Responding to 'the Fiscal Effects of Immigration to the UK'

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Responding to '*the Fiscal Effects of Immigration to the UK*'

Superficially, understanding the give and take between native and immigrant populations looks like a helpful contribution to the debate. A closer look at the methods used in '*The Fiscal Effects of Immigration to the UK*' [1] by Christian Dustmann and Tommaso Frattini shows how many pitfalls are inherent in the attempt. Professor Mervyn Stone has examined the methodology from a technical perspective. His paper[2] draws parallels with the misuse of mathematical methods in the allocation of health service expenditure, on which he has also written[3]. In this companion paper, I consider some of the assumptions that feed into the calculations. Two themes emerge. Assumptions built into the apportionment formula have a substantial bearing on the final results. The level of precision claimed is beyond what the data can reasonably support.

Overprecise

Past record

Professor Stone draws attention to a previous prediction by Professor Dustmann and colleagues[4]. Commissioned by the Home Office, it considered likely migration to the UK as a result of EU accession.

[1] *The Fiscal Effects of Immigration to the UK*, by Christian Dustmann and Tommaso Frattini, Centre for Research and Analysis of Migration, 2013, http://cream-migration.org/publ_uploads/CDP_22_13.pdf (retrieved 29/11/2013)

[2] Mervyn Stone, *Plain Assumptions and Unexplained Wizardry in Defence of 'The Fiscal Effects of Immigration to The Uk'*, Civitas 2006. http://www.civitas.org.uk/pdf/assumptionsandwizardry.pdf

[3] Mervyn Stone, *Explicating 'wrong'or questionable signs in England's NHS funding formulas: correcting wrong explanations* , Civitas 2013. http://www.civitas.org.uk/pdf/StoneSeries

[4] Christian Dustmann, Maria Casanova, Michael Fertig, Ian Preston and Christoph M Schmidt, *The Impact of EU Enlargement on Migration Flows,* Home Office, 2003, page 57, from http://www.irr.org.uk/pdf/rdsolr2503.pdf, (retrieved 29/11/2013)

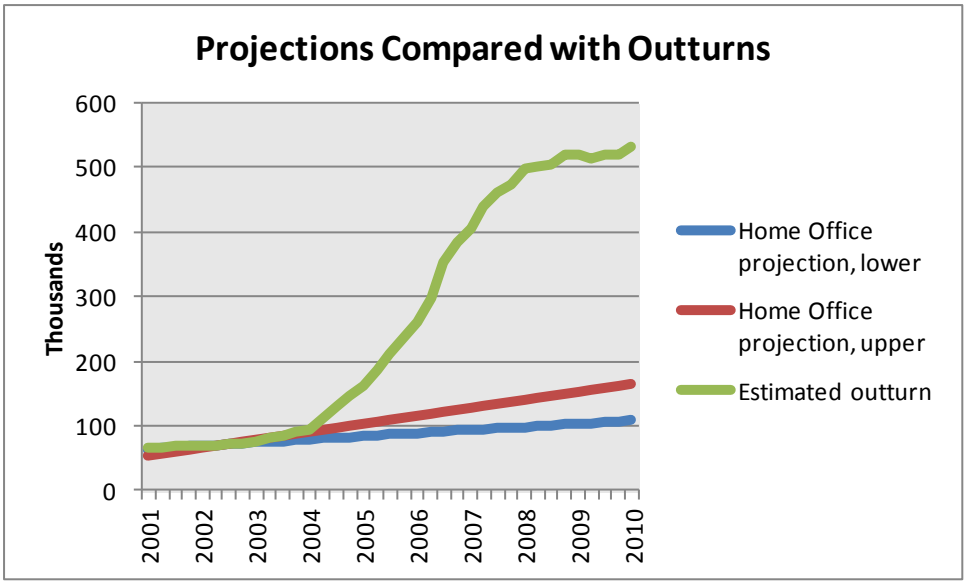

Figure 1

Figure 1 shows that prediction against an ONS short report *Polish People in the UK - Half a million Polish Residents*[5]. The upper and lower projections applied to all accession countries for the period 2000 to 2010. The graph extrapolates them in a straight line, beginning from the ONS estimate of Polish residents when the report was published. It is worth noting that whereas Cream projected growth of all accession countries, the ONS figures relate only to the greatest source, Poland. The gap between projection and outturn therefore appears smaller on the graph than actually happened.

Splicing expenditure statistics

The majority of public expenditure statistics in Dustmann and Frattini's report comes from the series *Public Expenditure Statistical Analyses*. Each annual edition has a warning similar to this one from PESA 2010: 'We advise against splicing together multiple editions of PESA.'[6] That warning can be set alongside the footnote to table A1, 'Expenditures Allocation Criterion'.

> *Column 1 reports the categories in which we have grouped public expenditure items from Table 5.2 of PESA 2010 (years 2004-2010), Table 5.2 of PESA 2009 (year 2003) Table 3.6 of PESA 2004 (years 1998-2002), and Table 4.5 of PESA 1999-2000 (years 1995-1997). Column 2 reports the share (in percent) of total public expenditure accounted for by each category, pooling over all years 1995-2011.*

Contrary to the advice, they have spliced. PESA does include a longer-term summary using consistent classifications, which this critique has used whenever actual figures are needed.

[5] *Polish People in the UK - Half a million Polish Residents*, Office for National Statistics, 2011 http://www.ons.gov.uk/ons/rel/migration1/migration-statistics-quarterly-report/august-2011/polish-people-in-the-uk.html (retrieved 29/11/2013)

[6] *Public Expenditure Statistical Analyses* (PESA) 2010, HM Treasury, from http://webarchive.nationalarchives.gov.uk/20101128151454/http:/www.hm-treasury.gov.uk/pespub_index.htm (retrieved 26/11/2013)

Redesign of the Labour Force Survey

In the years to 2006, questions were raised about the design of the survey with a view to improving the accuracy of estimates for particular categories. 'Temporary foreign workers' was such a category, as mentioned by Barry Werner of the Office for National Statistics' Labour Market Division:

> ***Identifying temporary foreign workers in LFS estimates***
>
> *In recent years there has been a considerable inflow to the UK labour supply from overseas, in particular from the recent accession countries to the European Union. In many cases, however, workers enter the UK to work for a short period of less than a year and hence are not categorised as UK usual residents. In that case, therefore, although these 'temporary foreign workers' make a significant contribution to UK output, they are not included in the mid-year population estimates to which the LFS is grossed and, hence, they not included in the LFS employment estimates. The 2006 report of the 'Quality Review of Employment and Jobs Statistics' (National Statistics Quality Review Series: Report no. 44) recommended a number of steps that might be taken to address this issue by enhancing both the LFS itself and the population figures to which it is grossed.*[7]

The notch in the native population figures for 2005 may reflect precisely that redesign. So might the step-change in 2007, when 300,000 people that had arrived before 2000 were reclassified as from within the EEA not from outside it. That is between 3 and 4 per cent of the total migrant population reclassified after the rare years of surplus and just before the years of greatest deficit. If the changes were uniform, removing that distortion would appear to increase the contribution of EEA migrants relative to people from elsewhere. However, the stronger message is that the variability is too great to quote results with a high level of precision.

Apportionment Formulae

Pure and Congestible

The report's authors assign to each itemised aspect of government expenditure an apportionment formula. Much depends on these formulae. If the apportionment is incorrect it will affect the final judgement. Eighteen specific areas of expenditure are identified, all apportioned on the basis of numbers of individuals to whom the expenditure is applicable. Although the report distinguishes between 'pure' public goods and 'congestible' ones, such that only 'congestible' costs rise as the population increases, it does not allow for even the congestible goods to be more expensive for immigrants than the national average. The base case for pure public goods is that immigrants should be apportioned a share but this fails to undo the inaccuracy.

Population Pressure

Many of the differences in cost are not caused by immigrant status itself but by the concomitant increase in population. Questions are only directed at immigration because that is discretionary,

[7] Barry Werner, *Reflections on fifteen years of change in using the Labour Force Survey*, Office for National Statistics, 2006, from http://www.ons.gov.uk/ons/rel/lms/labour-market-trends--discontinued-/volume-114--no--8/reflections-of-fifteen-years-of-change-in-using-the-labour-force-survey.pdf (retrieved 29/11/2013)

involving a deliberate choice to increase the population of the UK instead of another country. For many categories of expenditure, there is a wealth of individual circumstances that determine how much is due to each person. Dividing people into natives and immigrants is too crude. The further division according to periods of arrival in the UK and region of origin is scarcely more sophisticated.

Public sector debt interest

The report classifies Public Sector Debt Interest as a pure public good. It is good only in the sense that the country's reputation would be damaged if the interest were not paid but it is hard to see why much if any of it should be attributed to the immigrant population. The complications come with the suggestion that few of the native population regard the accumulated national debt as their doing either, whereas someone moving to the UK can at least be aware of the burden they are taking on. Paying for other people's debts is an area of such obvious potential for injustice that no method of apportionment is likely to get general agreement.

Transport

Public expenditure on transport, on the other hand, appears archetypally congestible. Dustmann and Frattini report it as if it is a disservice, a worst case, to suggest that an immigrant population needs as much spent on transport as is spent for the natives. They count transport as a 'pure public good'. The question invites the worst kind of pigeon-holing. Take a rural bus service where the fares adequately cover a passenger's fuel requirements and there are usually free seats even in a minibus. Then, an extra passenger can spread the overheads and make a public service more economic. At the opposite extreme, if people are left on urban platforms because the trains cannot fit another passenger, demanding investment in increased capacity, then the costs caused by extra population can go well beyond the average. The effect of high, localised migration is expensive congestion. Either way, excluding transport from those services described as 'congestible' is stretching credulity.

Police Services

Immigration and citizenship police services are apportioned by the report entirely to immigrants. This looks debatable. The justification behind it is that the services would be unnecessary without an immigrant population. It is not obvious how immigrants stand to benefit from these particular services, which exist more to satisfy the native population that their rules are being correctly applied.

Housing

Housing is expensive and scarce, especially in London. Any increased demand is likely to stretch existing resources. Public expenditure on extra social housing is small compared to the increasing need and any new development is likely to cause costs elsewhere. It is a category that does not lend itself easily to apportionment within each single year's expenditure. The costs were capital costs, incurred many years previously, and were much in excess of what it spent in current years. As immigrants were not responsible for incurring the national debt, so it is reasonable not to reckon the cost of interest to their account. However, the expenditure on new housing is not equivalent to depreciation of the existing housing stock, neither should it be considered proportional to the numbers of people living in existing social housing. It is improbable, though not impossible, that past investment in housing was intended to provide for migrants to the UK.

London housing is particularly expensive, so there is a case for weighting recipients there more heavily. The report notes that 9 per cent of natives, 33 per cent from the EEA and 44 per cent from elsewhere lived in London, but uses this only to estimate overall numbers, not to calculate the cost of providing it.

Housing, then, is an instance where an unsatisfactory method of apportioning the total is applied to an inappropriate measure of the total itself.

Pensions

Natives are generally older than immigrants. Therefore more will be receiving pensions. Although personal contributions through the tax system to a state pension are not now regarded as covering the entire cost of retirement, current recipients have still paid in over many previous years. Likewise, current contributors will, in many cases, expect to receive state pensions at some future time. It is too sweeping an assumption to suggest that the past contributions and future receipts will even out. Rising numbers mean that immigrants represent a smaller proportion of past contributions than they will make of future payouts. The Dustmann's and Frattini's study is using figures from a medium-term period to illustrate a long-term savings plan. The result cannot be without bias.

Revenue Side

The credit for revenue is apportioned in two ways across nine subcategories. For 27 per cent of the total it is by a formula dependent on population estimates. For the remainder, it involves applying actual or assumed tax bands to quoted income.

Direct Tax

Direct Tax is calculated from estimates of income. It is rare to say it of anything, but the Labour Force Survey is 'fit for purpose'. Its purpose is to provide a detailed picture of working patterns in the United Kingdom. If used for other purposes, then limitations appear. For income and earnings studies, ONS run a separate survey because LFS data, though instructive, are subject to limitations. HMRC run their own income surveys to provide for high earners too. Where the highest earners pay a substantial proportion of tax, especially income tax, it is not straightforward to derive their contribution from the Labour Force Survey. Income questions in the survey treat the very highest earners as 'outliers' – rare observations - that are omitted from the weighting scheme. These respondents are responsible for a disproportionate share of income tax, so the inclusion or absence in a sample can make a substantial difference to reported averages. For this reason, ONS surveys do not treat the average (mean) income as the best measure of earnings. The problem is exacerbated for a reduced subset, such as immigrants from the EEA or beyond. Yet to estimate the fiscal contribution of migrants, Dustmann and Frattini are obliged to estimate precisely this mean income.

Indirect tax

Indirect taxation is 28 per cent of receipts so makes a substantial contribution to the overall balance. The source document for indirect tax estimation, ONS's '*The Effects of Taxes and Benefits on Household Income*'[8], makes no distinction between natives and immigrants. These things depend

[8] *The Effects of Taxes and Benefits on Household Income*, 2010/11, Office for National Statistics, 2012 http://www.ons.gov.uk/ons/rel/household-income/the-effects-of-taxes-and-benefits-on-household-income/2010-11/etb-stats-bulletin-1011.html (retrieved 29/11/2013)

entirely on expenditure. Potential differences are assumed not to exist. Particular group characteristics, like eschewing alcohol, giving generously to charity or remitting money to family overseas, may cause differences in indirect taxation but cannot be reflected in this study. Dustmann and Frattini have provided an alternative scenario, by which immigrants only spend four fifths of the fraction of their income spent by natives, but this is not carried through to their headline results.

Company taxes

Immigrants are assumed to have similar share ownership to natives. That may need more justification. It is only at the richer end that this will make a substantial difference to treasury receipts but average citizens may be expected to arrive in the country with fewer shares than natives already own.

Judging Contribution by Income

Indirect taxes are judged by expenditure. As someone earns, so they pay taxes. Dustmann and Frattini reckon this to their account as a fiscal contribution. There is a more complicated calculation necessary to establish how much of this contribution would still have been paid had a job been carried out by a native instead. The value of most work should be that it is valuable in itself. If somebody is willing to do it for less money, there is at least a sense in which that is a greater contribution to the economy. That, however, is tied in with the effects of competition for the same work. A second Cream report from November, 'The Effect of Immigration on Public Finances' by Ian Preston[9], was much more appreciative of the complexity of judging a contribution to the public purse. That report gained much less coverage than that of Dustmann and Frattini.

[9] Ian Preston, *The Effect of Immigration on Public Finances*, Centre for Research and Analysis of Migration, 2013, http://cream-migration.org/publ_uploads/CDP_23_13.pdf (retrieved 29/11/2013)

from Table 4.3 Public sector expenditure on services by function in real terms[10], 1988-89 to 2011-12

Outturn for year cash, £billion, 2011-12 prices	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
1. General public services	48.1	51.8	51.9	52.8	52.9	48.5	50.3	46.0	44.8	47.6	50.2	52.8	53.7	55.5	56.1	55.1	68.2
of which: public and common services	*8.6*	*8.7*	*8.6*	*8.4*	*9.6*	*10.4*	*10.3*	*11.7*	*12.2*	*13.3*	*14.3*	*14.8*	*14.3*	*13.7*	*14.9*	*14.4*	*13.0*
of which: international services	*4.8*	*4.9*	*4.3*	*4.2*	*4.3*	*4.8*	*5.5*	*5.5*	*5.6*	*6.2*	*6.5*	*7.2*	*7.1*	*7.3*	*7.7*	*8.4*	*9.1*
of which: public sector debt interest	*34.4*	*38.2*	*38.9*	*40.3*	*39.1*	*33.2*	*34.6*	*28.9*	*27.0*	*28.0*	*29.4*	*30.9*	*32.3*	*34.4*	*33.5*	*32.4*	*46.1*
2. Defence	34.2	32.1	30.6	29.4	32.6	32.8	33.4	32.4	33.6	35.0	35.2	35.8	36.2	37.0	39.3	39.7	40.1
3. Public order and safety	22.9	22.8	22.7	23.2	23.9	24.0	26.5	29.4	30.3	32.1	33.7	33.9	34.2	34.8	36.0	36.0	33.7
4. Economic affairs	35.0	33.4	32.3	29.2	26.1	28.1	30.9	35.4	38.3	40.3	39.8	40.9	42.4	41.0	51.1	48.7	38.9
of which: enterprise and economic development[11]	*6.9*	*6.4*	*6.0*	*5.8*	*4.1*	*5.7*	*6.4*	*6.5*	*7.3*	*7.3*	*7.7*	*7.4*	*7.2*	*7.8*	*16.9*	*12.5*	*5.1*
of which: science and technology	*1.6*	*1.7*	*1.9*	*1.9*	*1.9*	*1.8*	*1.8*	*2.2*	*2.6*	*2.8*	*3.0*	*3.5*	*3.3*	*3.6*	*3.4*	*3.7*	*3.3*
of which: employment policies	*4.7*	*4.4*	*3.9*	*3.4*	*3.9*	*4.6*	*4.9*	*4.2*	*3.7*	*3.9*	*3.8*	*3.8*	*3.7*	*2.3*	*2.1*	*2.5*	*3.2*
of which: agriculture, fisheries and forestry	*5.0*	*5.6*	*7.5*	*6.4*	*5.8*	*5.6*	*6.1*	*8.0*	*6.1*	*6.4*	*6.4*	*6.5*	*5.7*	*4.7*	*6.2*	*5.8*	*5.3*
of which: transport	*16.9*	*15.6*	*13.2*	*11.8*	*10.4*	*10.3*	*11.7*	*14.4*	*18.4*	*19.8*	*18.9*	*19.6*	*22.4*	*22.5*	*22.6*	*24.2*	*22.0*
5. Environment protection	5.6	5.8	5.1	5.4	5.7	6.4	6.6	6.9	7.5	7.5	8.3	9.8	10.6	10.5	10.4	11.6	11.7
6. Housing and community amenities	9.1	8.6	7.9	6.6	7.3	6.1	7.1	7.9	6.7	8.2	9.5	12.4	12.9	14.3	16.2	17.2	13.1
7. Health	57.8	59.1	59.2	60.4	62.4	64.5	70.4	76.2	82.3	91.1	98.0	103.8	106.6	112.4	117.5	124.5	124.2
8. Recreation, culture and religion	7.6	7.8	7.9	8.7	9.6	10.1	10.1	11.0	11.6	11.8	11.8	12.5	12.7	13.1	13.2	14.1	13.3
9. Education	53.1	52.8	52.3	52.4	53.2	55.1	59.6	65.3	68.0	74.2	76.9	80.7	82.1	86.4	88.7	93.1	94.0
10. Social protection	149.5	153.5	156.1	155.4	153.2	160.7	166.9	175.2	180.7	189.3	194.0	197.6	199.2	207.1	219.1	236.5	237.6
EU transactions	-6.3	-5.8	-7.2	-5.0	-3.5	-3.5	-3.4	-6.1	-2.4	-2.6	-1.1	-0.7	-2.0	-1.7	-3.1	0.1	2.8
Public sector expenditure on services	416.4	422.0	418.7	418.6	423.4	432.6	458.7	479.6	501.7	534.8	556.4	579.3	588.6	610.2	644.5	676.5	677.6
Accounting adjustments	22.1	22.2	18.5	18.3	16.4	15.3	-15.0	16.6	22.1	19.4	25.5	26.2	30.3	29.8	28.5	29.1	28.4
Total Managed Expenditure[12]	438.5	444.2	437.2	437.0	439.9	447.9	443.7	496.1	523.8	554.2	582.0	605.5	619.0	640.0	673.0	705.6	706.1

[10] Real terms figures are the nominal figures adjusted to 2011-12 price levels using outturn GDP deflators from the Office for National Statistics (released 28 June 2012), and using the 2011-12 GDP deflator forecast by the Office for Budget Responsibility.

[11] Transactions in 2008-09 onwards have been affected by financial sector interventions.

[12] This excludes the temporary effects of banks being classified to the public sector.

Differences and Uncertainties

Part of Table 4.3 of *PESA 2011*, produced by the Treasury, is reproduced on the preceding page[13]. It covers all the years and most of the categories used by Dustmann and Frattini to apportion expenditure to natives or migrants. In graphical form and sorted so that rising expenditure appears at the top, it looks like this (Figure 2):

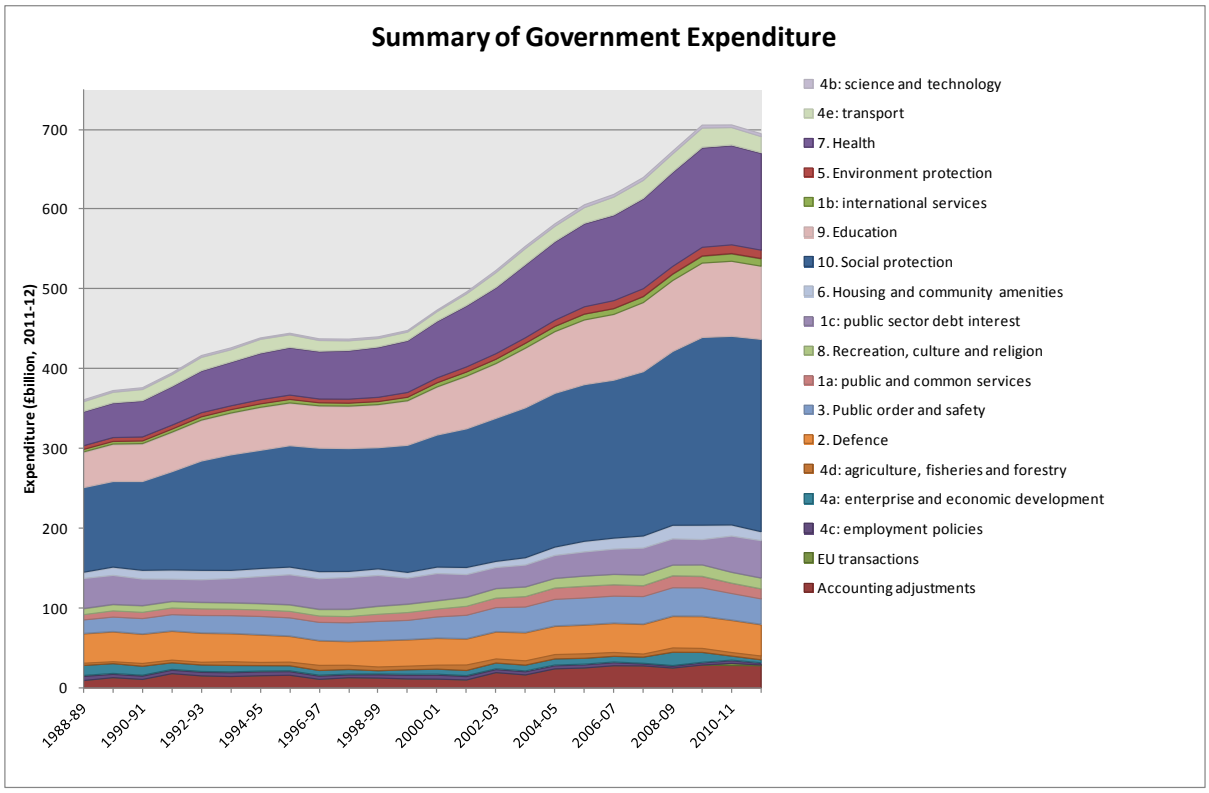

Figure 2

The major categories of current expenditure are clearly health, education and social protection, to which can be added past investment in pensions and housing. Even theminor but growing category, transport, where Dustmann's and Frattini's assumptions are particularly questionable, never fell below £10 billion during the period of the study. It peaked at £24 billion in 2009/10. Their report left transport out of the list of 'congestible' goods. If sums that size are potentially misapportioned, then observed differences will have to be substantial to justify the conclusion that some groups, such as EEA migrants, give better fiscal value than others.

Recent EEA Migrants

The claim that recent immigrants are fiscally beneficial is based on a positive balance after apportioning costs and receipts according to the estimates described. A further claim, that they are fiscally beneficial relative to natives is based on the larger gap between their positive balance and the native's deficit. If all revenue and expenditure were proportional to population size, such that

[13] Public Expenditure Statistical Analyses (PESA) 2011 HM Treasury, from https://www.gov.uk/government/publications/public-expenditure-statistical-analyses-2011 (retrieved 29/11/2013)

being native or migrant made no difference, there would be an overall balance or deficit. Each group's contribution could be considered up in proportion to its size. The estimates for groups are not exact, since they depend on the assumptions about how to apportion the receipts and expenditure. In the terms of a whole economy, even the difference between the benefit attributed to recent EEA migrants and the deficit attributed to native is vulnerable to a smaller change in the assumptions.

If an annual £2¾ billion of expenditure or income were apportioned more favourably to natives or less favourably to recent EEA migrants, it would nullify all the advantage that Dustmann and Frattini have attributed to them. This figure is derived from multiplying out the surplus ratios and actual surpluses quoted in their table 5. Natives, claims the study, have a ratio of revenues to expenditures of 0.894. For recent EEA migrants it is 1.339. Over 11 years, one group contributes £22 billion and the default group overspends £624 billion. Given their shares of the population, that means that the recent EEA group is contributing £2¾ billion each year more than the level at which shares would be equal. That was the most favoured group in their analysis. Other groups are either vulnerable to a smaller reapportionment or start from an unfavourable position, as is the case with non-EEA migrants over 11 years from 2001. The reapportionment for recent EEA migrants is a large proportion (46 per cent) of the expenditures that Dustmann and Frattini consider due to them. Nevertheless, when uncertainties exist on both sides of the ledger, can affect high earning taxpayers, incur high liabilities for pensions and housing, can involve mid-study reclassifications of people from one group to another and where even in minor categories of expenditure questionable assumptions can affect sums of similar magnitude, an artificial surplus of £2¾ billion each year is not enough to claim that one group is more economically beneficial than another.