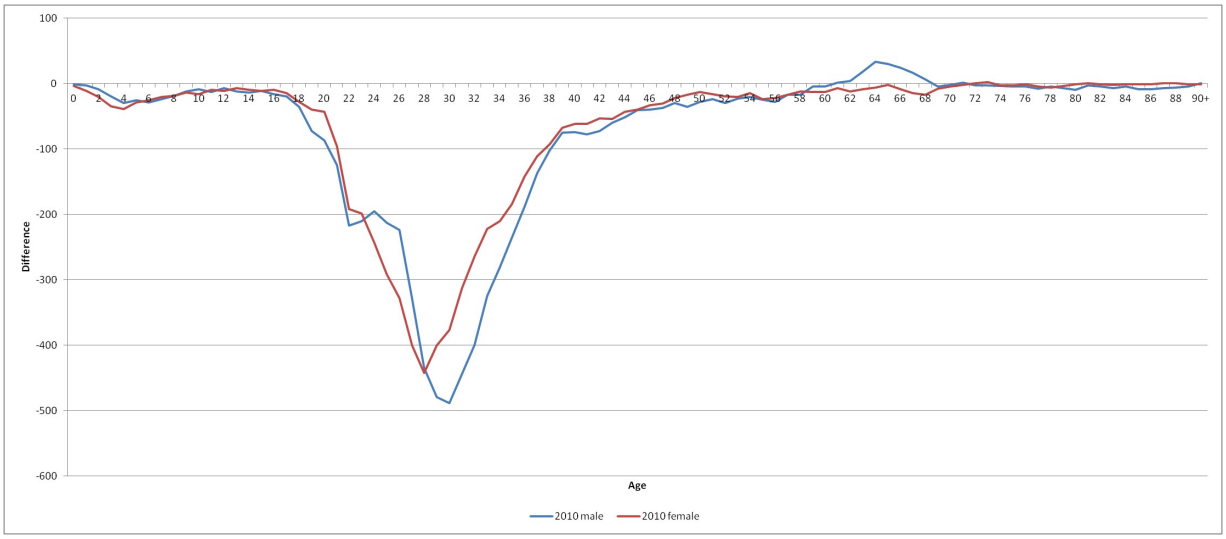
Chart 7: Difference between the indicative revision for mid-2010 and the 2010 mid-year population figures, Newham, single year of age by gender



Sources: Mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age and mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population, ONS

Chart 8 shows that Westminster is one of the top 20 local authorities where the indicative figures have resulted in the population being revised down when compared to the 2010 mid-year figures. With the exception of males aged roughly 61-68, the 2010 mid-year estimates are higher than the indicative revisions. The biggest difference is for 30 year old males which are nearly 500 people higher using the 2010 mid-year figures than the indicative estimates. Between the ages of 21 and 38, the number of males is between 100 and nearly 500 people higher using the 2010 mid-year estimates per single year of age. Females follow a similar pattern to males although they peak earlier at 29 years and a lower value (about 440).

Chart 8: Difference between the indicative revision for mid-2010 and the 2010 mid-year population figures, Westminster, single year of age by gender

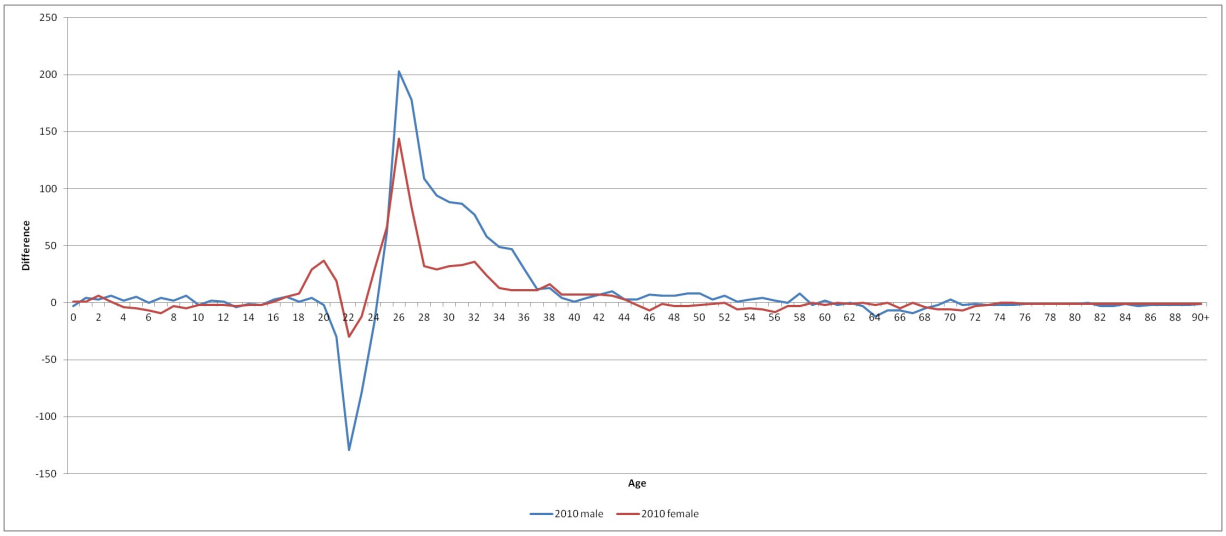


Sources: Mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age and mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population, ONS

For Wandsworth (Chart 9), a double peak pattern is apparent with the 2010 mid-year figures being higher for those in their early twenties but the indicative revisions being higher for those in their mid to late twenties. For all other ages, the two sources of data are roughly equal with negligible differences of not more than about ten people either way. The 2010 mid-year figures are higher than the indicative revisions for males aged between about 20 and 24 years and peak at males aged 22 at nearly 130 people higher. The pattern for females is less pronounced with the 2010 mid-year figures being higher only for those aged between 23 and 24 years (peaking at 30 people higher).

Between the ages of 25 and 33, the numbers of males are about 50 people higher when using the indicative revisions. At the age of 30, the difference peaks with about 200 more males using the indicative revisions. Females follow a similar pattern although they peak at the age of 29 with about 140 more females.

Chart 9: Difference between the indicative revision for mid-2010 and the 2010 mid-year population figures, Wandsworth, single year of age by gender



Sources: Mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age and mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population

Appendix B shows the difference between the indicative revisions and the mid-year population figures by single year of age for all London boroughs for mid-year 2006 and mid-year 2010.

For the three boroughs, the charts in Appendix C show that generally the differences between the two sets of data are more pronounced for males than females. These differences for both genders have increased each year and have also expanded to encompass a larger age group.

Conclusions

This *Update* has provided a summary of the improvements to the immigration distributional methodology as part of the MSIP and the impacts of this on the estimated number of migrants and people between 2006 and 2010.

With the changes to the immigration distributional methodology, local authority estimates are based on distributions and not administrative counts. These changes have been applied to mid-year 2005-06 to mid-year 2009-10 IPS data impacting on both immigration and population estimates.

The results of the indicative migration estimates show that 13 London boroughs are in the top 20 local authorities with upwards revisions. The number of immigrants therefore estimated to be in London has risen by 129.8 thousand.

Immigration estimates have been split into five broad streams: workers; students; UK born returning migrants; asylum seekers; and others. The indicative migration estimates released for London and its boroughs generally indicate that workers contribute the most to the number of immigrants. However, there has been an increase in 2010 in several boroughs in the number of student immigrants.

There are differences between the indicative population estimates and the 2010 mid-year figures which vary by age by gender for each borough. Generally, on a borough basis three main patterns emerge. These are:

- **Single peak:** 2010 mid-year figures are higher;
- **Single peak:** indicative revisions are higher; or
- **Double peak:** 2010 mid-year figures are higher for one age group with indicative revisions being higher for another.

The differences for males are generally more pronounced than for females with the largest differences occurring between the ages of 18 and 40.

Appendix A: Immigration estimates by broad stream for all London boroughs mid-2006 to mid-2010

Source: Table D: Analysis of indicative immigration estimates by broad stream (mid-2006 to mid-2010), ONS

Chart A1: Immigration estimates by broad stream, Camden, mid-2006 to mid-2010

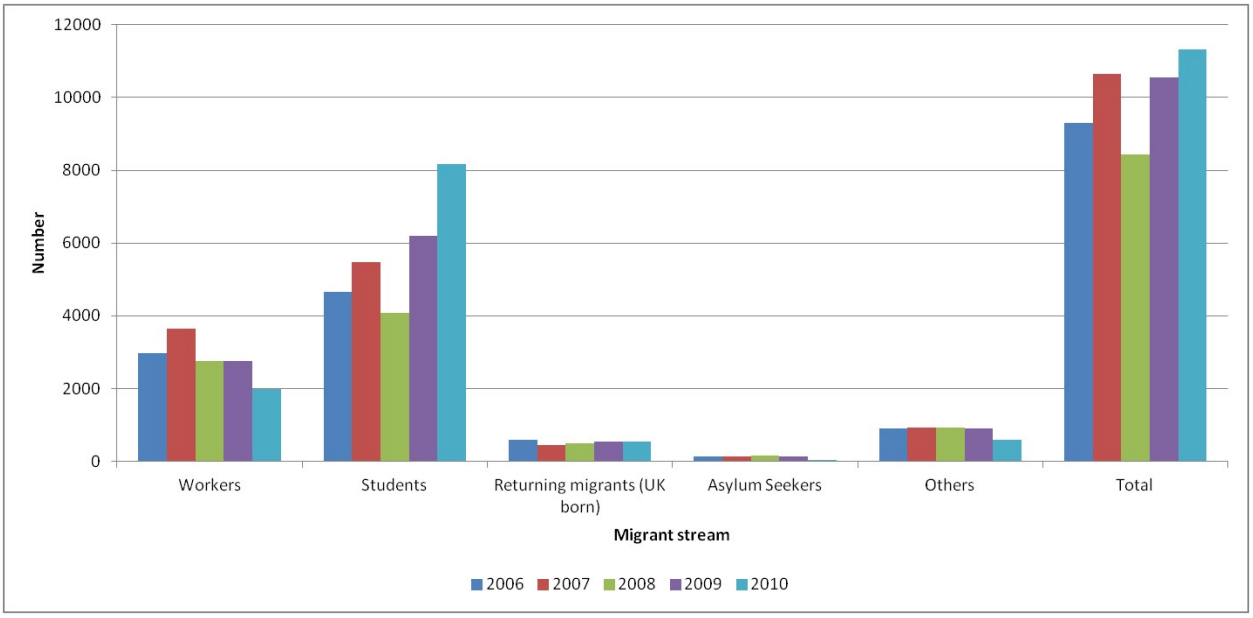


Chart A2: Immigration estimates by broad stream, City of London, mid-2006 to mid-2010

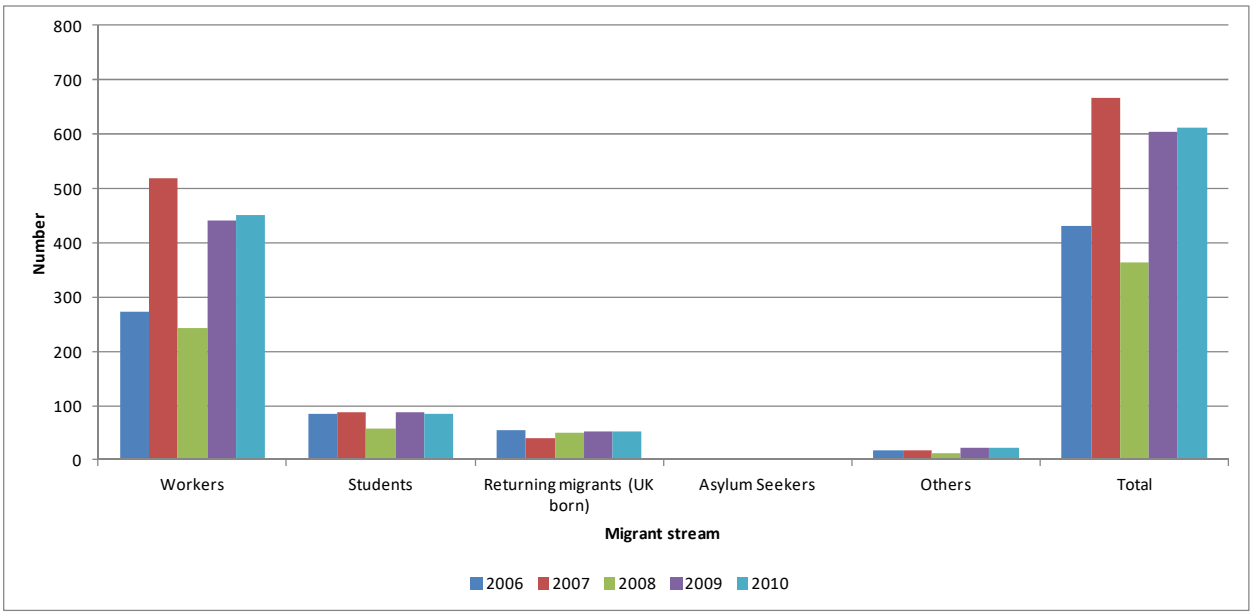


Chart A3: Immigration estimates by broad stream, Hackney, mid-2006 to mid-2010

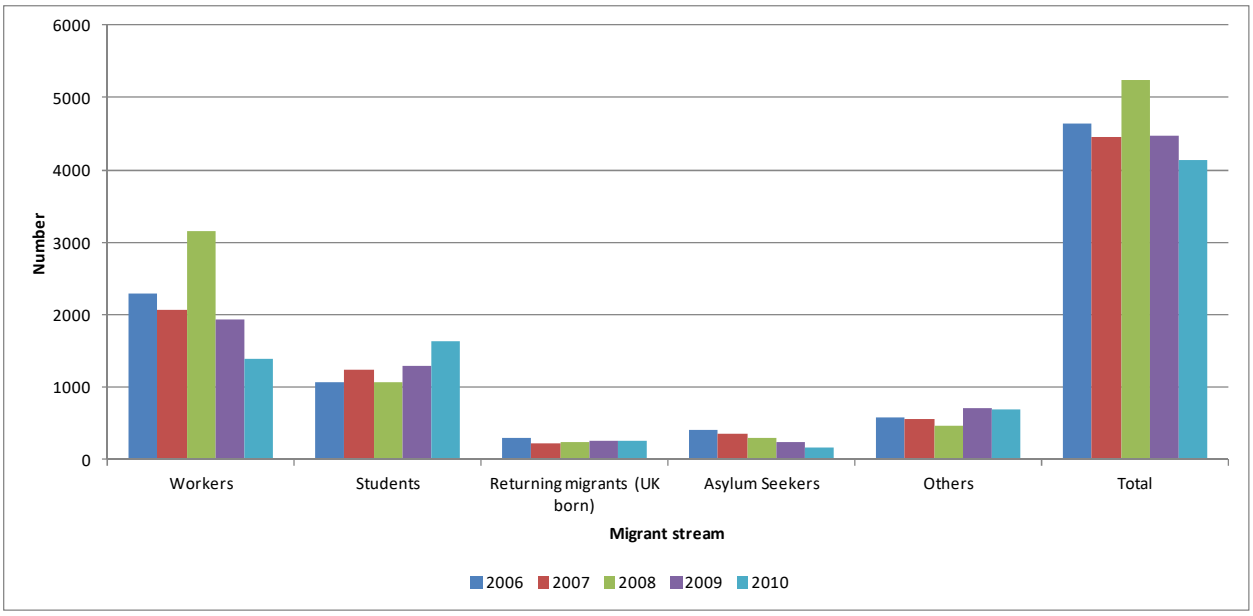


Chart A4: Immigration estimates by broad stream, Hammersmith and Fulham, mid-2006 to mid-2010

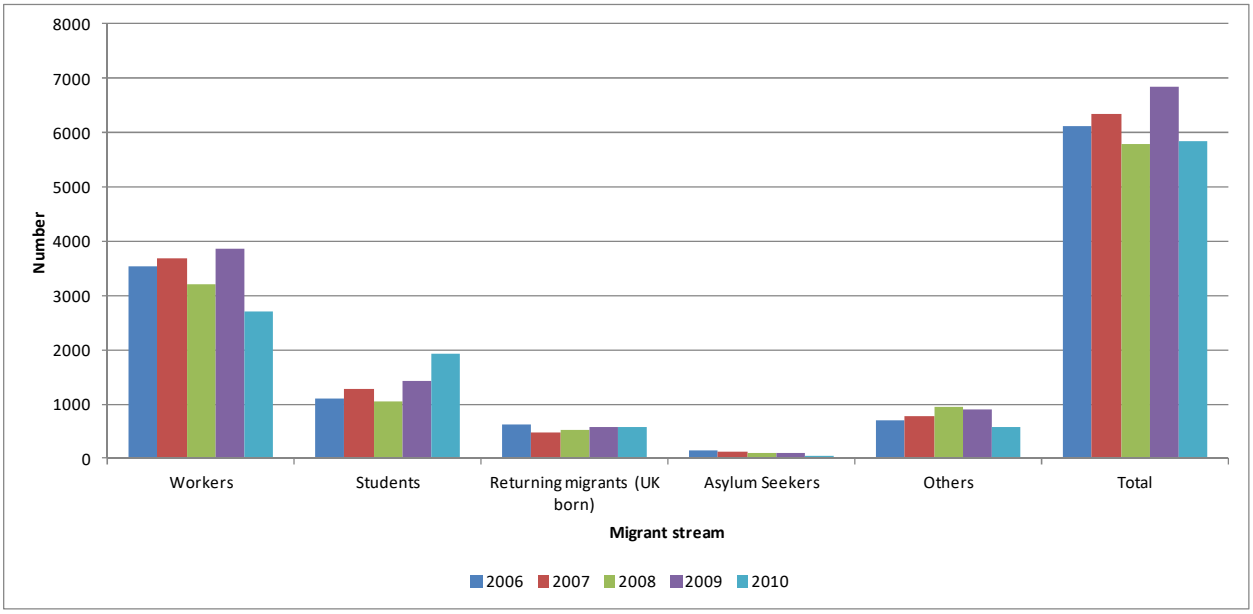


Chart A5: Immigration estimates by broad stream, Haringey, mid-2006 to mid-2010

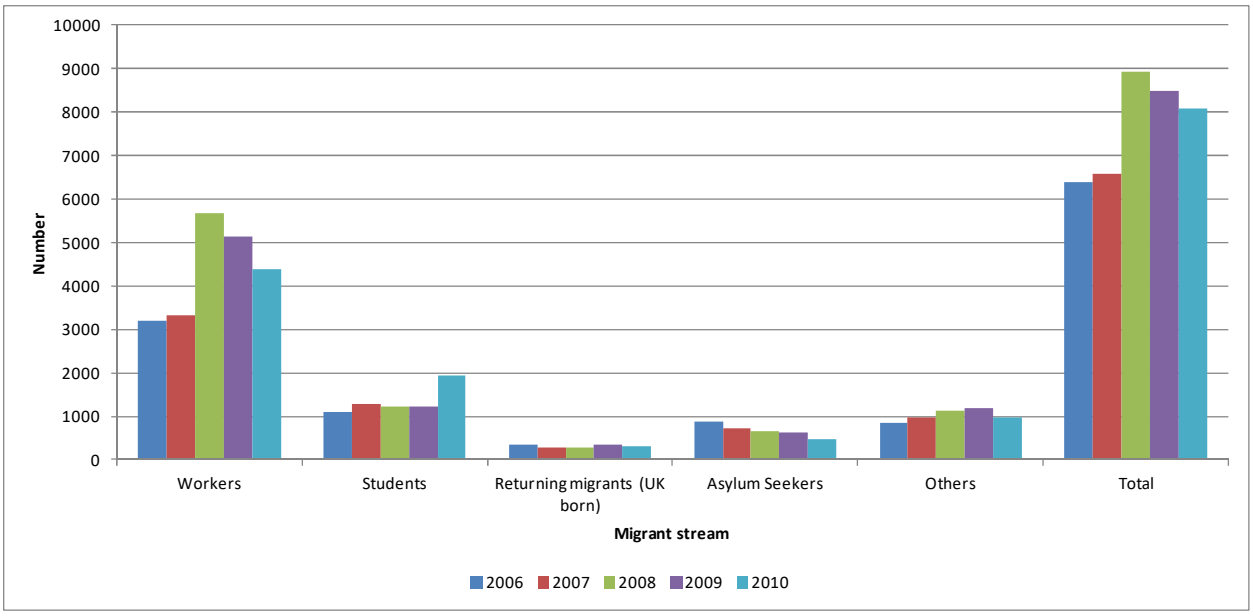


Chart A6: Immigration estimates by broad stream, Islington, mid-2006 to mid-2010

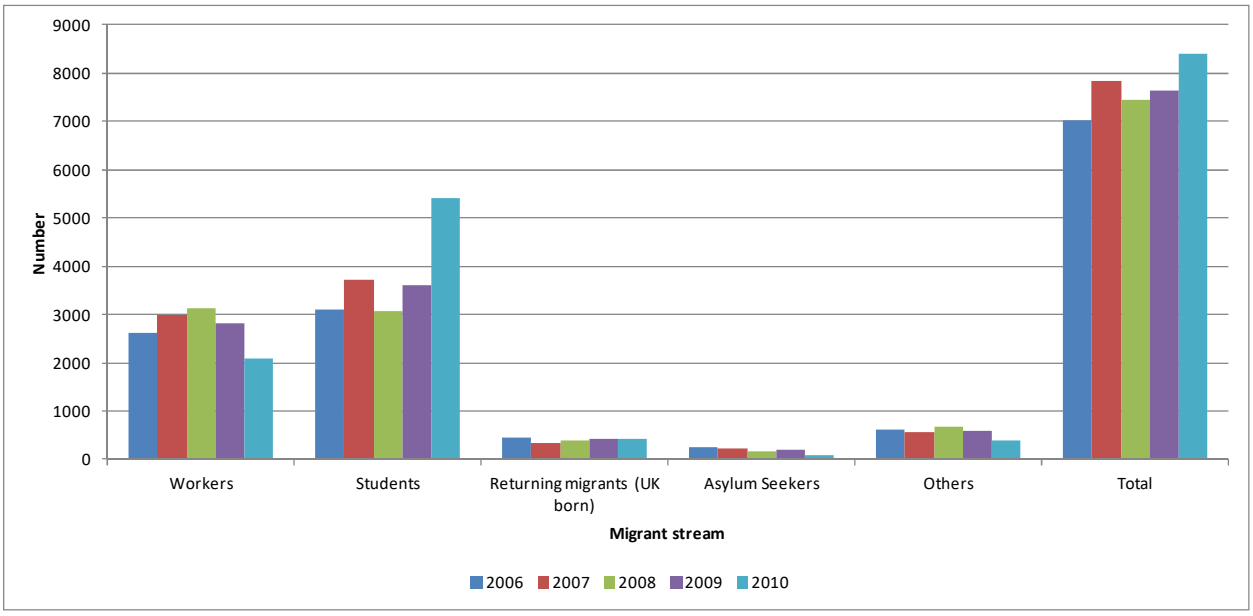


Chart A7: Immigration estimates by broad stream, Kensington and Chelsea, mid-2006 to mid-2010

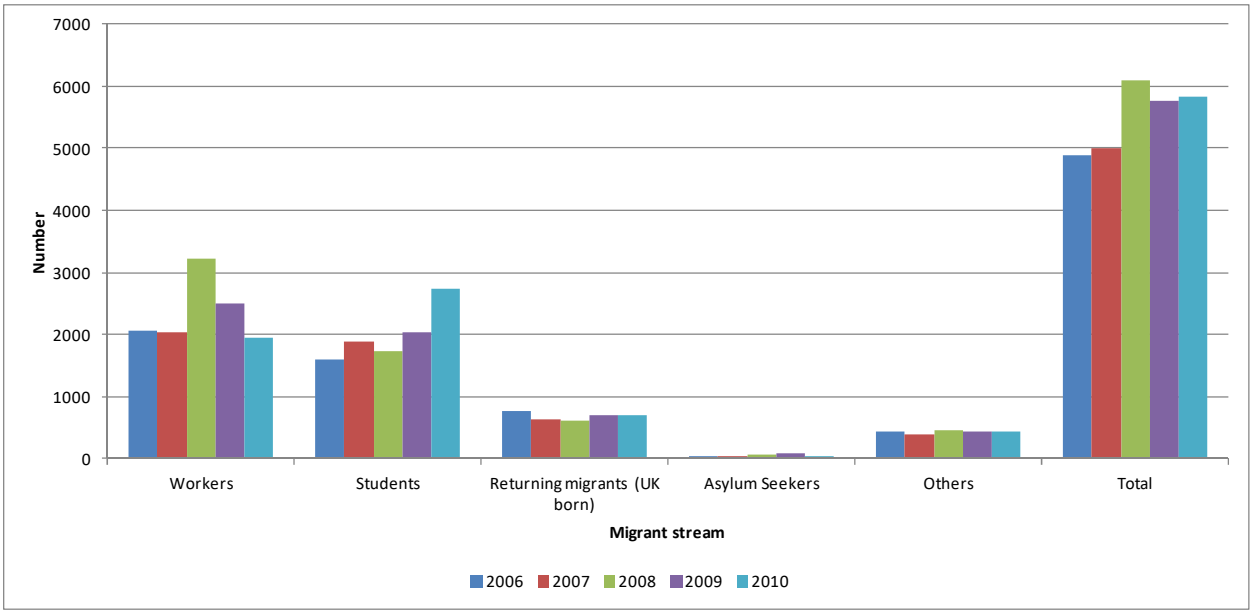


Chart A8: Immigration estimates by broad stream, Lambeth, mid-2006 to mid-2010

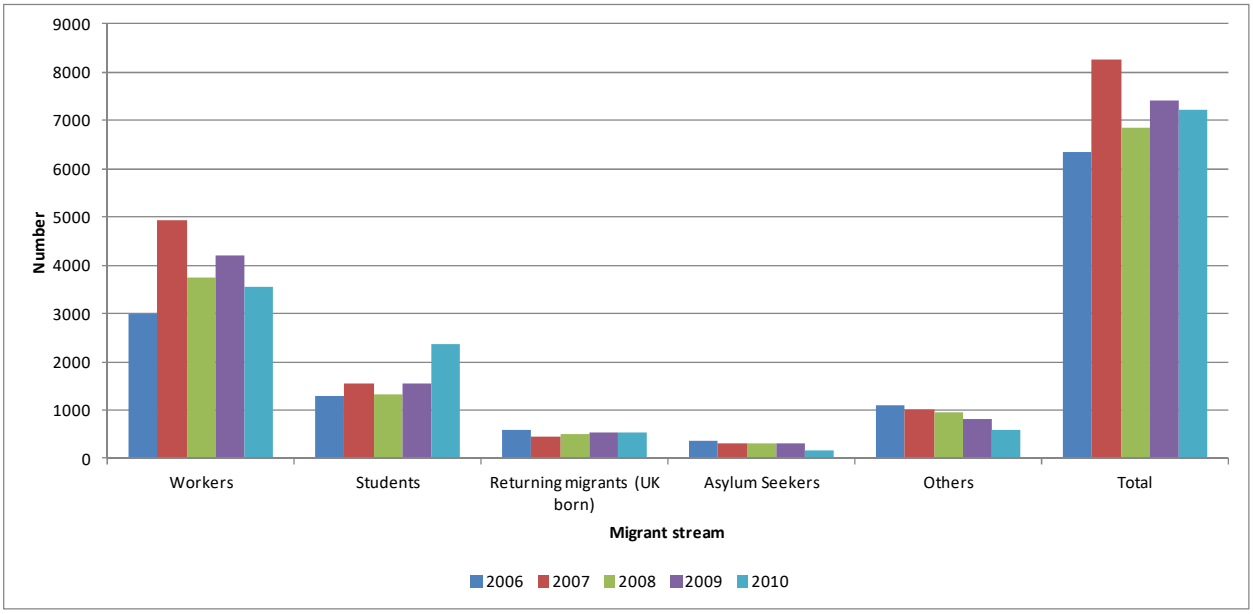


Chart A9: Immigration estimates by broad stream, Lewisham, mid-2006 to mid-2010

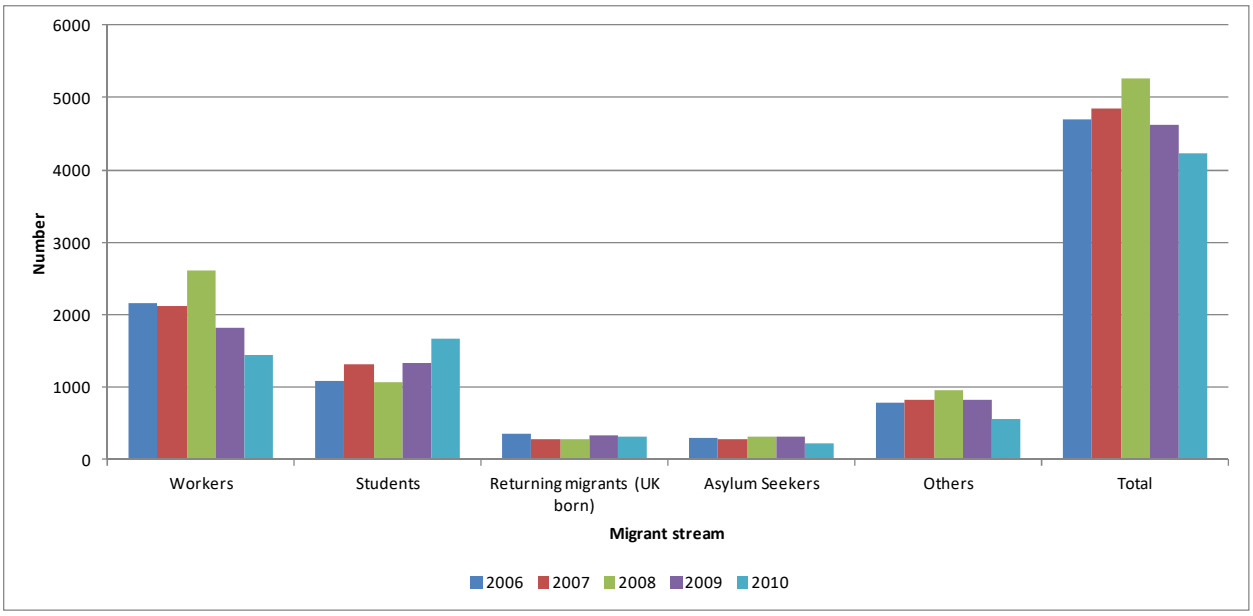


Chart A10: Immigration estimates by broad stream, Newham, mid-2006 to mid-2010

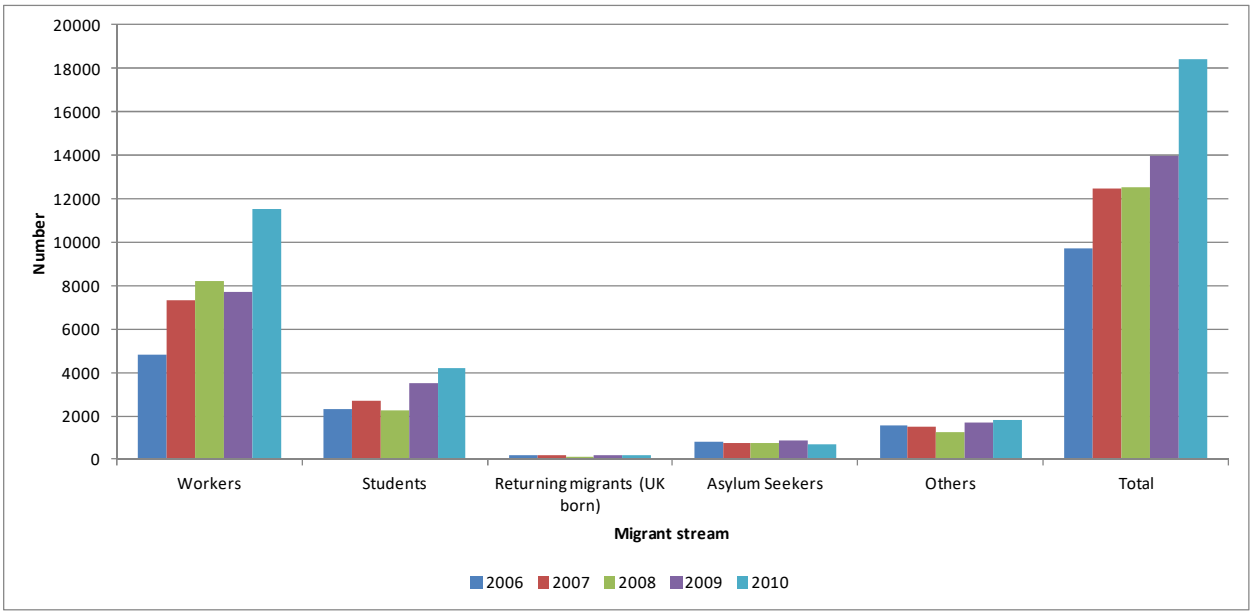


Chart A11: Immigration estimates by broad stream, Southwark, mid-2006 to mid-2010

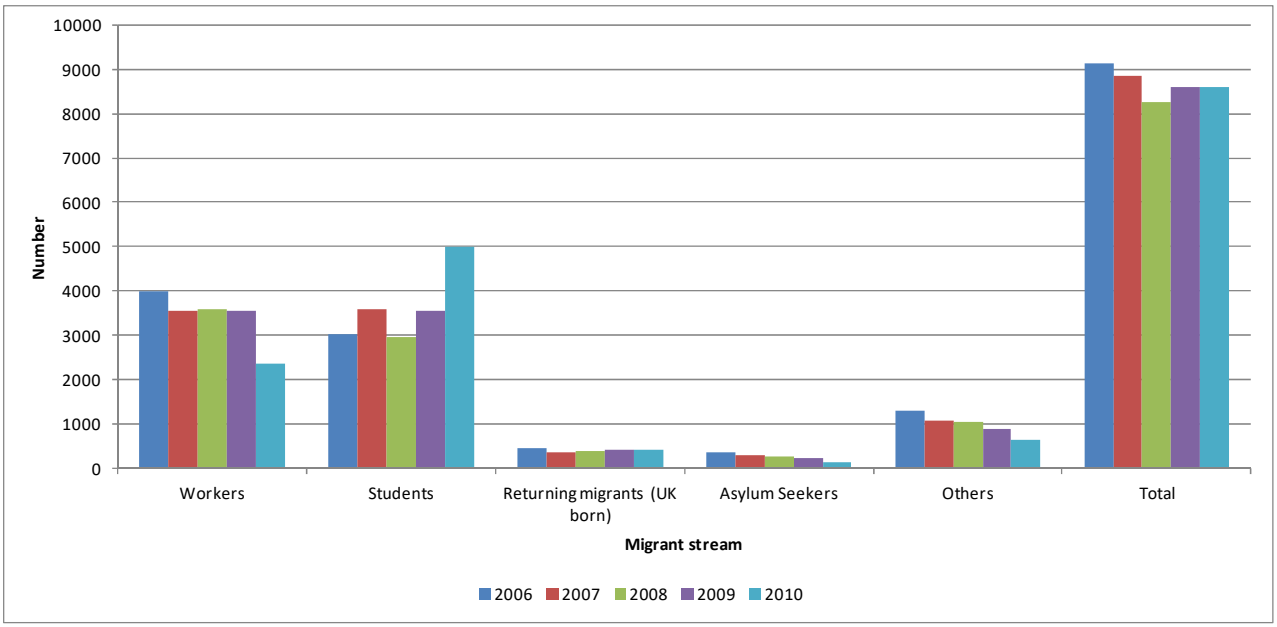


Chart A12: Immigration estimates by broad stream, Tower Hamlets, mid-2006 to mid-2010

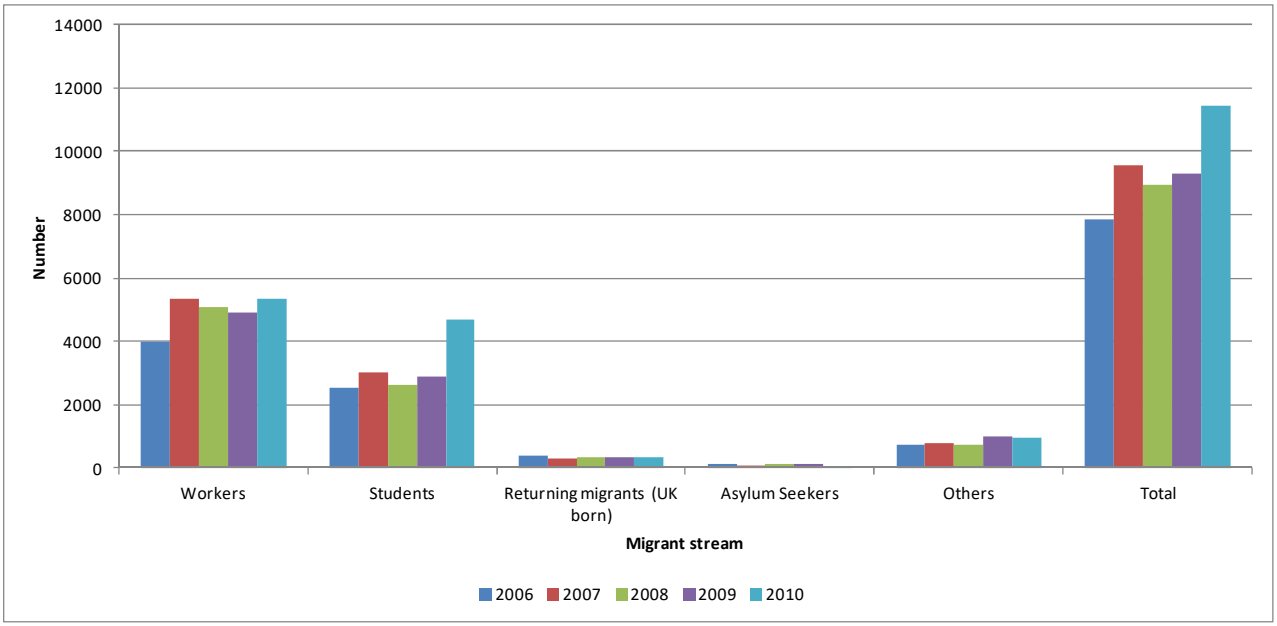


Chart A13: Immigration estimates by broad stream, Wandsworth, mid-2006 to mid-2010

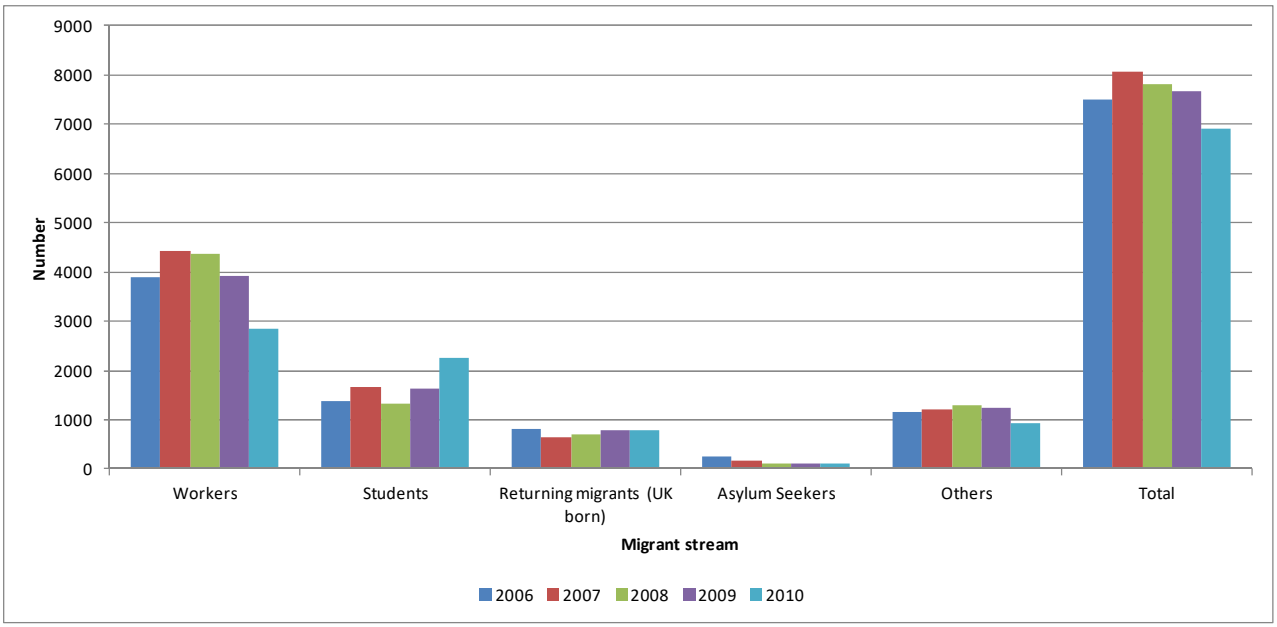


Chart A14: Immigration estimates by broad stream, Westminster, mid-2006 to mid-2010

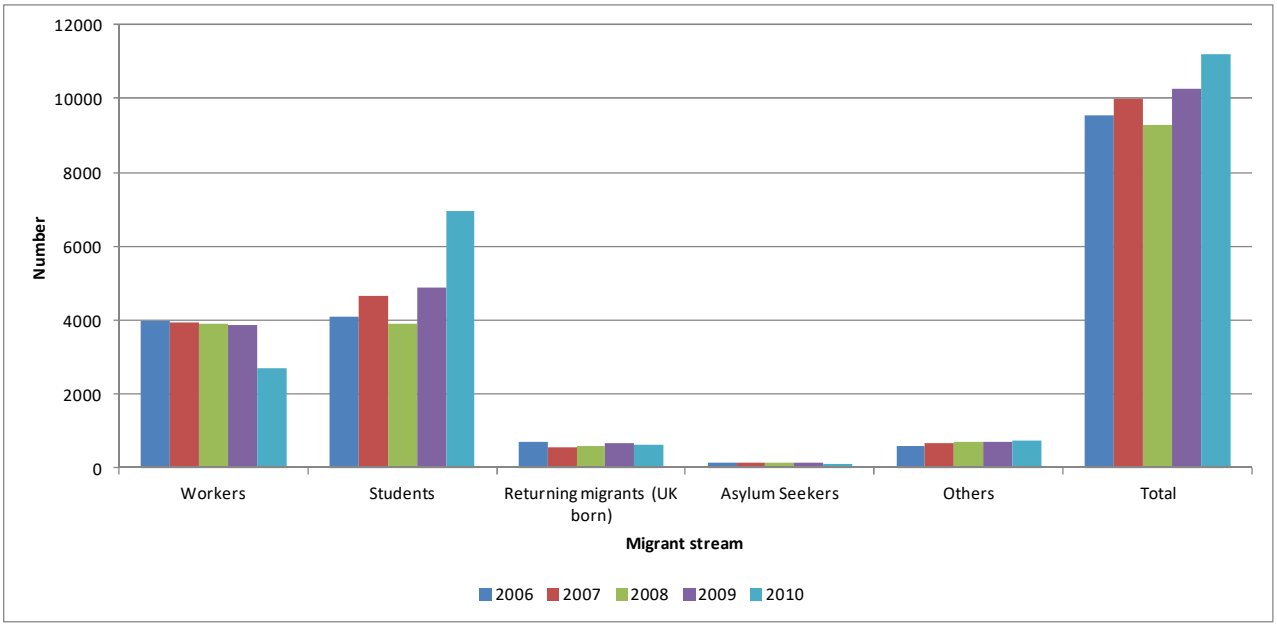


Chart A15: Immigration estimates by broad stream, Barking and Dagenham, mid-2006 to mid-2010

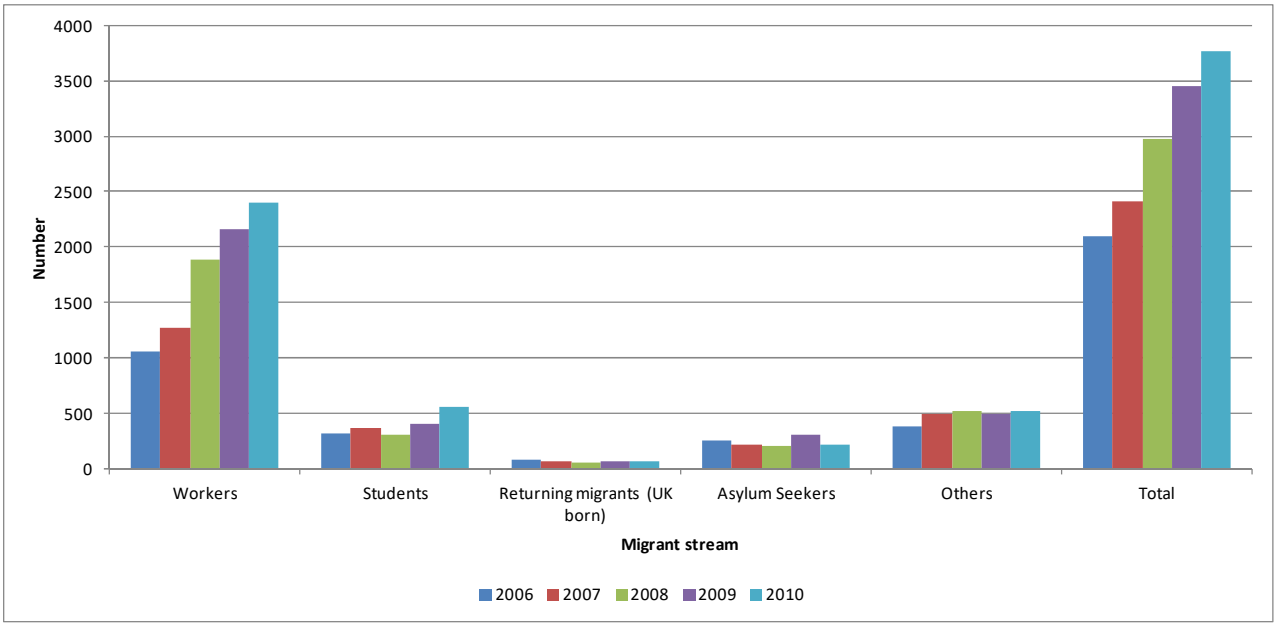


Chart A16: Immigration estimates by broad stream, Barnet, mid-2006 to mid-2010

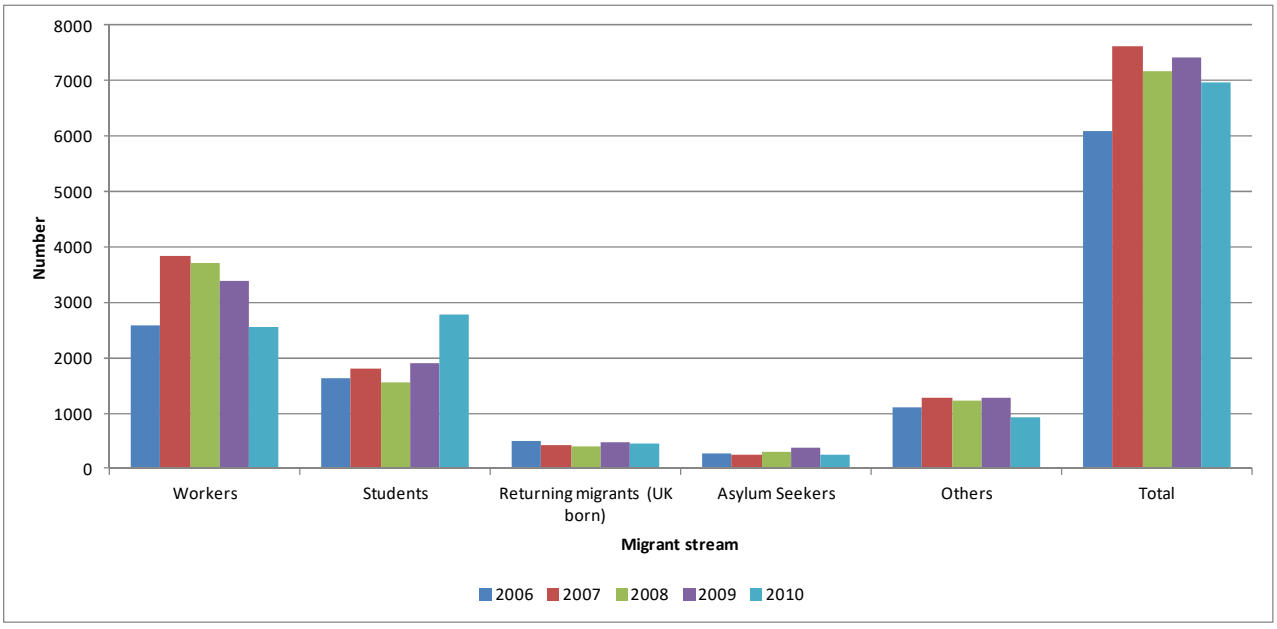


Chart A17: Immigration estimates by broad stream, Bexley, mid-2006 to mid-2010

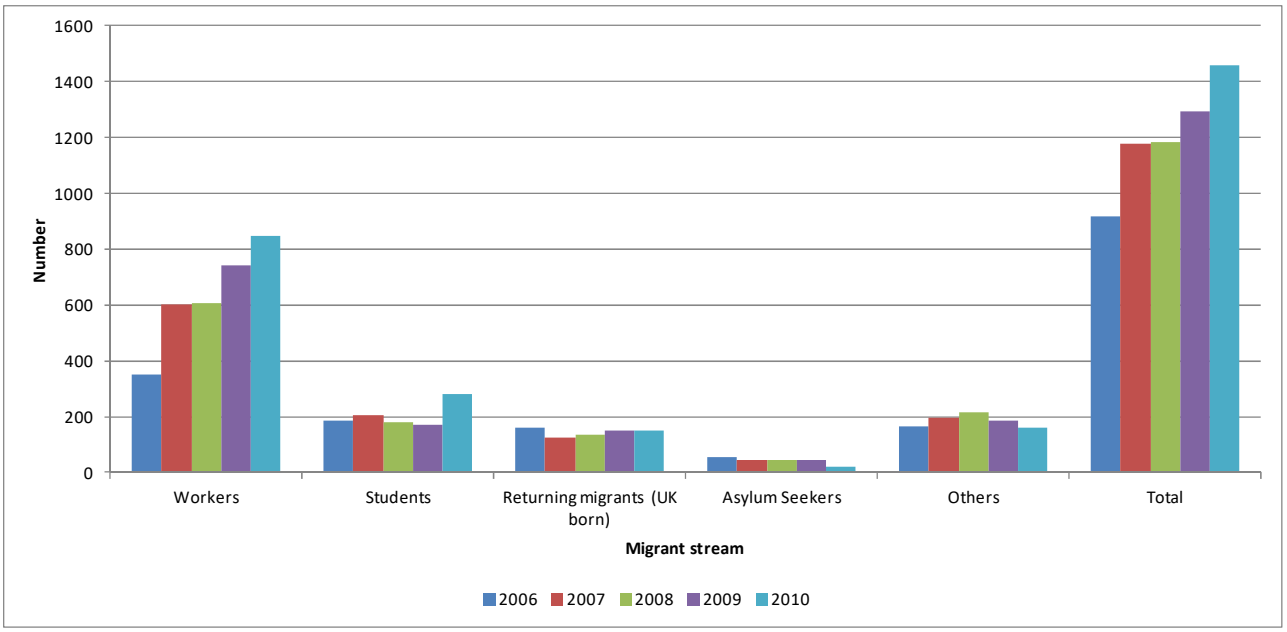


Chart A18: Immigration estimates by broad stream, Brent, mid-2006 to mid-2010

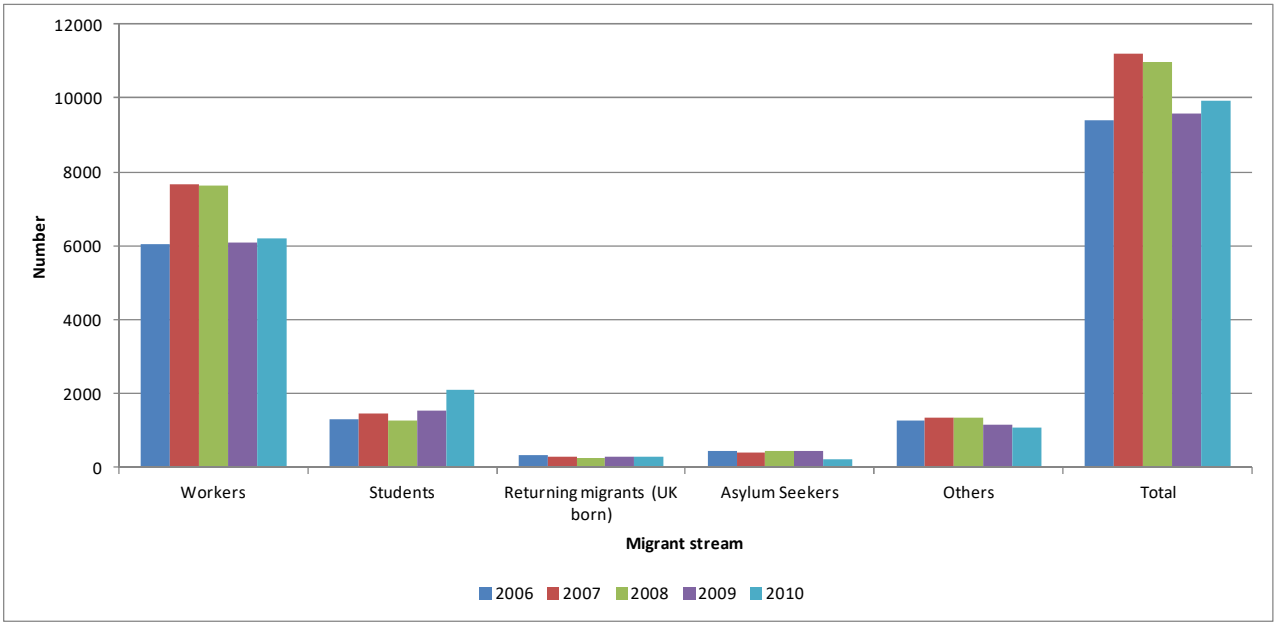


Chart A19: Immigration estimates by broad stream, Bromley, mid-2006 to mid-2010

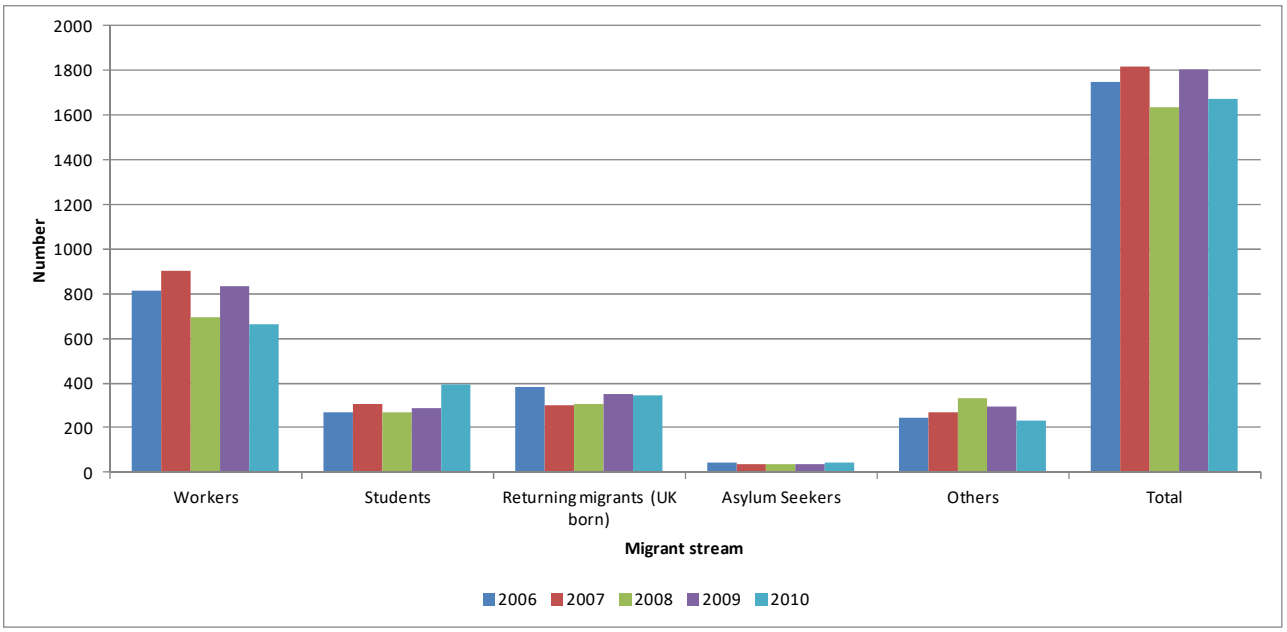


Chart A20: Immigration estimates by broad stream, Croydon, mid-2006 to mid-2010

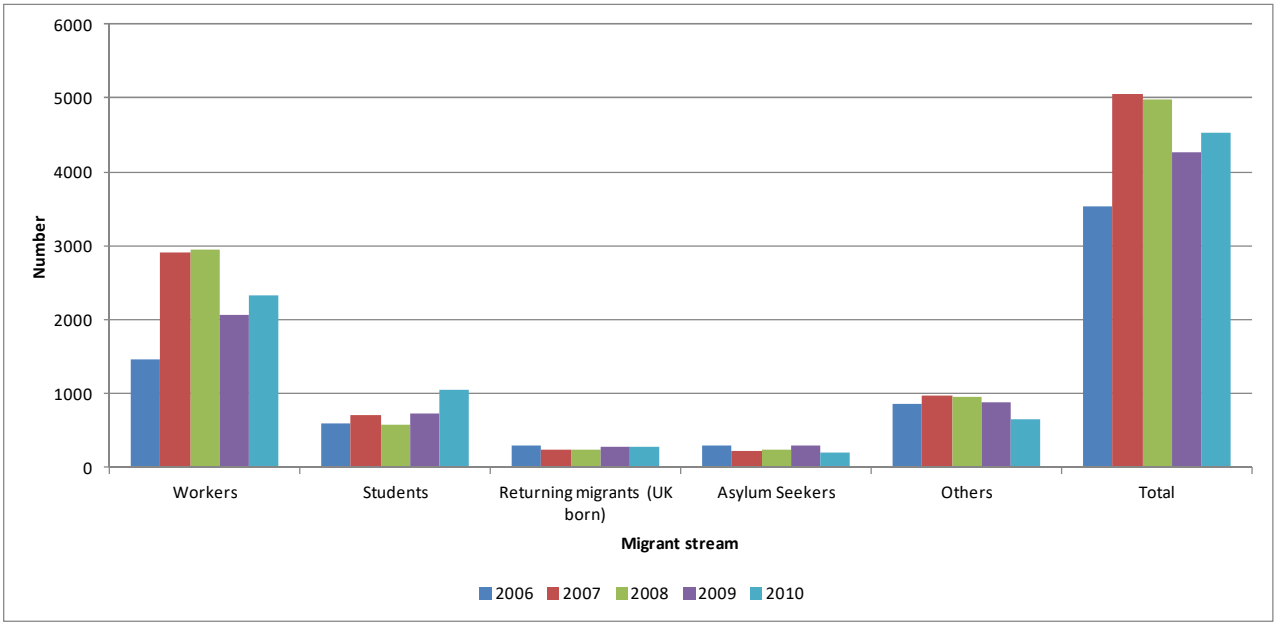


Chart A21: Immigration estimates by broad stream, Ealing, mid-2006 to mid-2010

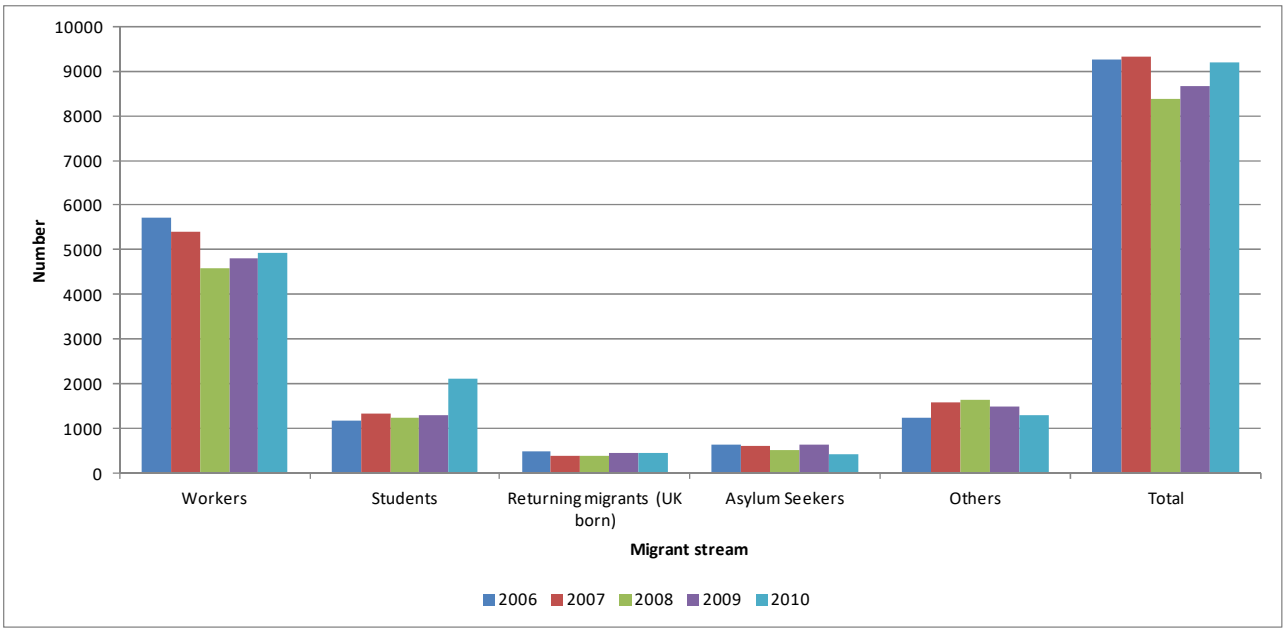


Chart A22: Immigration estimates by broad stream, Enfield, mid-2006 to mid-2010

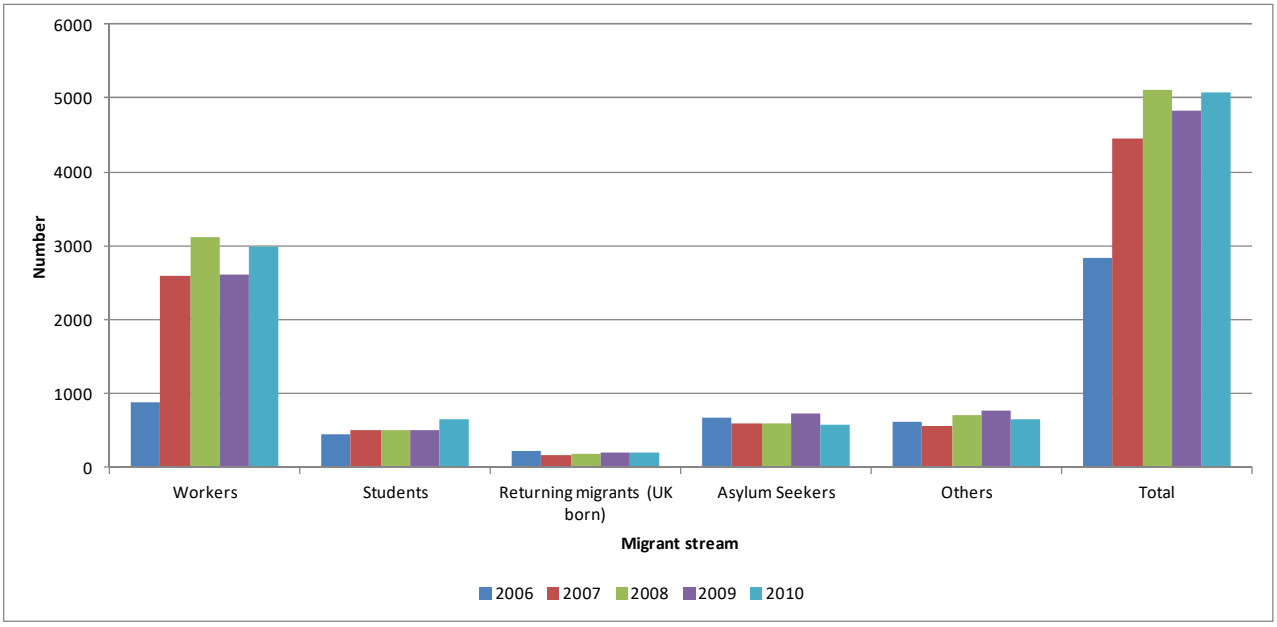


Chart A23: Immigration estimates by broad stream, Greenwich, mid-2006 to mid-2010

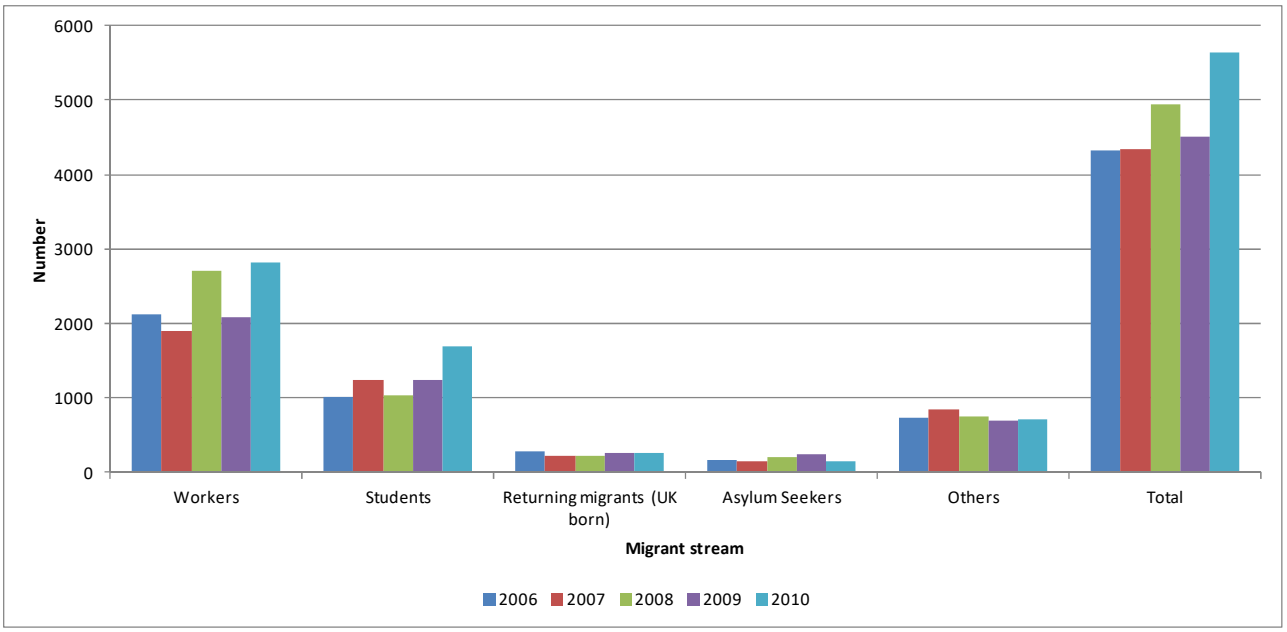


Chart A24: Immigration estimates by broad stream, Harrow, mid-2006 to mid-2010

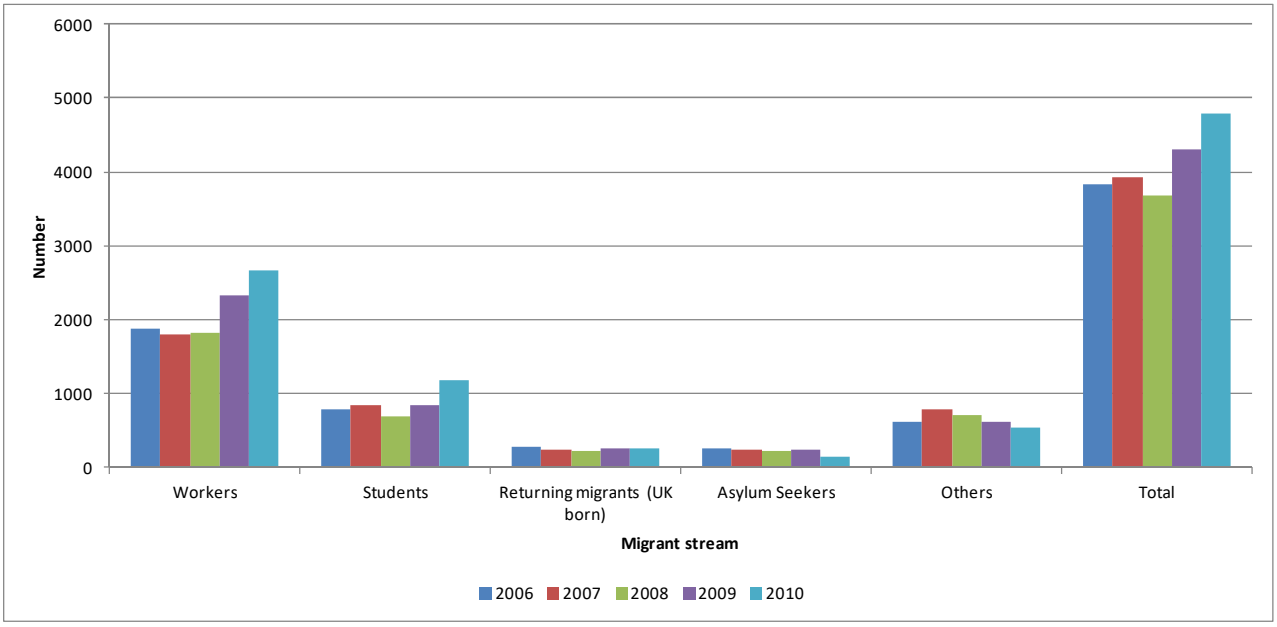


Chart A25: Immigration estimates by broad stream, Havering, mid-2006 to mid-2010

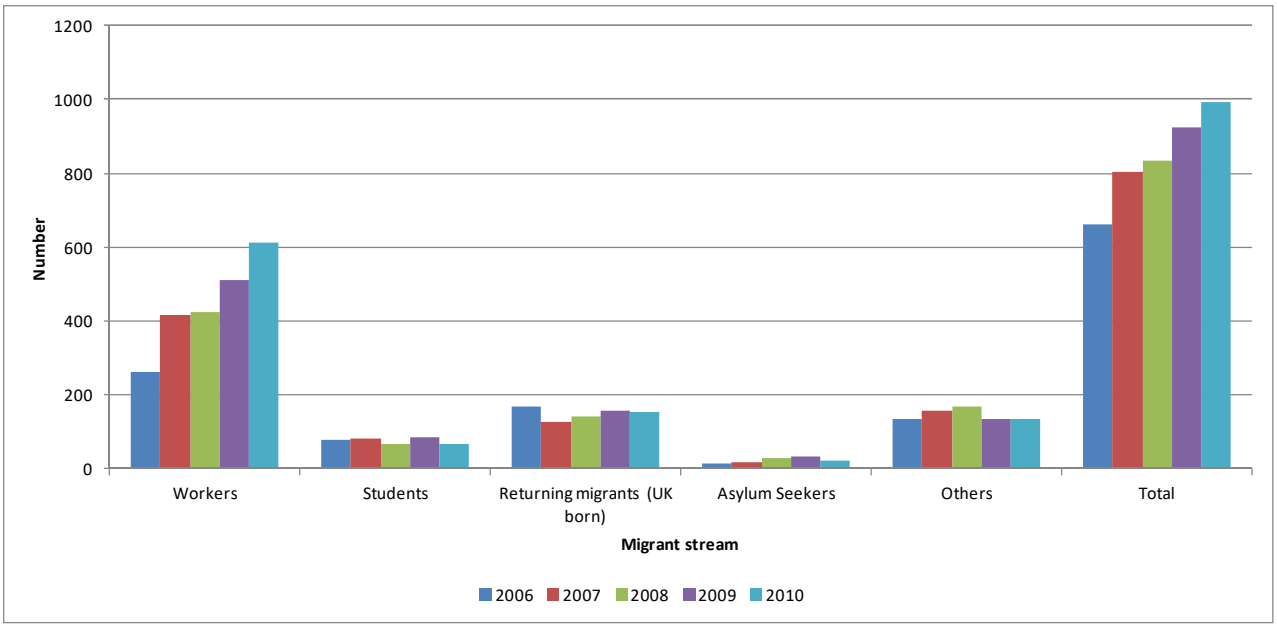


Chart A26: Immigration estimates by broad stream, Hillingdon, mid-2006 to mid-2010

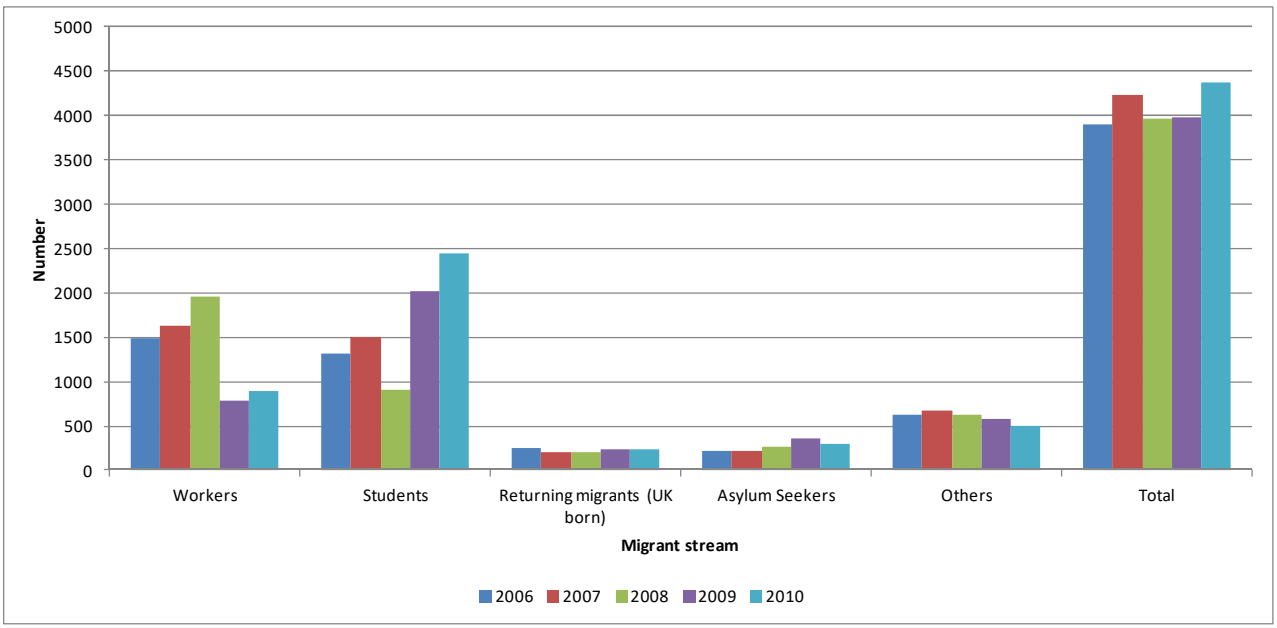


Chart A27: Immigration estimates by broad stream, Hounslow, mid-2006 to mid-2010

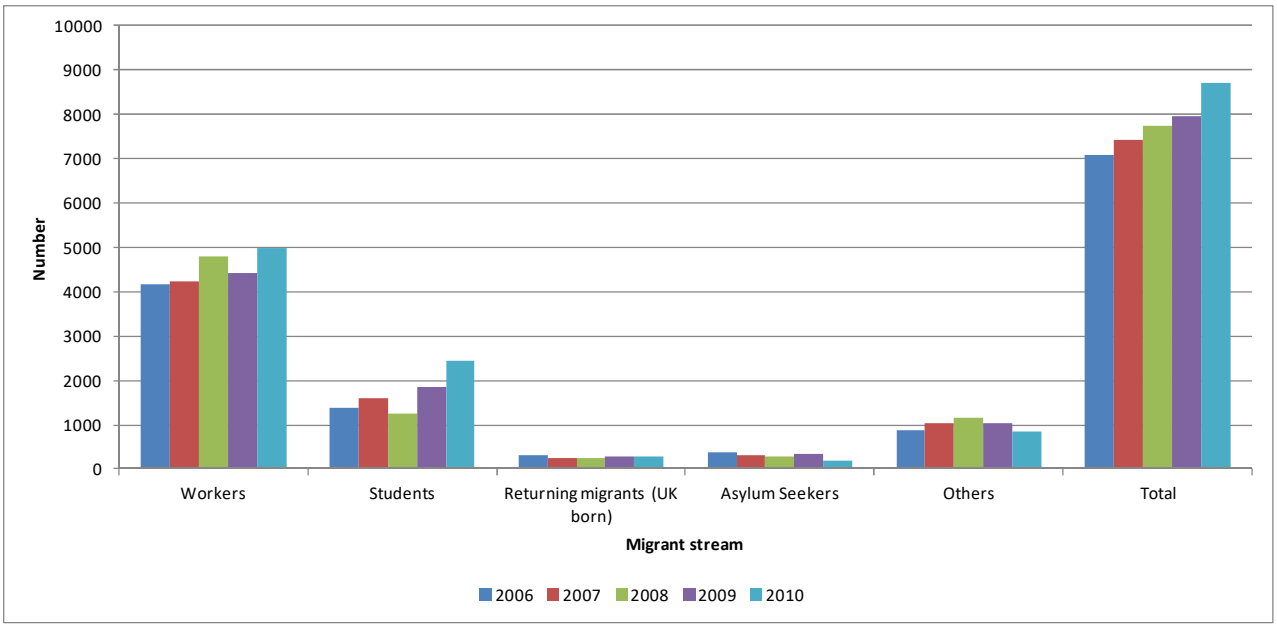


Chart A28: Immigration estimates by broad stream, Kingston upon Thames, mid-006 to mid-2010

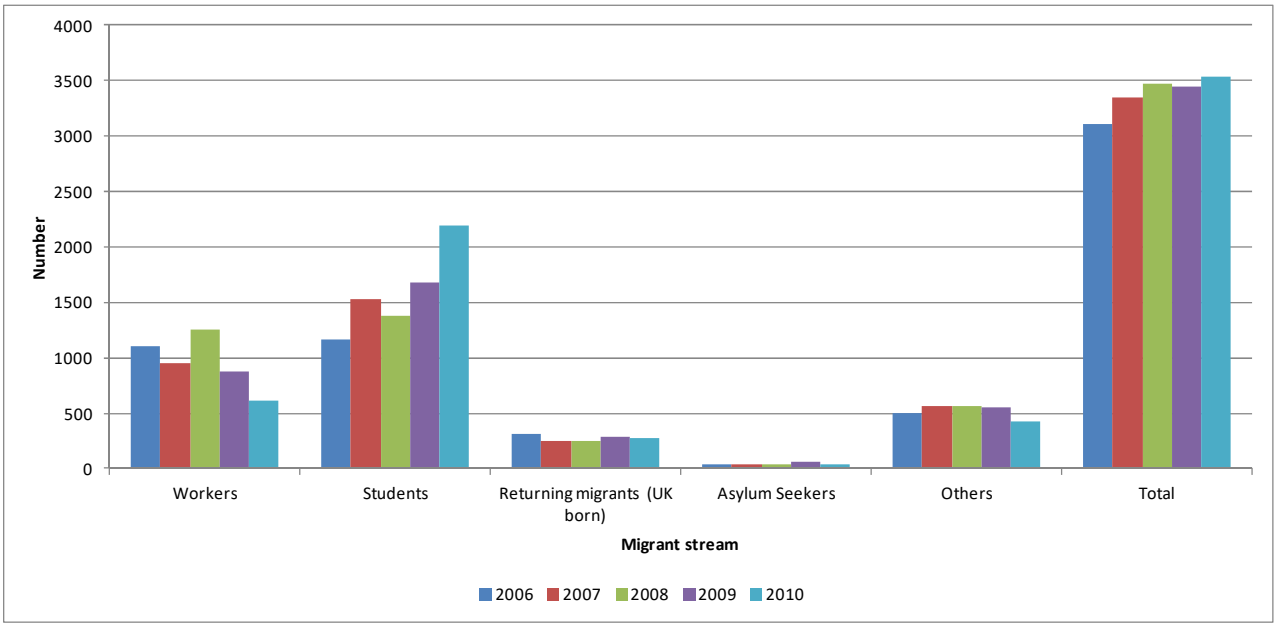


Chart A29: Immigration estimates by broad stream, Merton, mid-2006 to mid-2010

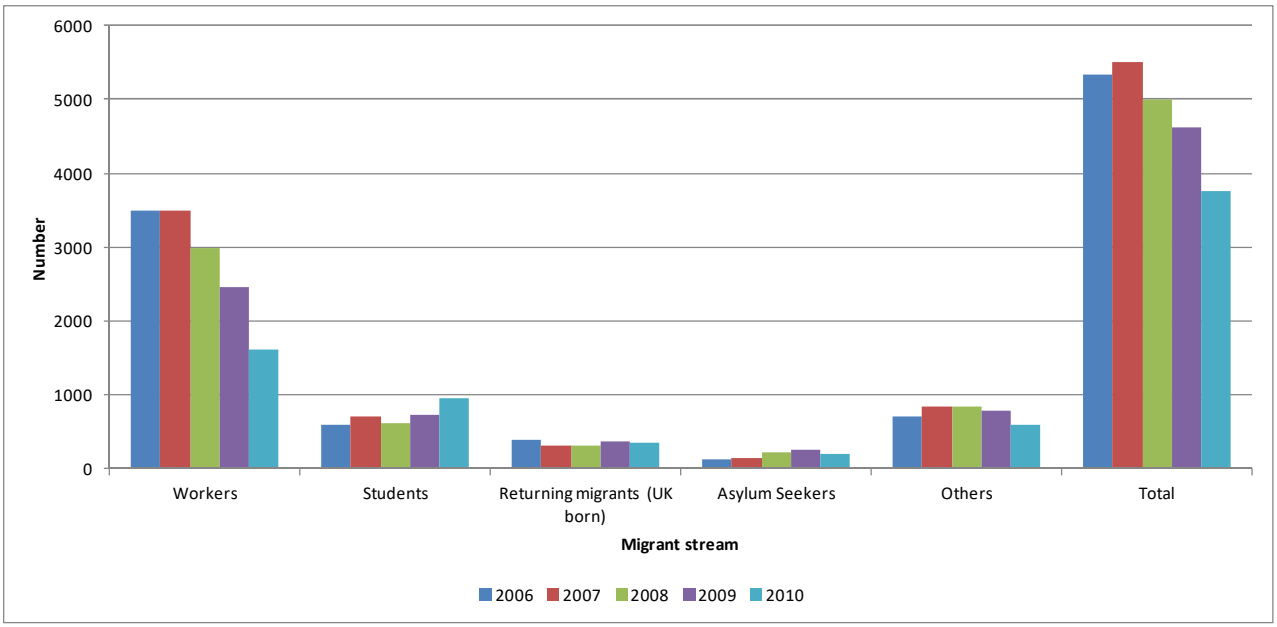


Chart A30: Immigration estimates by broad stream, Redbridge, mid-2006 to mid-2010

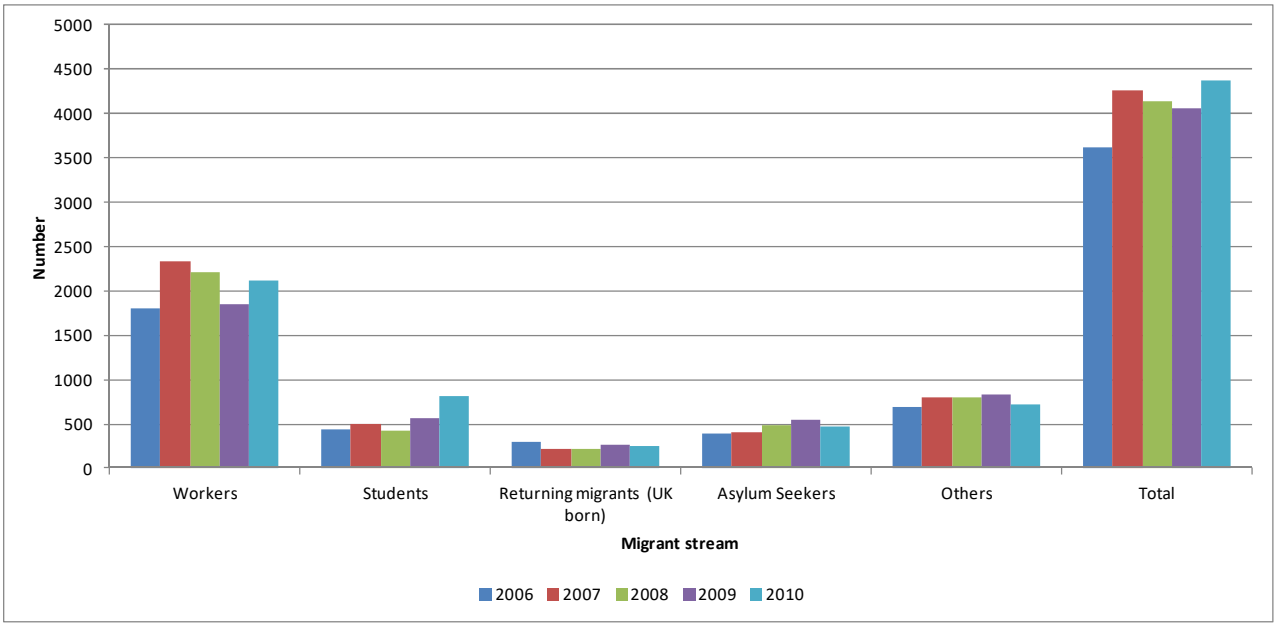


Chart A31: Immigration estimates by broad stream, Richmond upon Thames, mid-2006 to mid-2010

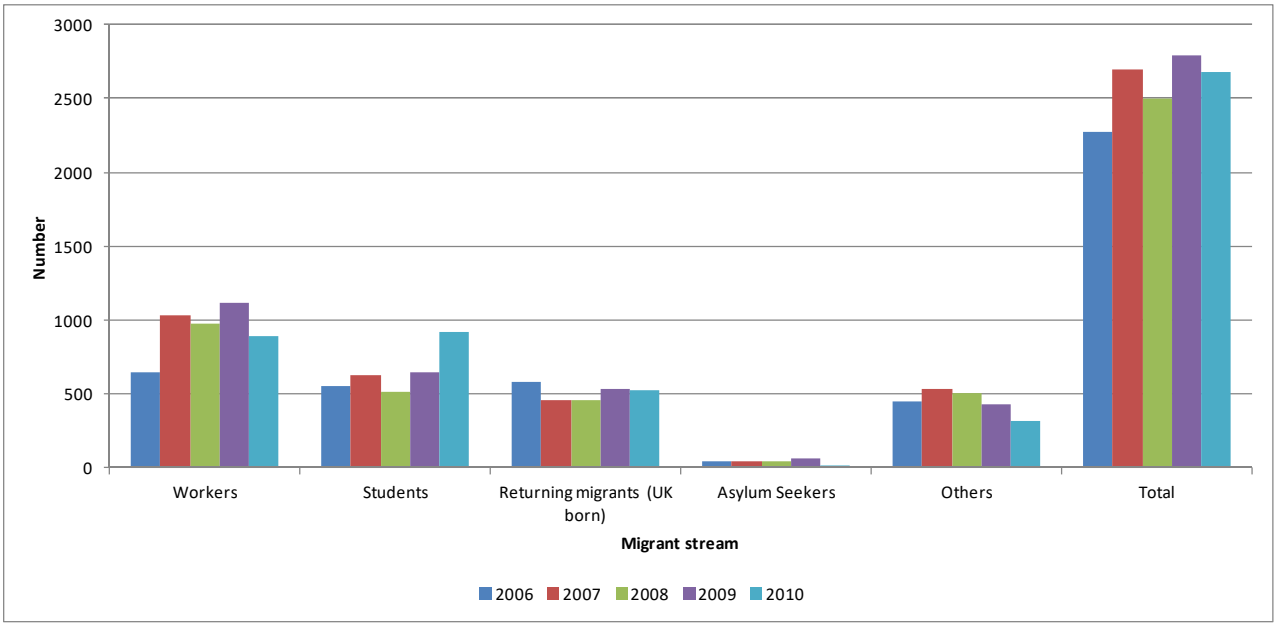


Chart A32: Immigration estimates by broad stream, Sutton, mid-2006 to mid-2010

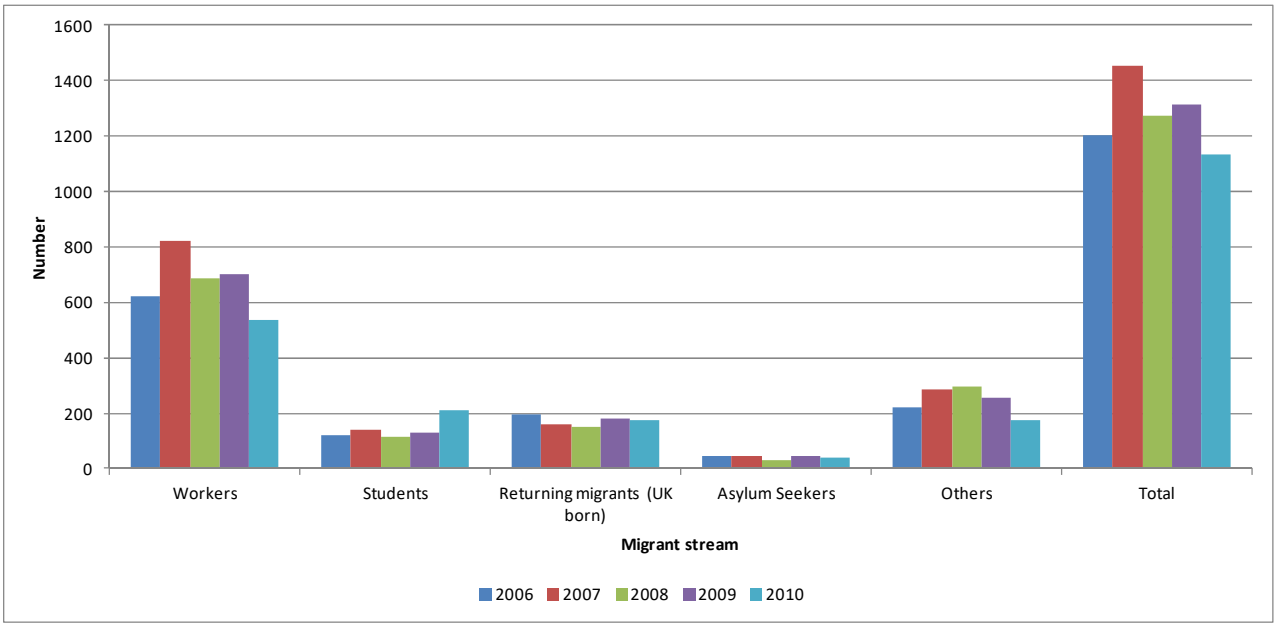
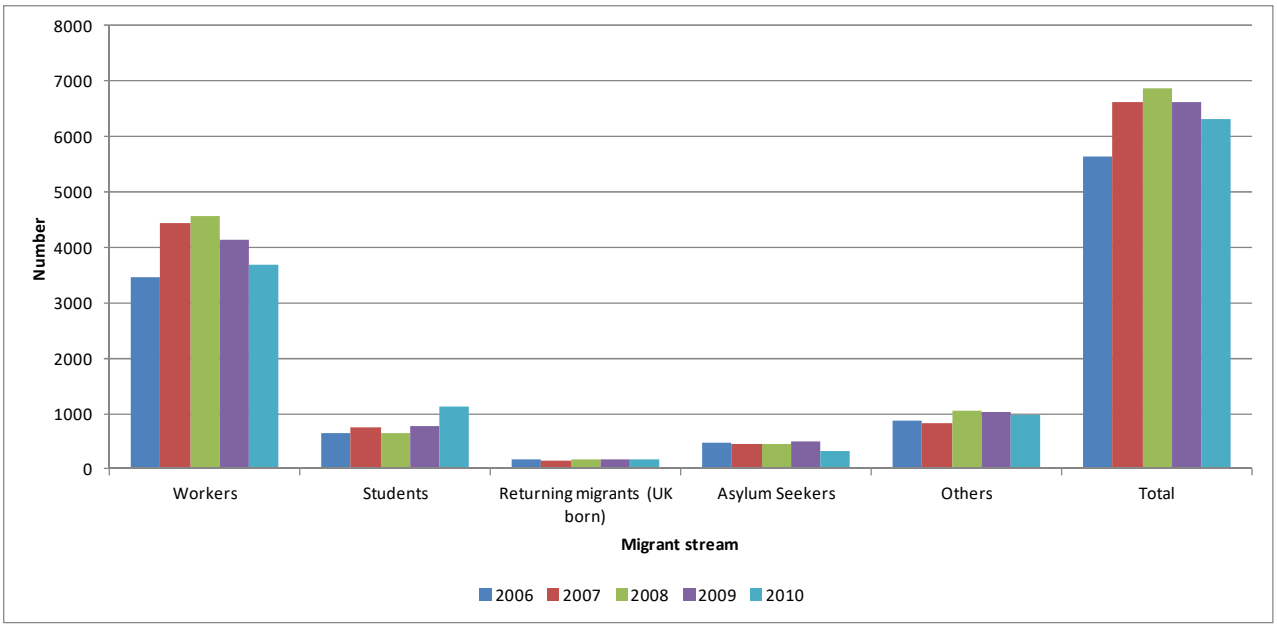


Chart A33: Immigration estimates by broad stream, Waltham Forest, mid-2006 to mid-2010



Appendix B: Difference between the indicative revisions and the mid-year population figures, single year of age, all London boroughs, mid-year 2006 and mid-year 2010

Sources:

Table F1: Mid-2006 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age, ONS

Mid-2006 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population, ONS

Table F5: Mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age, ONS

Mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population, ONS

Chart B1a: Difference between the indicative revisions and the mid-year population figures, Camden, mid-year 2006 and mid-year 2010, males, single year of age

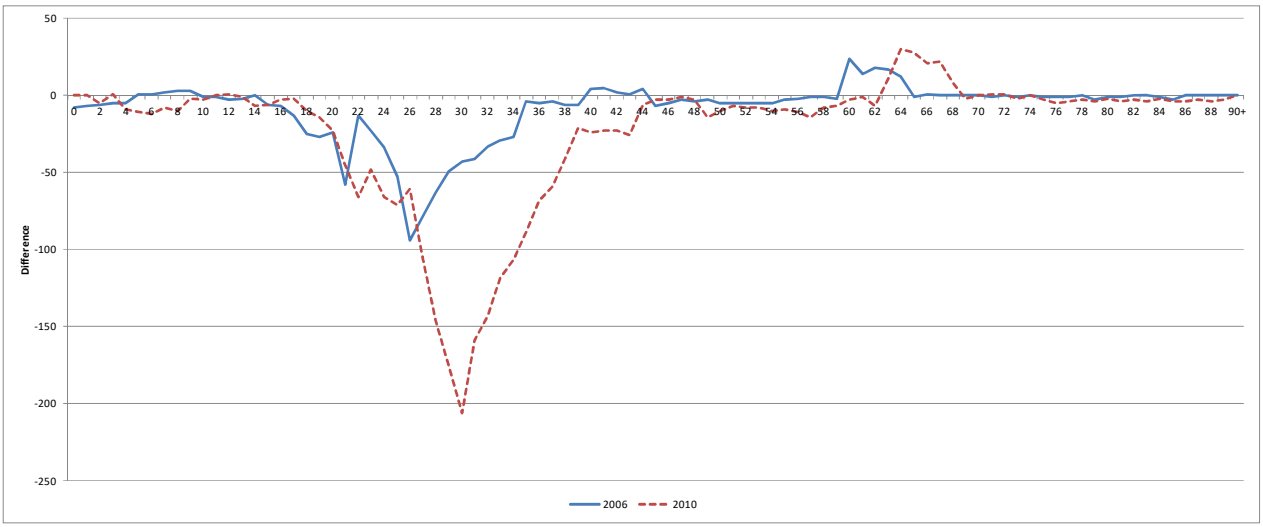


Chart B1b: Difference between the indicative revisions and the mid-year population figures, Camden, mid-year 2006 and mid-year 2010, females, single year of age

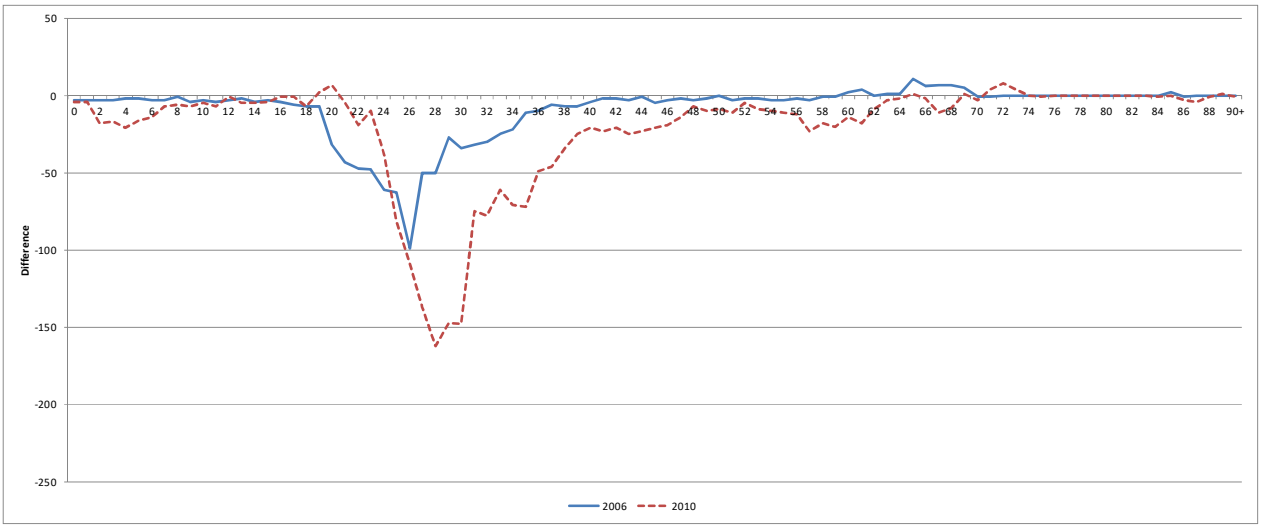


Chart B2a: Difference between the indicative revisions and the mid-year population figures, City of London, mid-year 2006 and mid-year 2010, males, single year of age

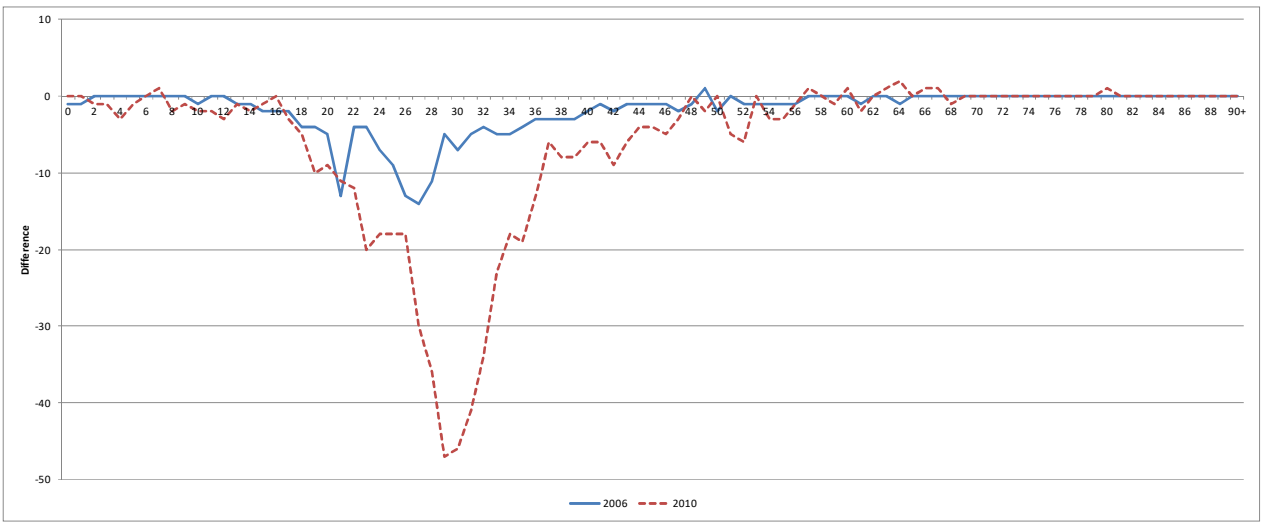


Chart B2b: Difference between the indicative revisions and the mid-year population figures, City of London, mid-year 2006 and mid-year 2010, females, single year of age

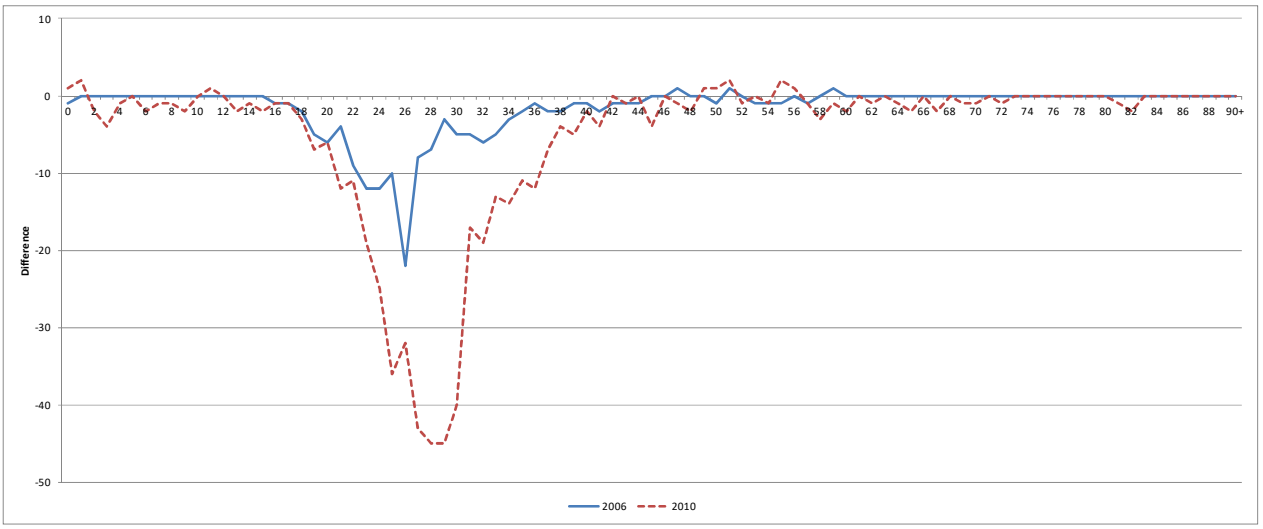


Chart B3a: Difference between the indicative revisions and the mid-year population figures, Hackney, mid-year 2006 and mid-year 2010, males, single year of age

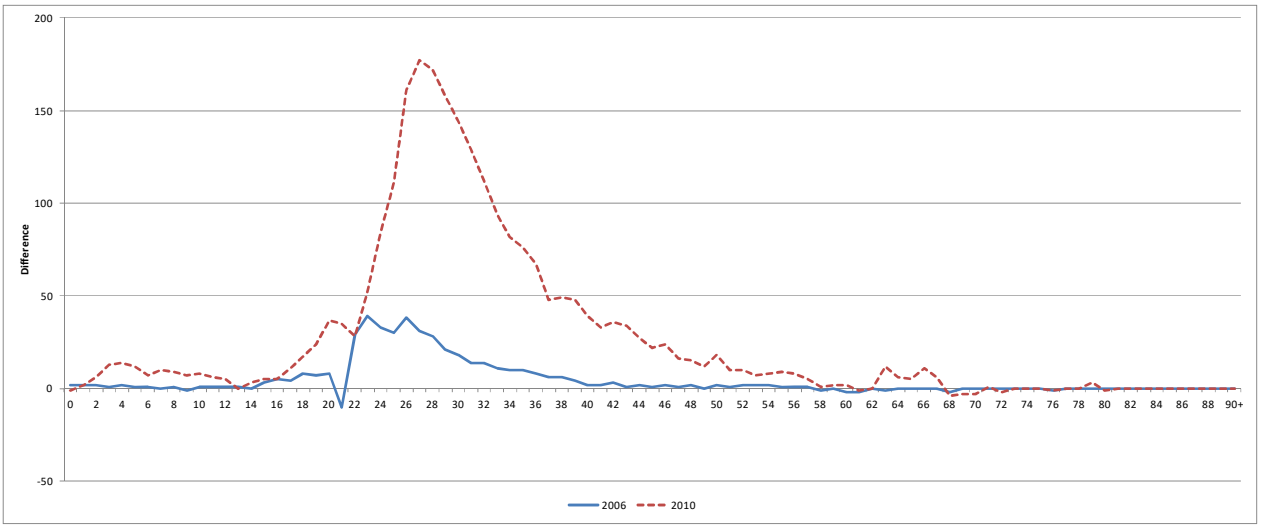


Chart B3b: Difference between the indicative revisions and the mid-year population figures, Hackney, mid-year 2006 and mid-year 2010, females, single year of age

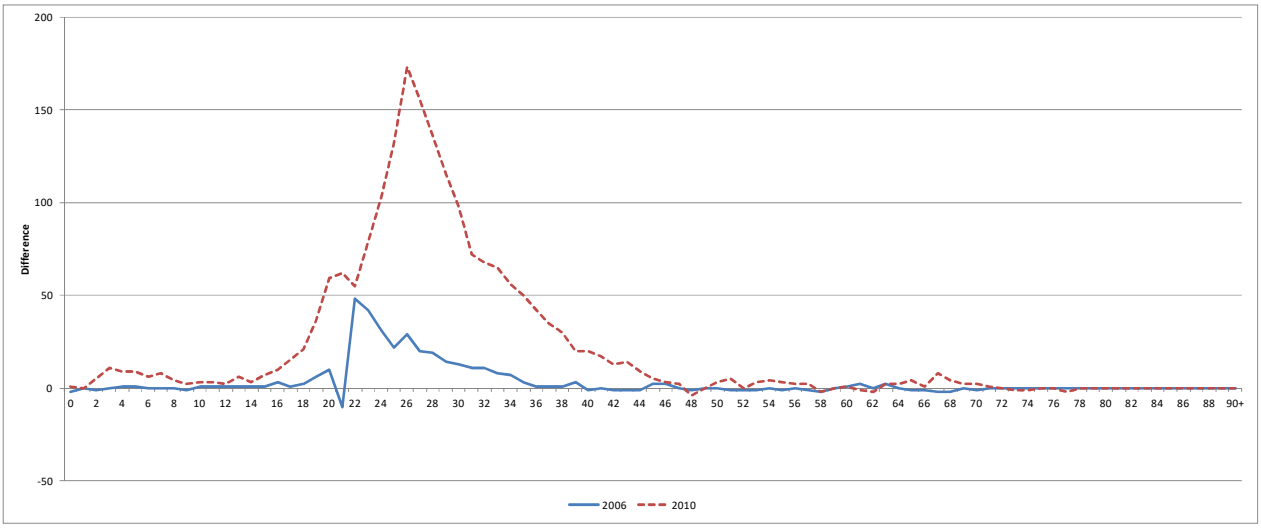


Chart B4a: Difference between the indicative revisions and the mid-year population figures, Hammersmith and Fulham, mid-year 2006 and mid-year 2010, males, single year of age

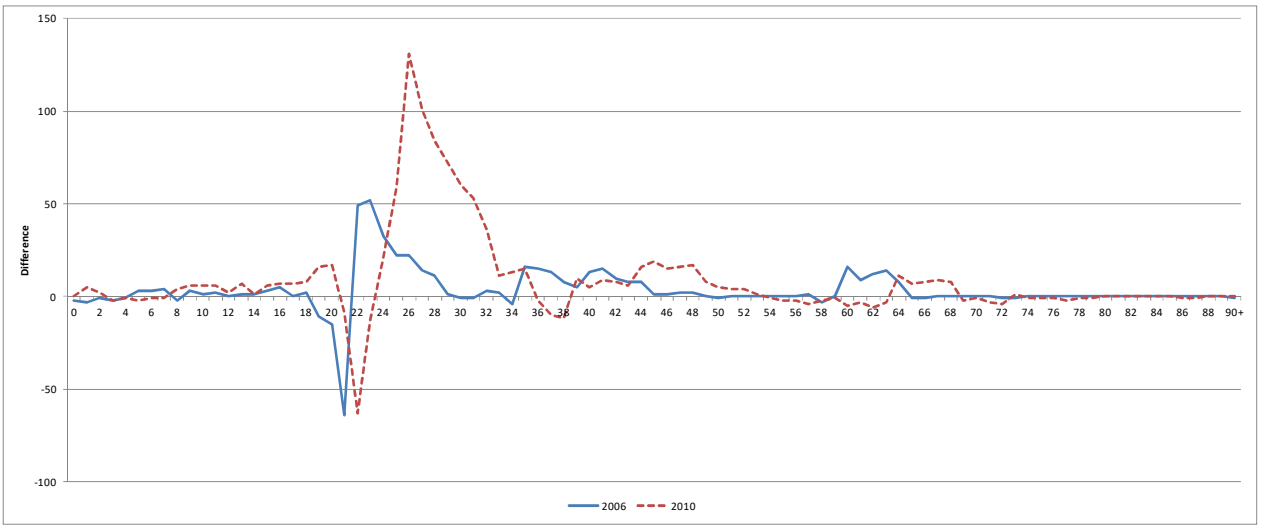


Chart B4b: Difference between the indicative revisions and the mid-year population figures, Hammersmith and Fulham, mid-year 2006 and mid-year 2010, females, single year of age

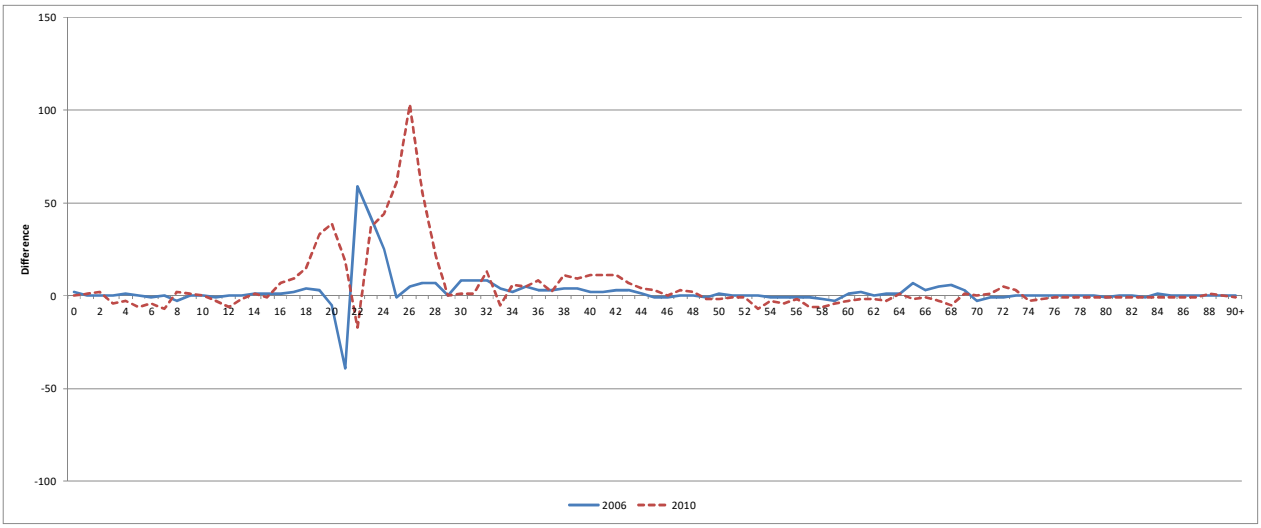


Chart B5a: Difference between the indicative revisions and the mid-year population figures, Haringey, mid-year 2006 and mid-year 2010, males, single year of age

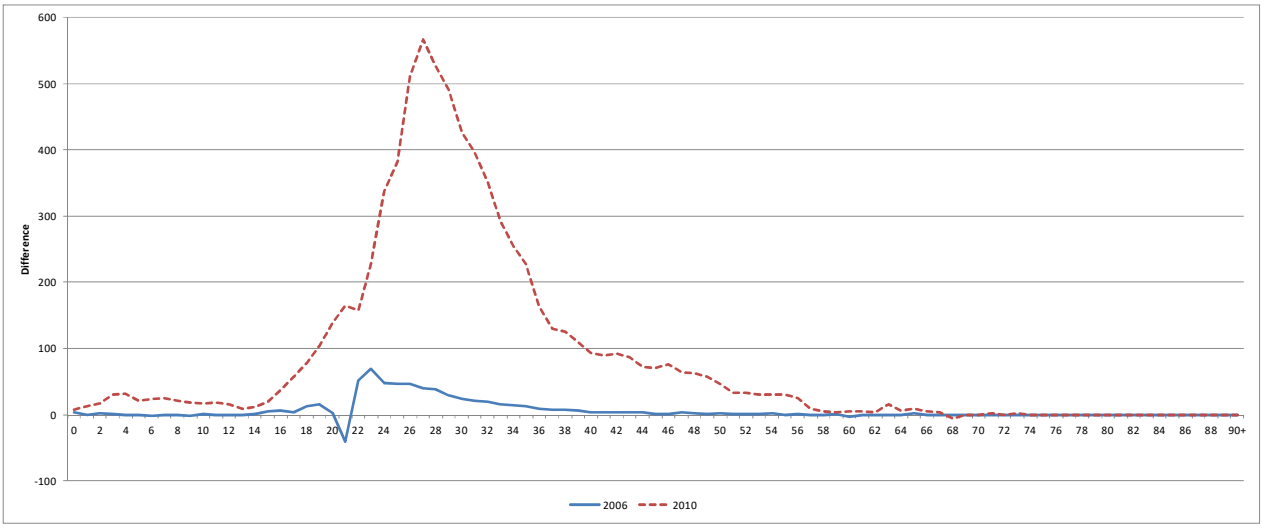


Chart B5b: Difference between the indicative revisions and the mid-year population figures, Haringey, mid-year 2006 and mid-year 2010, females, single year of age

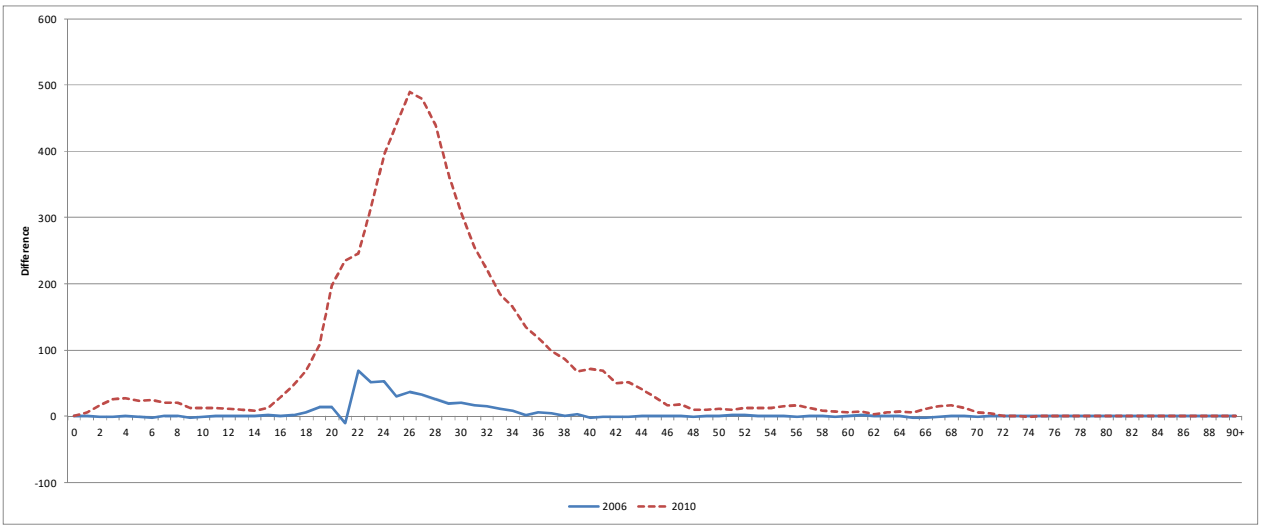


Chart B6a: Difference between the indicative revisions and the mid-year population figures, Islington, mid-year 2006 and mid-year 2010, males, single year of age

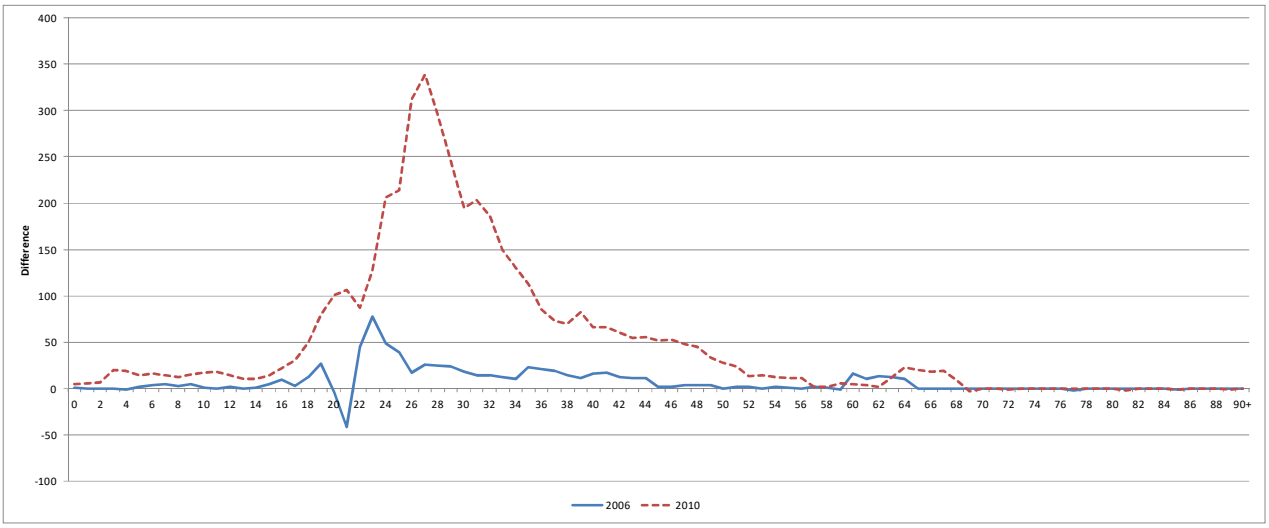


Chart B6b: Difference between the indicative revisions and the mid-year population figures, Islington, mid-year 2006 and mid-year 2010, females, single year of age

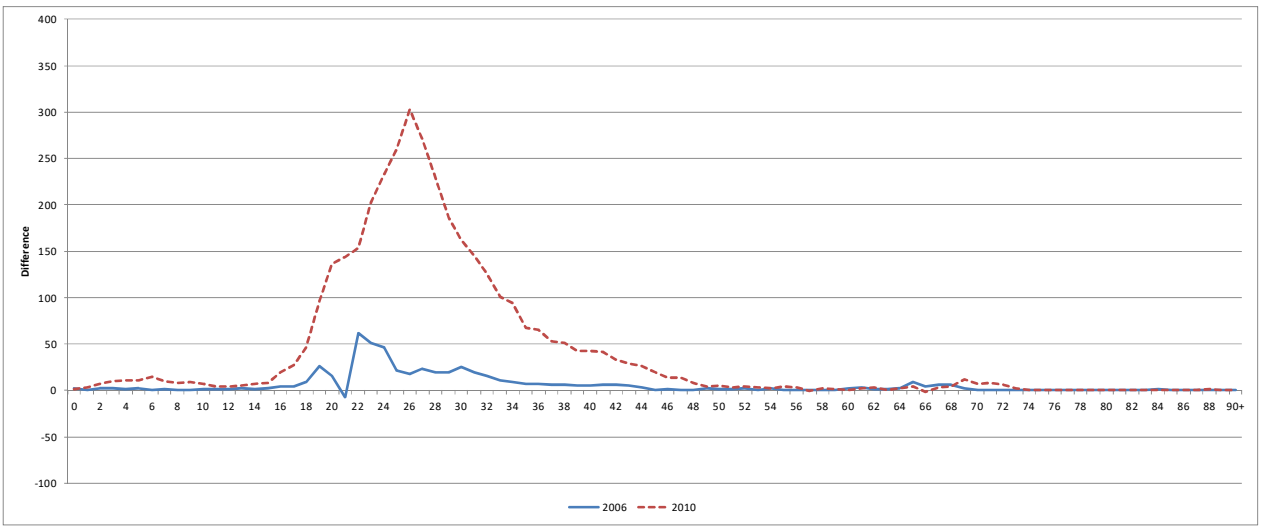


Chart B7a: Difference between the indicative revisions and the mid-year population figures, Kensington and Chelsea, mid-year 2006 and mid-year 2010, males, single year of age

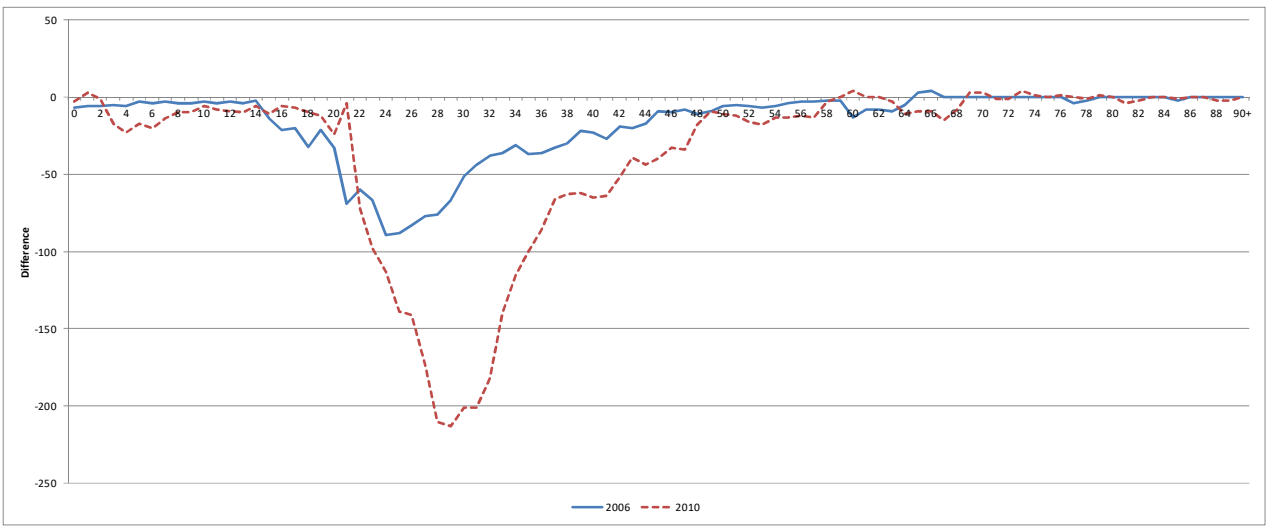


Chart B7b: Difference between the indicative revisions and the mid-year population figures, Kensington and Chelsea, mid-year 2006 and mid-year 2010, females, single year of age

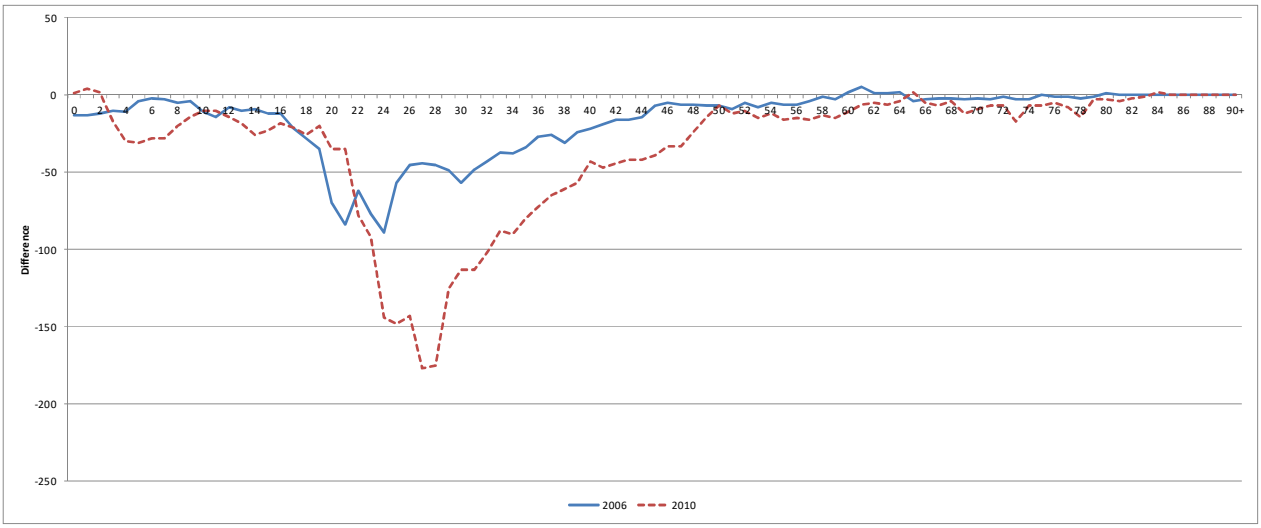


Chart B8a: Difference between the indicative revisions and the mid-year population figures, Lambeth, mid-year 2006 and mid-year 2010, males, single year of age

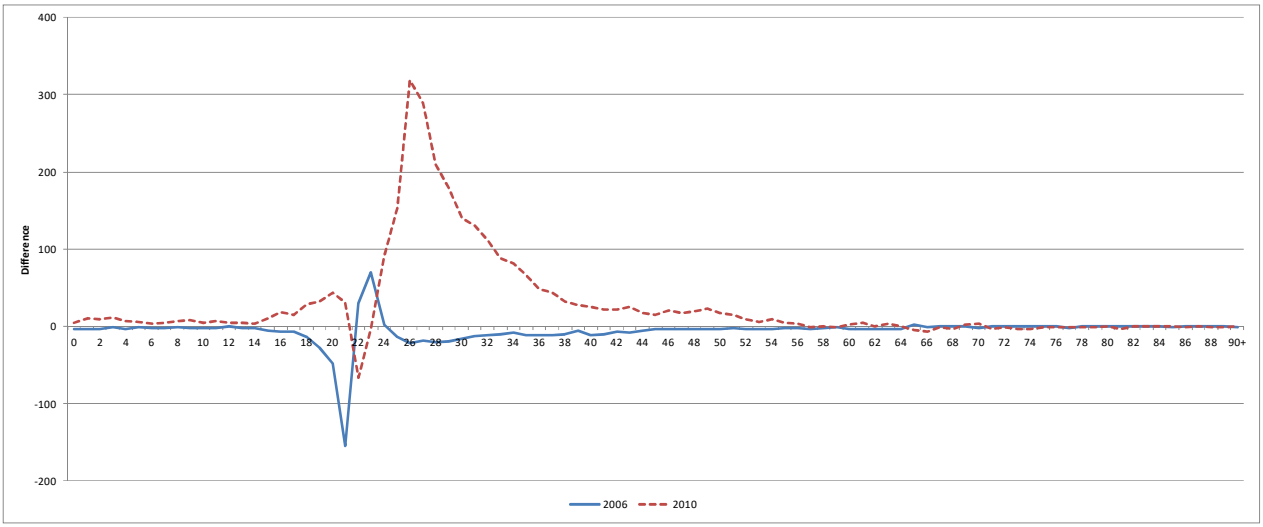


Chart B8b: Difference between the indicative revisions and the mid-year population figures, Lambeth, mid-year 2006 and mid-year 2010, females, single year of age

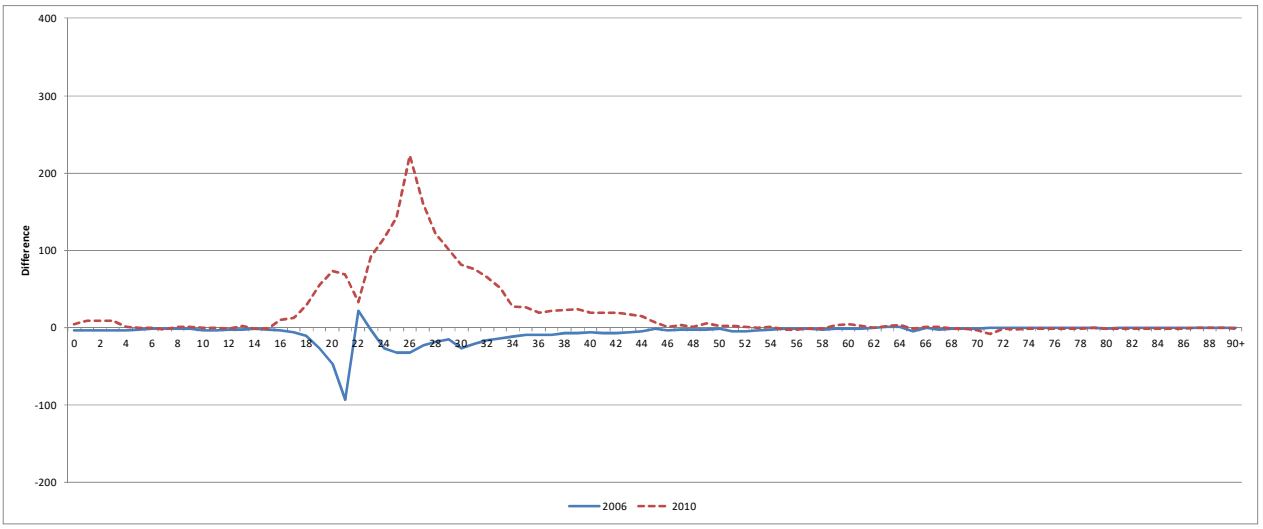


Chart B9a: Difference between the indicative revisions and the mid-year population figures, Lewisham, mid-year 2006 and mid-year 2010, males, single year of age

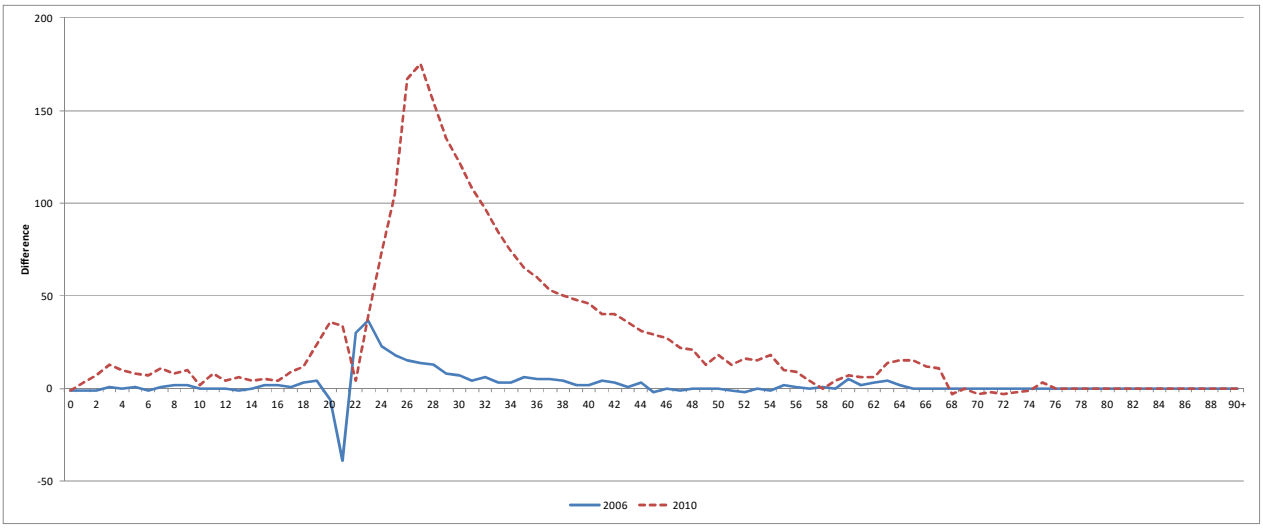


Chart B9b: Difference between the indicative revisions and the mid-year population figures, Lewisham, mid-year 2006 and mid-year 2010, females, single year of age

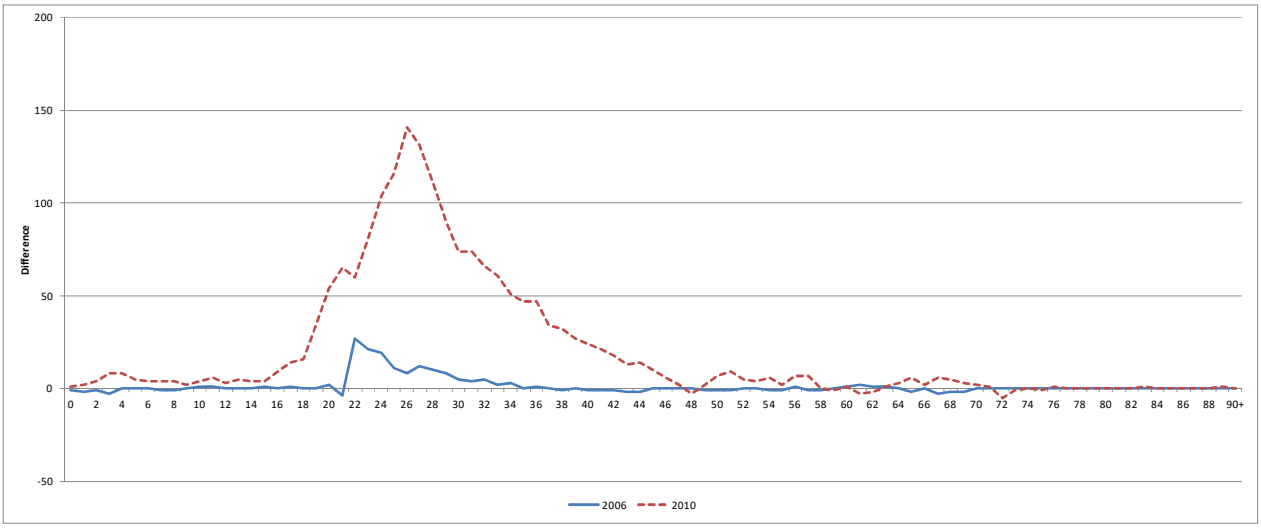


Chart B10a: Difference between the indicative revisions and the mid-year population figures, Newham, mid-year 2006 and mid-year 2010, males, single year of age

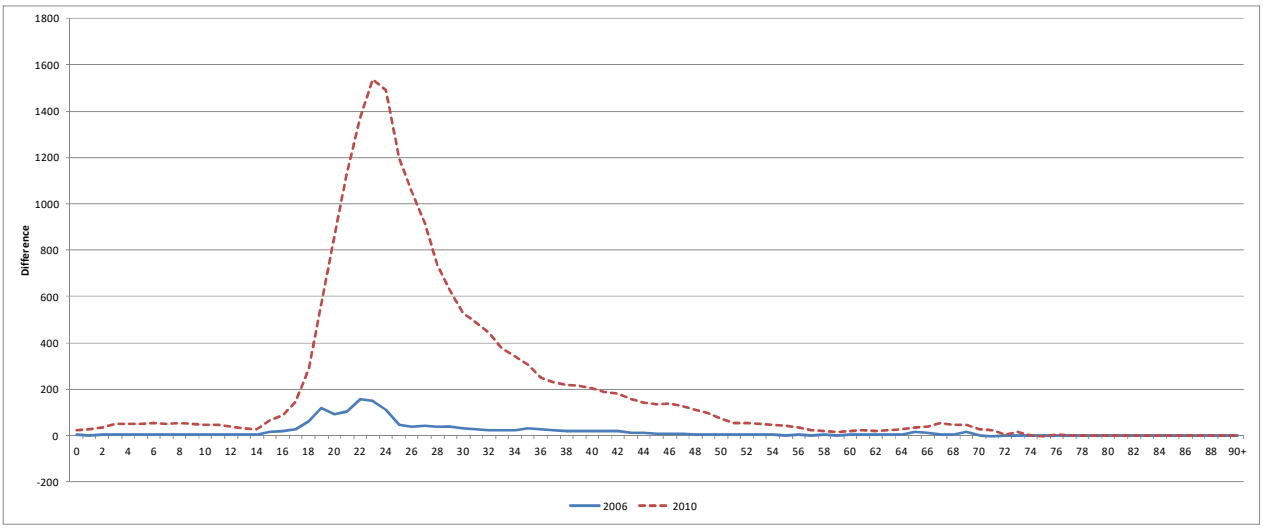


Chart B10b: Difference between the indicative revisions and the mid-year population figures, Newham, mid-year 2006 and mid-year 2010, females, single year of age

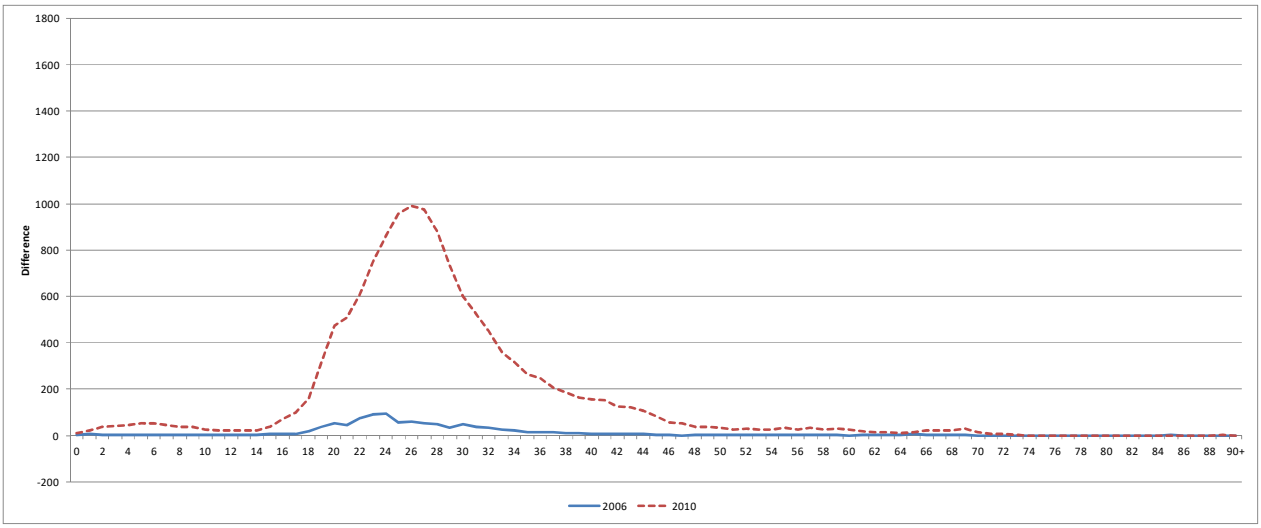


Chart B11a: Difference between the indicative revisions and the mid-year population figures, Southwark, mid-year 2006 and mid-year 2010, males, single year of age

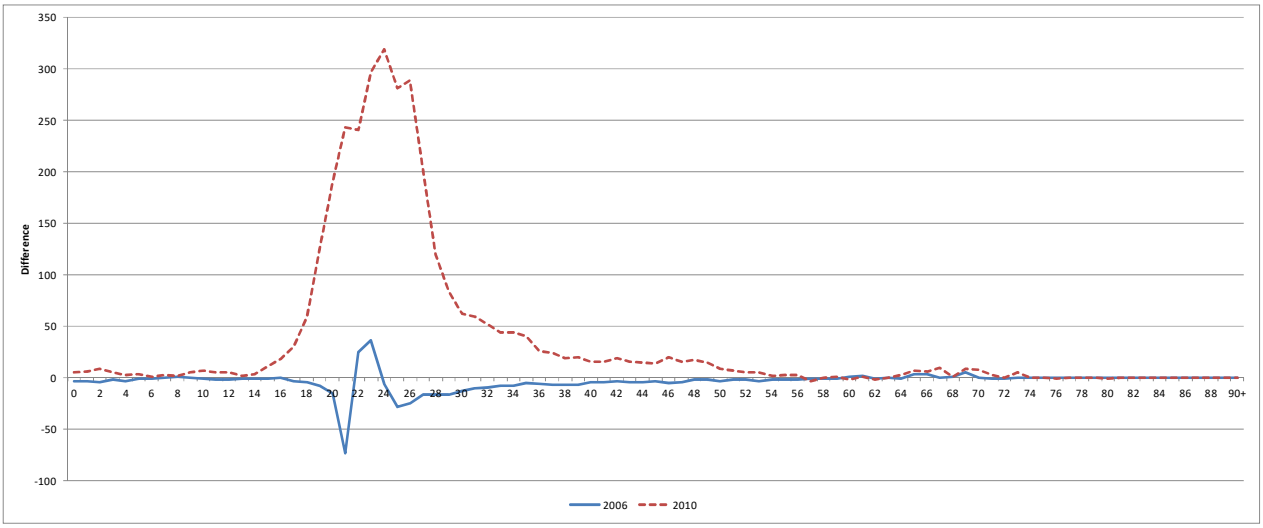


Chart B11b: Difference between the indicative revisions and the mid-year population figures, Southwark, mid-year 2006 and mid-year 2010, females, single year of age

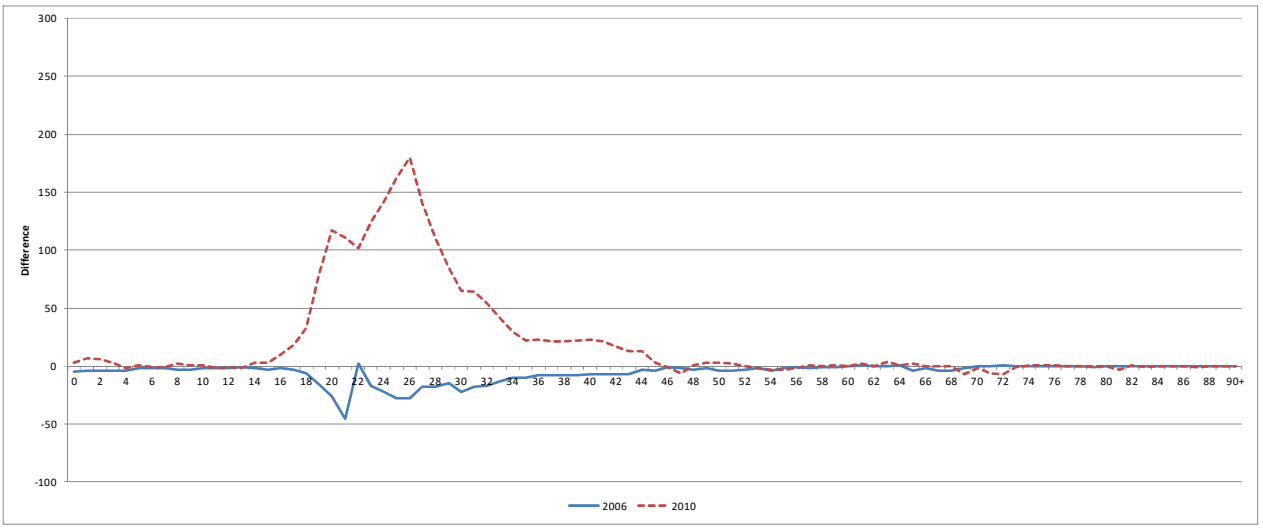


Chart B12a: Difference between the indicative revisions and the mid-year population figures, Tower Hamlets, mid-year 2006 and mid-year 2010, males, single year of age

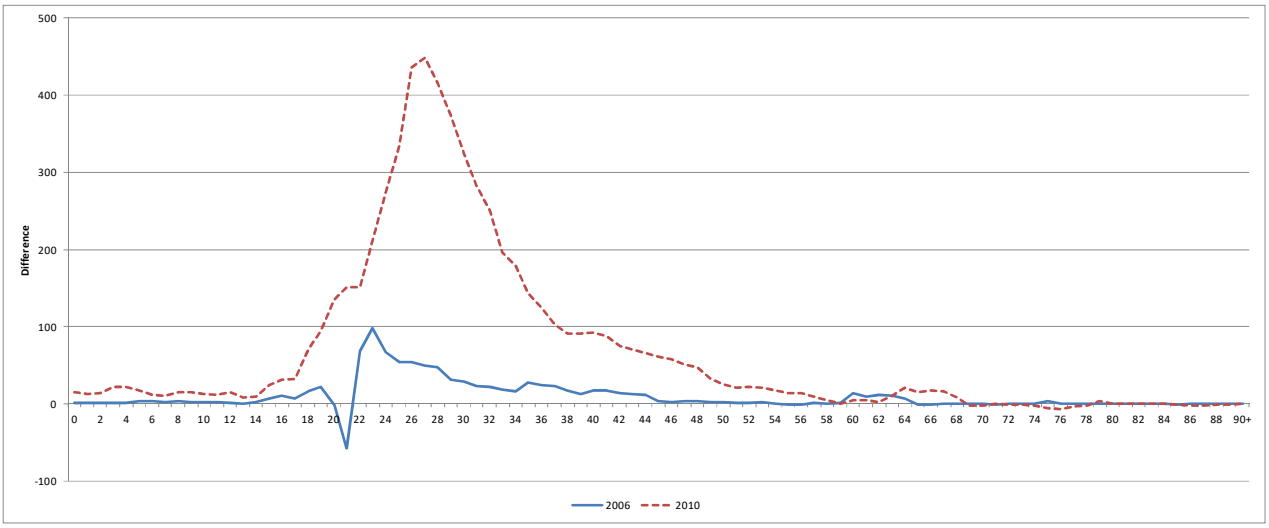


Chart B12b: Difference between the indicative revisions and the mid-year population figures, Tower Hamlets, mid-year 2006 and mid-year 2010, females, single year of age

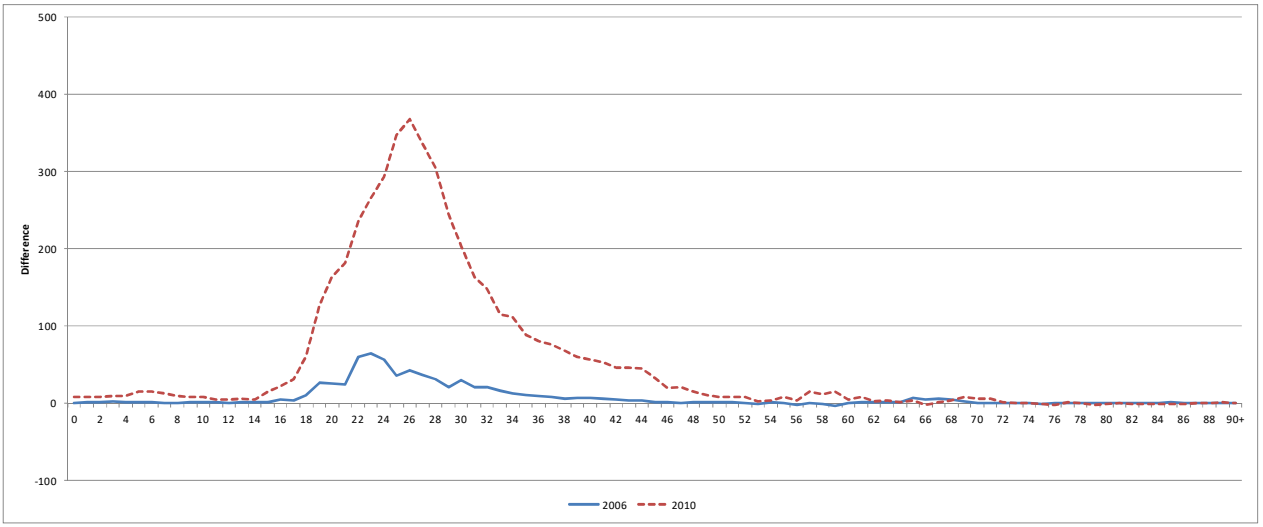


Chart B13a: Difference between the indicative revisions and the mid-year population figures, Wandsworth, mid-year 2006 and mid-year 2010, males, single year of age

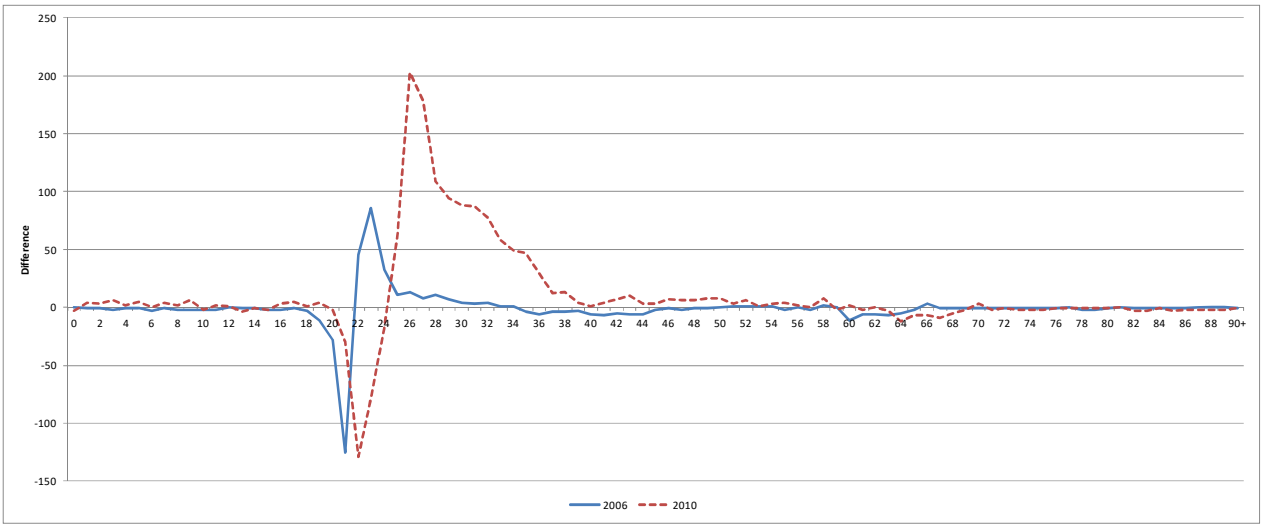


Chart B13b: Difference between the indicative revisions and the mid-year population figures, Wandsworth, mid-year 2006 and mid-year 2010, females, single year of age

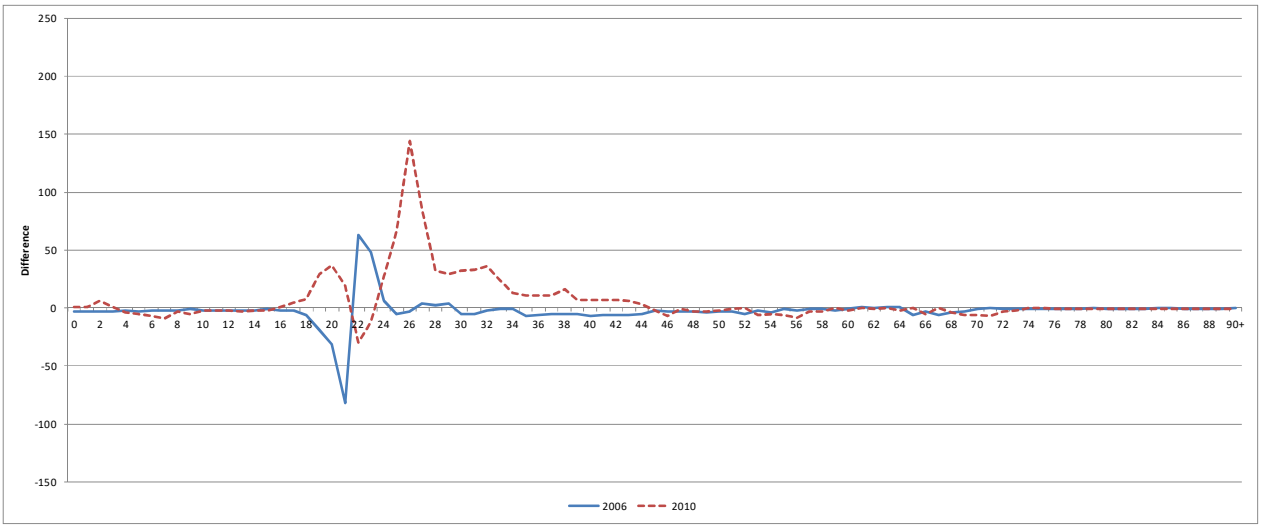


Chart B14a: Difference between the indicative revisions and the mid-year population figures, Westminster, mid-year 2006 and mid-year 2010, males, single year of age

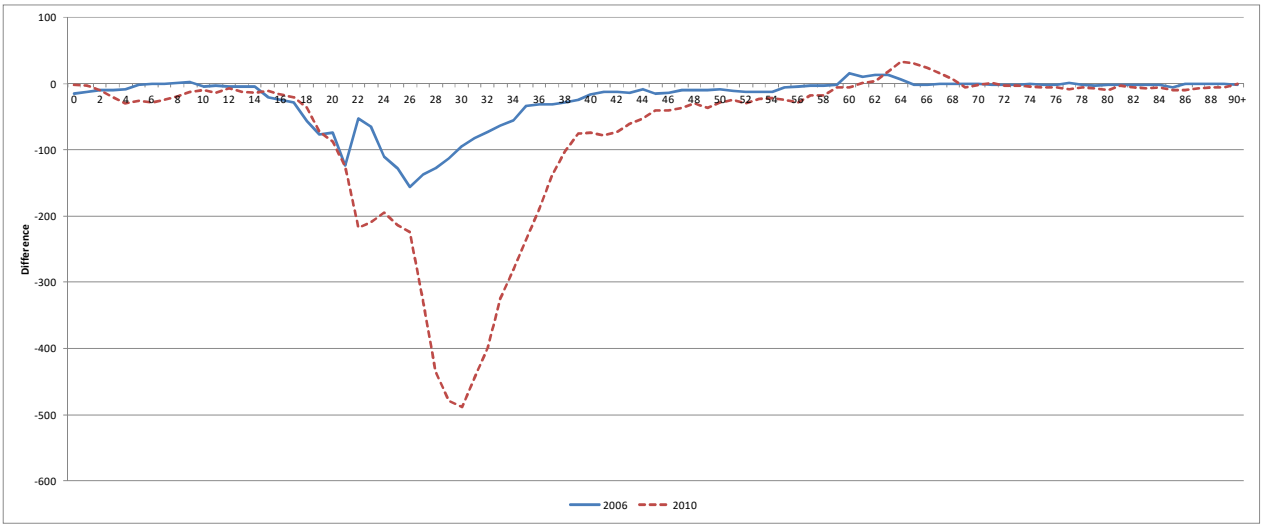


Chart B14b: Difference between the indicative revisions and the mid-year population figures, Westminster, mid-year 2006 and mid-year 2010, females, single year of age

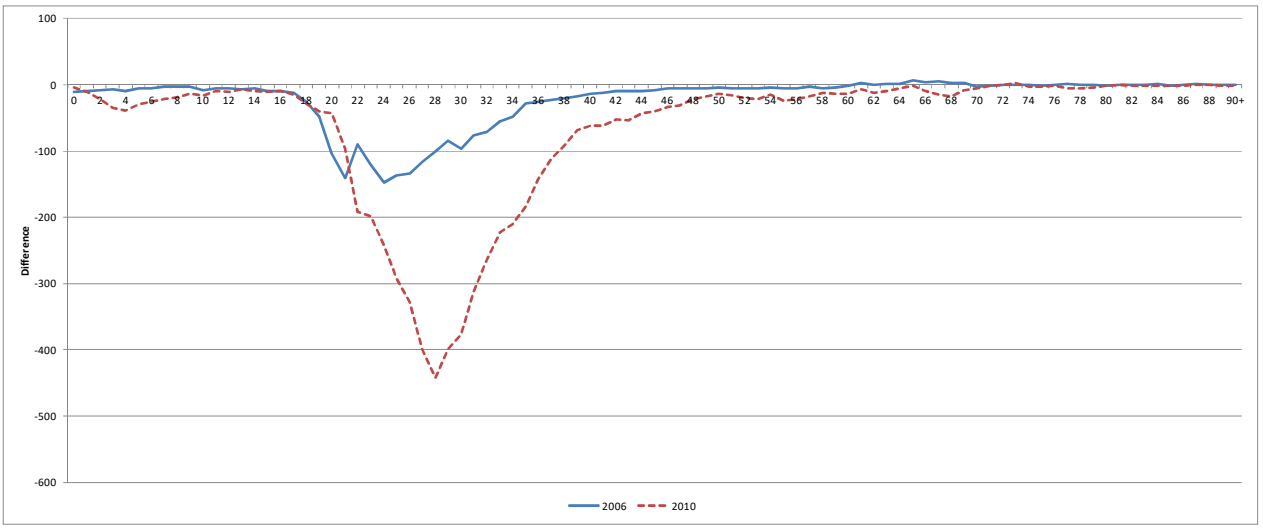


Chart B15a: Difference between the indicative revisions and the mid-year population figures, Barking and Dagenham, mid-year 2006 and mid-year 2010, males, single year of age

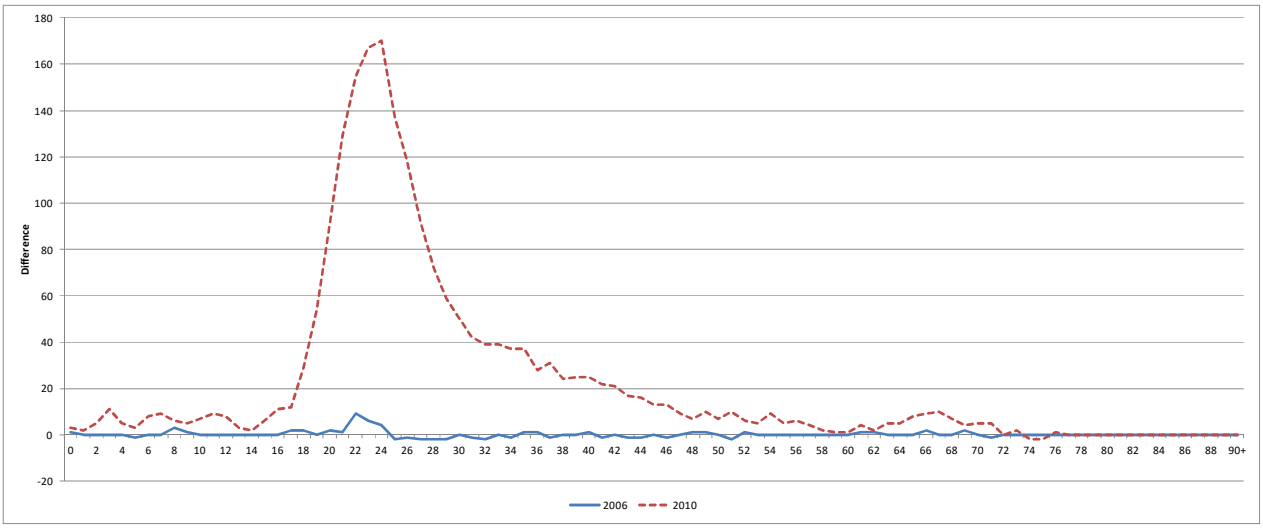


Chart B15b: Difference between the indicative revisions and the mid-year population figures, Barking and Dagenham, mid-year 2006 and mid-year 2010, females, single year of age

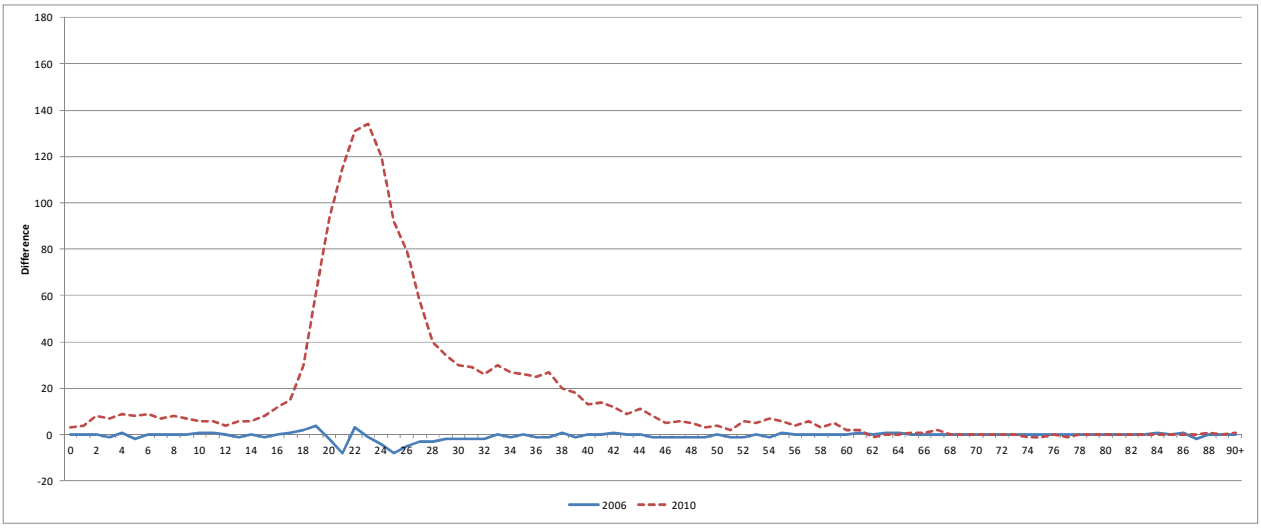


Chart B16a: Difference between the indicative revisions and the mid-year population figures, Barnet, mid-year 2006 and mid-year 2010, males, single year of age

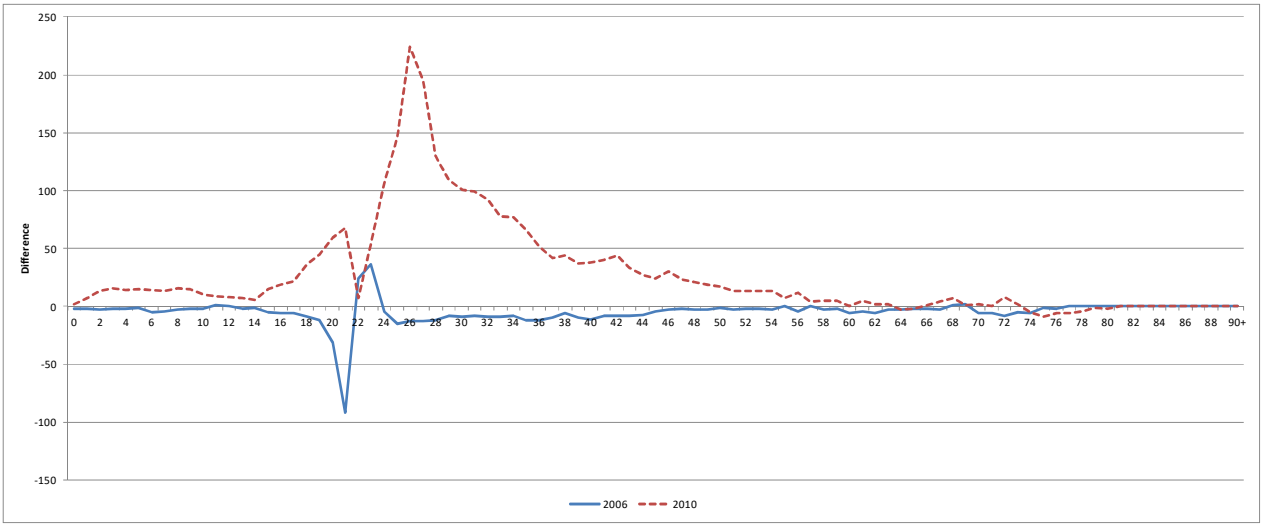


Chart B16b: Difference between the indicative revisions and the mid-year population figures, Barnet, mid-year 2006 and mid-year 2010, females, single year of age

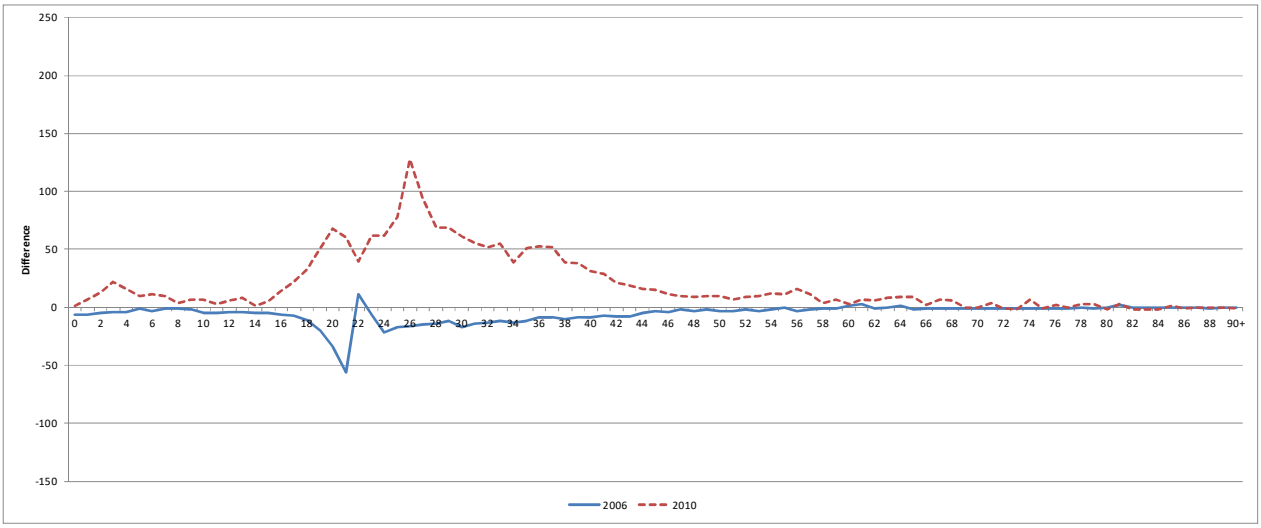


Chart B17a: Difference between the indicative revisions and the mid-year population figures, Bexley, mid-year 2006 and mid-year 2010, males, single year of age

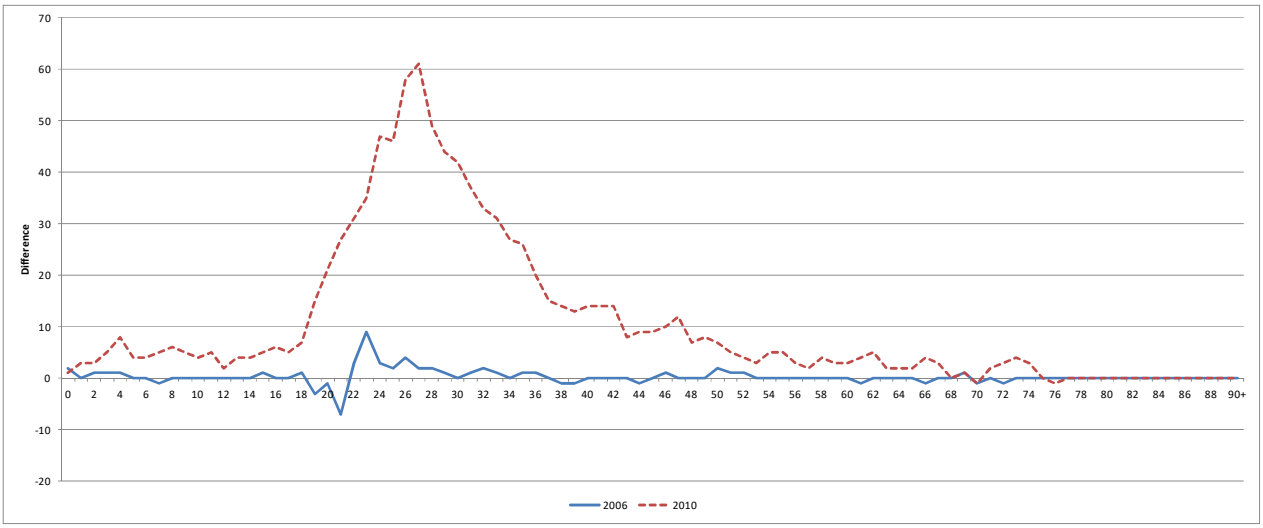


Chart B17b: Difference between the indicative revisions and the mid-year population figures, Bexley, mid-year 2006 and mid-year 2010, females, single year of age

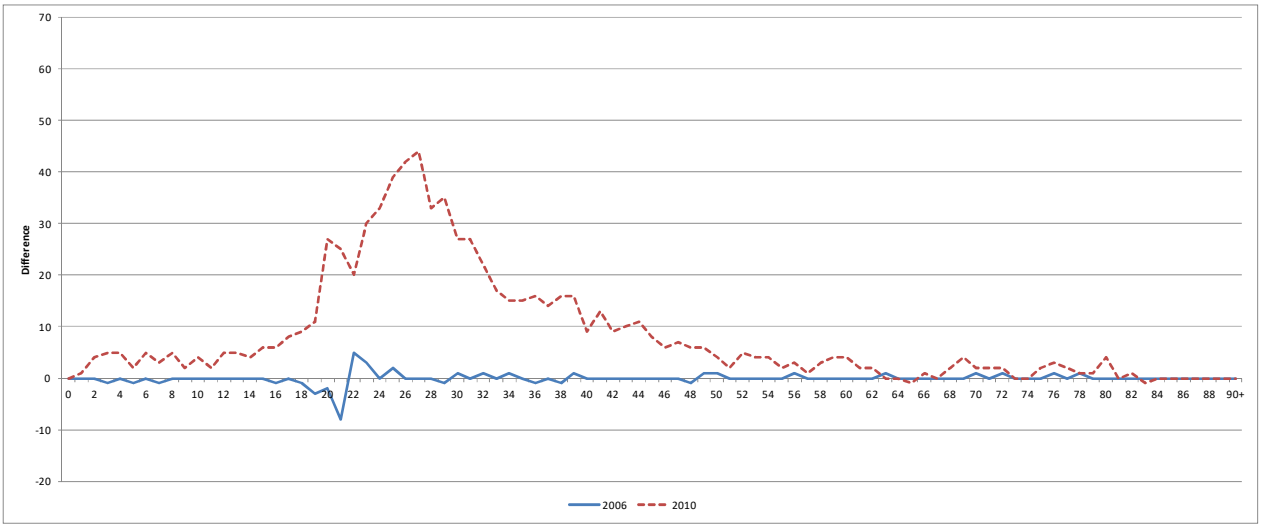


Chart B18a: Difference between the indicative revisions and the mid-year population figures, Brent, mid-year 2006 and mid-year 2010, males, single year of age

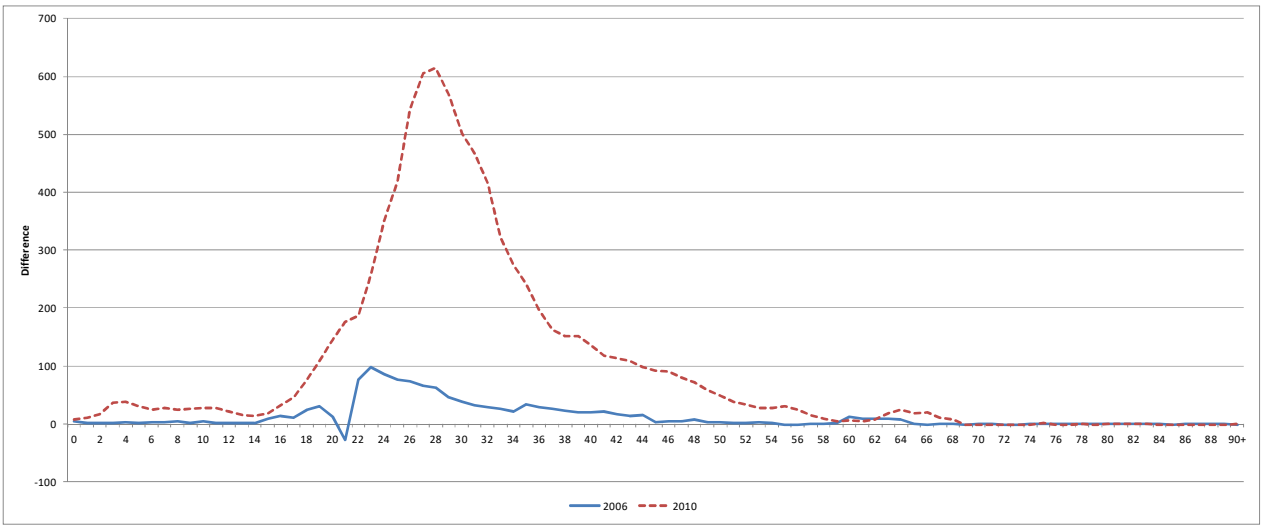


Chart B18b: Difference between the indicative revisions and the mid-year population figures, Brent, mid-year 2006 and mid-year 2010, females, single year of age

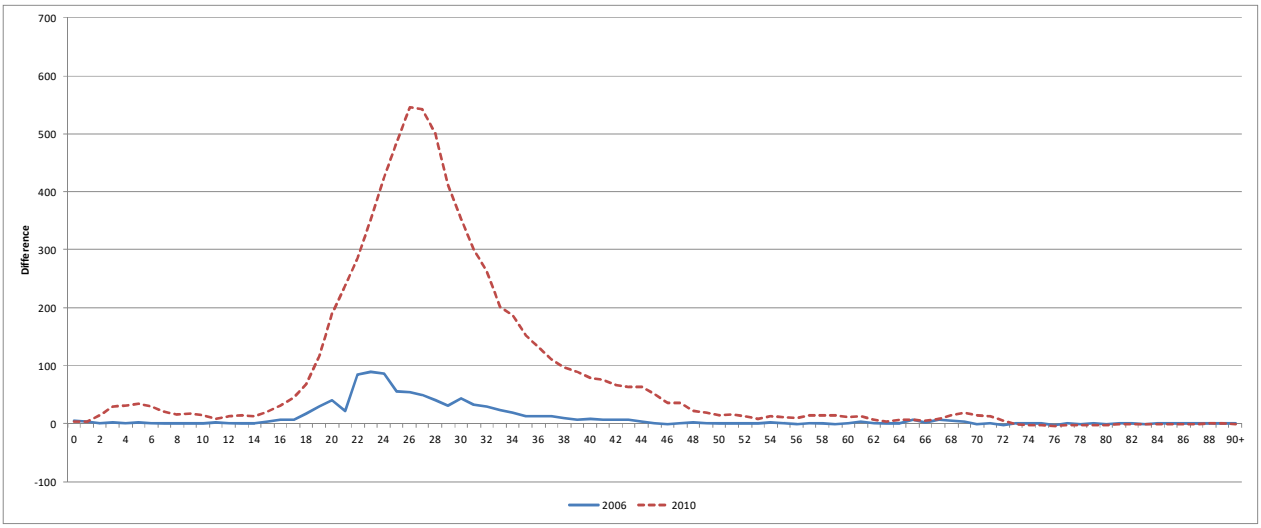


Chart B19a: Difference between the indicative revisions and the mid-year population figures, Bromley, mid-year 2006 and mid-year 2010, males, single year of age

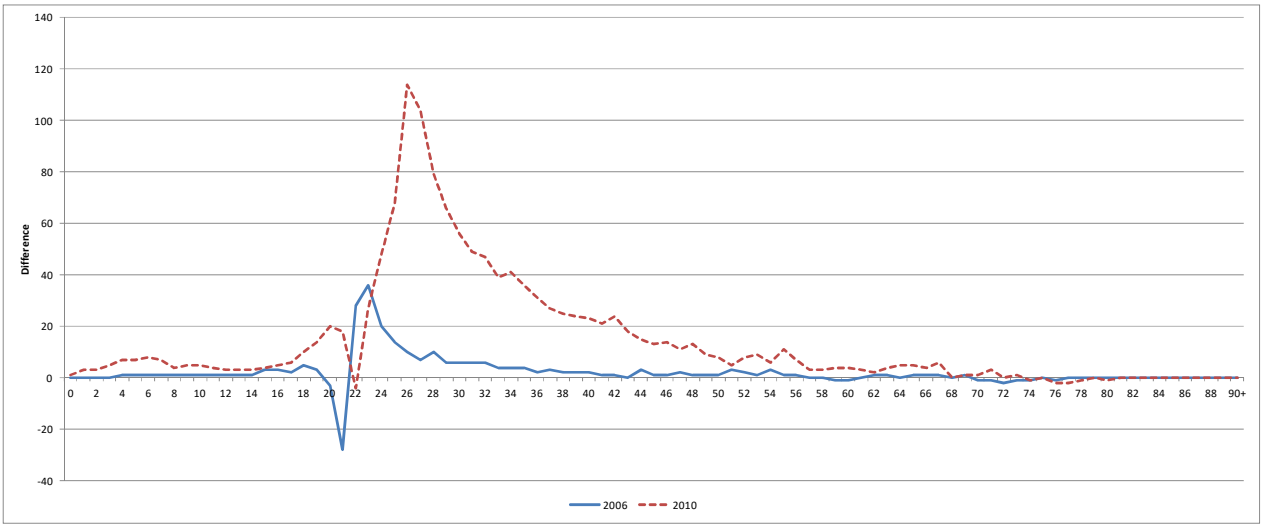


Chart B19b: Difference between the indicative revisions and the mid-year population figures, Bromley, mid-year 2006 and mid-year 2010, females, single year of age

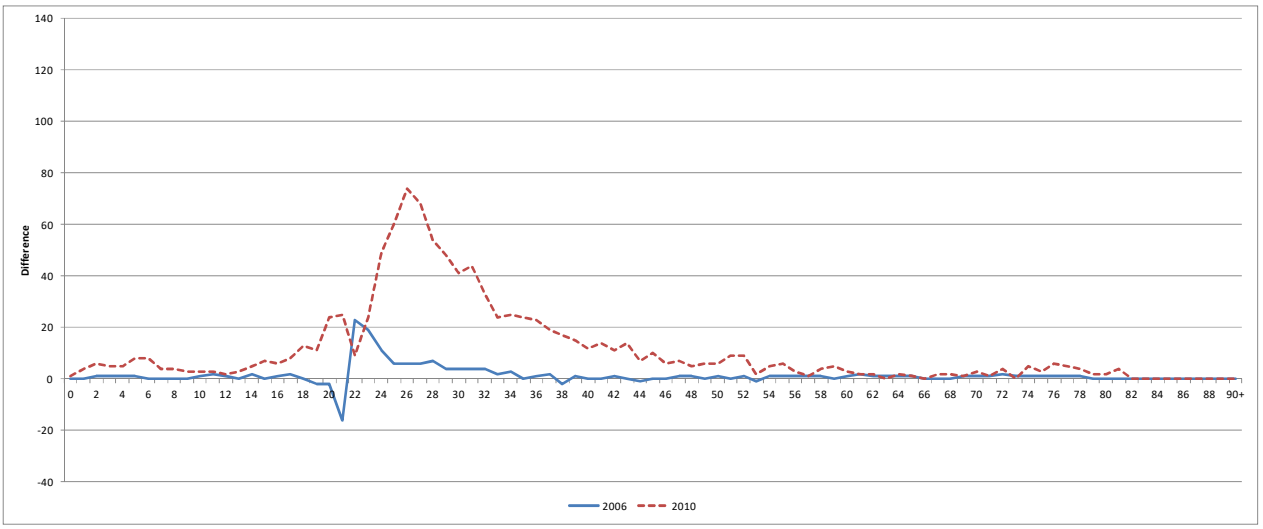


Chart B20a: Difference between the indicative revisions and the mid-year population figures, Croydon, mid-year 2006 and mid-year 2010, males, single year of age

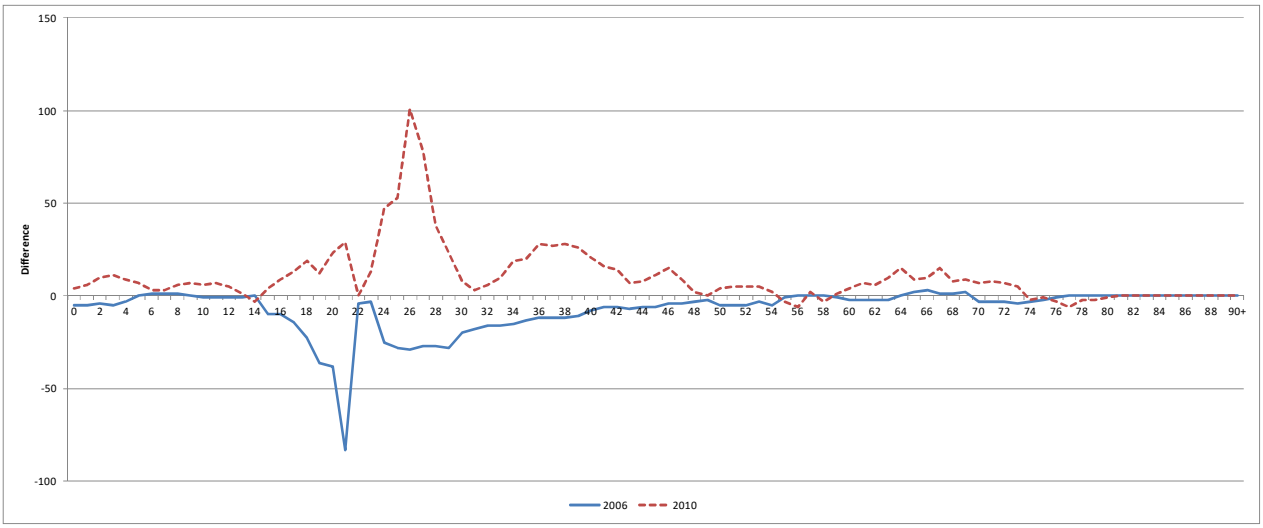


Chart B20b: Difference between the indicative revisions and the mid-year population figures, Croydon, mid-year 2006 and mid-year 2010, females, single year of age

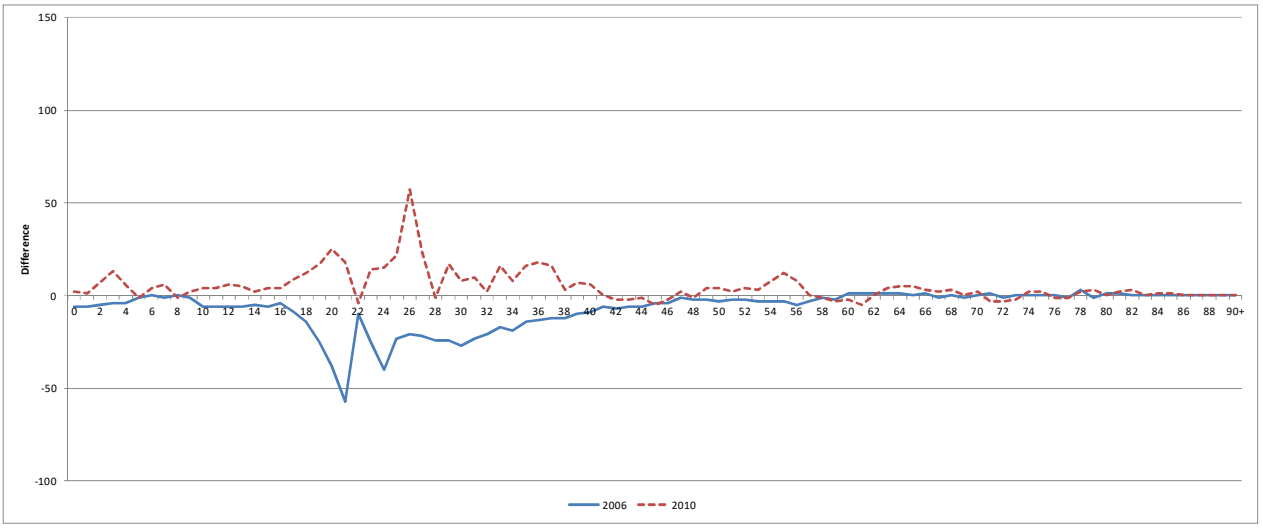


Chart B21a: Difference between the indicative revisions and the mid-year population figures, Ealing, mid-year 2006 and mid-year 2010, males, single year of age

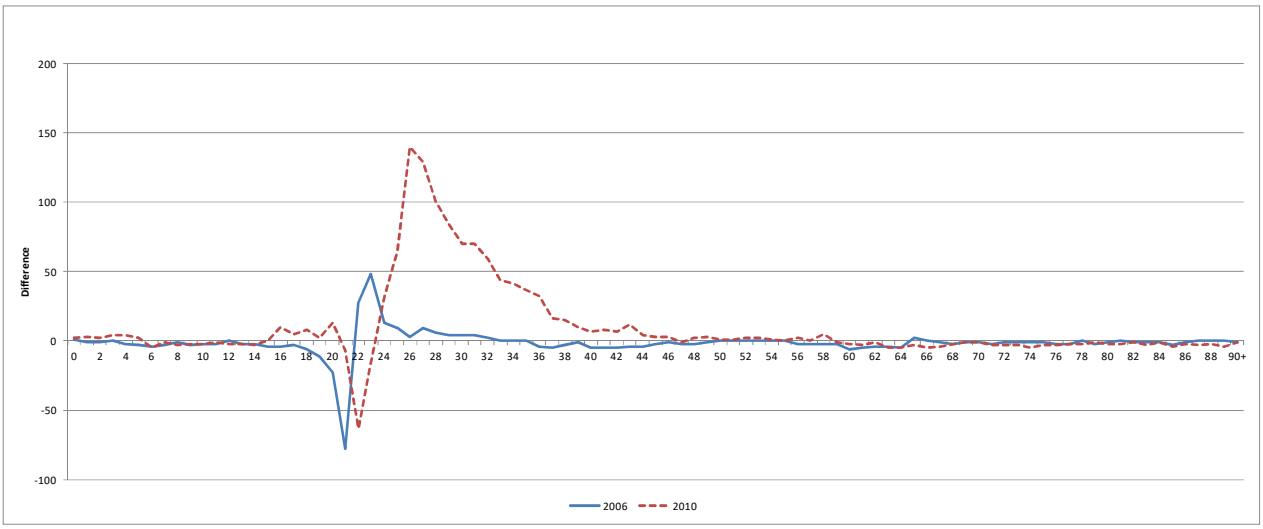


Chart B21b: Difference between the indicative revisions and the mid-year population figures, Ealing, mid-year 2006 and mid-year 2010, females, single year of age

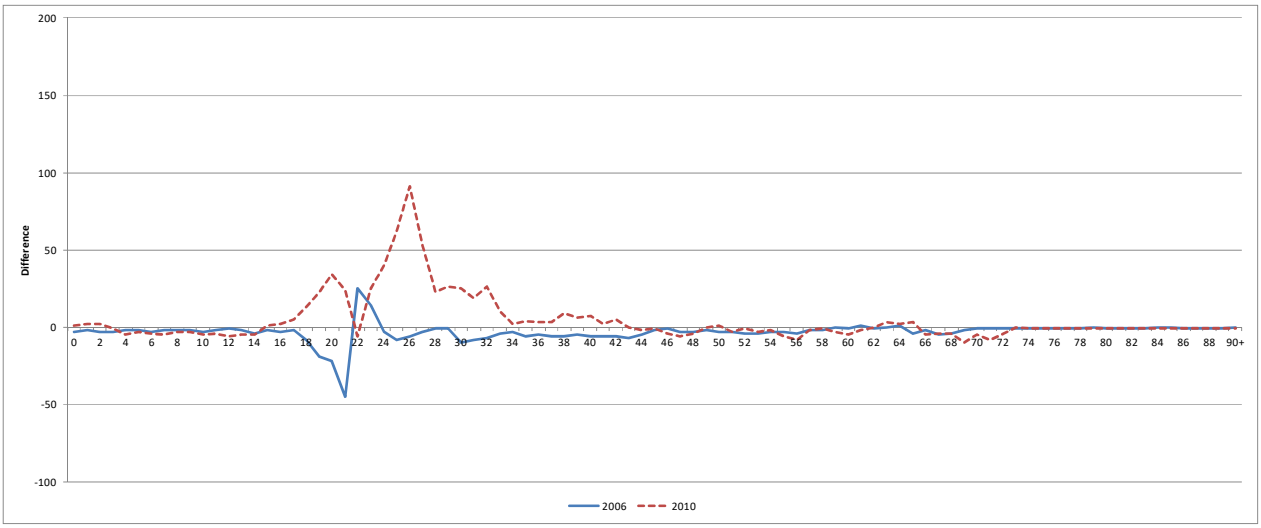


Chart B22a: Difference between the indicative revisions and the mid-year population figures, Enfield, mid-year 2006 and mid-year 2010, males, single year of age

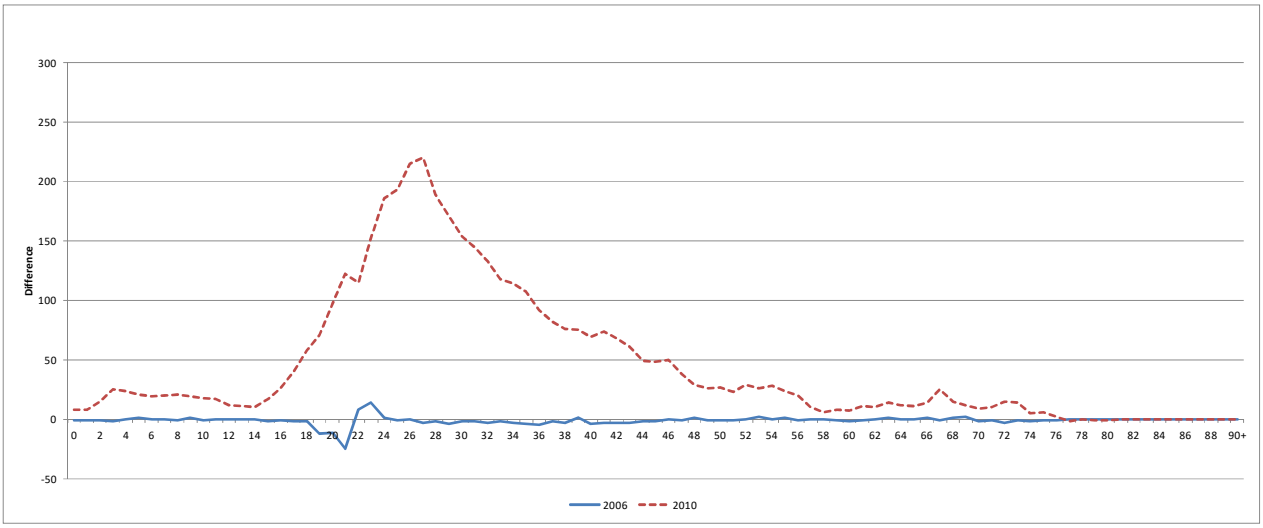


Chart B22b: Difference between the indicative revisions and the mid-year population figures, Enfield, mid-year 2006 and mid-year 2010, females, single year of age

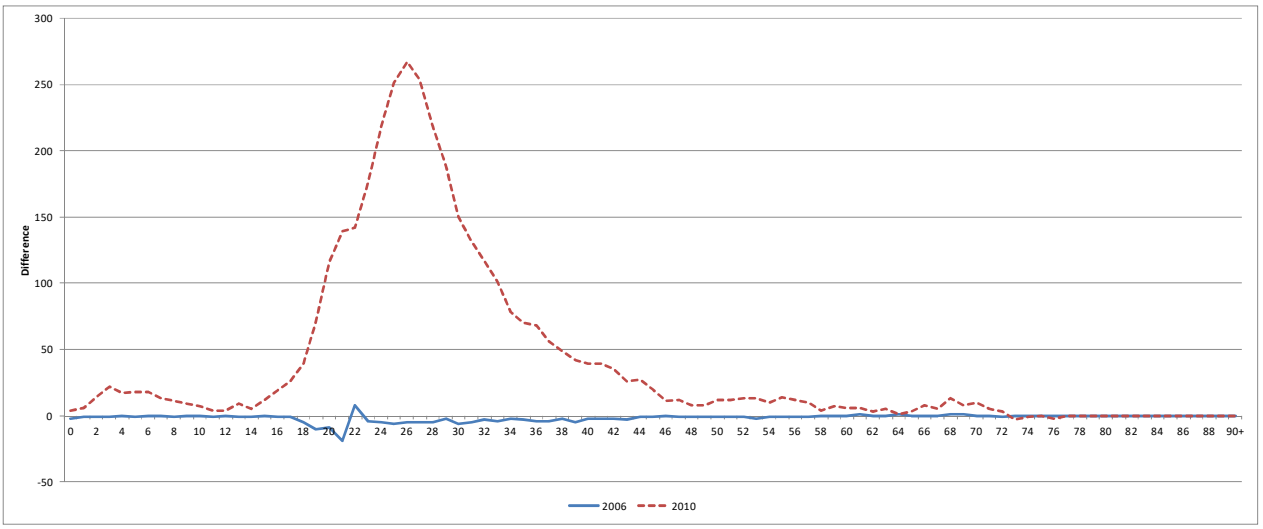


Chart B23a: Difference between the indicative revisions and the mid-year population figures, Greenwich, mid-year 2006 and mid-year 2010, males, single year of age

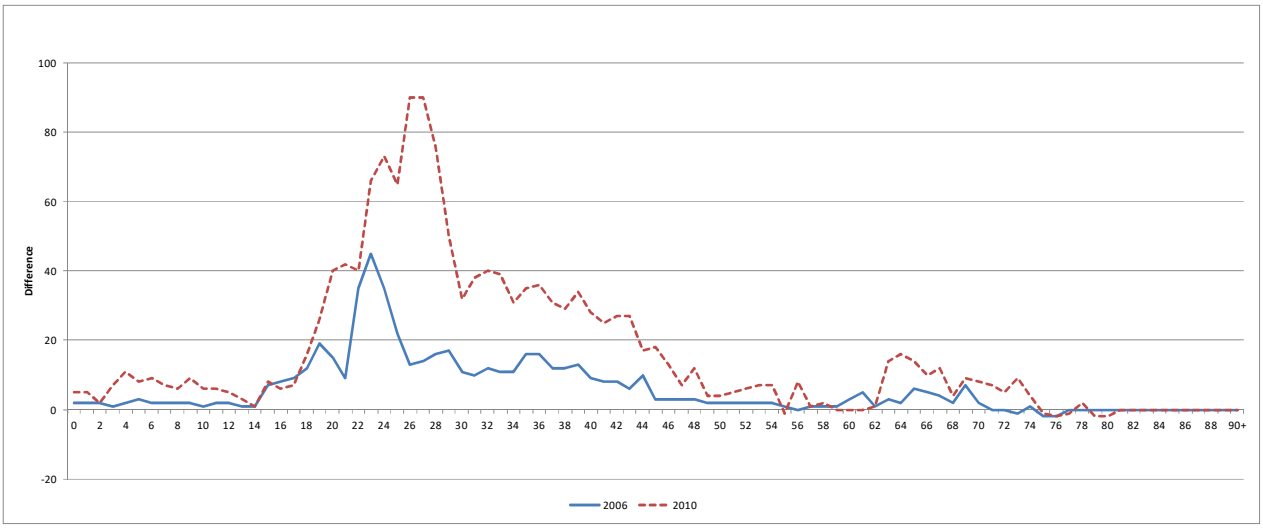


Chart B23b: Difference between the indicative revisions and the mid-year population figures, Greenwich, mid-year 2006 and mid-year 2010, females, single year of age

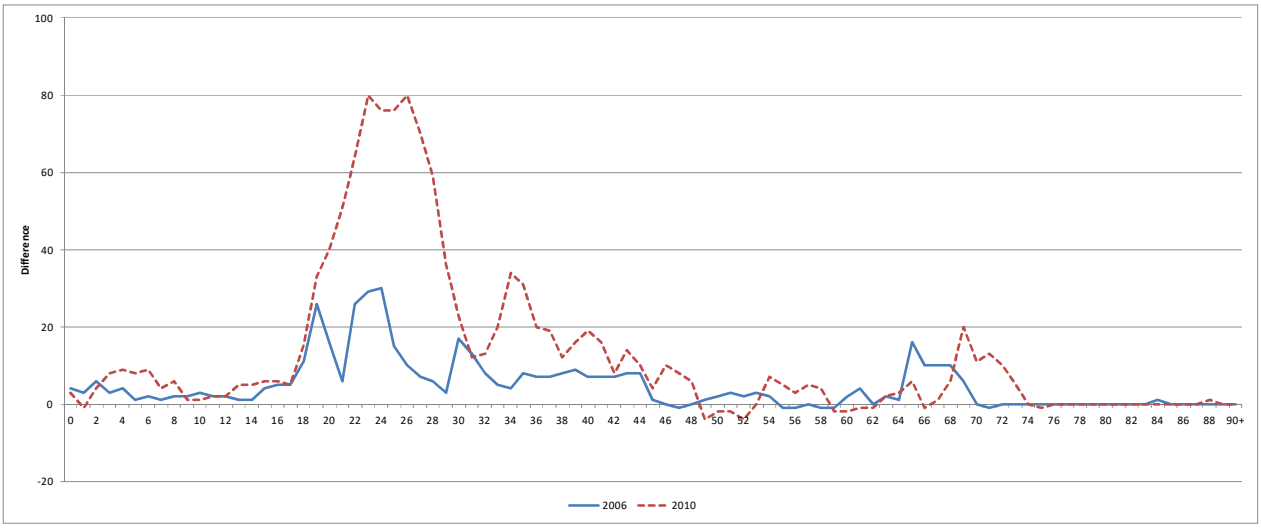


Chart B24a: Difference between the indicative revisions and the mid-year population figures, Harrow, mid-year 2006 and mid-year 2010, males, single year of age

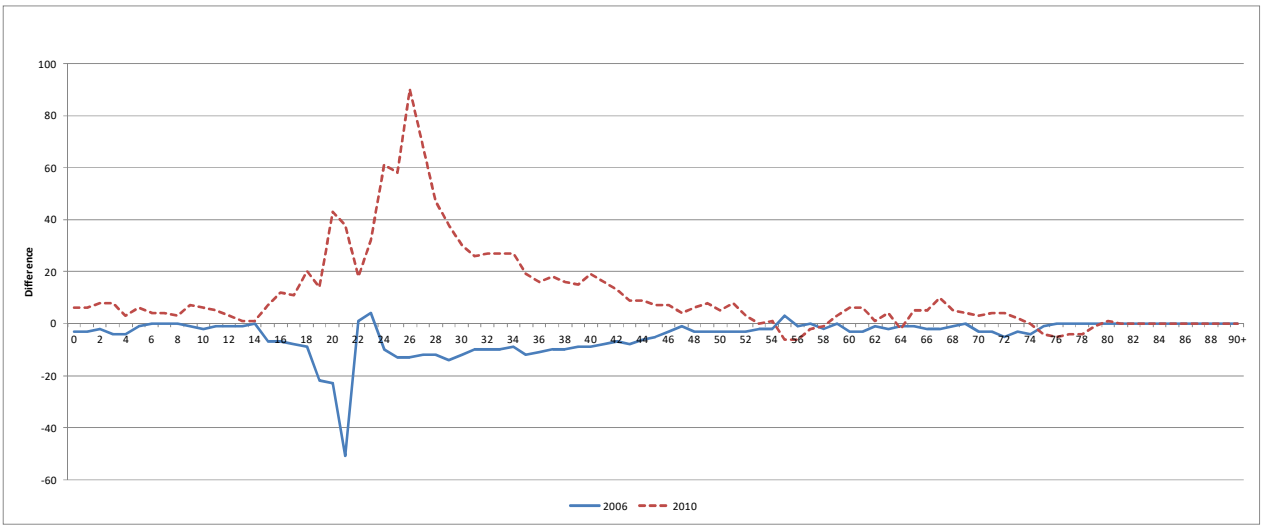


Chart B24b: Difference between the indicative revisions and the mid-year population figures, Harrow, mid-year 2006 and mid-year 2010, females, single year of age

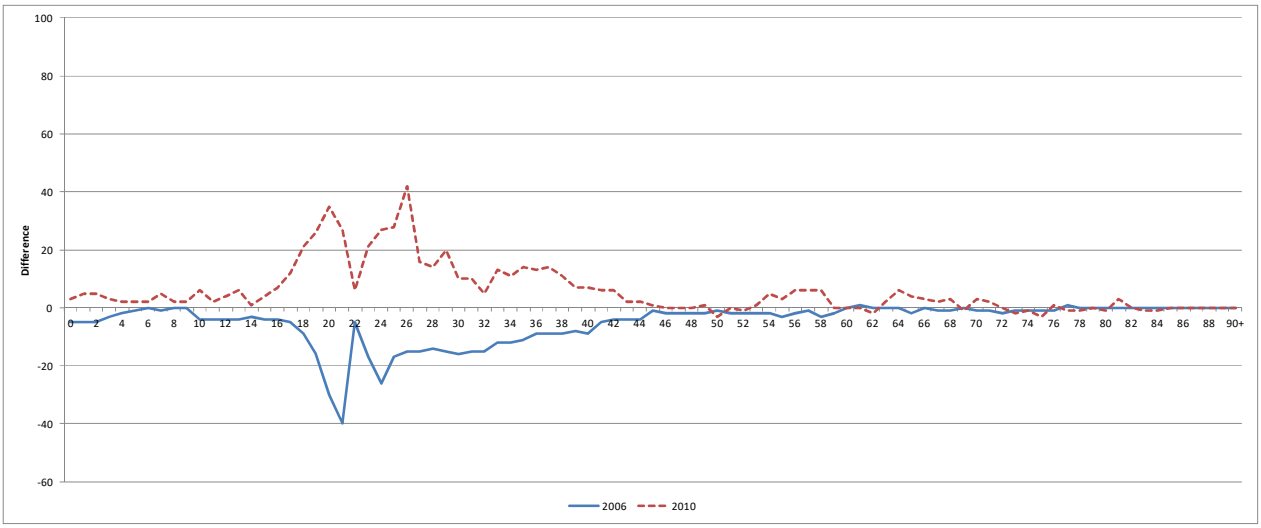


Chart B25a: Difference between the indicative revisions and the mid-year population figures, Havering, mid-year 2006 and mid-year 2010, males, single year of age

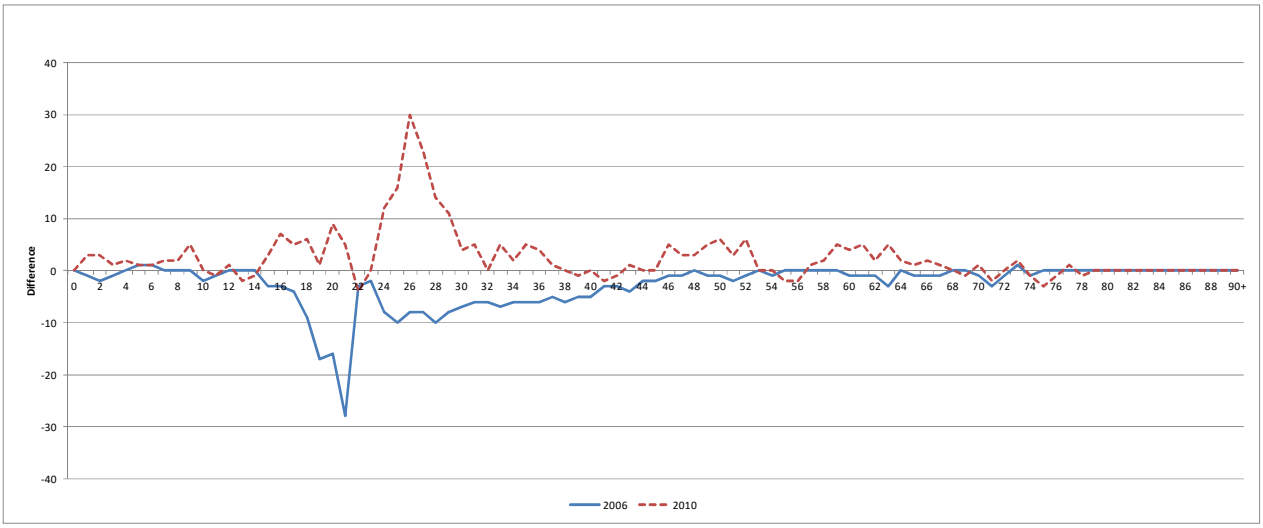


Chart B25b: Difference between the indicative revisions and the mid-year population figures, Havering, mid-year 2006 and mid-year 2010, females, single year of age

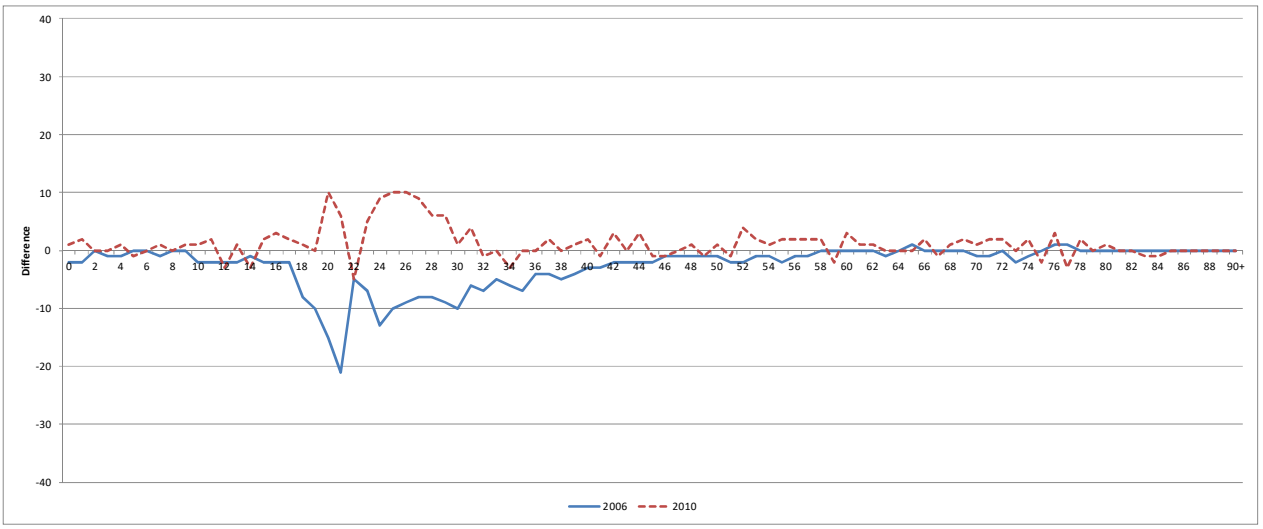


Chart B26a: Difference between the indicative revisions and the mid-year population figures, Hillingdon, mid-year 2006 and mid-year 2010, males, single year of age

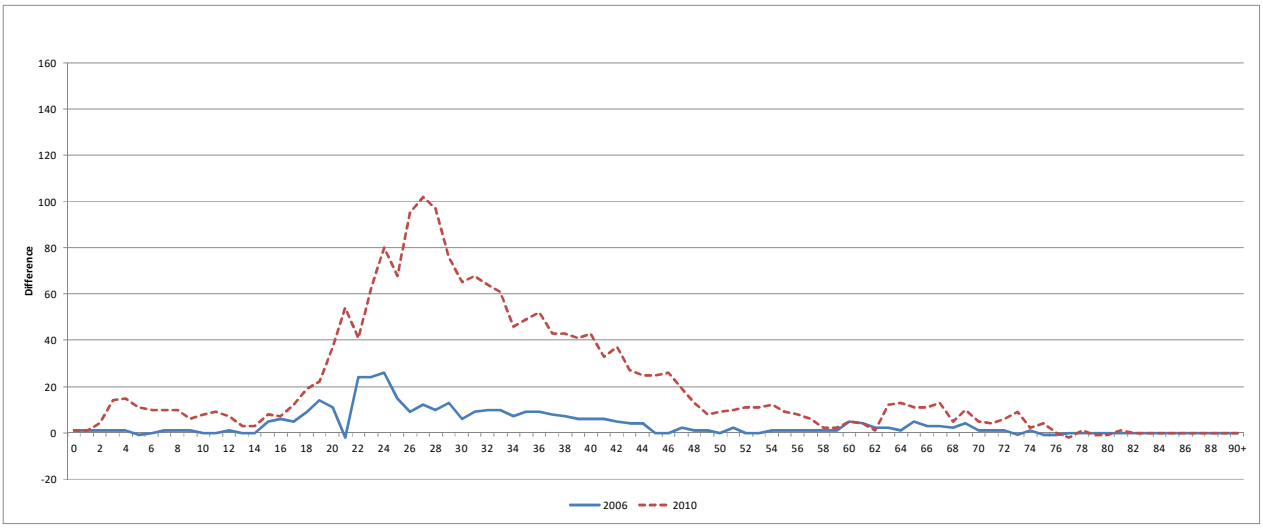


Chart B26b: Difference between the indicative revisions and the mid-year population figures, Hillingdon, mid-year 2006 and mid-year 2010, females, single year of age

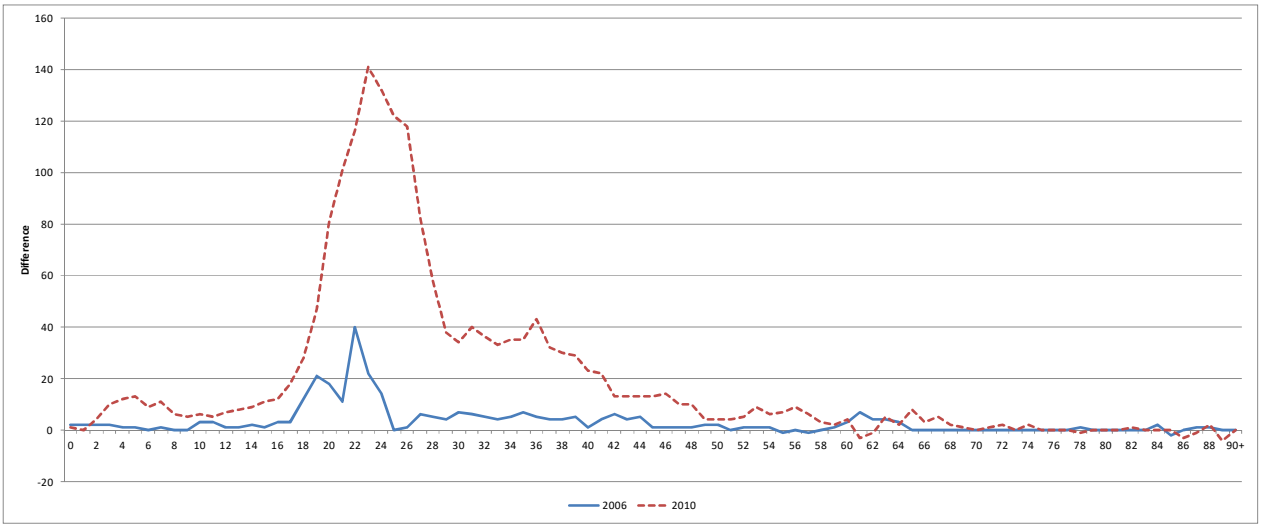


Chart B27a: Difference between the indicative revisions and the mid-year population figures, Hounslow, mid-year 2006 and mid-year 2010, males, single year of age

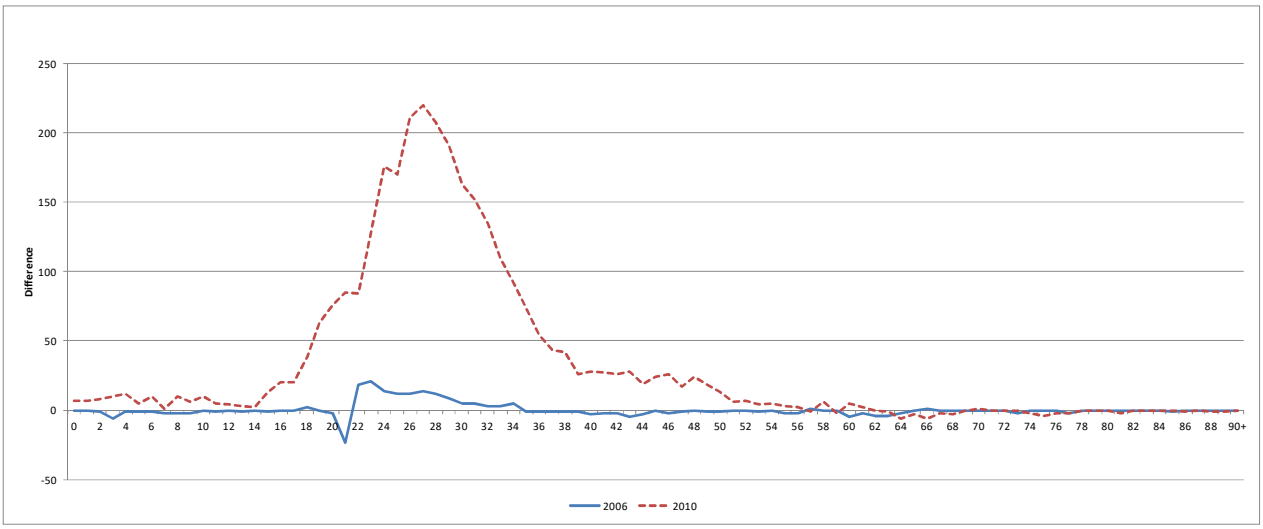


Chart B27b: Difference between the indicative revisions and the mid-year population figures, Hounslow, mid-year 2006 and mid-year 2010, females, single year of age

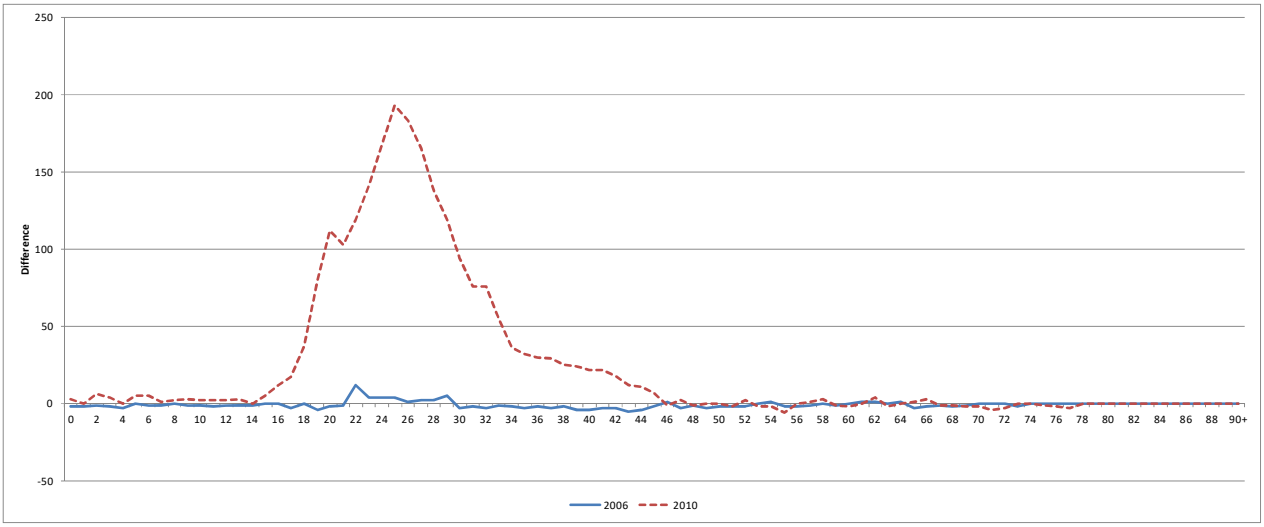


Chart B28a: Difference between the indicative revisions and the mid-year population figures, Kingston upon Thames, mid-year 2006 and mid-year 2010, males, single year of age

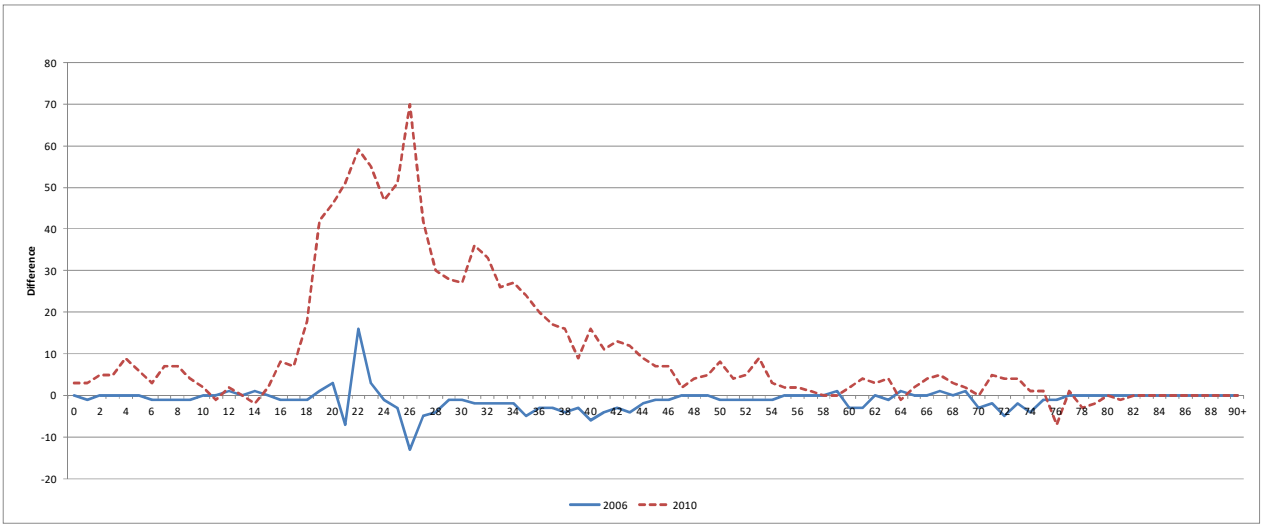


Chart B28b: Difference between the indicative revisions and the mid-year population figures, Kingston upon Thames, mid-year 2006 and mid-year 2010, females, single year of age

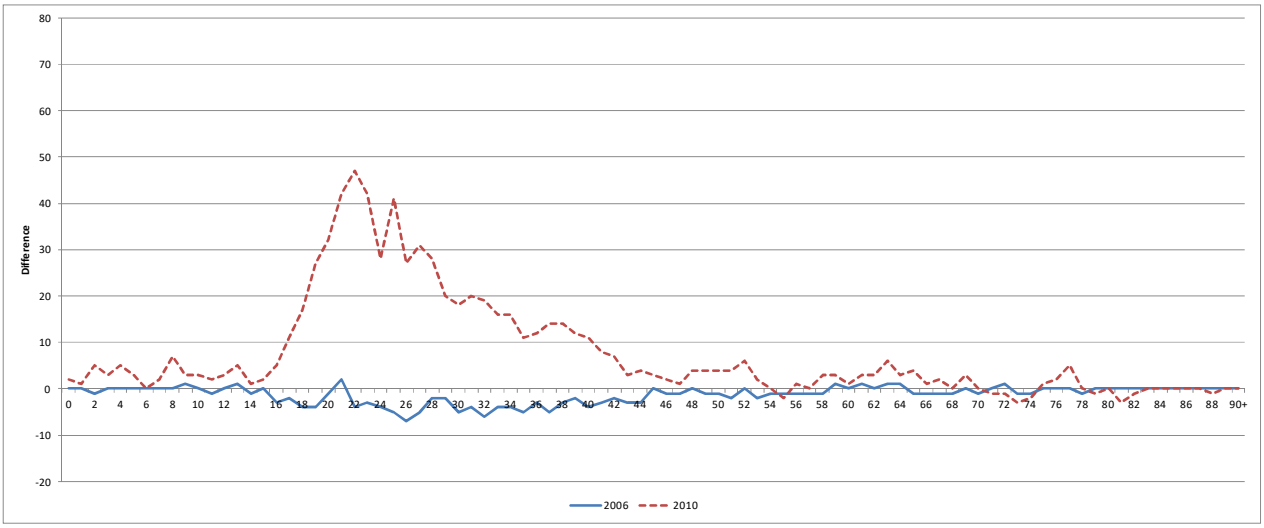


Chart B29a: Difference between the indicative revisions and the mid-year population figures, Merton, mid-year 2006 and mid-year 2010, males, single year of age

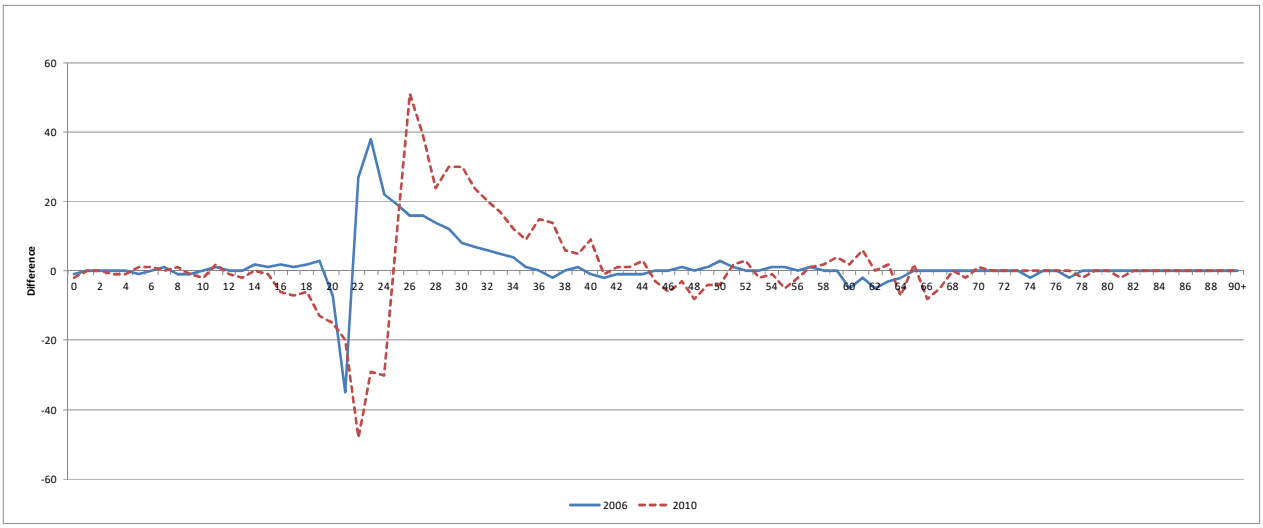


Chart B29b: Difference between the indicative revisions and the mid-year population figures, Merton, mid-year 2006 and mid-year 2010, females, single year of age

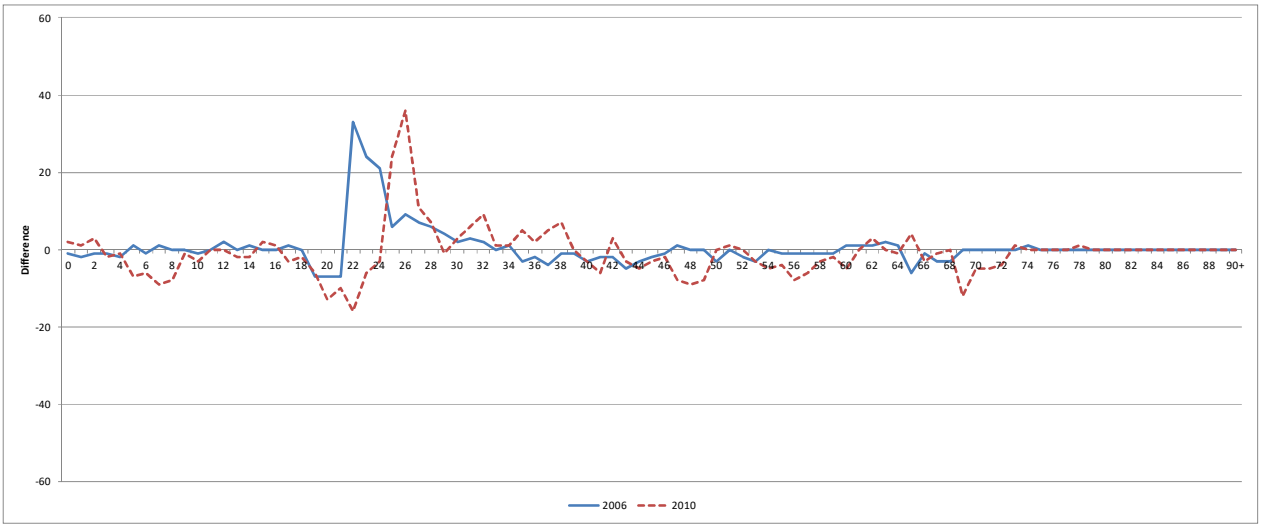


Chart B30a: Difference between the indicative revisions and the mid-year population figures, Redbridge, mid-year 2006 and mid-year 2010, males, single year of age

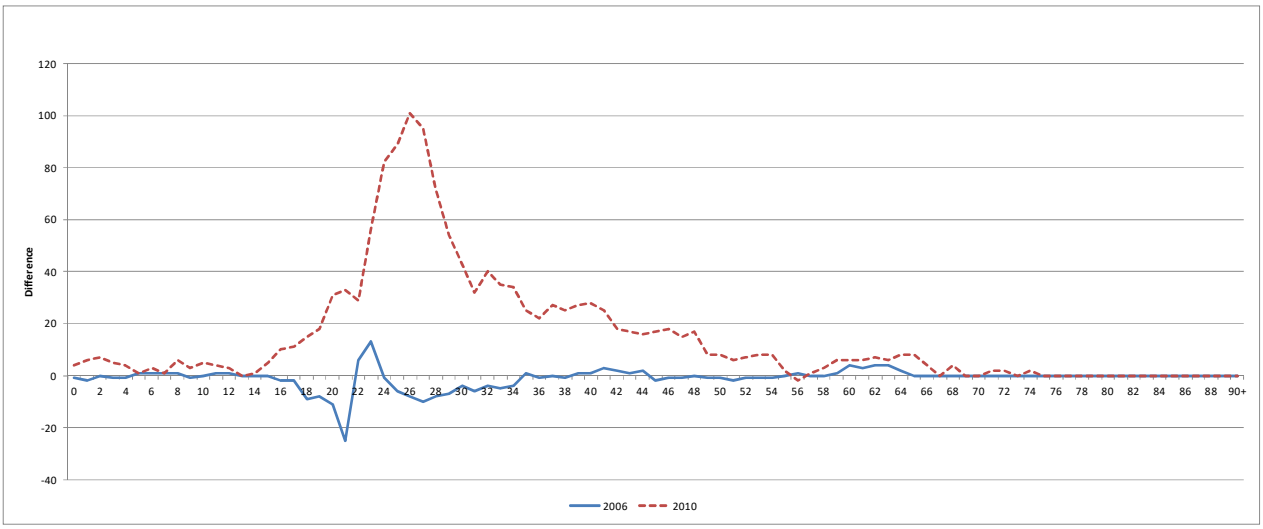


Chart B30b: Difference between the indicative revisions and the mid-year population figures, Redbridge, mid-year 2006 and mid-year 2010, females, single year of age

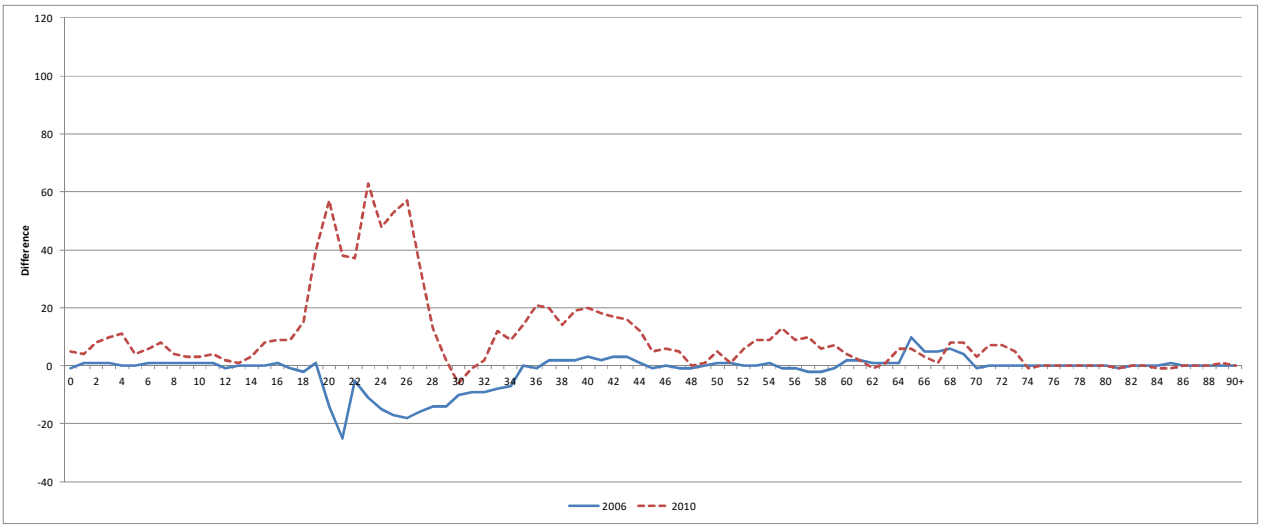


Chart B31a: Difference between the indicative revisions and the mid-year population figures, Richmond upon Thames, mid-year 2006 and mid-year 2010, males, single year of age

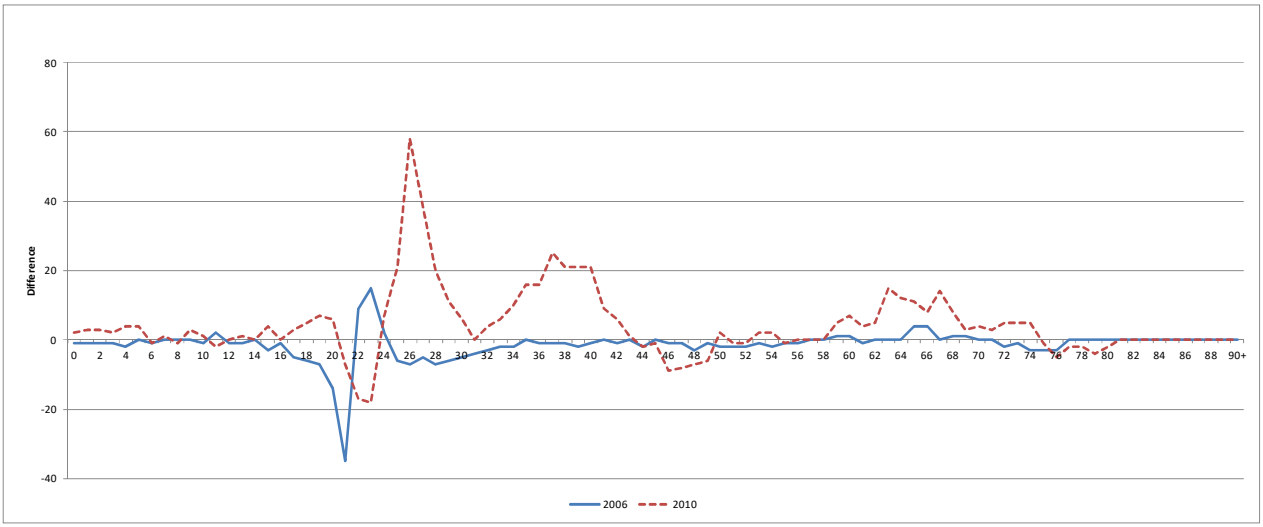


Chart B31b: Difference between the indicative revisions and the mid-year population figures, Richmond upon Thames, mid-year 2006 and mid-year 2010, females, single year of age

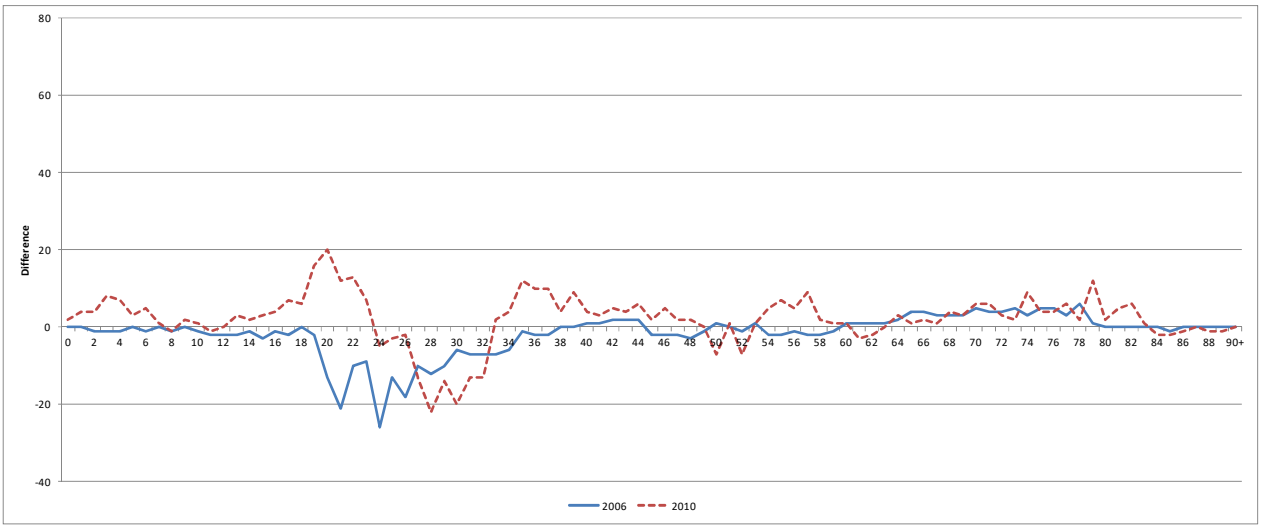


Chart B32a: Difference between the indicative revisions and the mid-year population figures, Sutton, mid-year 2006 and mid-year 2010, males, single year of age

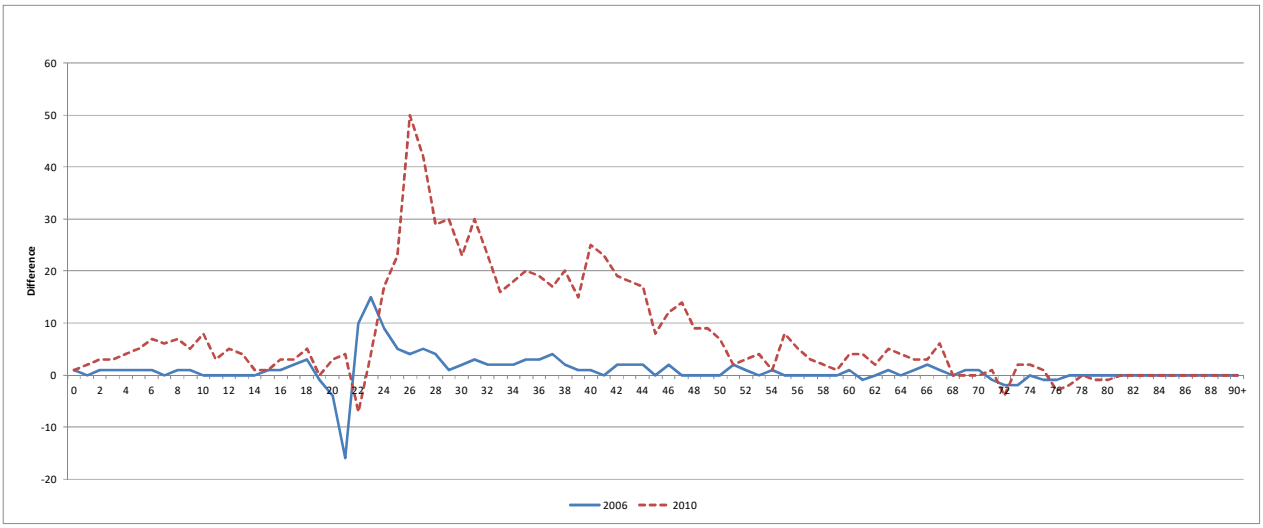


Chart B32b: Difference between the indicative revisions and the mid-year population figures, Sutton, mid-year 2006 and mid-year 2010, females, single year of age

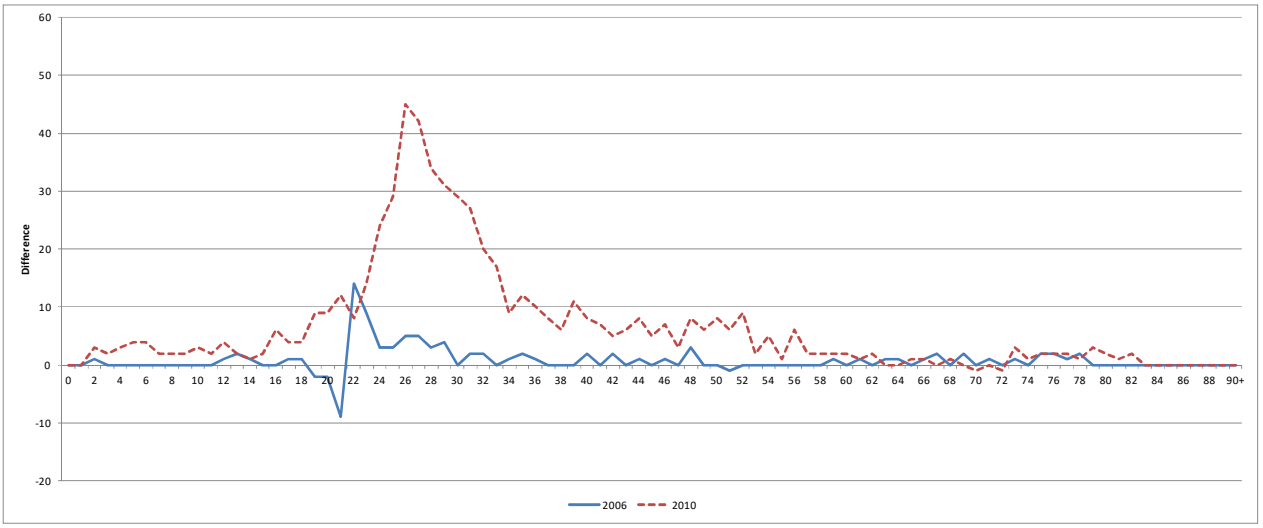


Chart B33a: Difference between the indicative revisions and the mid-year population figures, Waltham Forest, mid-year 2006 and mid-year 2010, males, single year of age

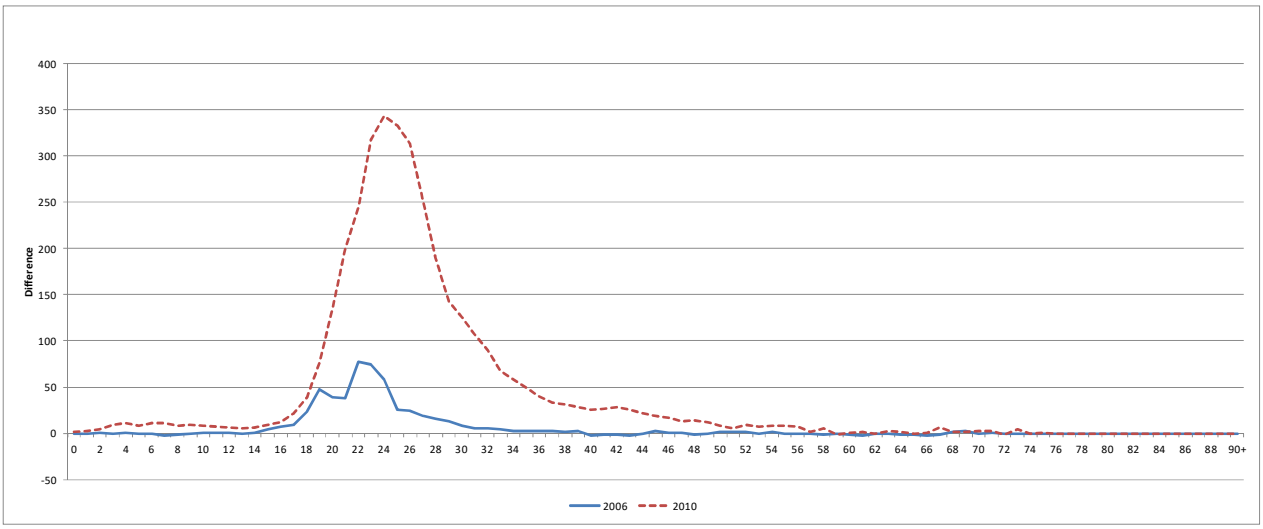


Chart B33b: Difference between the indicative revisions and the mid-year population figures, Waltham Forest, mid-year 2006 and mid-year 2010, females, single year of age

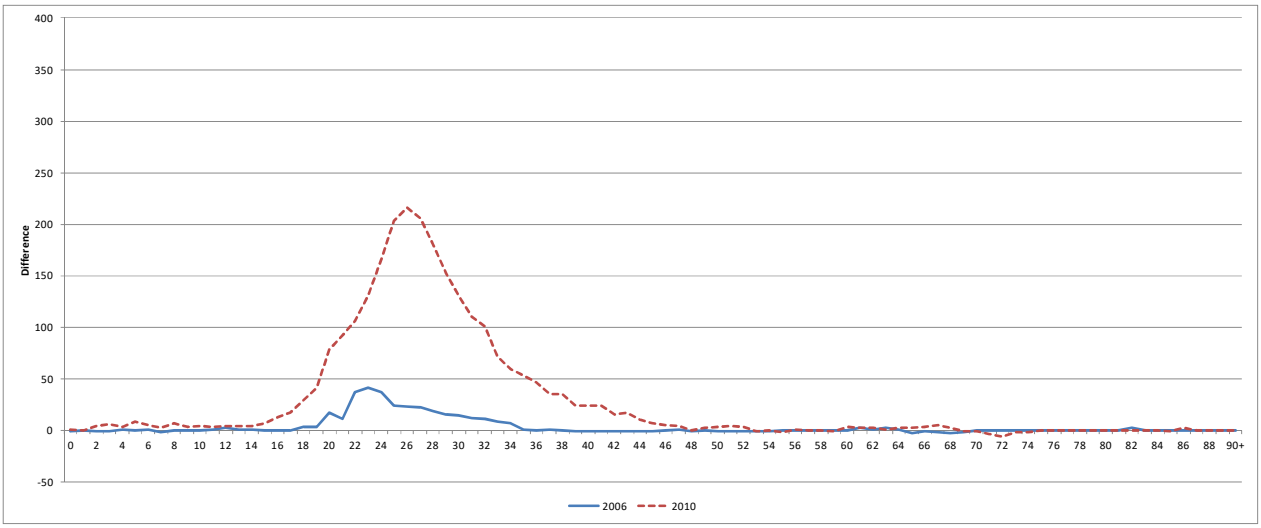


Chart B34a: Difference between the indicative revisions and the mid-year population figures, London, mid-year 2006 and mid-year 2010, males, single year of age

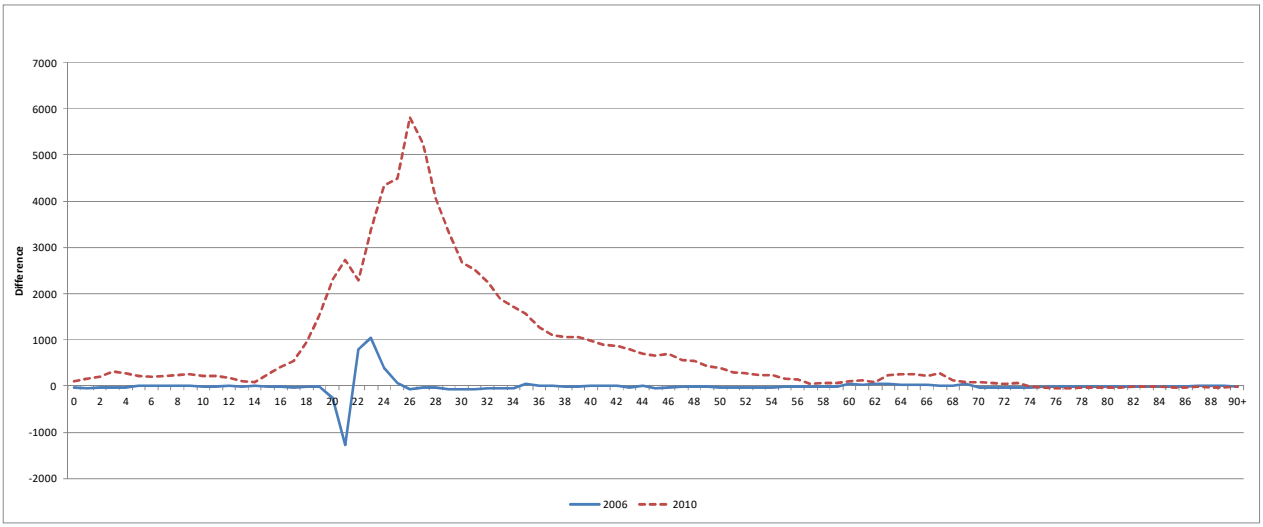
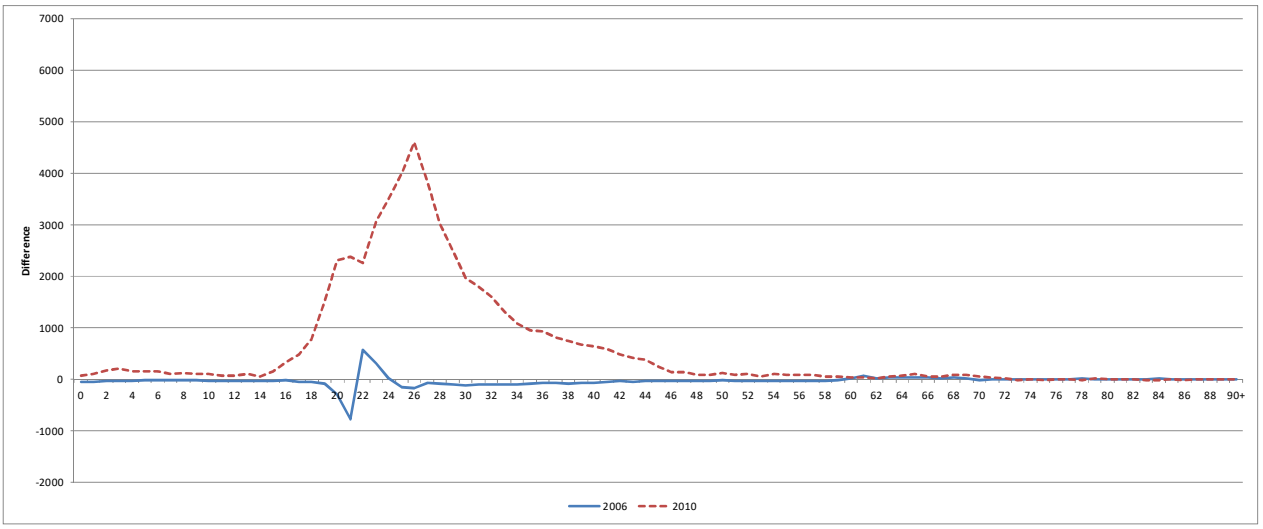


Chart B34b: Difference between the indicative revisions and the mid-year population figures, London, mid-year 2006 and mid-year 2010, females, single year of age



Appendix C: Difference between the indicative revisions and the mid-year population figures for mid-year 2006 to mid-year 2010 by single year of age for selected boroughs

Sources:

Tables F1 to F5: Mid-2006 to mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age, ONS

Mid-2006 to mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population, ONS

London

Chart C1: Difference between the indicative revisions and the mid-year population figures for London from 2006 to 2010 for males, single year of age

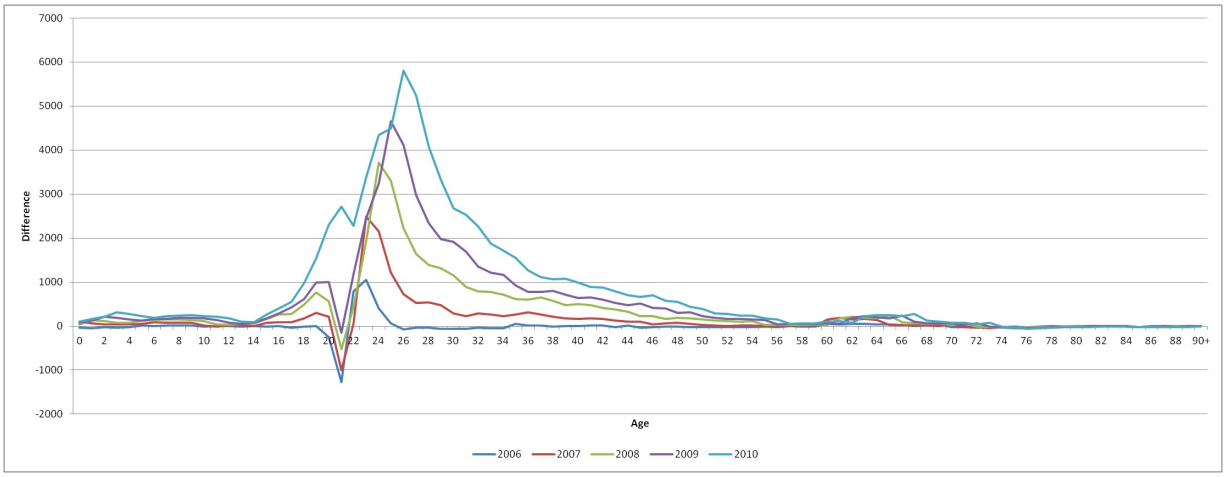
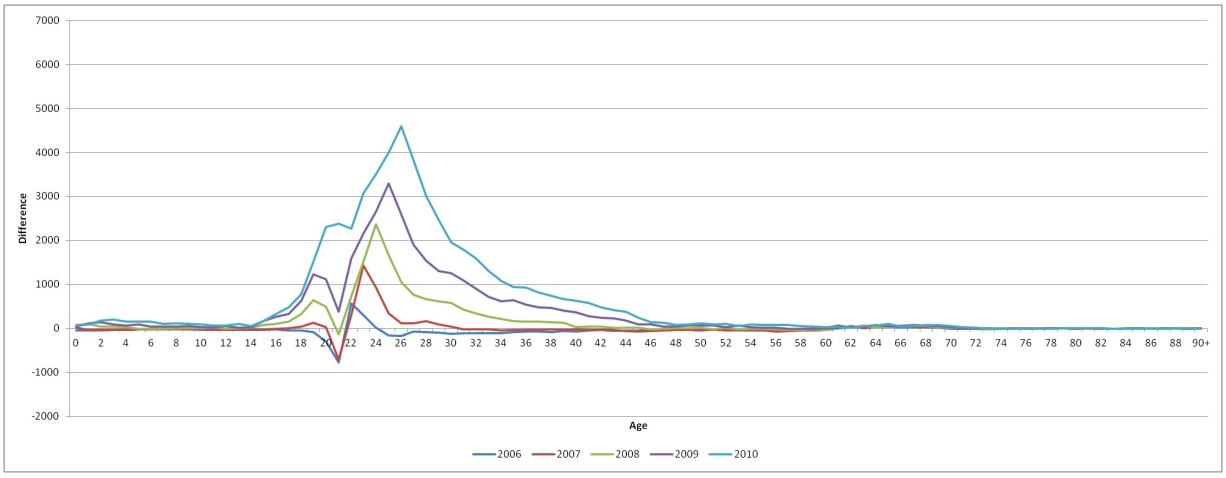


Chart C2: Difference between the indicative revisions and the mid-year population figures for London from 2006 to 2010 for females, single year of age



Newham

Chart C3: Difference between the indicative revisions and the mid-year population figures for Newham from 2006 to 2010 for males, single year of age

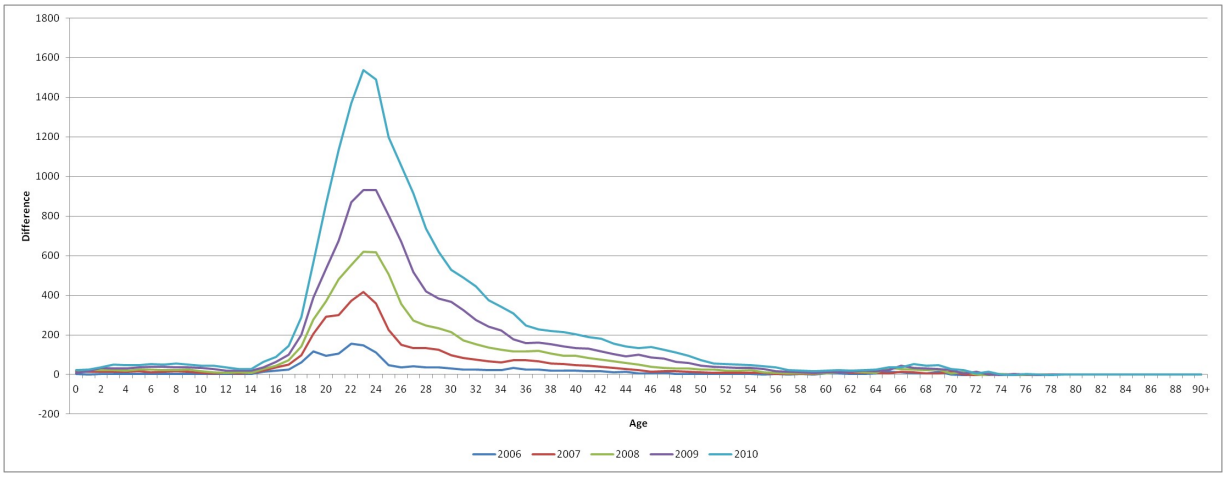
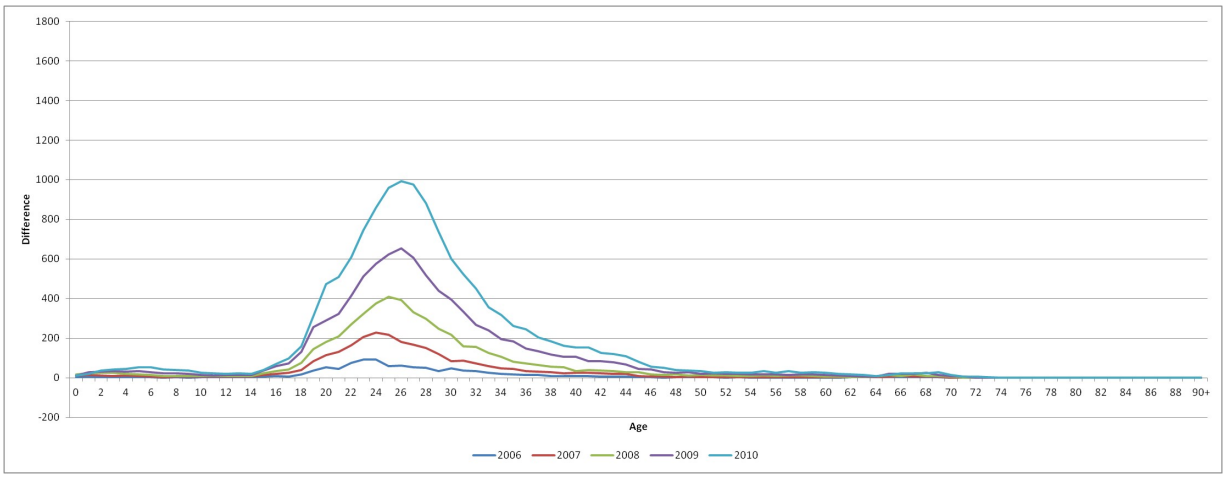


Chart C4: Difference between the indicative revisions and the mid-year population figures for Newham from 2006 to 2010 for females, single year of age



Westminster

Chart C5: Difference between the indicative revisions and the mid-year population figures for Westminster from 2006 to 2010 for males, single year of age

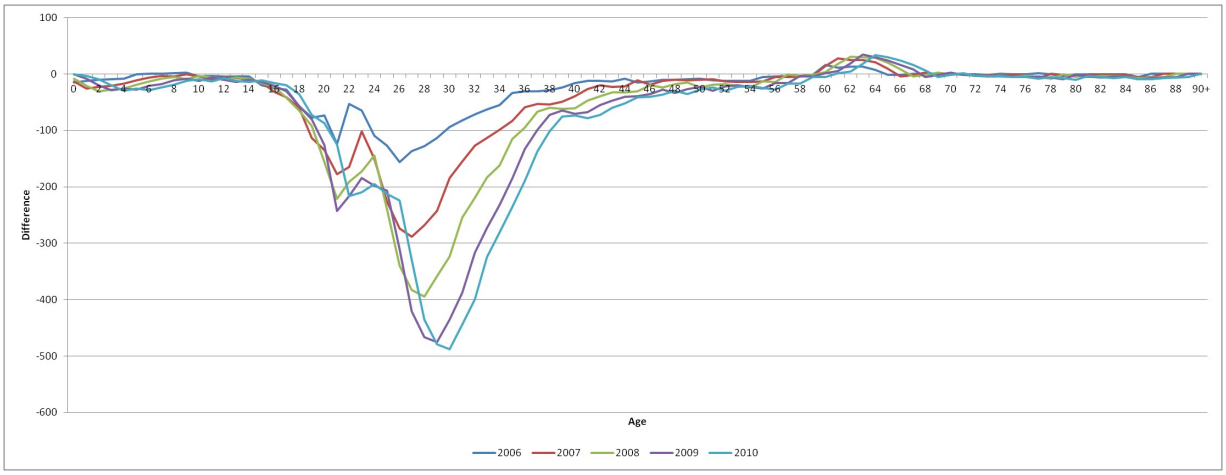
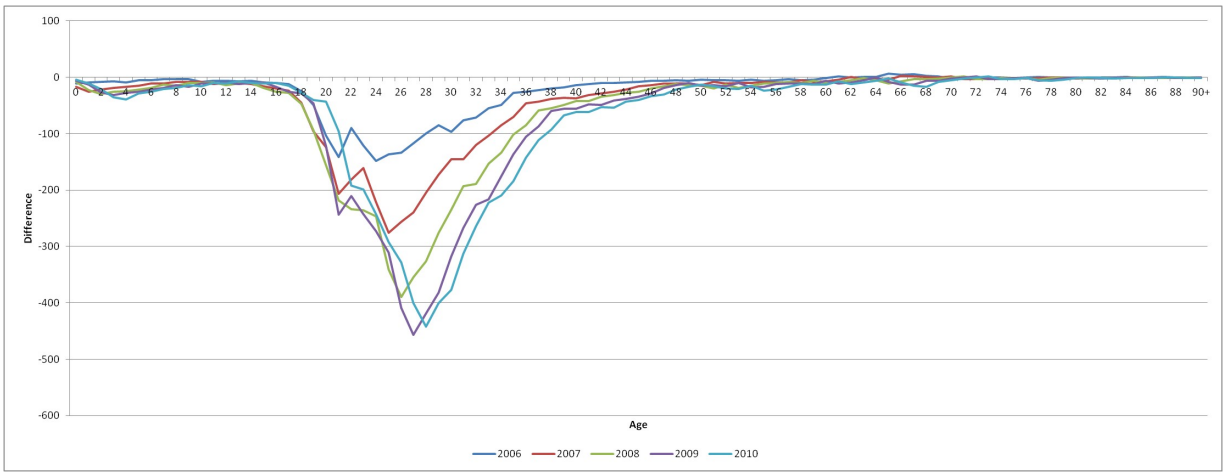


Chart C6: Difference between the indicative revisions and the mid-year population figures for Westminster from 2006 to 2010 for females, single year of age



Wandsworth

Chart C7: Difference between the indicative revisions and the mid-year population figures for Wandsworth from 2006 to 2010 for males, single year of age

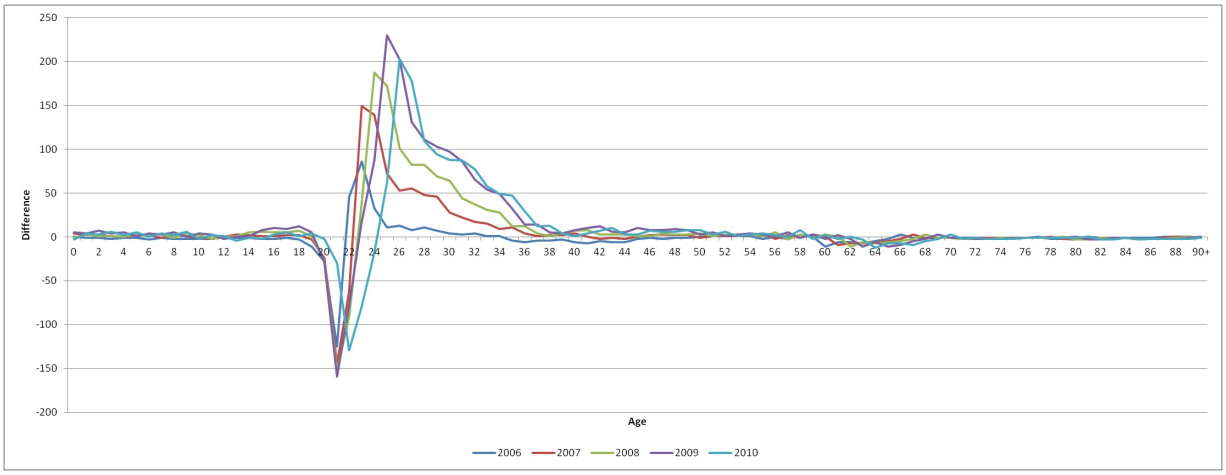
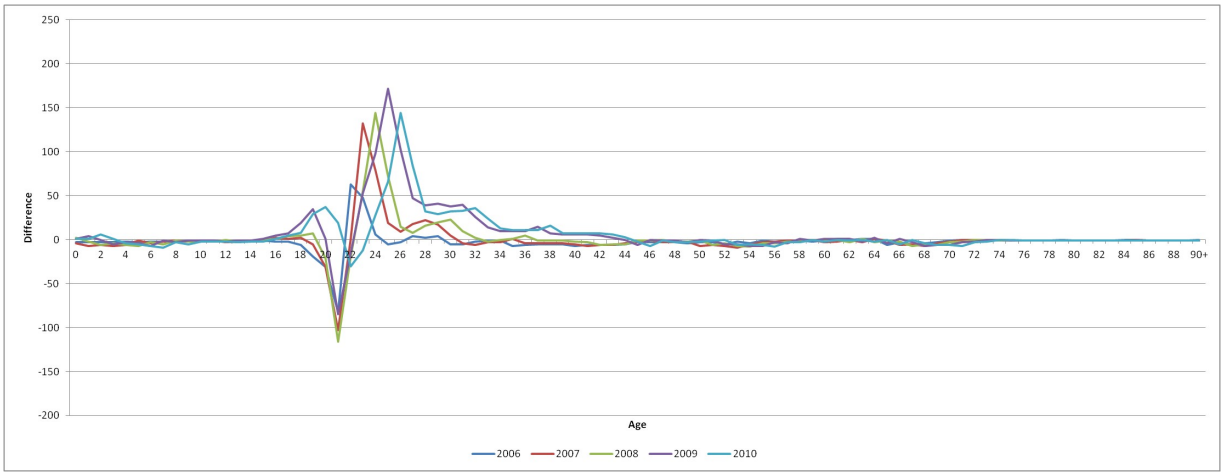


Chart C8: Difference between the indicative revisions and the mid-year population figures for Wandsworth from 2006 to 2010 for females, single year of age



Sources for all Appendix charts: Mid-2010 indicative population estimates: local authorities in England and Wales; estimated resident population by sex and age and mid-2010 population estimates: single year of age and sex for local authorities in the United Kingdom; estimated resident population

For more information please contact Monica Li, Research and Statistical Analyst, Intelligence Unit, Greater London Authority, City Hall, The Queen's Walk, London SE1 2AA
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