

# Principles of Police Funding in the UK

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## Principles of Police Funding in the UK

In England and Wales, each of the 43 police forces receives most of its funding in the form of a central government grant, and the rest from local taxation and from charging for events. The Home Office and the Department for Communities and Local Government (DCLG) distribute the funding received using a specific formula, which takes into account data on policing needs from crime levels, fear of crime, population and the policing of special events. However, the process of 'damping' smoothed out large variations in funding allocations which were calculated from the formula and ended up with all forces receiving an almost equal amount (HC 695, 2011; NAO, 2015).

The formula takes into consideration council tax rates in each police force but does not consider all demands on police time, the relative efficiency of individual police forces, or the levels of funding reserves forces may have (NAO, 2015). The formula calculations are based on the estimated workload of each police force area and cover: crime related activity, non-crime activity (e.g. providing public reassurance or road traffic accident assistance), policing special events, policing sparsely-populated areas, and workload weighting calculation for cost and time which include an area cost adjustment for variation in labour market costs in different areas.

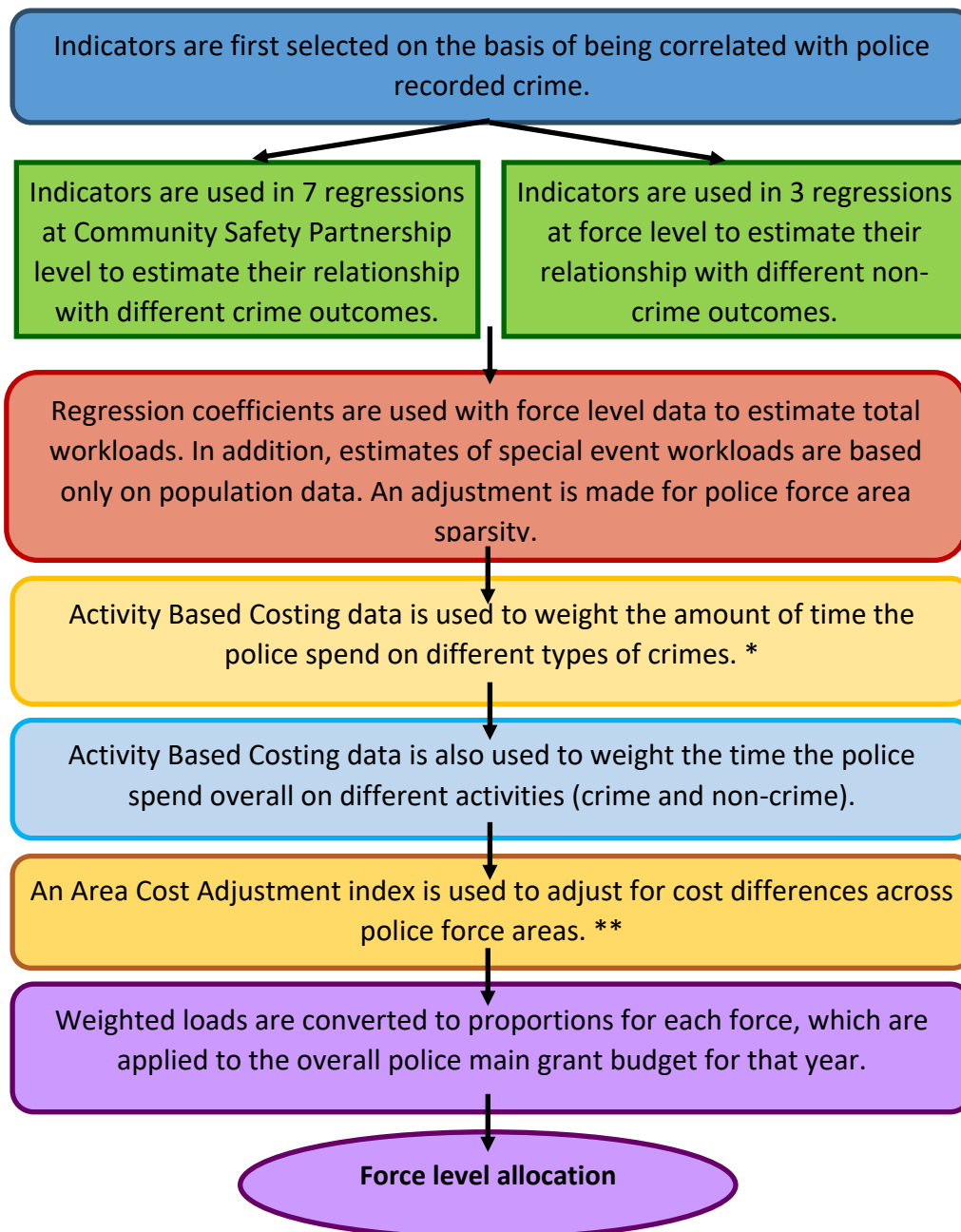
The formula does not estimate how much each force area needs independently of all other force areas, instead it shares out the amount of money designated for police funding based on the relative needs (not absolute needs) (Home Office, 2013). It uses population data and a large range of socio-economic variables to estimate the expected workload of each force across a range of crime and non-crime activities. These estimates are created by ten complex statistical regression models. The formula relies largely on data from 2003/4 and Census data from 2001 (Home Office, 2015).

The current police allocation formula is presently under review. It is expected that consultation on what the formula should look like will occur between October 2016 and February 2017, and the Police Minister will not review proposals before March 2017. This timeline is outside of the scope of the current project, and consequently we can only discuss the formula in its current form, which has received a lot of criticism for being outdated, vague and unfair. However, this is the only formula we currently can consider to assess inputs and variables used to determine police funding. We then discuss principles for a replacement. We will also discuss the different situations in Wales and in Scotland. Wales differs slightly from England; Scotland differs radically.

### *The Police Allocation Formula*

The first stage of the formula is to divide funds between the different activities that the police undertake (Home Office, 2014). A portion of total funding is also distributed according to population sparsity, to address the specific needs of rural forces. The second stage is to divide

funding for each of these workloads between the 43 local policing bodies of England and Wales. In order to do this, 'workload indicators' are calculated to estimate how much work each police force is expected to have in each of the key areas compared to other forces.



\* An Activity Based Costing exercise was carried out annually from 2002/3 to 2007/8 over a two-week period when police officers would record what they had been doing for each 15 minutes period.

\*\* The Area Cost Adjustment, produced by DCLG, takes into account differences in labour costs between areas as well as differences in business rates paid on local authority premises and buildings.

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Figure 1: Process of allocating Police Main Grant using the police funding formula

These estimates are calculated using socio-economic and demographic indicators that are correlated with each workload<sup>1</sup> (Home Office, 2014). The formula consists of a basic amount per resident and a basic amount for special events, and top-ups for the five key areas, sparsity and area costs (which takes account for regional differences in costs) (see figure 1).

The allocation formula cannot capture every variable that affects the relative need of a police force area, but the model is designed to provide a statistical prediction of the relative workload across the country. Although funding is based on police activity, forces do not need to spend the funding in-line with the way the total amount of money received has been calculated (e.g. a proportion of money has been allocated to a force due to high burglary rate, the force does not need to spend this proportion on fighting burglary crimes) (Home Office, 2013).

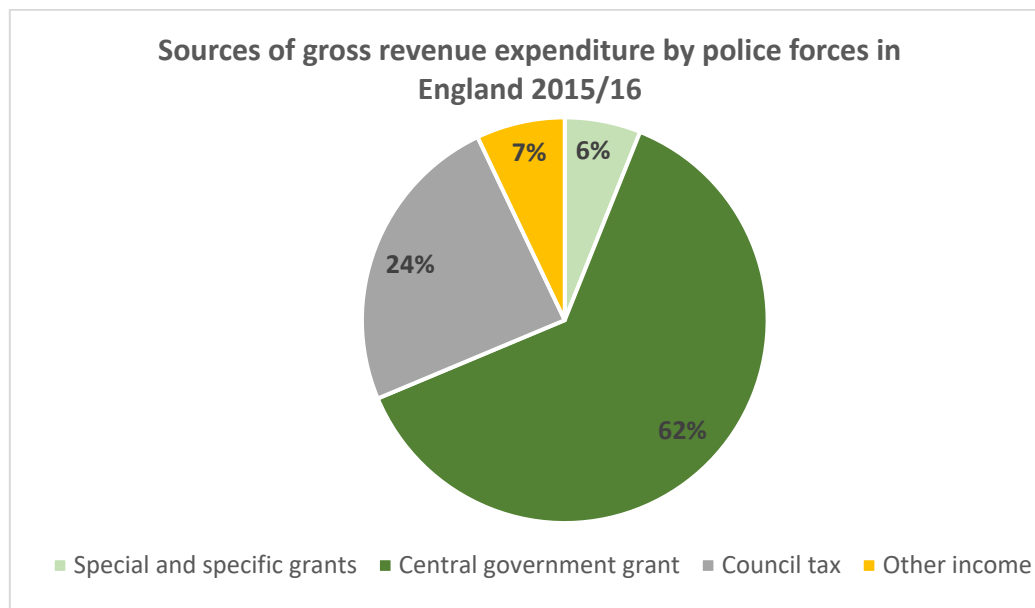
The National Debate Advisory Group (NDAG, 2015) called the existing formula “*backward-looking, highly complex, opaque and, through its reliance on out of date data and regression, distant from current policing reality*”. It relies heavily on Activity Based Costing data which stopped being collected in 2008 and is linked to a local government funding model that no longer exists. Focused on the past, rather than current and future policing needs, it did not consider current policing priorities of crime prevention, more visible policing and increased partnership working. The NDAG proposed more police funding arrangements which address these shortcoming (NDAG, 2015).

Police forces and Police and Crime Commissioners (PCCs) receive funding from: the central government (£8.6bn); council tax precepts (£3bn); and income from activities such as policing at major sporting events (Home Office 2015). Most of the central government funding is provided un-ringfenced to PCCs (or their London equivalents) (£7.8bn) to spend on policing and crime (Johnston & Politowski, 2016). The remainder of the central government funding is used for counter-terrorism policing and to support other national policing priorities.

In addition to central funding, each force can also raise funds through council tax in the form of the police precept. Nationally almost a quarter of gross revenue expenditure (GRE) of police forces is expected to be raised by council tax in 2015/16, but the proportion varies considerably by police force area, largely due to “*historical decisions taken by police authorities and PCCs*” (Home Office, 2015). For example, Surrey Police raised nearly half of its income from council tax precepts, while West Midlands Police raised only about 12% in this way, with most of the remaining 88% coming from central government grant (see Figure 2a). The Metropolitan Police Service and the City of London Police also receive National and International Capital City funding to reflect the additional costs of policing the capital (HC 476, 2015).

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<sup>1</sup> Indicators of workload are used rather than data on actual recorded crime levels to account for known variations in recording practices and to avoid creating perverse incentives.

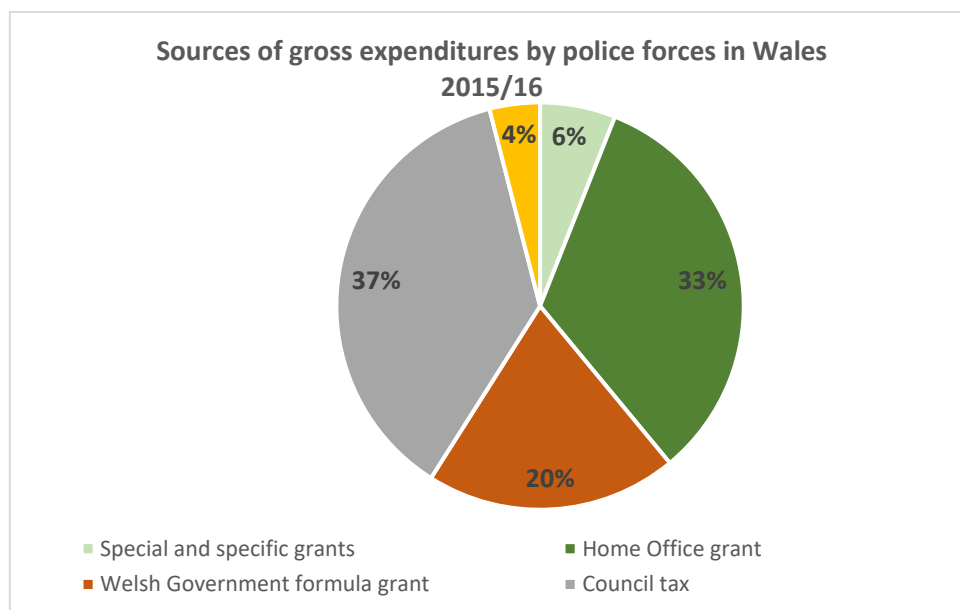


**Source: CIPFA Stats, Police service estimates 2015/16.**

*Figure 2a: Source gross revenue expenditure by police forces in England 2015/16*

The real terms reductions in central grant to police forces as a whole has only varied between 12% and 23% (see Figure 3) since 2010/11 but the large differences between the proportions of funding raised through council tax means that the effect of the reduction in central government grant on individual forces has varied much more widely (HC 476, 2015). The National Audit Office (NAO) calculated that, once local taxation had been taken into account, the average reduction for forces as a whole was 18% (2015). However, the range for real terms reductions for individual forces was from 12% for Surrey to 23% for Northumbria and West Midlands, the two forces most reliant on government grant.

A difference between England and Wales is that in England police grant was delinked from local government grant in 2012/13, whereas in Wales it was not. In Wales, as formerly in England, 'the amount paid to the four police forces is made up of revenue support grant and redistributed business rate income' (Johnston & Politowski, 2016). Redistributed business rate income, as the name implies, transfers funds from areas where business rates are buoyant (generally, rich areas) to areas where they are weak (generally, poor areas). The loss of this redistributive component of police funding in England is discussed below. Another difference between England and Wales is that the proportion of police current expenditure funded from council tax is notably higher in Wales (Figure 2b).

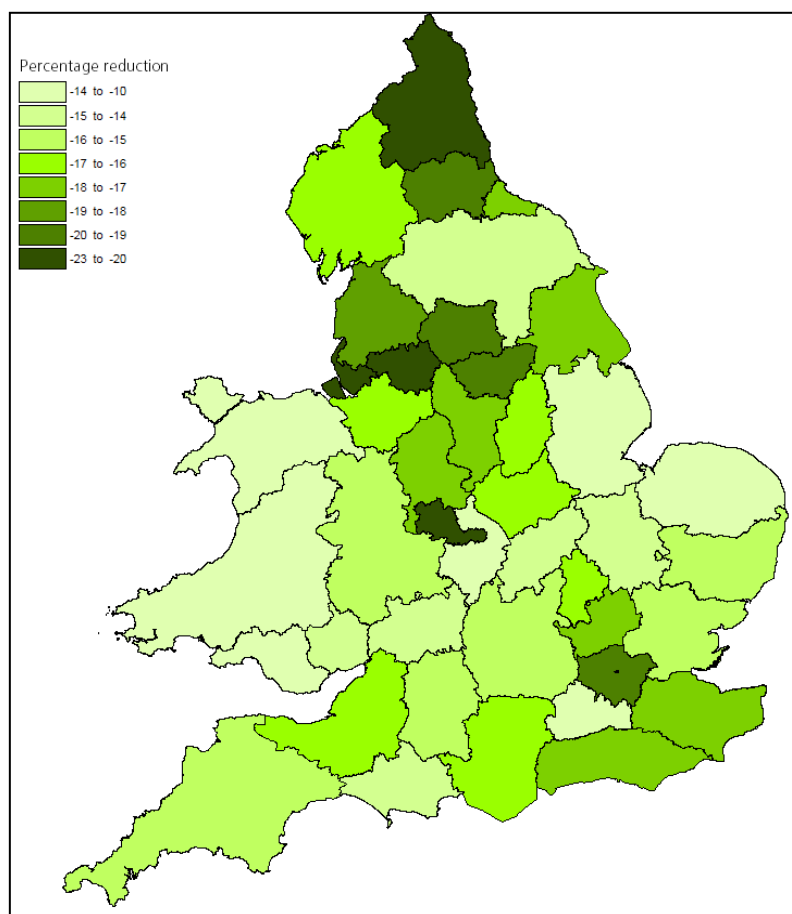


**Source: CIPFA, Police service estimates 2015/16**

*Figure 2b: Gross revenue expenditure by police forces in Wales 2015-16.*

This is counter-intuitive. Wales is poorer than England, and therefore has a weaker property tax base. How then is a higher proportion of police spending funded from council tax? There are likely to be two reasons, which require fuller investigation. First, council tax has a more robust base in Wales than in England. In England, council tax valuations are still pegged to 1991 house values. In Wales, there was a highly controversial revaluation of council tax bands in 2005, where values were updated and an additional band added at the top. Secondly, the UK government, in its capacity as the government of England, has put obstacles in the way of councils (including the former police authorities and the current PCCs) who wish to raise council tax bills by more than a certain proportion. The Welsh Assembly Government has not followed suit. Thus, paradoxically, although England is richer than Wales, Wales has a more robust local tax base for these two reasons. The implications of a more robust local tax base are also discussed below.

Figure 3 shows the territorial impact of the reduction in revenue funding to police authorities since 2010/11. All forces have faced the same percentage reduction in central government funding, irrespective of their service performance, financial position, or level of financial reserves. The NAO (2015) states that the system does not incentivise value for money or strong financial management. Because the ability to offset drops in central funding by increases in precept is greater in rich areas than in poor ones, the drop in overall funding is least severe in a rich area (Surrey) and most severe in poor areas (Northumbria, Merseyside, Greater Manchester, and West Midlands). The drop in central funding does not seem to have been recouped from precept in the Metropolitan area although it, like Surrey, is a rich area. This may reflect differences in the machinery for levying the precept in London from the rest of England.



**Source: House of Commons Library.**

*Figure 3: Real terms reduction in police funding – central government grant and council tax precept – 2010/2011 to 2015/2016*

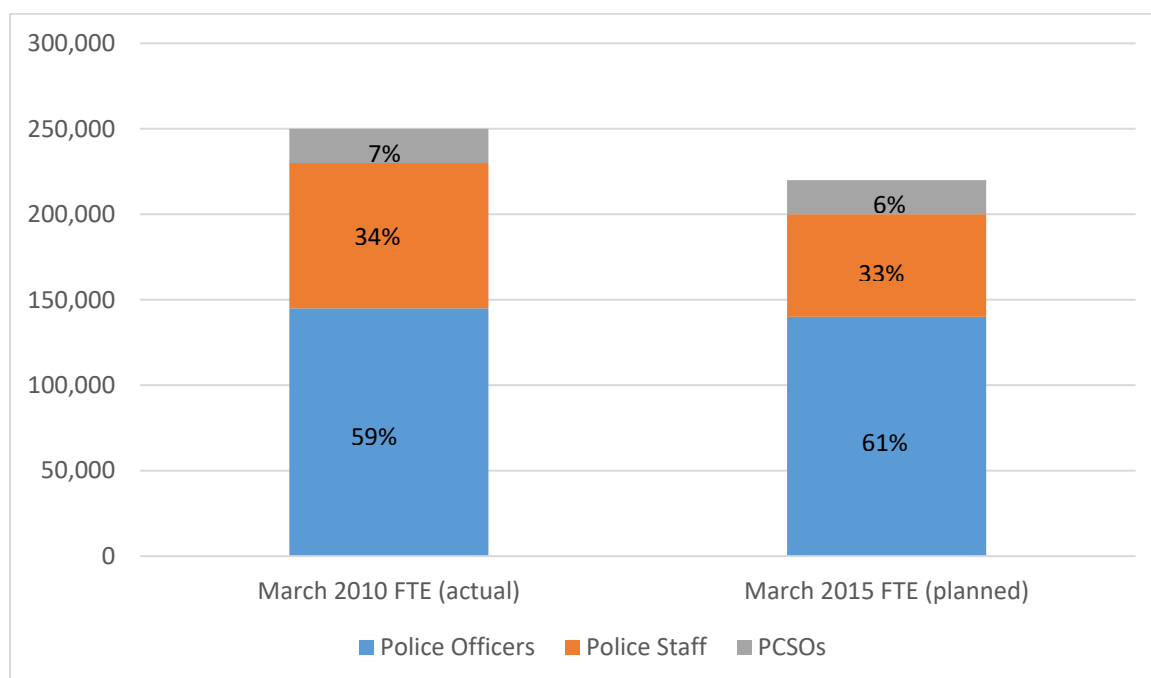
There will be close to a 22% real terms reduction in police revenue grants since 2011/12 (£9.3m), through year-on-year decreases (2015/16 - £8.5m) (Johnston & Politowski, 2016). In order to achieve this, most police forces have coped with the decrease in funding by drastic reductions in headcounts, and the implementation of streamlined back office procedures. Over 80% of total expenditure is linked to staff and workforce costs (Dhani, 2012). With the majority of police force budgets being spent on pay, financial cuts were likely to have an effect on the size of the workforce. At the beginning of the process of reductions HIMC inspected all forces to assess their plans for savings. Forces were expecting to reduce workforces by 34,100. Actual reductions in police workforce from March 2010 to March 2015 totalled 37,400. Table 1 shows the changes in workforce forces in England and Wales were planning for and those actually achieved (Johnston & Politowski, 2016).

*Table 1: Planned and actual reductions in police workforce 2010-2015*

	Actual FTEs March 2010	2011 Planned FTEs March 2015	% change from 2010	Actual FTEs March 2015	Actual % change from 2010
<b>Police officers</b>	143,734	127,600	-11.2%	126,818	-11.8%
<b>Staff</b>	79,596	67,100	-15.7%	63,719	-19.9%
<b>PCSOs</b>	16,918	15,100	-10.7%	12,331	-27.1%
<b>Total</b>	240,248	209,800	-12.7%	202,868	-15.6%

**Sources: Home Office Police workforce statistics & HMIC Adapting to Austerity 2011**

On average, workforce costs account for 81% of force budgets (GRE) across England and Wales. It is therefore unsurprising that forces planned to achieve the bulk of their savings by cutting the number of officers, staff and PCSOs. However, because of the varying numbers of people in each category in absolute terms, the estimated overall ratio of staff and officers has remains broadly unchanged from March 2010 (see figure 4).



*Figure 4: Estimated planned changes to the workforce profile between March 2010 and March 2015*

#### *A proposed new model*

New proposals for funding arrangements were laid out by the government in early 2015 to replace the existing model with a much more simplified and transparent funding model which uses population levels, underlying characteristics of that population (indicated by data on households with no adults employed and dependent children, hard pressed population and



Council Tax Band D equivalent properties) and specific environmental conditions (indicated by data on the density of licensed bars in an area) to determine budget allocation at force level (Home Office, 2015). The new funding formula (utilising 10 complex statistical regression models), aimed to distribute funding on the basis of ‘relative need’ by using population data and a range of socio-economic variables to estimate the ‘expected workload’ of each PFA across a range of crime and non-crime activities (see Figure 5) (Home Office, 2015).

In mathematical terms a simple equation would replace complex arrangements in the previous formula. Total police funding would be allocated to individual force areas as follows:

$$\text{Force allocation} = (S_1 \times FS_1) + (S_2 \times FS_2) + (S_3 \times FS_3) + (S_4 \times FS_4) + (S_5 \times FS_5)$$

Where:

- S = the share of total funding for each of the five indicators in the simplified model. These are expressed in cash terms.
- FS = the percentage share of S for each force area. These are calculated by dividing the volume of the indicator for each force area by the total volume of that indicator.

These variables were then assigned specific weightings (see

). The first two factors, population and the local council tax base, are the core elements of the model. The Government believes that ability to generate precept income should be factored into any new police funding model but that it would not be appropriate to take into account differences in actual precept levels based on local areas making different choices over time, as this is not consistent with local accountability (Home Office, 2015).

*Table 2: Summary of proposed indicators and their weightings*

<b>Indicator</b>	<i>Population</i>	<i>Band D equivalent properties</i>	<i>Households with no adults employed and dependent children</i>	<i>Hard pressed population</i>	<i>Bar density</i>
<b>Weighting</b>	24%	16%	25%	25%	10%
<b>Data sources</b>	ONS and StatsWales mid-year population estimates	DCLG and StatsWales council taxbase statistics	ONS Census data	Acorn population classification data from CACI Ltd	Inter-Departmental Business Register and Census both from ONS
<b>Frequency of data update</b>	Annual	Annual	10 years	Annual	IDBS = annual Census = 10 years

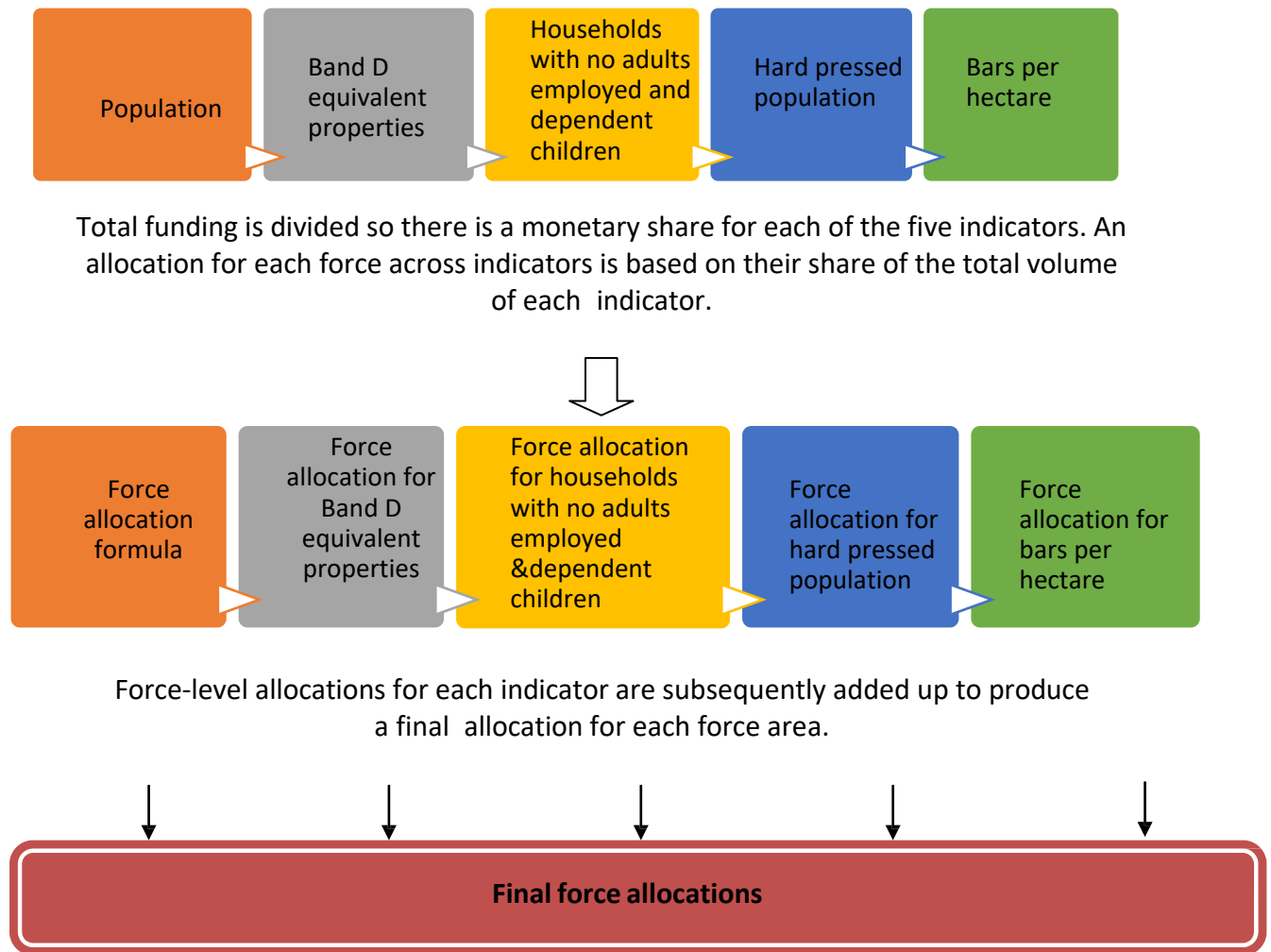


Figure 5: Process of determining funding allocations under proposed simplified model

The Government considered a broad range of 25 population characteristics. After its analysis, it identified two socio-economic factors that are closely correlated with the patterns of crime experienced between different areas over time. These were households with no working adult and dependent children and ‘hard pressed’ population. The ‘hard pressed’ population indicator is used in the current allocation formula and includes groups such as low income people and families, single parent families, old people and single parent families in high-rise flats, multi-ethnic people on housing estates or in crowded flats (Johnston & Politowski, 2016).

A single environmental factor was included, the density of bars within the police force area, because of the strong relationship between bar density and drivers of crime and demands on police time. The total number of bars, including night clubs, social bars and public houses is divided by the police force area (Johnston & Politowski, 2016). There are no indicators of non-crime demands on police time. Non-crime demands on police forces are often linked to issues

of vulnerability, public protection and safeguarding. There is also no consideration of the rural/urban nature of a police force. Rural forces point to the additional cost of policing sparsely populated rural area and the existing formula includes an element for sparsity of population (Johnston & Politowski, 2016).

Under the 2016 proposals the funding for an individual police force would be calculated in two stages.

1. The Home Office divides the total funding available for that year's settlement between the five indicators based on the weightings.
2. A share for each indicator would be allocated between police forces based on the proportion of each indicator within that police force area. The police force would then get allocations for each of the five indicators based on its proportion of the England and Wales total for that indicator. The police forces allocation would then be the sum of the five sub-totals for each indicator (see figure 6 for a worked example).

The Home Office considered three options for the future allocation of the central grant: continuing with the current practice; upgrading the existing allocation formula; and creating a new, simplified model, based on population size and characteristics and the physical environment of the police force area. As the first option would move force level funding allocations further away from relative need, and the second option suffered from a number of unresolvable issues, and did not accord with the Government's principles of a good funding model<sup>2</sup>, it was decided that an entirely new model was required (HC 476, 2015).

The Home Office said *"to determine allocations a new funding model needs to draw on information which can help explain why demands on the police differ between force areas so that relative levels of required resources can be determined"* (HC 476, 2015). Therefore, the indicators supporting the model needed to meet several conditions in order to be analytically robust and relatively stable over time. The consultation proposed a *"new simplified and transparent funding model"* based on three broad elements that, while not themselves drivers of individual criminal activity, correlated highly and strongly with long term patterns of crime and overall police demand (HC 476, 2015).

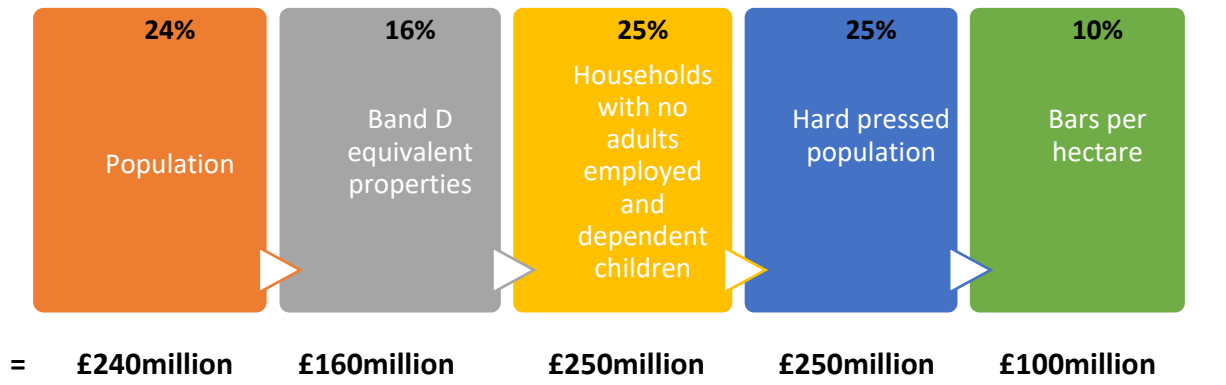
The Minister for Policing has said that the consultation had received 1,700 responses, and that the proposed model was being refined in light of this feedback. These refinements would then be sent to PCCs and Chief Constables for comment, along with an assessment of the force-level impacts, based on the funding for 2015/16. It was intended that this would enable the model to be finalised in time for implementation in 2016/17, the first year of the next Spending Review period (HC 476, 2015).

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<sup>2</sup> In considering options for a new police funding model the Government has used a set of five guiding principles covering: robustness, stability, transparency, incentives and future proofing.

**Total amount of funding available for distribution = £1 billion**

Total funding is divided into a monetary share for each indicator based on the weightings for each indicator



Each force is given an allocation for each indicator based on that forces share of the total volume in each indicator.

For example: if police force A has 4% of the total population of England and Wales it would receive 4% of the £240million allocated to the population indicator.

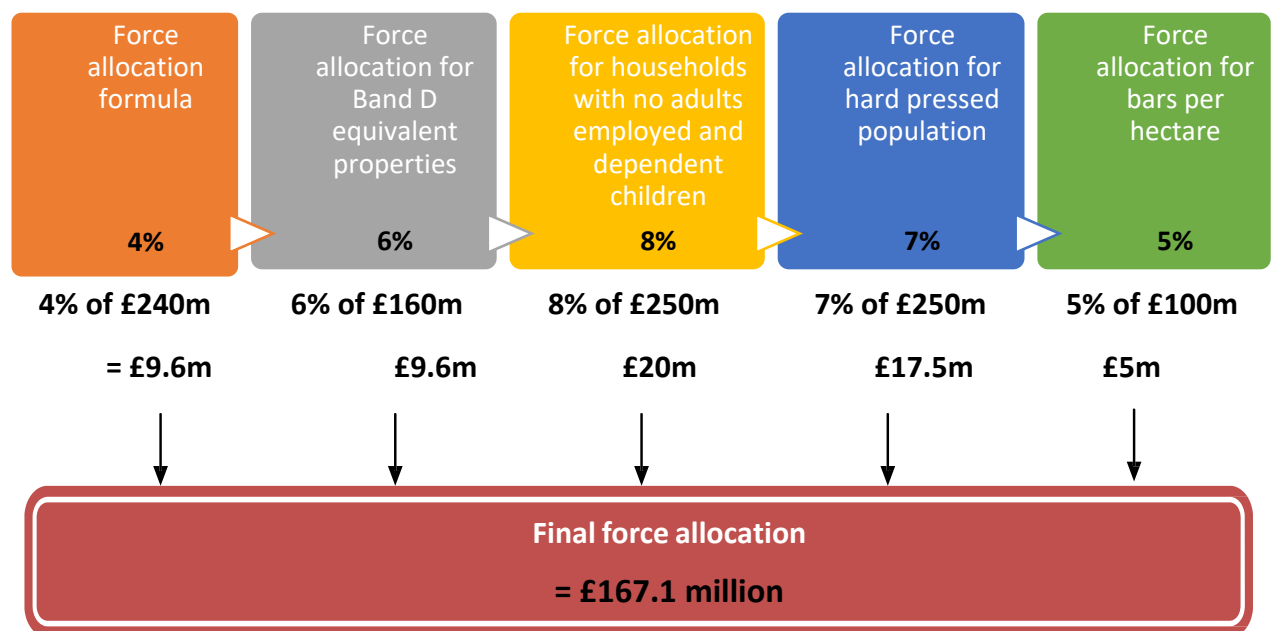


Figure 6: Example of how funding would be allocated

The key refinements to the model were that:

- the licensed bar density measure needed to account better for the overall volume of bars in a force area as well as the impact of large clusters of bars;
- the council tax base indicator did not meet the intended purpose, and that there was likely to be no effective way of capturing the ability to raise precept through the inclusion of a specific indicator, so this indicator was removed;
- a new indicator would be used to measure the highest levels of deprivation across all force areas; and
- the model would reflect differences in regional costs through the application of an Area Cost Adjustment index (HC 476, 2015).

The proposed funding formula was halted in the summer of 2016 as an error in the mathematical formula was identified; the wrong data was being used as a baseline figure, and the formula reverted to its previous version in the meantime. This highlights the complexity of determining a model which allocates funding and the importance of accurate and appropriate data variables.

#### *The Home Office's calculation error and its consequences*

The Commons Home Affairs Committee's report into the aborted attempt to change the funding formula for England reveals a state of affairs that, according to the report, 'would be amusing if it were not so serious..... Mr White [chief executive of the PCC's office, Devon & Cornwall] was able to unravel the entire funding model in a way that made the Home Office look foolish' (HC 476, 2015). The data were derived from a commercial database which the Home Office had refused to make available free of charge to PCCs. When Devon and Cornwall bought a copy to see why the Home Office's calculations were so different to its own, they found that the Home Office had actually used a different formula. The Devon & Cornwall PCC supplied the Home Affairs Committee with a table of the effect on each force of differences between the two formulae, which were substantial (HC 476, 2015). The Home Office acknowledged the error but did not apologise for it. The apology came from the Minister for Policing in reply to an Urgent Notice Question (*Hansard*, Commons, 9 November 2015). The Home Affairs Committee states that the Home Office opposed the application to the Speaker for an Urgent Notice Question (HC 476, 2015). The Minister announced that the new formula would not be implemented until 2017-18. As of late October 2016, no Government response to the highly critical Home Affairs Committee report had been received.

Meanwhile, in preparation for the 2015 Spending Review, departments without special protection (such as the Home Office) were asked to prepare for real cuts of between 25% and 40% in the Spending Review period. However, a few days after the Policing Minister's statement delaying the implementation of the new formula came the Paris terrorist attack of November 13, 2015. The following day, Chancellor Osborne announced that there would be no cuts to police expenditure during the five-year Spending Review period, to the reported

astonishment of chief constables and PCCs (HC 476, 2015). The combination of the Paris attacks and the collapse of the new formula has meant that the old formula staggers on, but without the expected deep cuts.

Before turning to analysis and recommendations from this messy situation, we must explain the totally different regime for police funding in Scotland.

### *The Barnett Formula and the funding of Police Scotland*

Some public services are devolved to the governments of Scotland, Wales and Northern Ireland. Policing is a devolved responsibility in Scotland (and in Northern Ireland, which is outside the scope of our study because the issues there are so different to those in Great Britain). It is not a devolved responsibility in Wales, although as we saw above the funding regime is somewhat different in Wales from England. So the only force in our study which is funded, albeit indirectly, by a territorial block grant from HM Treasury is Police Scotland.

In the period covered by our study, the devolved governments have had substantial responsibility for public spending but almost no responsibility for raising tax. The only locally raised taxes in Scotland were Council Tax and Business Rates. This will be changed somewhat by the Scotland Act 2012 and substantially by the Scotland Act 2016. The 2012 Act's provisions come into force in 2016, and the 2016 Act's provisions, in 2017. These measures will align the responsibility to tax and the responsibility to spend more closely. Were Scotland to become independent, the responsibility for taxing and for spending would of course wholly lie in the same place. Ruth Davidson MSP, leader of the Opposition in the Scottish Parliament, has recently said that as a consequence of the 2012 and 2016 Acts, the Scottish Parliament is no longer a 'pocket-money parliament' (speech at ECFR lunch, London, 12 September 2016).

The origin of formula funding for spending in Scotland and Ireland is the Goschen Proportion, introduced by the Chancellor of that name in the 1888 Budget. The proceeds of some taxes were to be assigned in the proportion 80:11:9 to England and Wales, Scotland and Ireland respectively. Scotland's assignment was therefore  $11/80^{\text{ths}}$  of that to England and Wales. When the formula was introduced, it was not generous to Scotland, but it became so from the 1920s onwards as Scotland's population dropped below  $11/80^{\text{ths}}$  of the population of England and Wales. However, there was always a Secretary for Scotland in the government. From 1926, that post was a Secretary of State, permanently in the Cabinet. Together with his civil servants in Edinburgh, the Secretary of State could always argue for the Goschen Proportion. Indeed, he could always argue for Goschen as a floor, not a ceiling. When he could make an extra case for Scotland, say on the grounds of remoteness, poverty, or special problems of Glasgow or the Highlands, he did so. The result was that, by the 1970s, public spending per head in Scotland was substantially higher than in the poorer regions of England (McLean, 2016), and also higher than in Wales, which did not get a separate Secretary of State until 1964. Given that Wales and the northern regions of England were all poorer than Scotland, this situation was increasingly anomalous and the Treasury looked for a mechanism to curb what they saw as overspending on Scotland. The key Treasury minute states:

*[T]he Scots and Welsh – and for that matter the Northern Irish – were indeed able to ‘have it both ways’ in the sense of automatically receiving extra according to the traditional formula [i.e., the Goschen Proportion] whenever English Departments got more and further additions for special problems peculiar to their own countries. The Scots, over a long period of time (and the Northern Irish in the early 1970s), played this game skilfully and effectively; the Welsh much less so. The result was to build up public expenditure per head on Scottish Office (and NIO) programmes to something of the order of 25% more than England; and in Wales to something like 5% more.... [W]e should at least stop the rot by preventing further increases in the differential (Levitt, 2014; McLean, 2015).*

The formula was introduced shortly after this minute, and was adopted by the incumbent Labour government. The chief secretary to the Treasury was Joel (later Lord) Barnett, and since 1980 the formula has borne his name (conferred not by him but by the public finance academic David Heald).

The Barnett Formula was indeed designed to ‘prevent... further increases in the differential’ without the savage reductions in block grant to Scotland and Northern Ireland that would have occurred if the Treasury had switched to a formula that made grant a function of relative need. In fact, the evidence is that the Treasury planned to operate Barnett for just long enough to get spending in Scotland and Northern Ireland down to the level of their relative need, and then switch to funding based on a needs assessment. It did not work out like that.

A needs assessment was prepared, against the bitter opposition of civil servants in the Scottish and Northern Ireland Offices, but in effect it fell at the change of government in 1979. The incoming Conservatives were less interested in these issues, and only a meagre report was ever published, with no follow-up (HM Treasury, 1979). Meanwhile, over the almost 40 years of its operation, Barnett has only brought about modest convergence in public spending per head.

The formula works by taking baseline expenditure in Scotland, Wales, and Northern Ireland as a given. Because of inflation, public expenditure goes up in cash terms every year. Barnett affects not the baseline grant to the three territories, but this amount by which it goes up this year. For each devolved service, the grant goes up each year by the territory’s population share of the amount by which spending on that service has gone up in the reference territory (usually England, but sometimes, as with police, England and Wales – policing being a devolved function in Scotland but not in Wales). Because the baseline level was above the population share of each of the territories, in the long run this procedure should have led to spending being equal per head in all four territories of the UK, as successive increments came to swamp the original (1978) baseline. This would obviously have been a step too far, as all three territories are poorer than England. Therefore the Treasury planned its switch to a needs assessment, no doubt intending to introduce it for each territory when the annual series of Barnett incremental grants had brought its public expenditure per head to a point at or below its relative needs. But, as noted, this plan was aborted at the change of government in 1979.

And in fact, the convergence has been very slow. Table 3 shows the latest figures for real-terms spending per head in the 12 standard regions of the UK:

*Table 3: Total identifiable expenditure on services by country and region per head<sup>(1)</sup> in real terms<sup>(2)</sup>, 2009-10 to 2013-14*

	£ per head				
	National Statistics				
	2009-10	2010-11	2011-12	2012-13	2013-14
	outturn	outturn	outturn	outturn	outturn
North East	10,259	9,985	9,660	9,597	9,710
North West	9,912	9,708	9,381	9,422	9,405
Yorkshire and the Humber	9,214	9,005	8,816	8,761	8,800
East Midlands	8,652	8,431	8,203	8,231	8,334
West Midlands	9,265	8,999	8,778	8,756	8,761
East	8,557	8,347	7,956	7,930	8,061
London	11,270	10,929	10,429	10,126	10,004
South East	8,286	8,104	7,770	7,810	7,864
South West	8,670	8,453	8,299	8,309	8,453
England	9,351	9,117	8,808	8,763	8,799
Scotland	10,871	10,606	10,479	10,633	10,418
Wales	10,477	10,307	10,221	10,008	10,062
Northern Ireland	11,586	11,347	11,223	11,237	11,114
<b>UK identifiable expenditure</b>	<b>9,598</b>	<b>9,364</b>	<b>9,086</b>	<b>9,050</b>	<b>9,060</b>

(1) Per head figures calculated using the latest mid-year population estimates from the ONS. See Annex F for details.

(2) Real terms figures are the nominal figures adjusted to 2014-15 price levels using GDP deflators from the Office for National Statistics (released 30 June 2015).

**Source: HM Treasury (2015a), Table 9.4.**

Table 3 shows, as expected, that public expenditure per head in Scotland is significantly higher than in England, and also higher than in Wales, which is poorer than Scotland. If expenditure per head in England in the latest year for which data are available, viz., 2013-14, is indexed to 100, then expenditure per head in Scotland is 118, and in Wales 114.

The reasons why Barnett has led to only limited convergence are many, and are beyond the scope of this article (but see McLean 2005; Gallagher 2015). The two main reasons are probably: (i) that population figures are not kept constantly up to date, so that Scotland's slower population growth leads to an advantage in Barnett grants, which (ii) is then built into the baseline, so that it 'frozen' into the aggregate grant.



Table 4: UK identifiable expenditure on services by function, country and region, per head indexed, 2009-10 to 2013-14 (continued)

Data in this table from 2009-10 to 2013-14 are National Statistics

Index (UK Identifiable expenditure = 100)

	1. General public services <i>of which: public and common services</i>	<i>of which: international services</i>	2. Defence	3. Public order and safety	4. Economic affairs <i>of which: enterprise and economic development</i>	<i>of which: science and technology</i>	<i>of which: employment policies</i>	<i>of which: agriculture, fisheries and forestry</i>	<i>of which: transport</i>	5. Environment protection	6. Housing and community amenities	7. Health	8. Recreation, culture, religion	9. Education	10. Social protection	Total Expenditure on Services		
<b>2013-14</b>																		
North East	97	97	100	97	105	91	127	93	145	90	73	71	124	111	98	100	112	107
North West	84	83	99	89	105	85	94	88	111	52	87	189	76	105	78	100	106	104
Yorkshire and the Humber	70	69	101	73	95	93	89	89	128	84	90	69	75	97	88	103	99	97
East Midlands	93	92	101	97	81	77	72	86	92	112	65	77	79	88	74	99	97	92
West Midlands	65	65	100	94	90	82	83	73	120	71	80	63	70	98	87	102	101	97
East	83	82	100	124	73	83	51	126	76	110	76	84	64	87	69	93	93	89
London	101	101	100	115	154	122	65	127	107	13	167	77	183	122	132	116	93	110
South East	81	80	100	112	78	76	58	113	61	70	78	83	57	88	72	89	90	87
South West	79	79	102	93	79	76	61	89	64	142	61	108	55	93	72	90	101	93
England	84	83	100	101	97	88	74	101	96	76	91	94	88	99	86	99	98	97
Scotland	194	196	95	103	102	183	266	112	108	213	184	152	166	107	177	101	107	115
Wales	174	175	101	139	102	129	201	75	109	172	115	122	108	99	147	107	114	111
Northern Ireland	187	189	101	-	166	152	225	76	169	347	93	81	246	106	202	106	120	123
UK identifiable expenditure	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Source: HM Treasury 2015a, extract from Table 9.16

Does this then translate into more resources per head for Police Scotland than for police forces in England and Wales? The latest Treasury data provide a surprising answer, see Table 4. The rightmost column of table 4 confirms that expenditure on services in Scotland is some 18% ahead of that in England. But when that expenditure is broken down, service by service, the pattern is very variable. For some service areas such as transport, Scottish expenditure per head is very much higher than England. However, for 'public order and safety', the function that includes policing<sup>3</sup>, expenditure per head in Scotland is only 5 percentage points ahead of that in England.

How can this be? Because Barnett grant is *unearmarked*. Each year, HM Treasury transfers to Scotland the increment determined by Scotland's population share of the services which are devolved to the Scottish Government, together with the baseline from the previous year. The increment is derived from a detailed analysis of which services are devolved (see latest HM Treasury 2015b). But it is entirely up to the Scottish Government to decide how to allocate its funds. In proportion to its own baseline of about 18% per head above the English level of expenditure, it spends heavily on some services such as transport and economic development. It does not spend highly on the group of services of which policing comprises just over half (with the rest comprising fire, courts, and prisons).

This block grant procedure is quite different to that used to determine grant to police services in England and Wales, discussed above. In England and Wales, both the old and the (aborted) new formulae attempt to determine relative needs for police service. They then transfer an *earmarked* sum to each force.

Under the 2012 and (especially) 2016 Scotland Acts, Scotland gets considerably more control over public expenditure, and for the first time this is to be matched by some responsibility for raising tax in Scotland. By the time the 2016 Act comes fully into effect, about half of the public expenditure in Scotland will be funded out of taxes raised in Scotland, with almost the whole responsibility for Income Tax being devolved, and the proceeds of VAT in Scotland also being assigned to the Scottish Government. The role of Barnett will be much reduced, but it will still exist. In a long-fought duel between the Scottish and UK governments, a deal was finally reached in February 2016<sup>4</sup>. This provides that when any tax power is transferred to the Scottish Parliament, the block grant is reduced by exactly the yield of that tax in the year before the transfer, so that the transfer is fiscally neutral on day 1. All the trouble between the governments lay with the indexation method thereafter: should the Scottish Government be insulated from the effects of slower population growth, and/or slower economic growth, in Scotland than in the rest of the UK. In the end, the deadlock was broken by the UK government accepting the indexation method that gave the Scottish government the most protection against these risks even though the Scottish Government negotiators were from

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<sup>3</sup> For Scotland in 2013/14, police spending was just over half of the total under 'public order and safety'. The fire service, courts, and, prisons between them accounted for almost ball the rest. HM Treasury 2015, Table 10.6

<sup>4</sup> *The agreement between the Scottish Government and the United Kingdom Government on the Scottish Government's fiscal framework* at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/503481/fiscal\\_framework\\_agreement\\_25\\_feb\\_16\\_2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/503481/fiscal_framework_agreement_25_feb_16_2.pdf), accessed 26.10.2016.

the Scottish National Party, whose platform is Scottish independence, and thus 100% exposure to the risks of population growth or GDP growth).

*Principles of a good funding formula.*

The Home Affairs Committee discussed some principles for a good replacement funding formula. These should include transparency, fairness, and simplicity. One difficult area for fairness is the interaction between each force's grant and precept funding, especially where precepts had been capped, as they were in England though not in Wales). The Committee recommended trying to 'reset precepts at a common level' (HC 476, 2015). Unfortunately, this recommendation fails to clarify whether 'a common level' means 'a common rate in the pound' or 'a common yield per head'. These two interpretations have radically different implications for fairness. It is necessary to step back and draw on some first principles, and some experiences from elsewhere.

As well as transparency, fairness, and simplicity, there is a fourth principle for a good funding formula: incentive-compatibility. This means that the formula should give recipients and incentive both to do desirable things (e.g., make more tax effort) and not to do undesirable things (e.g., manipulate reported actions and outcomes in order to appear relatively 'needy').

Transparency, fairness, simplicity and incentive-compatibility add up to a quadrilemma. Each is desirable, but the four are not fully compatible. The abortive new English formula lacked transparency for at least two reasons: the underlying data were not provided to police authorities, and no list of exemplifications (implications of applying the formula to each force) was provided. The first of these is just a mistake and must not be repeated. The second is more subtle. Whenever exemplifications are offered, it is easy, and almost inevitable, for each recipient to compare the exemplification that results from each suggested formula, and choose the formula under which that particular recipient does best. Transparency has then obstructed at least one of the other three desiderata.

The tension between fairness and simplicity arises because, the simpler a formula, the more a force will argue that it is not fair because of that force's special circumstances. In normal lobbying, this results in funding formulae becoming more and more complicated as the special needs of each client are lobbied for and eventually granted.

The tension between fairness and incentive-compatibility arises because of the very different tax bases of police authorities. Most academic experts agree that property in the UK is relatively undertaxed. Council Tax is very visible, unlike VAT (which is incorporated in retail prices) or National Insurance and Income tax (the bulk of both being deducted at source from pay packets). People believe, therefore, that their Council Tax represents a higher proportion of their total tax bill than it actually does, and they put pressure on politicians to do things like freeze increases and delay revaluations. The structure of Council Tax is uniquely regressive, both between rich and poor people and between rich and poor areas. House prices are lower in poorer areas. Therefore a higher proportion of properties are in the lower bands

A, B, and C. Council Tax is calibrated to the rate charged on a house in Band D, and the rates on other bands are a fixed proportion of the Band D rate. It follows that, not only is the yield per head of a given tax rate higher in a rich area (like Surrey) than in a poor area (like Northumbria) but also that the tax rate on a given house in each band is higher in Northumbria than in Surrey. This is completely topsy-turvy. The police precept simply sits on top of an extremely regressive property tax.

So, a fair system of police funding will require a fair system of local taxation. This has been addressed by the Scottish and Welsh governments, but hardly at all by the UK government in its capacity as the government of England. The Scottish government appointed an all-party Commission on Local Tax Reform (Commission on Local Tax Reform 2015). Its report stated that Council Tax must be replaced, but ducked the question of what should replace it, to be addressed after the 2016 Scottish election. Nothing has come of this at the time of writing. But the fiscal squeeze on the Scottish Parliament brought about by the increase in its tax powers and the corresponding reduction in Barnett transfers, means that in the lifetime of the 2016-20 Parliament it will have to address property taxation with a view to making it fairer. Police Scotland is financed entirely out of central funds and, as Table 4 shows, at a lower level per head than in England and Wales. Its funding is probably fairer than in England and Wales (because it does not rely on regressive Council Tax), but is not transparent nor incentive-compatible.

What about Wales? As noted above, police funding in Wales is slightly fairer than in England, even though Wales is a poorer country, in which the median house is only in Council Tax band C. The base for Council Tax is more up-to-date and fairer than in England, with houses banded according to their value in 2003 (rather than 1991 as in England) and with an additional Band I on high-value houses. However, the number of properties in Band I is tiny – fewer than 5000 out of more than 1.7 million houses in Wales. The fact that Council Tax funds a higher proportion of police costs in Wales than in England (Figures 2a and 2b) is probably due to the lack of any cap on local authority rate increases. That this does not lead to the sort of unfairness that seems to arise as between Northumbria and Surrey is probably down to two factors. One is that there is less spread between the poorest and the richest council in Wales than there is in England. The poorest authorities in Wales (Blaenau Gwent and Merthyr Tydfil) are as poor as any in England, but the richest (Cardiff and Vale of Glamorgan) have house prices which are far below the level of those in London and south-eastern England. The other is that Wales, unlike England, retains an element of pooled business rate distribution in its police funding package. Pooling business rates raises incentive issues, but it is fairer than not pooling them.

Aside from reforming land and property tax, the most important aspect for a new funding formula is one that can be implemented quite quickly. International experience shows that the best formulae are indeed simple and transparent. Added to that, they must not be manipulable by the bodies which they fund. The inclusion of bar density in the aborted 2015 formula was a bad idea for many reasons, but one of them is that it is a number which the

councils and police authorities being funded could control. If allowing more bars on your patch brings more police funding with it, you have a textbook example of a perverse incentive.

The best model for a simple, transparent, yet incentive-compatible formula system of which we are aware is the Commonwealth Grants Commission of Australia, about which one of us (IM) has written (McLean 2004). The CGC regime has three relevant features. Firstly, its measure of the relative needs of the states and territories of Australia is based on demographic features that the states themselves cannot easily change (such as mortality, age structure, and morbidity). Secondly, its assessment of the tax capacity of the states is based on the value of their tax bases (property, incomes, wealth, transactions), and not on the actual tax effort they make. Third, their formulae are applied with a time lag, so that if a state increases its local tax take, the proceeds are not immediately equalised away from it. When the Home Office does offer a revised funding formula after the 2015 fiasco, it is to be hoped that its officials take a trip to Australia.

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