

Impact of Revised Methodologies on Total International Migration (TIM) Estimates

Summary

The 2006 Total International Migration (TIM) estimates incorporate two main methodological enhancements. The first involves improvements to the adjustments made for those whose intentions change with respect to length of stay (also known as 'switchers', see paragraph 8 below). The main impact of this is to reduce TIM outflows by about 20,000 a year and to increase net inflows into the UK by a similar amount. The second involves improvements to the estimation of migrant inflows by UK destination. The main impact of the improved geographical distributions is to reduce inflows into London. There are mixed impacts for other parts of the UK, but most have higher immigration following implementation of the new methodology.

Both of these changes have been also introduced to the TIM back series although it has not been possible to apply these for all years. This has resulted in some discontinuities in the TIM series. There are also complex interactive effects when the methodological changes are combined. For these reasons care is needed when comparing estimates across years.

Introduction

1. Two key methodological enhancements have been introduced for the calculation of the 2006 Total International Migration estimates (TIM). These are:
 - Improvements to the method for calculating adjustments for switchers
 - Improvements to the estimation of migrant inflows by destination down to the level of UK countries and English Government Office Regions (GORs).

These are planned methodological enhancements that had been under development for several years as part of the IMPS (Improving Migration and Population Statistics) project sponsored by the Office for National Statistics. They were first introduced for the international migration component of the 2006 mid-year estimates published in August 2007. These are now being introduced for the 2006 calendar year TIM estimates, the official series of international migration for the UK. TIM estimates for earlier years have also been revised.

2. The purpose of this report is to describe and explain how these enhancements to the TIM methodology have impacted on TIM estimates. This is achieved mainly by comparing the previous and revised TIM estimates or relevant TIM components. As 2006 estimates are not available under the previous methodology, comparisons are only possible up to 2005.
3. TIM estimates are produced for a range of variables including citizenship, last and next country of residence, country of birth, UK countries/region of residence, reason for migration, occupation, age, sex, marital status, and intended length of stay. This report focuses on just three of the variables that have been published as part of the 2006 First Release. These are:
 - Citizenship;
 - UK area of destination/origin (i.e. UK country, English GOR); and
 - Reason for migration.

4. The processing of other variables is ongoing and the full set of TIM tables will be produced as usual in spring 2008. However, the main impacts of the methodological enhancements on the revisions are all covered by these three variables. Citizenship is critical as the changes to the methodology for calculating the switcher adjustments have different impacts for EEA and non-EEA citizens. UK countries and English GORs are also particularly affected since these estimates are directly affected by the use of Labour Force Survey (LFS) data to distribute International Passenger Survey (IPS) inflows by UK destination. Finally, reason for migration provides an example of a TIM variable that is not directly targeted by either of the main enhancements to the methodology, but is affected indirectly by both.
5. There are several important things to bear in mind in this report:
 - The impacts of these changes on TIM estimates are not always easy to understand. They combine in complex ways and the outcomes can seem counterintuitive. For example, one of the main outcomes of the new methodology is an annual increase in net immigration of about 20,000 a year. However, this is not due to higher inflows, but rather a downwards revision in outflows. Understanding how inflows and outflows combine to produce net flows and the concept of 'switching' is essential to understanding the impact of these changes.
 - Due to problems with data availability in earlier years, neither of the two main methodological changes have been applied to the entire back series. Furthermore, they each take effect in different years. This has resulted in unavoidable discontinuities in the time series. Thus, it is important to be aware of this when comparing estimates across time, particularly when comparing breakdowns of variables that are targeted by the methodological enhancements.
 - Finally, it is important not to confuse the impact of the revisions with the real underlying trends. For example, while the enhanced methodology has tended to revise downwards estimates of immigration into London between 1999 and 2005, there is also a real underlying trend of London receiving slightly lower levels of UK immigration during this period.

Enhancements to the TIM methodology

6. Both the enhancements to the TIM methodology introduced for the 2006 estimates involve use of new data. Improvements to the method for estimating switchers are based on data from new IPS questions introduced in 2004. Improvements to the geographical distribution of immigrants use LFS data, which is known to better reflect where immigrants live.
7. Several other minor methodological and processing system enhancements have been implemented at the same time as the two major improvements in accordance with the ONS revisions policy. These have had some minor impacts on the revised estimates and mainly affect earlier years in the TIM series. Further details of these minor changes are included in **Appendix A**. A summary of all the methodological changes and how they impact on each year from 1991 to 2005 is

shown in **Appendix B**. The following sections provide further detail on the two main changes.

Impacts resulting from changes to the methodology for estimating switchers

8. Understanding changes to the 'switcher adjustments' requires familiarity with the TIM concept of switching and how these have historically been calculated. It also requires familiarity of the UN definition of an international migrant, which is used by ONS for defining a long-term international migrant:

"... someone who changes his or her country of usual residence for a period of at least a year, so that the country of destination effectively becomes the country of usual residence."

Any person who changes their country of usual residence for less than 12 months is technically is classified as a visitor and is not included in TIM.

9. The main component of TIM is the International Passenger Survey (IPS). One of the key features of IPS migration data is that it is intentions based. IPS migrants are those who state an intention to change their country of residence for at least a year. These can be either overseas residents arriving intending to live in the UK, or UK residents leaving intending to live abroad.
10. However, it is known that these intentions are not always realised. Some people entering or leaving the country intending to be visitors, (i.e. staying or being away for less than 12 months), will actually migrate for more than a year. These people are, in effect, visitors who subsequently become migrants and are referred to as **visitor switchers**. For these to be incorporated in to a more comprehensive estimate of migration, they must be added to the IPS migration estimates. Also, some people entering or leaving the country intending to migrate, (i.e. staying or being away for more than 12 months), will actually stay or leave the country for less than a year. These people are known as **migrant switchers** and need to be removed from IPS migrant flows.
11. Switcher adjustments have been a feature of TIM since 1991 when the series began. Between 1991 and 2000, visitor switcher estimates were based on Home Office data on visa extensions. At this time, no adjustments were made for migrant switchers. In 2001, changes in Home Office administrative systems meant this data source was no longer available.
12. For 2001 estimates, a new methodology was developed using broad assumptions about switcher behaviour. Fixed proportions were used to estimate the number of visitors who become long-term migrants for the types of visitors most likely to switch. This group comprises long stay visitors (6-12 months) and 'possible migrants' (those who respond to the IPS saying they are unsure how long they will stay but possibly more than a year). These potential visitor switchers were divided into four separate flows and switcher estimates calculated as follows:
 - Inflow of EEA (European Economic Area) citizens and: 50 per cent of 'possible migrants' become long-term migrants;
 - Inflow non-EEA citizens: 25 per cent of 'possible migrants' and 75 per cent of 'long stay visitors' become long-term migrants;

- Outflow of EEA citizens to EU countries: 50 per cent of 'possible migrants' become long-term migrants; and
 - Outflow for non-EEA citizens and EEA citizens to non-EU countries: 25 per cent of 'possible migrants' and 75 per cent of 'long stay visitors' become long-term migrants.
13. Visitor switcher estimates for non-EEA citizens were matched to historical patterns of Home Office visa extensions data. A method was also developed for estimating EEA citizen visitor switchers. This was based on an assumption that migration intentions of EEA citizens were likely to be different due to freedom of movement. Specifically, it was assumed that since EEA nationals are free to live and work in the UK without a visa, they will be less circumspect than non-EEA nationals about stating their true intentions with respect to length of stay. In other words, EEA citizens were thought to be less likely to switch and so this was reflected in the methodology assumptions.
14. A migrant switcher adjustment was also introduced and incorporated into TIM revisions back to 1991. This assumed that:
- 5 per cent of those in the IPS intending to immigrate to the UK for at least a year actually stayed less than a year; and,
 - 1 per cent of those in the IPS intending to emigrate from the UK for at least a year actually returned within a year.
15. In 2004, as part of IMPS, new IPS questions were introduced to identify both migrant switchers and former visitor switchers. For example, emigrants leaving the UK after being resident for a year or more were now asked how long they intended to stay when they initially arrived. Those that initially intended to stay for less than a year were flagged as former visitor switchers. These data were used for calculating the new switcher proportions which replaced the previous broad assumptions. These proportions were then applied to the potential switcher pools in much the same way as the previous methodology, although for visitor switchers there were no longer different proportions applied to 'long stay visitors' and 'possible migrants'. These two categories were now combined into a single 'switcher pool'.
16. The new switcher questions did not provide sufficient data in just one year to offer a robust method for estimating a new set of switcher adjustments. For the 2006 mid-year estimates, two and a half years of new data were available which was considered sufficient to implement a change to the methodology for estimating switchers. The 2006 calendar year estimates were the first that use a full three years worth of data and all future estimates will be based on the most recent 6 half-year's of switcher data. A key feature of this new methodology is that the switcher adjustments are no longer fixed. Long term changes in switching behaviour will therefore be reflected in TIM estimates.
17. The new IPS questions were only introduced in 2004, and a decision was made to apply the new fractions only to the 2004 estimates onwards¹. As 2006 is the first year in which the new methodology has been applied, changes to the switcher methodology are only relevant for 2004 and 2005. Further details of the new methodology are provided in the paper ['Estimation of People Whose](#)

¹ The consensus view is that there are insufficient data to determine whether the switching patterns observed between 2004 and 2006 can be applied to earlier years. However, it is possible that earlier years will be revised again if further data suggest that this is a reasonable assumption.

[Intentions Change With Respect to Their Length of Stay](http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14834) at:
<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14834>

18. The impacts of the changes to the methodology for estimating switchers are particularly complex because visitor and migrant switcher adjustments are made to both inflows and outflows but operate in different directions. For example, an increase in the visitor switcher adjustment on inflows increases the TIM inflow, but an increase in the migrant switcher adjustment decreases the TIM inflow. A full illustration of the previous and revised methodologies for both visitor switcher and migrant switchers for 2005 is shown in **Appendix C**.

Impact on TIM estimates resulting from changes to the visitor switcher adjustment

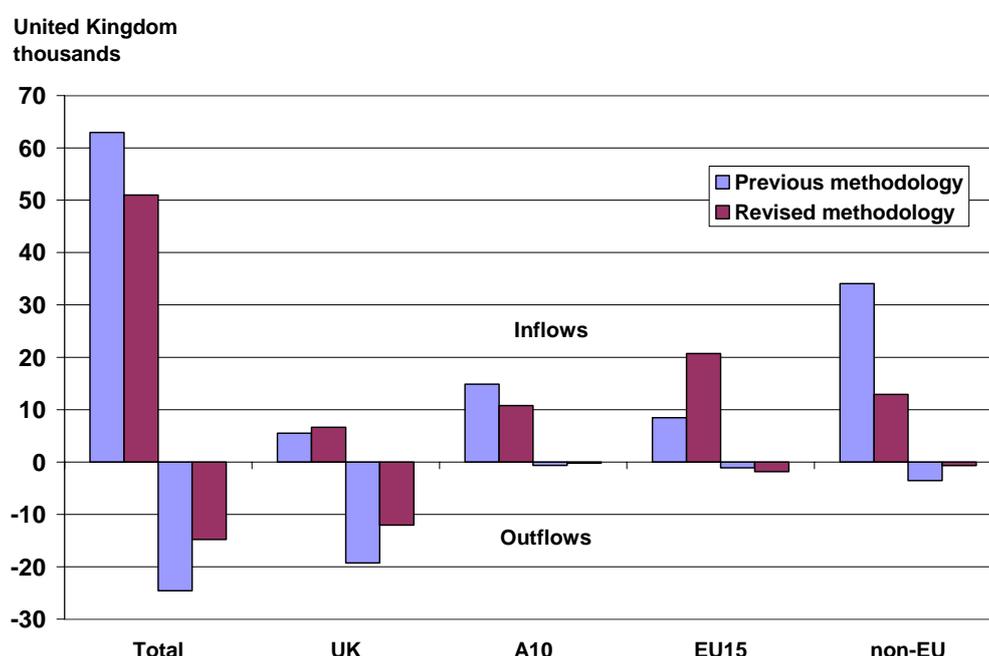
19. Research into the new data on former visitor switchers revealed that EEA and non-EEA citizens have different visitor switching patterns, but not in the way previously assumed. EEA citizens are actually more likely to switch than non-EEA citizens. Although the precise reasons for this are not known, it is possible that lower barriers to migration mean that EEA citizens can be afford to be less definite about their intentions to stay in the UK compared with non-EEA citizens who must generally travel greater distances at greater expense.
20. It is difficult to illustrate precisely how the changes to the visitor switcher methodology have impacted on the estimates for several reasons:
- i) Although the revised methodology retains an EEA/non-EEA split, direct comparisons between the previous and revised methodologies are complicated by the movement of the A10 citizenship group (i.e. the ten countries that acceded to the EU on 1 May 2004) from the non-EEA to EEA group².
 - ii) The methodology affects not just the switcher fractions, but also the 'switcher pool' to which the fractions apply. Therefore, the changes to the estimates are not simply proportional to the change in the fractions.
 - iii) Finally, the total visitor switcher adjustment calculated for each EEA and non-EEA 'stream' are distributed to the citizenship groups within that stream using a three-year average of visitor data. This combined with the other two factors can subtly affect these distributions and therefore the final estimates.
21. Due to these complex interactions it is best to view the impacts simply in terms of how they change the visitor switcher adjustments for broad citizenship groups. Also, it is easier to focus on the impact on a single year. For this reason, 2005 is selected, although the patterns are broadly the same for 2004 (the only other year for which comparisons are possible between the previous and revised methodology). **Figure 1** shows the impacts of these changes on both inflows and outflows for 2005. Overall, the revised visitor switcher adjustments for 2005 were about 10,000 lower for both inflows and outflows. However, the revised visitor

² Under the previous methodology, the non-EEA assumption continued to be applied to the A10 group even after they became part of the EEA. This was partly because the previous visitor switcher assumptions had been developed based on the definition of the EEA in 2001 but also because use of the EEA assumptions would have resulted in lower A10 inflows. Research into the methodology explored the possibility of an A10, other EEA, and non-EEA split. However, research showed that an EEA (which now included the A10) and non-EEA split was the optimal approach.

switcher adjustments for EU15 citizens increased inflows by 12,000 and increased outflows by slightly less than a 1,000. By contrast non-EU inflows were reduced by about 21,000 and almost 3,000 on outflows. The impact on the A10 group was less marked due to being grouped with the non-EEA previously and with the EEA under the revised methodology.

22. The pattern for UK citizens was unusual in that the number of visitor switchers increased slightly for inflows (about 1,000) but reduced for outflows (by over 7,000). Closer analysis revealed that, although the absolute numbers of visitor switchers have fallen overall, the proportions who were UK citizens had increased from 9 to 13 percent for inflows and 78 to 81 percent for outflows.

Figure 1: Comparison of visitor switcher adjustments by major citizenship group (2005)



Impact on TIM estimates resulting from changes to the migrant switcher adjustment

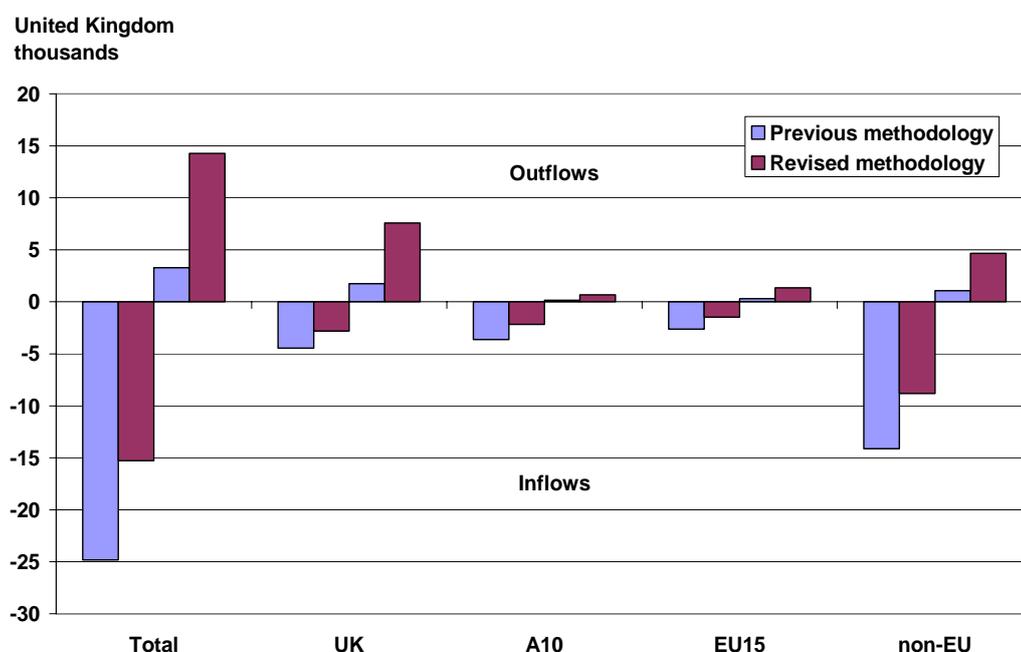
23. The impacts of the changes to the methodology for estimating the migrant switcher adjustment are more straightforward than for visitor switchers. Citizenship groups are not used in either the previous or the revised methodology and the basic approach of estimating the number of migrants by applying a proportion to the total IPS flows remains unchanged. The proportions used in the previous and revised methods are shown in Table 1. These indicate that the previous methodology may have removed too many migrants from IPS inflows but not enough from outflows. The new data on migrant switchers suggest that those intending to emigrate from the UK for a year or more were much more likely to return within a year than assumed previously. This increase in the estimate of ‘false migrants’ on outflows has had the affect of reducing outflows overall.

Table 1: Comparison of migrant switcher fractions between the previous and revised TIM methodology

Migrant switcher adjustment:	Previous methodology	Revised methodology
for Inflows	0.05	0.0308
for Outflows	0.01	0.0436

24. The impacts of these changing proportions on the major citizenship groups in 2005 are shown in **Figure 2**. The overall impact was to reduce the number of migrant switchers removed from inflows by about 10,000 and to add a further 11,000 on to outflows. The breakdown of this pattern by citizenship group was the same for across all citizenships with the size of the migrant switcher adjustment being directly proportional to the size of the relevant IPS flow.

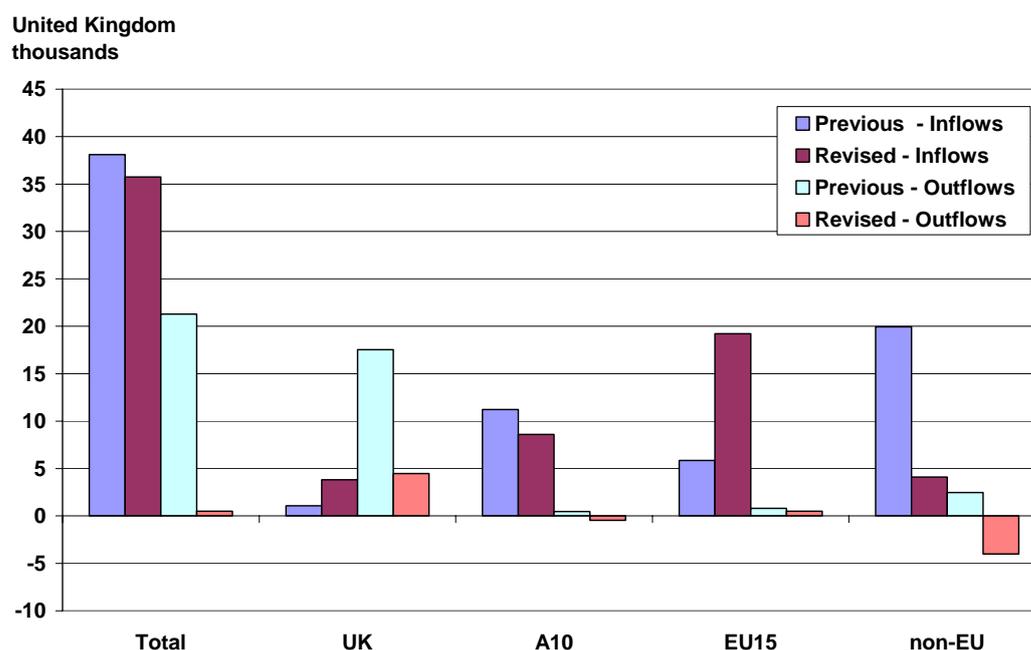
Figure 2: Comparison of migrant switcher adjustments by major citizenship group (2005)



Impact on TIM estimates resulting from combined effects of changes to both the visitor and migrant switcher adjustments

25. Combining the visitor and migrant switcher adjustments for 2005 by citizenship gives the net impact of the methodological changes (**Figure 3**). The impact on total inflows is negligible. The revised methodology adds about 12,000 fewer visitor switchers but removes approximately 10,000 fewer migrant switchers. These two effects roughly cancel each other out resulting in a net addition of 36,000 to TIM inflows as a result of switching compared with about 38,000 previously. However, the overall impact on total outflows under the revised methodology is much stronger. Under the previous methodology, the net effect of the switcher adjustments was to add about 20,000 to outflows. Under the revised methodology visitor and migrant switchers more or less cancel each other out.

Figure 3: Net Impact of changes to the methodology for estimating switcher adjustments by Major Citizenship Group (2005)



Note: 'Net switchers' shows the visitor and migrant switcher adjustments combined

26. **Table 2** shows a comparison of overall TIM flows for both 2004 and 2005 with the change broken down by the switcher adjustments. It shows that in 2004, the impact of changes to the switcher adjustment closely followed the pattern in 2005 with TIM inflows remaining relatively unchanged, but with outflows reduced by about 18,000. Thus, in broad terms the enhancements to the switcher methodology has resulted in outflows being revised downward by about 20,000 a year while total inflows have remained relatively unaffected.

Table 2: Impact of revised methodology on total TIM flows, 2004-2005

Thousands

		Total International Migration (TIM)			Switcher adjustments	
		Previous methodology	New methodology	Change	Visitor switchers	Migrant switchers
Inflow	2004	582.1	586.0	3.9	-6.0	10.0
	2005	565.3	562.9	-2.4	-11.9	9.5
Outflow	2004	359.5	342.0	-17.5	-7.1	-10.4
	2005	379.8	359.1	-20.7	-9.8	-11.0

27. Although TIM inflows overall remained relatively unaffected by the net effect of the changes to the switcher adjustments, there were noticeable differences by major citizenship groups. For 2005, the switcher changes added a further 13,000 to the EU15 TIM inflow estimates and subtracted about 15,000 from the non-EU group. The effect on inflows for UK and A10 citizens was less noticeable. On outflows, the overall net change in outflows was mostly be explained by a sharp decline in the estimate for UK switchers added on to outflows.

Improving the geographical distribution of immigrants using Labour Force Survey data

28. The second major enhancement to TIM is a methodology to improve the geographic distribution of migrants arriving in the UK. IPS migrants are asked about their intended destination within the UK. As with length of stay, the response to this question is based on intentions which may or may not be realised. ONS research comparing IPS data with the 2001 Census and Labour Force Survey reveal that there are some migrants who will live at the intended destination for only a short time before moving elsewhere. In particular, IPS data show a greater proportion of long-term UK migrants stating London as their destination compared with either LFS or Census data. One explanation is that London is the international gateway to the UK and so for some immigrants it is a transition point before they settle in others part of the UK.
29. The LFS provides more reliable data on the geographical distribution of immigrants than the IPS as it is based on where migrants actually live rather than on their initial intentions. However, the total IPS inflows are better for estimating the total inflow of migrants coming from abroad. A methodology has been developed that calibrates the IPS data to the geographical distributions in the LFS. The main steps are as follows:
- i) LFS data are used to identify the geographical distribution of immigrants by UK country and English Government Office Regions (GORs).
 - ii) Distributions are applied to total IPS inflows to create control totals for these geographical areas.
 - iii) IPS data are calibrated to control totals.

This creates an IPS data set with the same total flows as the original, but estimates by geographical area consistent with the most recently available LFS data on where migrants are living. The overall effect is to redistribute migrants geographically across the UK and English GORs.

30. The methodology has been implemented back to 1999 since the scope of the original research looking at the use LFS data only went back this far. Therefore, the comparisons in this section are for 1999 to 2005 as these are the only years that are affected by this change to the TIM methodology. Finally, it is important to note that the change to the methodology affects inflows only and outflows continue to be estimated directly from IPS data.

Further details of this change to the TIM methodology are provided in the following papers:

- 'Geographical Distribution of Estimates of In-migration'
- 'The Use of Calibration in Estimating International In-migration to UK Countries and the Regions of England'
- 'The Use of the Labour Force Survey to Improve Estimates of International In-migration - Coverage and Quality'

These can all be found at the following link:

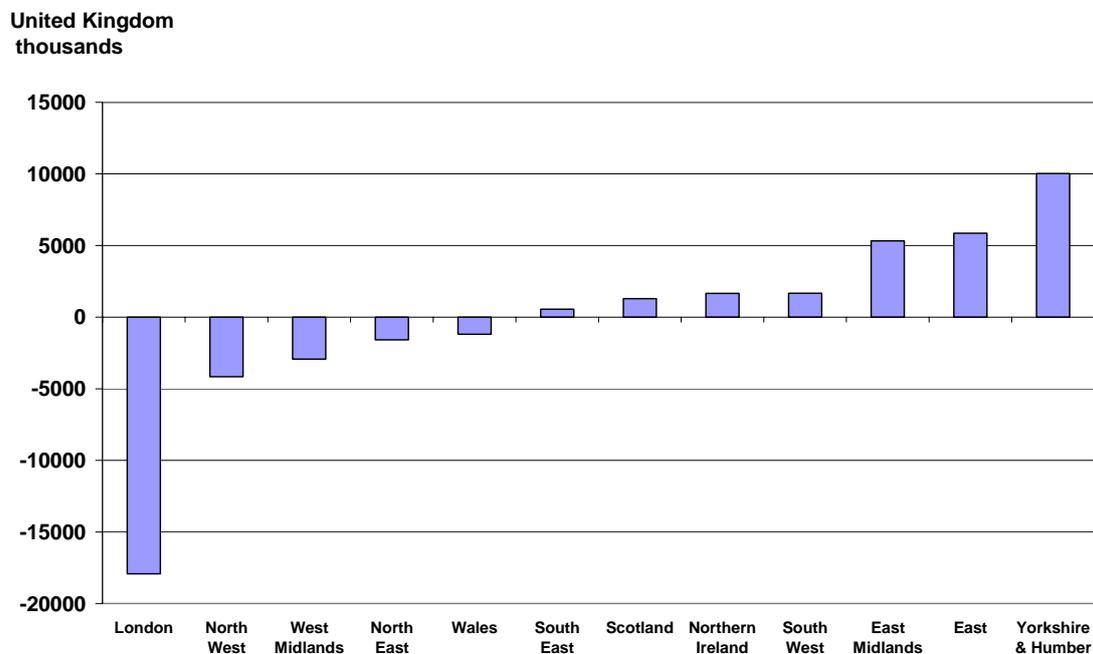
<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14834>

The methodology discussed in this paper relates to the redistribution of immigrants down to the level of UK country and English GORs. A separate methodology has been developed for distributing immigrants from this level down

to local authority level for the purposes of population estimates. For further information see the report: '[Geographical Distribution of Estimates on Immigration](#)', which can also be found at the above link.

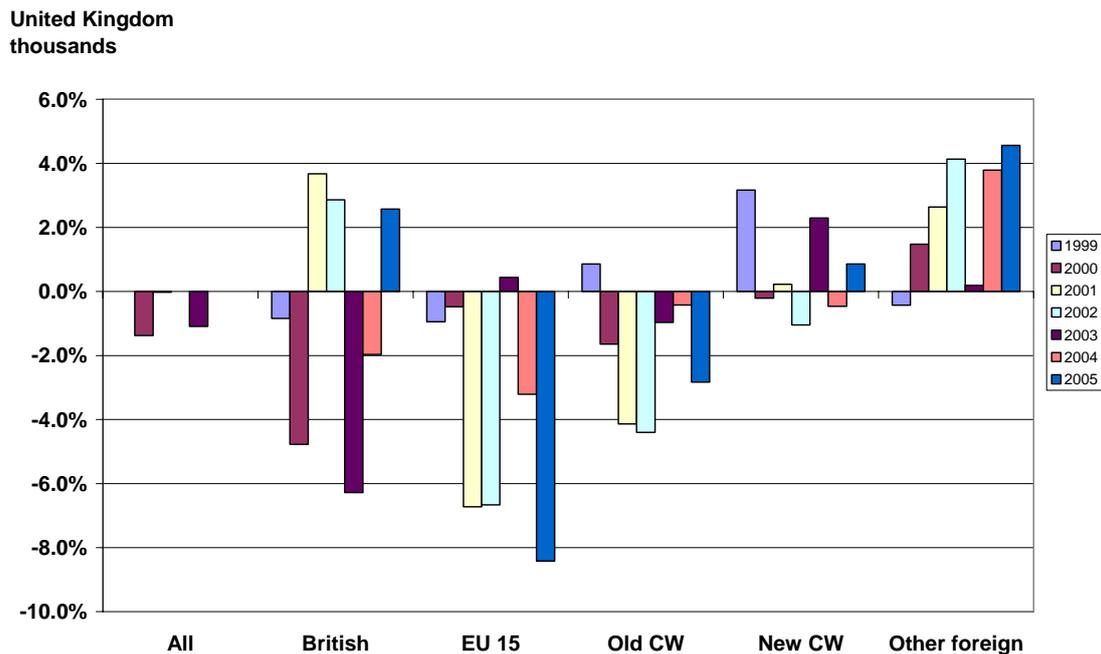
31. The main effect of this calibration of IPS data has been to reduce immigration estimates into London by an average of around 18,000 a year (**Figure 4**). However, London has not been the only area affected. The North West, West Midlands, North East, and Wales all show, on average, lower immigration estimates as a result of the new methodology. Yorkshire and the Humber has been the largest beneficiary of the revised methodology receiving an average increase in estimated immigration of 10,000 a year. The East Midlands and the East of England each have average increases of over 5,000 a year. The remaining areas of the UK have all seen small increases each year.

Figure 4: Average change in migration estimates by UK country and English Government Office Region (1999-2005)



32. A key feature of the new calibration methodology is that it changes the individual record-level weights in the IPS data set. This means that the aggregated estimates for other variables will invariably change. This can be illustrated by showing the impact in terms of the annual percentage change in the estimate by major citizenship group (**Figure 5**). The impacts tend to vary from year to year, although all the changes are well within the annual standard errors of the estimates. There are, however, some systematic differences between the previous and new estimates, with the EU15 and the Old Commonwealth citizenship groups tending to be lower for most years, while estimates for 'Other foreign' citizens tend to be higher.

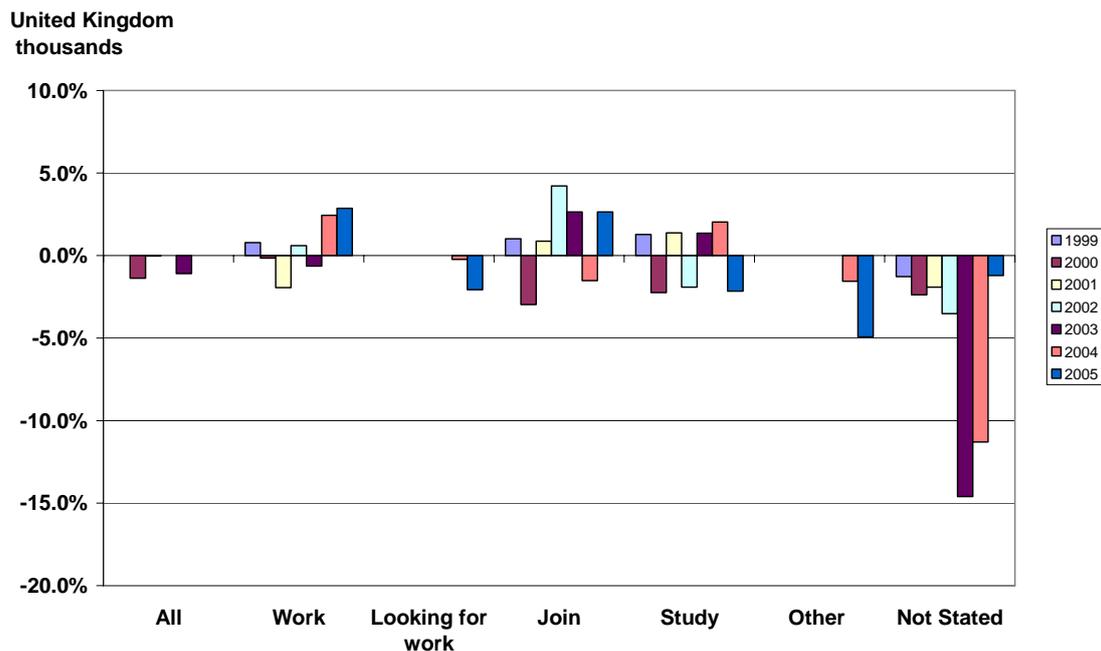
Figure 5: Impact of calibration on IPS-only estimates by citizenship group



Note: Calibration does not affect overall inflows. The percentage declines for 'All' citizens is related to changes in the treatment of Channel Islands data and is not due to calibration effects

33. These systematic effects will occur with variables correlated with geography. For example, EU15 and Old Commonwealth citizens are more likely to live in London compared with other citizenship groups and so these estimates will tend to be deflated as a side-effect of redistributing migrants out of London. By contrast, citizens in the 'Other foreign' group are more likely to live in other parts of the UK and so the estimates for this group will tend to be higher following calibration.
34. **Figure 6** shows the impact of calibration on IPS only estimates by main reason for migration. The largest impact is on the 'Not stated' category. These estimates have been revised down in every year, in the case of 2003 and 2004 by over 10 per cent. This suggests a correlation between migrants for whom no reason for migration has been given and those stating London as the UK destination. However only about 6 percent of migrants do not state a main reason for migration and so the overall impact on the estimates is small. There are no strong patterns for any other main reasons for migrating to the UK.

Figure 6: Impact of calibration on IPS-only estimates by main reason for migration

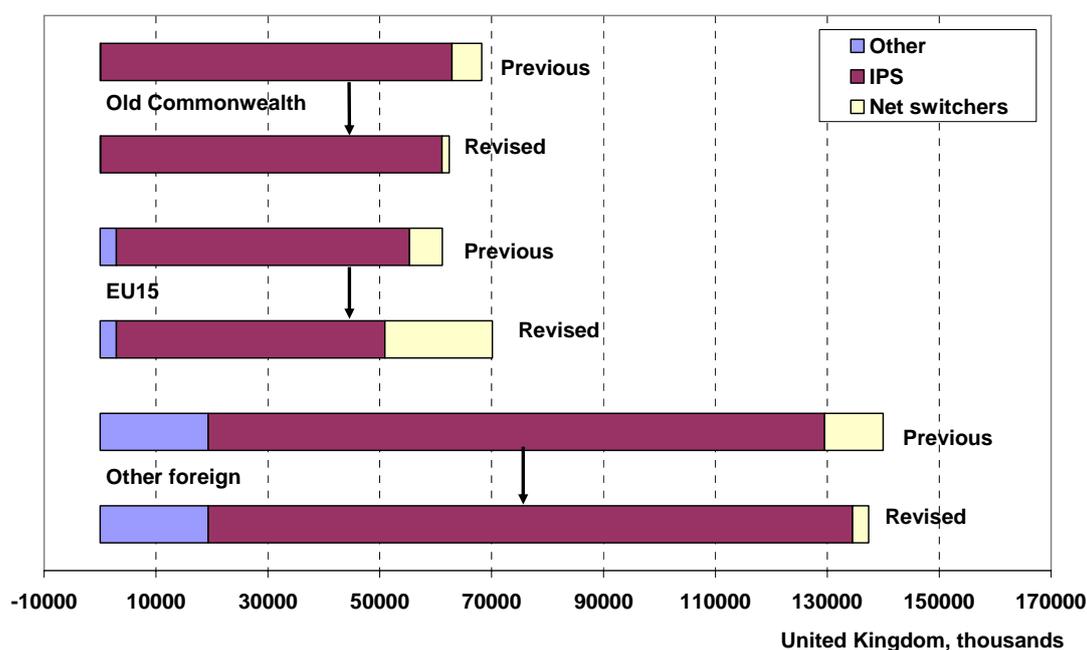


Combined effects of the methodological changes

35. Thus far, this report has focused separately on the impact of the new method for estimating switchers and the new method for distributing immigrations geographically. However, these in combination these methodologies can have a complex impact on the final TIM estimates, particularly since the methodologies have been introduced at different points in the back series.

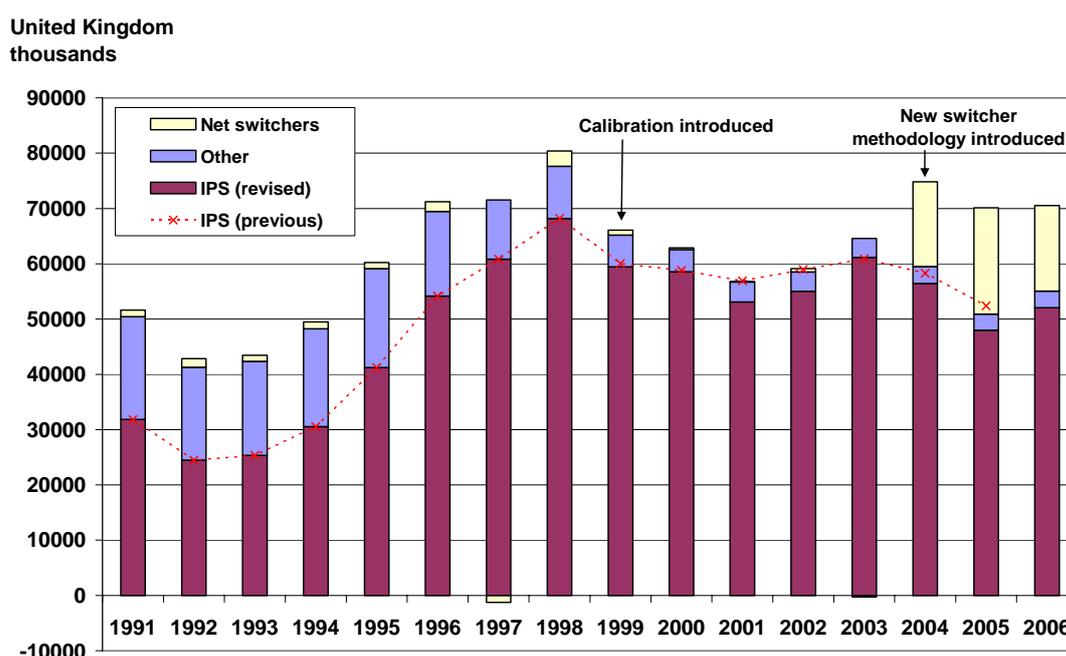
36. **Figure 7** shows how the methodological changes have affected TIM inflow estimates for the EU15, Old Commonwealth and Other foreign citizenship groupings in 2005. These examples have been chosen as they clearly illustrate the different ways in which changes to the methodologies have combined to produce the revised TIM estimate. The net effect of switchers on the EU15 group added over 13,000 to the estimate. However, calibration removed over 4,000 resulting in an overall increase in the EU15 estimate of 9,000. For the Other Foreign citizenship group the effects worked in reverse with a reduction due to net switchers of less than 8,000 but with calibration adding 5,000 to the estimate. The combined effect was a reduction of less than 3,000. The Old Commonwealth group also received fewer net switchers under the new methodology (about 4,000 fewer), but it also lost 2,000 as a result of calibration, resulting in a total reduction of 6,000.

Figure 7: Comparison between previous and revised 2005 TIM estimates for selected citizenship groups by components



37. These two changes in methodology have not been implemented for the whole TIM series. Therefore it is important to consider both the combined effects and the timing of the changes when analysing trends over time. For example, we have seen that the main impact of changes to the switcher methodology has been to revise outflows down by about 20,000 for 2004 and 2005 and therefore increase net flows by a similar amount. Since the changes have not been applied to years before 2004 caution is needed when comparing these flows, which continue to use the previous methodology, with those for more recent years.
38. The EU15 TIM estimates are more affected by changes to the methodology than the main citizenship groups. **Figure 8** shows the complete TIM series for the EU15 broken down by components. There was a sharp drop in 1999 - the year the calibration methodology was introduced - however IPS data for that year are relatively unchanged. In 2004, there was a sharp increase which corresponds with the introduction of the changes to the switcher methodology. However, the underlying IPS data suggest a continuation of the pattern of gradually declining EU15 inflows beginning in 1999.
39. These combined effects do not apply in the case of outflows since calibration is only applied to IPS inflows. They are also not a major factor in the case of inflows by UK destination since the current methodology distributes visitor switcher inflows using the same LFS distributions used to estimate IPS inflows. The only interaction effect associated with geography is a relatively minor impact on migrant switcher inflows due to calibration changing the IPS estimates. Migrant switcher estimates are always proportional to the relevant IPS flow and so a change in the IPS inflow will also affect the migrant switcher estimate.

Figure 8: EU15 inflows by TIM components, 1991-2006



Conclusion

40. As a consequence of the methodological improvements made to the 2006 migration estimates, the TIM back series have been revised. The impacts of these revisions on total inflows (for 2004 and 2005) are negligible although there is a reduction in total outflows of about 20,000 a year (and a corresponding increase in net flows). There are more complex effects when total flows are broken down by key variables. The new calibration methodology has reduced the estimates of migrants into London and had mixed impacts elsewhere. Calibration has also introduced some secondary effects on other variables. For example, there has been an upward revision in inflow estimates of citizens from the EU15. This has occurred mainly at the expense of citizenship groups from outside the EU, although the level of change varies across the citizenship groups. Due to the timing of the implementation of the methodologies and complexity of the interactive effects, care must be taken when comparing estimates across the TIM series. This is particularly true for the following periods:

- 1991-1998 (before major changes to the TIM methodology were introduced)
- 1999-2003 (years for which the IPS redistribution has been applied but before implementation of the changes to the switcher methodology)
- 2004-2005 (for which both major changes to the TIM methodology have been applied)

Appendix A: Other methodological and processing system changes:

1. Changes to the implementation of the IPS weighting adjustment (IPSWA):

Changes to the IPS weighting methodology introduced in 1999 subsequently affected all IPS flows between 1991 and 1998. These flows were adjusted through separate weighting adjustments for both inflows and outflows. Further details about the reasons for implementing this weighting adjustment are available in the MN Series no.28, p39.

Subsequent research also found differential impacts depending on citizenship, last/next residence and UK country and destination. This led to a complex set of adjustments depending on the flow, the year and the variable being adjusted. The implementation of these adjustments proved to be cumbersome and time-consuming. All tables containing data from 1991 and 1998 had to be adjusted accordingly. Also, tables combining at least two of the adjusted variables could produce inconsistent results depending on the order in which the adjustments were applied.

A solution was developed and implemented to apply a set of one-off adjustments at the individual IPS contact level. The method was based on iterative proportional scaling using adjusted estimates for citizenship, last/next residence and UK country as control totals to maintain to maintain existing estimates. This resulted in the adjustments being incorporated into the IPS weights thus allowing data to be tabulated without any further adjustments. This new approach did not affect estimates for citizenship, last/next residence and UK country. However, the iterative proportional scaling resulted in some small changes for other variable and helps explain some of the change for in estimates for certain variables between 1991 and 1998.

2. Application of migrant switcher proportions after the IPSWA has been applied:

The implementation of the incorporation of the IPS weighting adjust into the individual weights has had a subsequent effect on the estimation of migrant switchers between 1991 and 1998. Migrant switcher estimates are calculated by applying the relevant migrant switcher fraction to the total IPS flow. The previous methodology applied these fractions to the 1991-1998 IPS flows before they were adjusted. As the unadjusted figures no longer exist within the processing system, they are now applied to the adjusted flows.

This changes TIM estimates between 1991 and 1998 as follows:

- IPS inflows increased by about 400 to 700 a year
- IPS outflows decreased by about 100 a year

In the context of these revisions, this impact is fairly negligible.

3. Processing system changes affecting Channel Islands and Isle of Man data:

The Channel Islands and the Isle of Man present some conceptual difficulties when estimating migration flows. Although the Channel Islands and Isle of Man are not technically part of the UK, residents moving to or from the UK and the Isle of Man are not international migrants. This ambiguity has led to some historic data being incorrectly treated as international migrants. The removal of these has resulted in revisions affecting some years. The affected estimates are:

- 2000 inflows reduced by 5000
- 2001 inflows reduced by 100
- 2001 outflows increased by 1000
- 2002 outflows increased by 1000
- 2003 inflows reduced by 4700
- 2003 outflows increased by 400

Appendix B: Overview of methodological and processing system changes introduced in 2006

Year	IPMS changes to TIM methodology		Other changes			
	Improvements to inflows by UK destination	Improvements to switcher adjustments	IPS weighting adjustment	Application of MS proportions	Channel Islands	
1991	No revisions planned		No changes to Total Flows or breakdowns based on: Citizenship; Last/next residence; UK country/GOR. Small revisions for other variables	Revised	Selected years	
1992						
1993						
1994						
1995						
1996						
1997						
1998						
1999	Revised		Not applicable	Not applicable	Not applicable	
2000						
2001						
2002						
2003						Revised
2004						
2005	New methodology only	New methodology only				
2006						

Appendix C: Comparison of Switcher Calculations for 2005 TIM

Previous methodology:						
	Flow	Group	Methodology	Example(2005)		
				Fraction	Switcher pool	Estimate
Visitor switchers	Inflow	EEA	50% of 'possible' migrants'	0.50	28062	14031
		Non-EEA citizens	75% of 'possible' migrants	0.75	27915	20936
			25% of long stay visitors	0.25	111839	27960
		Total:				62927
	Outflow	EEA to EU25	50% of 'possible migrants'	0.50	-3558	-1779
		Other out	75% of 'possible migrants'	0.75	-11779	-8834
25% of long stay visitors			0.25	-55819	-13955	
	Total:				-24568	
Migrant Switchers	Inflow		5% of IPS inflow	0.05	496470	24824
	Outflow		1% of IPS outflow	0.01	-369470	-3695

Revised methodology:						
	Flow	Group	Methodology	Example (2005)		
				Fraction	Switcher pool	Estimate
Visitor switchers	Inflow	EEA	x% of all long stay visitors and possible migrants	0.2746	140160	38484
		Non-EEA citizens	x% of all long stay visitors and possible migrants	0.1549	89276	13832
			Total:			
	Outflow	EEA to EU25	x% of all long stay visitors and possible migrants	0.3102	-27962	-8675
		Other out	x% of all long stay visitors and possible migrants	0.1039	-74799	-7769
			Total:			
Migrant Switchers	Inflow		x% of IPS inflow	0.03008	496470	14934
	Outflow		x% of IPS outflow	0.04361	-369470	-16113

Note: The previous methodology excluded the A10 from the 'EEA' group but it is included in the revised methodology. Therefore, it is not possible to make direct comparisons between the 'EEA' and 'non-EEA' groups between previous and revised methodologies.