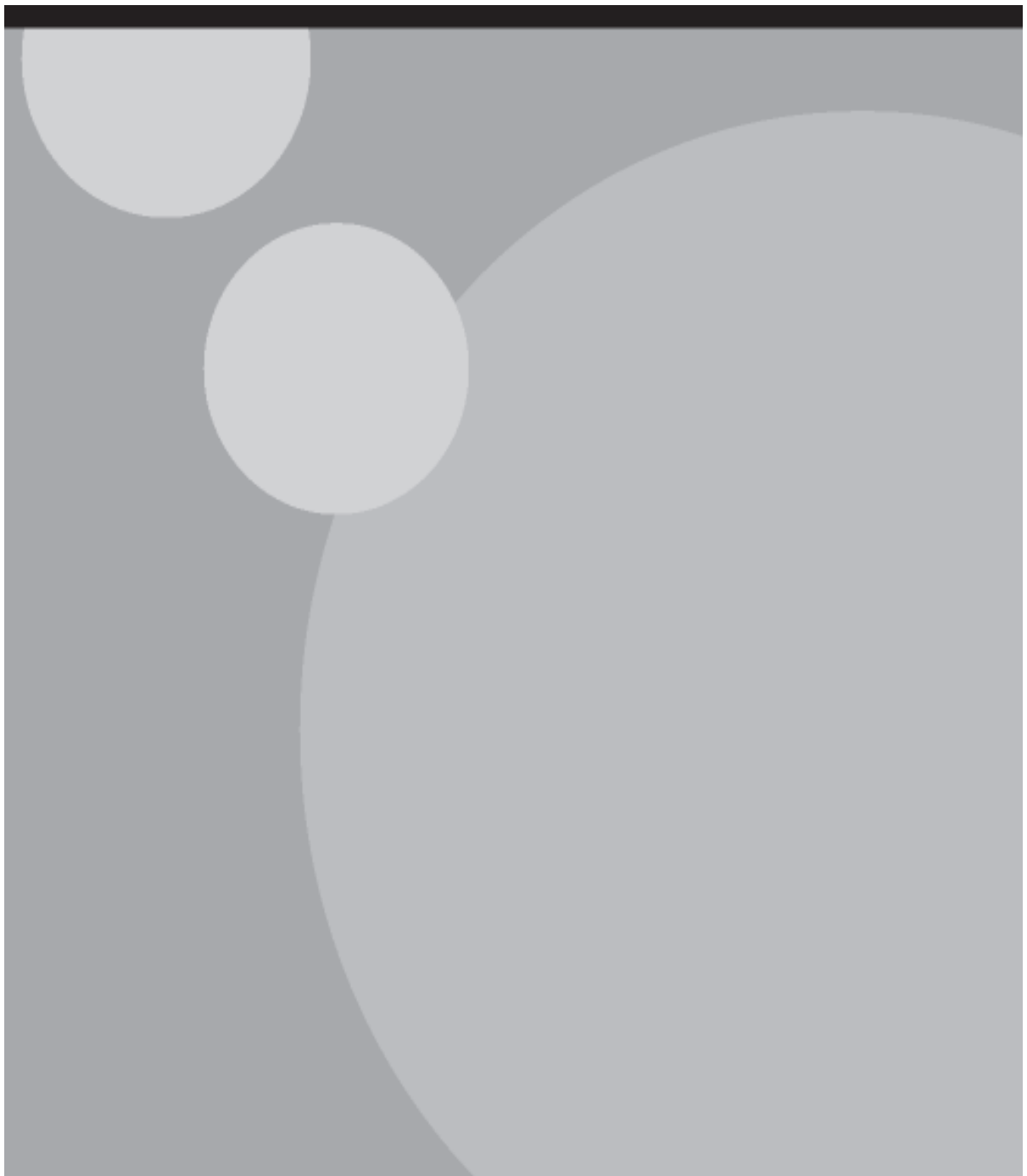




Business rates retention scheme: The economic benefits of local business rates retention





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Department for Communities and Local Government

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Summary

To gauge the impact of the business rates retention scheme we have used empirical results gathered from current economics literature to construct a simulation of the likely effect on GDP over the initial reset period. The caveat to this approach is that it is based on a series of assumptions on the reaction of local authorities to the incentives and the reaction of the economy to any increase in commercial floorspace in local authorities. These assumptions include the appropriate size of the incentive required for behaviour groups, the rate of commercial floorspace growth in each behaviour group, and the ratio of GDP growth to growth of commercial floorspace. An external review of our economic analysis of the scheme conducted by Prof. Henry Overman, Director of the Spatial Economics Research Centre, confirmed the reasonableness of the overall approach.

The basis for these estimates is a calculation of the size of the incentive for each billing authority to expand its commercial floorspace. Authorities are then grouped into behaviour groups and an appropriately increased growth rate for commercial floorspace assumed for each group. A national projection of increased business floorspace is then combined with data on the ratio of commercial floorspace to GDP to arrive at estimates of the increase in GDP from the incentives provided by business rates retention. The increase in GDP for each year of the reset period is discounted to give a present value in year 1 of the increase in GDP over the initial reset period.

Given the uncertainty concerning the assumptions made various alternative scenarios are modelled. Most prominent of these are alternative assumptions about the increase in the growth rate of commercial floorspace as a result of a given incentive and the addition to GDP from an additional hectare of commercial floorspace. The central case in our simulations predicts that, given the 50 per cent local share and seven year reset period, an additional £10.1 bn of GDP could be created. However, looking at the range of scenarios modelled gives a range from £1.7 bn to £19.9 bn. This is shown in the table below.

Potential additional GDP from the proposed rates retention scheme, with varying labour productivity and floorspace growth scenarios, under 7 year reset period, 50% local share and *central* incentive assumptions (£bn, discounted)

		Labour productivity scenario		
		Low	Central	High
Floorspace growth scenario	Low	1.7	3.5	5.2
	Central	5.0	10.1	15.1
	High	6.6	13.3	19.9

The Current Situation

1. At present, business rates are collected at the local level, but receipts are pooled nationally and redistributed via Formula Grant. This means that local authorities do not face a financial incentive to promote business growth in their area, as they do not receive the receipts from such growth.
2. Under the current system authorities actually face a fiscal disincentive when it comes to promoting business growth. This is because the costs from development – disruption during construction, the provision of services to

commercial property, congestion, etc. – tend to be more localised than the employment (and other) benefits, which tend to be dispersed over a wider area. Therefore, even if there are national net benefits to be had from business growth, these will not be realised if the bodies in charge of planning decisions (i.e. local planning authorities) face net costs – including opposition from their local communities – in allowing business growth to go ahead.

3. There is a wealth of evidence that planning restrictiveness is imposing national economic costs. For example:
 - a. In November 2010, the UK had six of the thirty most expensive global business property markets¹.
 - b. In 2004, the cost of constructing one square metre of office space in Birmingham was only around half of the equivalent cost in Manhattan, but the total per square metre occupation cost for business was 44 per cent higher².
 - c. Cheshire *et al* have shown that relatively restrictive planning policies have reduced total productivity in the retail sector – at least in the case of large supermarket groups³.
 - d. Work by McKinsey suggests that planning restrictions have created barriers to the entry of new firms and hindered the domestic expansion of the most productive UK companies, allowing less productive firms to remain in business⁴.
 - e. Michael Ball estimated the transaction costs alone of delays in the planning applications process (residential and non-residential combined) at £3bn per year⁵.
4. By reintroducing a fiscal incentive for local authorities to permit development, business rates retention could go some way towards reducing their planning restrictiveness⁶, thus increasing the supply of business premises and reducing costs for business, which in turn would allow for the expansion of existing businesses and/or the start-up of businesses which otherwise might not have been viable. The most likely mechanism to enable local authorities to become less restrictive is their setting of local plans. These give planning authorities an opportunity to set policy to be less restrictive on growth.

¹ CBRE, (Nov 2010), *Global Office MarketView: Rents*

² Cheshire and Hilber, (2008), *Office Space Supply Restrictions in Britain: The Political Economy of Market Revenge*

³ Cheshire, Hilber and Kaplanis, (2011), *Evaluating the Effects of Planning Policies on the Retail Sector: Or do Town Centre First Policies Deliver the Goods?*

⁴ McKinsey Global Institute, (1998), *Driving Productivity and Growth in the UK Economy*

⁵ Ball / NHPAU, (2010), *Housing Supply and Planning Controls*

⁶ The planning system is arguably the biggest ‘lever’ that authorities have to enable local growth; however, they are also responsible for a number of other potential levers, including local transport infrastructure, education and training, and building regulation control.

Will the Government's Proposed Rates Retention Scheme Make a Difference?

5. The evidence and theory available to us suggests that rates retention could deliver a sizeable prize for the national economy. For example:
 - a. Cheshire and Hilber of the London School of Economics have undertaken an assessment of the centralisation of business rates in 1990⁷ which found that the level of 'planning restrictiveness' increased significantly following the change – as authorities no longer had a fiscal incentive to pursue development – leading to less business development and subsequently higher costs for business through restricted supply. Reintroducing a fiscal incentive could help to reverse these effects.
 - b. Both the Barker Review of Land Use Planning⁸ and the Lyons Enquiry into Local Government⁹ emphasised the importance of local people seeing the benefits from development if growth is to be realised. Barker noted that:

Although new commercial and industrial developments will pay locally-collected business rates, based on local property values, these rates are redistributed nationally... Local people are therefore unlikely to see benefits in terms of local taxation or services from development, which will influence their views and those of their elected representatives.

She recommended that the incentives facing decision-makers should be better aligned with the benefits of development. Similarly, the Lyons Inquiry concluded that:

Even accounting for some specific initiatives, local authorities have a limited share in the general growth of housing or business tax bases... This question of incentives is particularly important when considering the role of local authorities in fostering economic prosperity and housing supply in their area, and the views of local communities. These are important aspects of their place-shaping role and so a link between the health of the economy and the size of local tax base would be a key motivation for local communities to take growth seriously.

- c. Centre for Cities have carried out some regression analysis which suggests that national annualised growth rate of business floorspace could increase by one percentage point as a result of introducing the business rates retention scheme¹⁰. They have come to this conclusion by comparing growth in non-factory floorspace¹¹ before and after the centralisation of business rates in 1990, and controlling for as many other variables beyond business rates

⁷ Cheshire and Hilber, (2008), *Office Space Supply Restrictions in Britain: The Political Economy of Market Revenge*

⁸ Barker, (2006), *Barker Review of Land Use Planning: Final Report - Recommendations*

⁹ Lyons, (2007), *Lyons Inquiry into Local Government – Place Shaping: A Shared Ambition for the Future of Local Government – Final Report*

¹⁰ Larkin, Wilcox and Gailey, (2011), *Room for Improvement: Creating the Financial Incentives Needed for Economic Growth*

¹¹ Centre for Cities only looked at non-industrial floorspace; they omitted industrial floorspace because the structural differences in level of industry between the two time periods were sizeable. Their non-industrial floorspace measure includes retail, offices, warehouses and other bulk premises floorspace (they didn't want to disaggregate too far because it would have provided false accuracy); we have thus used the same categories in our analysis.

centralisation as possible¹², e.g. the strength of the economy, the level of unemployment, and the number of employees in each region. While there are some caveats to this work – most notably, there is a data gap in the time series, and their dummy variable for the centralisation of business rates would have picked up other effects that they couldn't measure, such as a rise in home working, and changes in the business rates multiplier on a per authority basis pre- and post-1990 – it is another piece of evidence that lends weight to the argument that the retention of business rates could make a significant economic difference.

- d. Furthermore, the use of Tax Increment Financing would become much more viable under a system of rates retention, thus providing further support to economic growth¹³. In this regard, research undertaken by the Centre for Cities¹⁴ suggests that a number of UK cities face an “infrastructure deficit”. They report that, of businesses surveyed by the British Chambers of Commerce in 2008, almost 75% said that road transport is essential, and 80% said that congestion locally, regionally and nationally is a problem.
 - e. The policy thought world – including New Local Government Network (NLGN)¹⁵, Centre for Cities, and Localis¹⁶ – are supportive of the principles behind government's proposed business rates retention scheme.
6. Although the theory and evidence above suggests that the introduction of a rates retention system could have a significant economic impact, this will also depend on the precise way the incentives are structured. The literature around growth incentives suggests that relevant considerations for a growth incentive include the following:
- a. Sufficiently large
 - b. No thresholds
 - c. Incentivises the intended behaviour
 - d. Targeted at appropriate decision maker
 - e. Simple and transparent
 - f. Predictable, long-term and credible
7. In practice these considerations have to be optimised alongside the other key objective which is protecting authorities' funding needs. The Government's proposed core scheme design provides the conditions to achieve a balanced scheme that takes account of all these criteria¹⁷. The scheme seeks to provide

¹² The proposed business rates retention scheme is not a direct reversal of the 1990 business rates centralisation, as it will not allow local authorities discretion over the business rates multiplier. However, insofar as the proposed scheme once more provides local authorities with a fiscal incentive to promote business growth, it seems justifiable to compare the two in this manner (and we certainly don't have any better point of comparison).

¹³ Under Tax Increment Financing, projected future tax gains act as the collateral on borrowing to finance redevelopment and infrastructure projects.

¹⁴ Wilcox and Larkin, (2011), *A Taxing Journey: Progress and Challenges on Implementing Tax Increment Financing*

¹⁵ See Sommer and Kuznetsova, (2011), *The Devil in the Detail: Designing the Right Incentives for Economic Growth*

¹⁶ See Shakespeare and Simpson, (2011), *The Rate Escape: Freeing Local Government to Drive Economic Growth*

¹⁷ For example, there will be a proportional levy, to avoid introducing thresholds into the system (Point b above); the tier split will be in favour of shire districts, as shire districts have responsibility for local

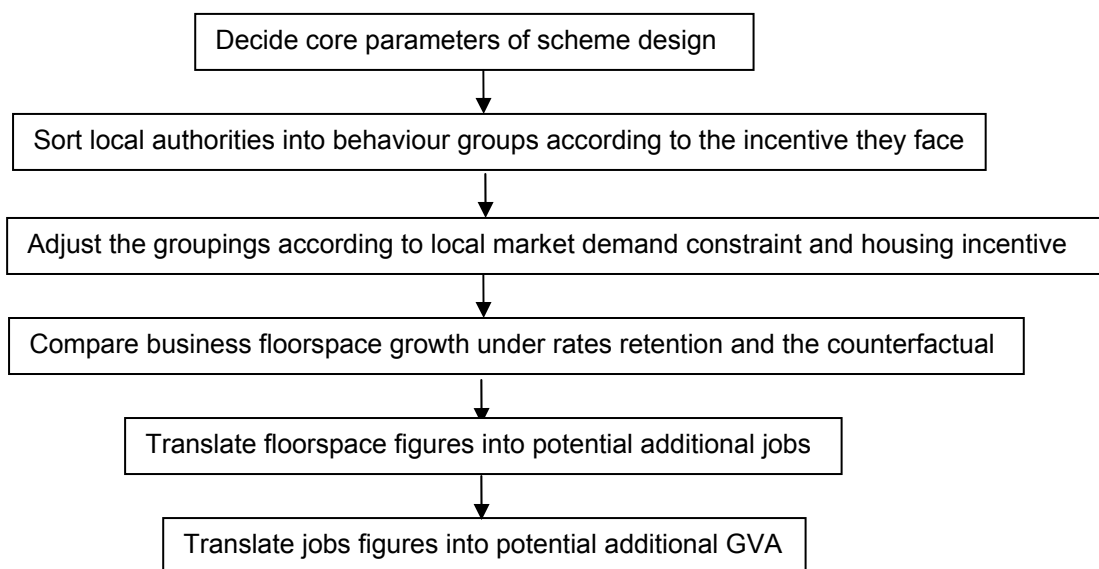
the simplest and most substantial incentive consistent with sufficient redistributive mechanisms to protect authorities' funding needs. The size of the incentive will be affected by the size of the local share of business rates, the levy on disproportionate gain used to fund the safety net and by the length of time until the next reset. Therefore, the magnitude of potential economic impact from rates retention set out by, e.g., Centre for Cities, is likely to be an over-estimate in relation to the Government's proposed scheme.

8. The next section of this paper sets out the methodology that has been used to analyse the potential economic impact of government's proposed scheme, and the results arising from this analysis.

Summary of the modelling methodology

9. Figure I below provides a high-level summary of the modelling methodology that we have used, and the rest of this section of the paper explains the approach in more detail.

Figure I: High-level summary of the modelling methodology



Decide core parameters of the scheme design

10. Following the consultation on the scheme, which closed at the end of October 2011, the Government decided that the rates retention scheme will have the following features:
 - a. A one-off redistribution of resources at the start of the scheme, to ensure that all authorities have the resources they need to deliver local services. This will be achieved through all authorities with business rates that exceed their baseline funding level paying a “tariff”, and all those with business rates below their baseline funding level receiving a “top-up”. Tariffs and top-ups will be index-linked to RPI over time.

planning decisions (Point d above); and there will be a lengthy period between resets, except in exceptional circumstances (Point f above).

- b. The provision of a “safety net”, to provide support to any authorities that see their income fall in any year to below a fixed percentage of their starting position. Starting positions will be index-linked to RPI to ensure their real terms value is not eroded.
- c. The placing of a “levy” upon disproportionate gain. The levy will be “proportional”, i.e. set such that, for every one per cent increase in its business rates, an authority will see no more than a corresponding one per cent increase in its income.
- d. A tier split share which allocates the greatest share of business rates to district councils.
- e. A central share of business rates will be paid by each billing authority to central government to ensure fiscal sustainability. It will be used by central government in its entirety to fund the local government sector.
- f. Resets of tariffs and top-ups, based on a new assessment of relative needs and resource, after a number of years (i.e. the reset period).

More detail as to why these parameters have been chosen can be found in the document: *Proposals for Business Rates Retention Consultation: Government Response*.¹⁸

11. To understand which of the above parameters affect the incentive faced by planning authorities we have modelled the financial gain from granting permission for additional commercial floorspace. The modelling here is based on the most basic model of local authority behaviour in the public finance literature, the median voter model.¹⁹ Given that planning authorities are accountable to their electorate this model postulates that they have to balance the sacrifice of transferring an amount of land per capita to commercial use against the median household’s share of the financial benefit to the local authority in increased business rates.
12. Hence the parameters of the business rates retention scheme overlay on top of the basic incentive that varies across local authorities as a result of variation in the rateable value of their land. The tier split, levy and local share all adjust the proportion of business rates collection retained by a given local authority. The length of the reset period affects the overall value to an authority of each pound retained. Thus all these parameters have a direct knock on effect on the size of the incentive.
13. The following table illustrates the features of the business rates retention scheme that have an impact in the model of growth incentives.

¹⁸ <http://www.communities.gov.uk/documents/localgovernment/pdf/20535021.pdf>

¹⁹ The median voter model postulates that, under certain assumptions, policy choices of elected governments will follow the preferences of the median voter, that is the voter in the middle of the distribution of voters’ preferred policy choices. This model assumes policy choices, and preferences, that operate along a single dimension, such as level of expenditure on a particular government programme.

Table 1: Features of the business rates retention scheme included in the model

Feature	Impact
Local share	Reduces the incentive by an equal proportion for all authorities compared to full retention
Tier split	Reduces the incentive by a different proportion for shire districts and unitary authorities depending also on whether they or their county provide the fire service
Levy	Reduces the incentive by a different proportion for authorities depending on the size of their business rates collection relative to their expenditure
Reset period	Reduces the incentive for all authorities in each year of the scheme depending on how long they have to retain any business rates gains from development
Tariffs, top-ups and safety net	Not included

Sort local authorities into behaviour groups according to the incentive they face

14. To provide a metric that relates to a more equal sacrifice of land across authorities we have based it on transferring an additional square metre per person to commercial use. The incentive for the median voter from an additional square metre per person of commercial land will then depend on the local authority's population but also on the rateable value of its commercial land and the median household's share of the council tax base. The model uses data on the rateable value of retail land in 2008 and the distribution of domestic property across council tax bands for each local authority.
15. 2008 Valuation Office Agency figures on rateable value per square metre for retail premise in each authority²⁰ are used to calculate a per square metre rates bill for each authority. The retail category is chosen as this provides the highest rateable values and thus the most powerful incentive. To get from rateable value per square metre to rates bill per square metre we multiply by the 2008/09 business rates multiplier²¹ and a plot ratio.
16. Plot ratios for employment use provide information on the ratio between gross floorspace and site area. Given the data from Figure II below, an overarching assumption of 0.4 is used.

²⁰ LA-specific 2008 data on RV per m², broken down by use type, comes from <http://www.neighbourhood.statistics.gov.uk/dissemination/>

²¹ The 2008/09 business rates multiplier is 0.462.

Figure II: Plot ratios for employment use (gross floorspace to site area)²²

Box D.7: Plot Ratios for Employment Use (Gross Floorspace to Site Area)		
	Roger Tym, 1997	Other Studies
Business Park	0.25 to 0.30	0.25 to 0.40
Industrial	0.42	0.35 to 0.45
Warehouse	–	0.40 to 0.60
Town Centre Office	0.41	0.75 to 2.00

Source: Roger Tym & Partners, 1997 and ERM Review

17. Having arrived at a business rates per square metre for each local authority the parameters of the business rates retention scheme are then used to determine how much per square metre would be retained by each authority. For each authority the local share is multiplied by the tier split share and by the levy rate to give the pence in the pound of additional business rates that is retained. This is then multiplied by the per square metre rates bill to arrive at retained business rates per square metre for each authority.
18. As noted above the standard economic model of local government reaction to incentives suggests that what matters here is the share of the financial gain from a per person sacrifice of land that can be imputed to the median voter. Hence the per square metre business rates bill for each authority is first multiplied by the median household's share of the council tax base. Data on the number of properties in each council tax by local authority in 2011²³ is used to determine the band of the property of the median household. This, when converted to a band D equivalent, can be divided by the number of band D equivalents in the local authority to produce the median household's share of the tax base.
19. For shire districts there is an incentive to the median household from the additional revenue gained by both the district and its county when an additional square metre of commercial land is approved. Clearly the median household of a district will represent an even smaller share of the county council tax base than it does of its district's council tax base. The benefit from the county is also lower due to its smaller tier split. Nevertheless where applicable the tax revenue gain imputed to the median household of a district from its county is added to that of the planning authority. The total median household's imputed revenue gain from the business rates bill from an additional square metre of commercial land is then multiplied by the planning authority's population to give the result for a square metre per person.
20. The last step of calculating the incentive recognises that the additional business rates from allowing new commercial land will not be kept by the authority forever. The additional annual revenue from expanding commercial land in an authority will be kept only until the next reset. At that point an authority's net income from business rates can be expected to be equalised with its estimated spending need and thus not affected by the size of its business rates tax base. Hence there is a different incentive in each year of the scheme, depending on how many more years there are until the next reset. The stream of increased annual business rates revenue is as long as the number of years till the next reset and by taking the present value of this stream in

²² ODPM, (2004), *Employment Land Reviews: Guidance Note*

²³ DCLG, "Local Authority Council Taxbase 2011 England", available at: <http://www.communities.gov.uk/publications/corporate/statistics/counciltaxbase2011>

each year we can see how the incentive declines with time. The discount rate used is the Green Book²⁴ discount rate of 3.5 per cent

21. Putting the above factors together gives rise to an incentive measure for each authority in each year that is the present value of the median household share of business rates retained from permitting an additional square metre per person of commercial land.
22. We decided to use the incentive measure given by the above process to rank local authorities and then split the ranking into several groups. Each group would then represent authorities within a certain range of incentive and would be assigned a particular behavioural reaction. Clearly the precise parameters for forming the groups as well as the reaction assigned to each group has a large impact on the overall results of the simulation model.
23. The key piece of evidence that could guide this process was the work done by Centre for Cities on the impact of business rates retention²⁵. Centre for Cities carried out some regression analysis that suggests that the national annualised growth rate of business floorspace could increase by a maximum of one percentage point as a result of introducing a business rates retention scheme.
24. Given that the Centre for Cities found an overall increase in annual commercial floorspace growth of one percentage point the model groups local authorities into six behaviour groups relating to
 - a. *No incentive*: Group 0 – relevant authorities are assumed to grow in line with trend floorspace growth, as per the counterfactual (i.e. it is assumed that they realise no additional floorspace growth as a result of the rates retention scheme). For the simulations the baseline annual growth of commercial floorspace is assumed to be one per cent.
 - b. *Very small incentive*: Behaviour A – 0.3 percentage points additional floorspace growth
 - c. *Small incentive*: Behaviour B – 0.5 percentage points additional floorspace growth
 - d. *Moderate incentive*: Behaviour C – 0.8 percentage points additional floorspace growth
 - e. *Large incentive*: Behaviour D – 1.0 percentage point additional floorspace growth
 - f. *Very large incentive*: Behaviour E – 1.3 percentage points additional floorspace growth
25. However, the precise parameters for forming the groups are of equal importance to the behavioural reaction assumed for each group. The model uses the Centre for Cities result to benchmark the boundaries between groups under the assumption that the one percentage point change for England would occur if there was
 - a. no central share, i.e. a local share of 100 per cent;
 - b. no levy;

²⁴ http://www.hm-treasury.gov.uk/data_greenbook_index.htm

²⁵ Larkin, Wilcox and Gailey, (2011), *Room for Improvement: Creating the Financial Incentives Needed for Economic Growth*

- c. no reset, so that additional business rates were kept forever;
 - d. tier splits in line with pre-1990 tier shares of business rates revenue.
26. The model also takes into account the standard shape of a supply response to an incentive that suggests that to repeatedly achieve a further increment in quantity supplied generally requires a geometrically increasing incentive. Two extreme options were thus considered for setting the group boundaries, either the group boundaries would double as you moved up the groups or they would increase linearly, with the central scenario being in the middle of these two extremes. Given the assumption about the behavioural reaction for each group in paragraph 24 and an assumption about the shape of the supply response, for example linear, we could then arrive at a unique set of group boundaries that would benchmark to the overall one percentage point increase in the annual growth rate of commercial floorspace for England. The final benchmarking was done also taking into account the modelling of the local demand constraint described below.
27. As described above, the incentive measure (i) used for the modelling is the present value of the median household share of business rates retained from permitting an additional square metre per person of commercial land. The result of the benchmarking for the two extreme scenarios is described in Annex A. For the central incentive scenario billing authorities are grouped according to the size of the incentive measure, as follows:
- a) $i < £85$: no incentive.
 - b) $£85 \leq i < £170$: very small incentive.
 - c) $£170 \leq i < £285$: small incentive.
 - d) $£285 \leq i < £460$: moderate incentive
 - e) $£460 \leq i < £755$: large incentive
 - f) $i \geq £755$: very large incentive.
28. These boundaries for the behaviour groupings combined with the commercial floorspace growth reaction assumed for each group would give rise to a one percentage point increase in the annual commercial floorspace growth rate for England, given a business rates retention scheme with no central share, no levies, no resets and tier splits according to pre-1990 share of business rates. How much lower the actual projection of the growth rate of commercial floorspace growth rate for England will be then depends on the operation of the actual scheme's local share, levies, tier splits and reset period on the rest of the model.
29. However, there is more than one way these groups could be set and still benchmark to the one percentage point change in commercial floorspace growth. The boundaries for the behaviour groups above are based on our own assumptions, rather than a fixed evidence base, therefore some sensitivity analysis is undertaken on these bandings in Annex A.
30. Also low, central and high scenarios have been formulated for floorspace growth, by adjusting the assumed floorspace growth percentages for the different behaviour categories. The assumptions made are shown in Table 2 below.

Table 2: Assumed increase in floorspace growth per annum for the different behaviour categories and growth scenarios

	Scenario		
	Low	Central	High
Behaviour A	0.1%	0.3%	0.4%
Behaviour B	0.2%	0.5%	0.6%
Behaviour C	0.3%	0.8%	0.9%
Behaviour D	0.4%	1.0%	1.2%
Behaviour E	0.5%	1.3%	1.5%

Take account of local demand constraints and the housing incentive

31. All of the above is based purely on the size of the supply side incentive that individual billing authorities face; it doesn't take account of local market circumstances and the role of demand-side factors in particular. Indeed, even if an individual billing authority has a large incentive to pursue business growth, there might be limits to how much growth the authority can realise if business demand in the area is low (authorities obviously have some levers at their disposal to increase the attractiveness of their area to businesses, but these are unlikely to be capable of overcoming fundamental demand constraints).
32. As such, the modelling is adjusted to take account of local market demand constraints, where local 2008 average rateable values are used as a crude proxy for demand. Although there are flaws in this approach – most notably, the fact that average rateable values depend in large part upon the quality of the stock in any given area, as opposed to simply demand, and the fact that future demand trends might not reflect past ones – it provides us with a reasonable indication of the effect that local market circumstances could have upon aggregate floorspace growth.
33. Authorities' demand constraints are modelled as follows:
- a. Authorities with an average rateable value in the bottom one sixth of authorities are assumed to have high demand constraints.
 - b. Authorities with an average rateable value above the bottom sixth but in the bottom third of authorities assumed to have moderate demand constraints.
 - c. Authorities with an average rateable value above the bottom third of authorities are assumed to have no demand constraints.
34. These assumptions then translate into changes in billing authorities' assigned floorspace growth behavioural groups along the following lines:
- a. All authorities with a high demand constraint are assumed to fall into the Behaviour 0 grouping.
 - b. All authorities with a moderate demand constraint are assumed to move down one behaviour grouping (e.g. those in the Behaviour E grouping shift to Behaviour D, etc.).
 - c. The behaviour groupings of authorities with no demand constraint are left unchanged.

35. The final changes to the assigned behavioural groupings arise because of the possible interaction of the effect of the business rates retention scheme on the incentive to permit more housing. While the interaction shouldn't be overstated – authorities are generally likely to want business growth to be accompanied by housing growth, and vice versa; and some sites will naturally lend themselves more to business than housing, or the converse, i.e. decisions between the two will often not be based on incentive levels – there is likely to be some relationship between the two incentives. Indeed, central government is tilting the tier split much more in favour of lower tier authorities than initially envisaged, in part so as to minimise distortions between housing and business growth decisions at the shire district level. The introduction of the business rates incentive changes the incentive to permit housing as, under the business rates retention scheme, council tax receipts from additional housing will not be equalised away through Formula Grant.
36. The modelling does not take account of any interaction between the New Homes Bonus and business rates retention. The New Homes Bonus may reduce the incentive to expand business floorspace but it is the model's assumption that this reduction is the same with or without the business rates retention scheme and thus has no effect on the impact of the scheme compared to the counterfactual. There is currently an insufficient evidence base to model a more complex interaction between these two policies.
37. As such, it seems fair to adjust the assumed impact of the business rates retention scheme downwards by some degree in billing authorities where the council tax incentive outweighs the business rates incentive to a large extent. This is done in the modelling by comparing the per square metre gain in revenue from commercial land with that for housing land. The calculation of the billing authority per square metre gain in revenue from additional commercial land is described in paragraphs 22-24 above. The billing authority per square metre gain from additional housing land is based firstly on data on "Year 1" New Homes Bonus net additions for each authority by council tax band²⁶. This data is used to construct a Band D equivalent number of net additions for each authority. This is multiplied by Band D council tax rates for each authority²⁷ and divided by the number of net additions to arrive at an additional council tax receipt per net additional housing unit. This is converted into additional council tax receipt per square metre for each authority by multiplying the payment per additional housing unit by the authority-specific 2007-2010 housing density figures.²⁸
38. For all billing authorities with no local demand constraint, and where the council tax per square metre is more than the retained business rates per square metre, it is assumed that they move down one behaviour grouping. This change is only made for authorities with no demand constraint, because it is assumed that local demand is likely to be the overriding factor in determining when additional business growth will be limited; in contrast, a large additional housing incentive in relation to an authority's business growth incentive is only assumed to have impacts at the margin.

²⁶ "Year 1" refers to the first year of the New Homes Bonus scheme, i.e. 2011/12. This uses October 2009 – October 2010 net additions data from the CTB form.

²⁷ Taken from DCLG Council Tax tables.

²⁸ Source: DCLG Live Table P232.

Compare business floorspace growth under rates retention and the counterfactual

39. Once billing authorities have been grouped, and appropriate adjustments have been made to those groupings, along the lines set out above, we are able to calculate, for each billing authority, the business floorspace growth that it would realise under the counterfactual (i.e. when there is no business rates retention scheme) and under the low, central and high scenarios when the rates retention scheme is implemented. When aggregated, this then provides us with a range of figures for additional national business floorspace as a result of the rates retention scheme being enacted. These figures are calculated over the period from 2013/14 until the first reset²⁹. With a 7 year reset period and a 50 per cent local share the simulations project that we could be in the region of seeing an additional 65 – 251 hectares (central scenario: 190 hectares) of business floorspace across England being created by the end of the period as a result of the rates retention incentive.

Translate floorspace figures into potential additional jobs

40. To give a very approximate idea of what this additional floorspace could mean in terms of potential economic impact, we then translate these figures into potential additional jobs and Gross Value Added (GVA) for the economy.³⁰
41. To get from floorspace to jobs, we use the Homes and Communities Agency's Employment Densities Guide³¹. This advises that we convert floorspace figures from gross internal to net internal area before making any job calculations³². As it advises using 15-20% as a general benchmark for conversion, we use a conversion rate of 17.5%, i.e. it is assumed that the net internal area of additional business floorspace is 82.5% of the gross internal area.
42. We then calculate a composite employment density figures for offices, retail, warehouses, and other bulk premises floorspace³³, on the basis of the Homes and Communities Agency employment density figures for each use type (which are expressed in terms of area in m² per Full Time Equivalent (FTE) job), and the proportion of 2008 floorspace accounted for by each³⁴. The composite employment density figure arrived at is 38.5 (i.e. each 38.5m² of additional net internal business floorspace is assumed to support one additional FTE job); the figures that support this are shown in Table 3 below:

²⁹ As the most recent LA-level floorspace data we have comes from 2008, trend growth in floorspace (i.e. 1% growth p.a.) is assumed across all authorities until the introduction of the scheme in 2013/14.

³⁰ GVA measures the contribution to the economy of individual producers, industries or sectors, and is used in the estimation of Gross Domestic Product (GDP) (GVA plus taxes on products minus subsidies on products equals GDP). It provides a monetary value for the goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production.

³¹ Homes and Communities Agency and OffPAT, (2010), *Employment Densities Guide: 2nd Edition*

³² Gross internal area is the area of a building measured to the internal face of the perimeter walls at each floor level, whereas net internal area is the *usable* area within a building measured to the internal face of the perimeter walls at each floor level, i.e. it doesn't include toilets, stairwells, etc.

³³ Only these type of floorspace are considered (and thus they sum to 100% of all 2008 business floorspace in Table II) because it was only these types that were included in the Centre for Cities analysis. Centre for Cities omitted industrial floorspace because the structural differences in level of industry between the two time periods they examined were sizeable, and they didn't disaggregate too far in terms of floorspace categories because it would have provided false accuracy.

³⁴ LA-specific 2008 floorspace data comes from <http://www.neighbourhood.statistics.gov.uk/dissemination/>

Table 3: How the composite employment density figure is calculated

	Use Type of Floorspace				Composite employment density figure
	Retail	Offices	Warehouses	Other bulk premises	
As % of 2008 floorspace (a)	27%	26%	41%	5%	
Homes and Communities Agency employment density, i.e. area per FTE in m ² (b)	20	12	70	20	
(a) x (b)	5.42	3.17	28.89	1.04	38.53

43. This therefore implicitly assumes that the balance of the different types of floorspace will persist over time under the new rates retention scheme. This is the best assumption that we can make in the absence of any robust evidence in support of a different approach.
44. The additional 65 – 251 hectares of gross internal business floorspace across England as a result of the rates retention incentive over the 2013/14-2019/20 period thus translates into an additional 53 – 207 hectares of net internal business floorspace (central scenario: 157 hectares), thus providing space for 14,000 - 54,000 jobs (central scenario: 41,000 jobs).

Translate jobs figures into potential additional GVA

45. Moving from a floorspace figure to a jobs figure is tentative. To some extent we might expect the increase in the supply of commercial floorspace to result in lower employment density. Furthermore, these figures assume current employment densities persist over time – which perhaps isn't realistic given changing working patterns. As such, using these tentative jobs figures to arrive at a very approximate range of Gross Value Added (GVA) figures is probably a safer approach. There is some evidence that restrictive planning policies have reduced productivity. This means that even if employment density falls the impact of increased commercial floorspace on GVA may be maintained or even rise.
46. To do this, we have obtained ONS data on aggregate GVA and total employment by region³⁵. Not all sectors will locate in the additional business floorspace that has been modelled in this paper³⁶, however, because we use averages and a range of scenarios, this approach is probably justifiable in providing us with an indication of the possible magnitude of impact of the rates retention scheme.
47. The ONS figures provide GVA at current prices, i.e. they measure the value of transactions in the prices relating to the period being measured. Our modelling is

³⁵ Region and Country Profiles, Key Statistics - February 2012; Annual Employment Statistics (BRES) 2009 - Table 3: Region, available on ONS website.

³⁶ For example, manufacturing and agricultural activity will not take place in the business floorspace looked at in this paper (i.e. retail, office, warehouses, and other bulk premises); however, as these types of employment tend to be associated with lower GVA per job than other employment types, this means that our GVA figures are likely to be an under-estimate rather than an over-estimate.

thus in 2009 prices, as we use 2009 GVA per job figures as our measure of labour productivity; however, we do undertake some sensitivity analysis to account for the fact that GVA per job fluctuates over time and by sector. A 50% decrease and increase are applied for the low and high estimates respectively.

48. The estimated GVA benefits from the rates retention scheme (i.e. the modelled number of potential additional jobs multiplied through by the GVA per job figures) are discounted over time at the Green Book-recommended rate of 3.5%, where the first year of the scheme is assumed to be 2013/14. This leads to a large range of potential increases in GVA from the proposed rates retention scheme, from £1.7bn - £19.9bn, as set out in Table 4 below. The central scenario is for a £10.1bn increase in GVA over the 2013/14-2019/20 period.

Table 4: Potential additional GVA from the proposed rates retention scheme, under a range of scenarios, with 50% local share and 7 year reset, 2013/14-2019/20 (£bn, discounted)

		Labour productivity scenario		
		Low	Central	High
Floorspace growth scenario	Low	1.7	3.5	5.2
	Central	5.0	10.1	15.1
	High	6.6	13.3	19.9

49. There are several caveats to the modelling methodology used. Most importantly, there is no clear evidence base for banding the incentive measure along the lines set out in paragraph 27. We have thus undertaken some sensitivity analysis around the bandings, which is provided in Annex A.

Other Considerations

50. It is important to note that the modelling results above don't take account of any additional industrial floorspace (and associated jobs) as a result of the rates retention scheme or of any additional housing growth (and associated jobs) as a result of the additional council tax incentive introduced by the scheme.
51. We have not undertaken any specific analysis around possible interactions between business rates retention and the Community Infrastructure Levy. The reasoning behind this is that, in its Community Infrastructure Levy charging schedule, an authority can set out different rates by area and/or use³⁷, i.e. central government does not set the parameters – and thus doesn't have such a strong influence over the size of incentive received – in the way that it does with business rates retention. Furthermore, authorities are free to spend Community Infrastructure Levy receipts where they feel they are needed so they can, for example, spend monies collected from housing development on infrastructure to support employment growth. In other words, there is more discretion for authorities in the use of the Community Infrastructure Levy than there is with either business rates retention or the New Homes Bonus.

³⁷ Although the only legal basis for varying the rate by area and/or use is that there are variations in the economic viability of development to justify the different rates.

52. We have also not undertaken any specific analysis around possible interactions between business rates retention and the National Planning Policy Framework. However, the two policies are likely to be mutually reinforcing, in so far as the National Planning Policy Framework makes planning processes simpler and more pro-growth, while business rates retention will provide a clear incentive for local authorities to embrace such growth.
53. This paper also currently doesn't take account of the impact of Tax Increment Financing or Enterprise Zones. There are again policies that might be expected to increase the economic benefit of local business rates retention.

Annex A: Sensitivity Analysis around the Bandings for the Incentive Measure

- As mentioned earlier, while the majority of the modelling is underpinned by a clear evidence base, we have no accurate way of informing where we should set the bandings for our behaviour groups. Our central assumptions, and the resulting additional GVA figures (shown in Table 7), are as follows:

Central incentive assumptions:

- $i < \text{£}85$: no incentive.
- $\text{£}85 \leq i < \text{£}170$: very small incentive.
- $\text{£}170 \leq i < \text{£}285$: small incentive.
- $\text{£}285 \leq i < \text{£}460$: moderate incentive
- $\text{£}460 \leq i < \text{£}755$: large incentive
- $i \geq \text{£}755$: very large incentive.

(where the incentive measure (i) used for the modelling is the present value of the median household share of business rates retained from permitting an additional metre squared per person of commercial land).

Table 7: Potential additional GVA from the proposed rates retention scheme, with varying labour productivity and floorspace growth scenarios, under 7 year reset period, 50% local share and central incentive assumptions (£bn, discounted)

		Labour productivity scenario		
		Low	Central	High
Floorspace growth scenario	Low	1.7	3.5	5.2
	Central	5.0	10.1	15.1
	High	6.6	13.3	19.9

- Clearly, however, changes to the bandings will significantly affect our overall modelling results. As such, we have undertaken some sensitivity analysis around these bandings. All banding variants used are benchmarked to the empirical result that the 1990 centralisation of business rates resulted in a one percentage point reduction in the growth rate of commercial floorspace.
- As a low incentive case we consider a pattern of bandings that is linear. This is a lower bound as normal supply response implies that the bounds increase geometrically. Linear bands reduces the level of incentive, as larger numbers of authorities fall into lower behaviour groups. The bandings used are shown below, as are the resulting additional GVA figures (in Table 8) :

Lower incentive assumptions:

- $i < \text{£}110$: no incentive.
- $\text{£}110 \leq i < \text{£}220$: very small incentive.
- $\text{£}220 \leq i < \text{£}330$: small incentive.
- $\text{£}330 \leq i < \text{£}440$: moderate incentive
- $\text{£}440 \leq i < \text{£}550$: large incentive
- $i \geq \text{£}550$: very large incentive.

Table 8: Potential additional GVA from the proposed rates retention scheme, with varying labour productivity and floorspace growth scenarios, under 7 year reset period, 50% local share and *lower* incentive assumptions (£bn, discounted)

		Labour productivity scenario		
		Low	Central	High
Floorspace growth scenario	Low	1.1	2.1	3.2
	Central	3.2	6.4	9.6
	High	4.3	8.5	12.8

4. A higher incentive assumption is formed by assuming fairly rapidly diminishing response to increases in the size of the incentive, resulting in doubling of the band sizes. This increases the level of incentive, as larger numbers of authorities fall into higher behaviour groups. The bandings used are shown below, as are the resulting additional GVA figures (in Table 9) :

Higher incentive assumptions:

- a) $i < £60$: no incentive.
- b) $£60 \leq i < £120$: very small incentive.
- c) $£120 \leq i < £240$: small incentive.
- d) $£240 \leq i < £480$: moderate incentive
- e) $£480 \leq i < £960$: large incentive

Table 9: Potential additional GVA from the proposed rates retention scheme, with varying labour productivity and floorspace growth scenarios, under 7 year reset period, 50% local share and *higher* incentive assumptions (£bn, discounted)

		Labour productivity scenario		
		Low	Central	High
Floorspace growth scenario	Low	2.9	5.9	8.8
	Central	8.0	16.0	23.9
	High	10.1	20.2	30.2

5. A comparative table of the three incentive bandings scenarios is provided in Table 10 below (for the central floorspace growth scenario only).

Table 10: Potential additional GVA from the proposed rates retention scheme, with varying labour productivity and floorspace growth scenarios, under 7 year reset period, 50% local share and *higher* incentive assumptions (£bn, discounted)

		Labour productivity scenario		
		Low	Central	High
Incentive assumption	Low	3.2	6.4	9.6
	Central	5.0	10.1	15.1
	High	8.0	16.0	23.9

6. The tables show that just by varying assumptions the model simulates an increase in GVA across a 7 year reset period of between £1.1 bn and £30.2 bn, with a central projection of £10.1 bn.