Benefits in Kind Statistics

Review of Methodology and Format

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1 Introduction

1.1 As part of the preparation of the first new tables to be published for 2 years, we conducted a review of the methodology and formatting used to produce the taxable Benefits in Kind tables.

1.2 The main driver for the review was a growing desire to replace a cumbersome and over-complex model with a simpler and more transparent methodology, particularly with regard to grossing-up from a sample (Section 2).

1.3 While rebuilding the model we reviewed all aspects of the methodology. This led to the identification of one important issue regarding taxable expenses. After analysing the issue we came to the decision that we should cease to include several types of expenses in our standard tables (Section 3).

1.4 As well as these major changes we made some other less significant changes relating to the treatment of cases where reported pay is less than £8,500 (included in Section 2) and to the methodology for assigning company car recipients and benefit values to particular CO_2 emission ranges in table 4.4 (Section 4).

1.5 We also reviewed the formatting of our tables and decided to update income bands and CO_2 emission ranges (Section 5).

1.6 Prior to the review a consultation of users was undertaken and a UK statistics assessment was carried out, and views and recommendations from these exercises were taken into account where applicable.

1.7 This document explains the nature of these changes, why they were carried out and their impact on our tables.

2 Underlying methodology for grossing-up

Introduction to data

2.1 In order to discuss the change to methodology it is first necessary to explain the base data used. There are two main datasets which we can refer to as “the full data” and “the sample”.

2.2 “The full data” are the database of expenses and benefits reported on P11Ds for a particular tax year and captured electronically. These data include full details of the benefits and expenses reported but no other information on the income of the recipient. The full data for a year typically consist of some 4 million records.

2.3 “The sample” is the result of merging the full data with the Survey of Personal Incomes which is a sample of UK taxpayers for a tax year and which contains full details of income. “The sample” consists only of individuals who were in both source datasets, and typically numbers between 80,000 and 100,000 records.

Reasons for change

2.4 We had two main reasons for wanting to change our model and methodology.

2.5 Firstly, the model used was largely written a long time ago, and much of the code generating outputs was out of the direct control of analysts. Results were difficult to check and reconcile with input data, and code was difficult to update.

2.6 Secondly, we were concerned that the complex grossing-up methodology used was delivering questionable improvements in accuracy for those elements which needed to be calculated from the sample (elements dependent on income) while failing to make use of the full data for elements which did not depend on the sample. In addition it was adding to the transparency problems inherent in the model.

2.7 The complex grossing-up methodology referred to involved adjusting standard grossing factors according to the combination of benefits and expenses the individual received in such a way that both the total taxable value and total number of cases for an individual benefit or expense type matched. There are a lot of different types and grossing-up factors could not be calculated for every single combination. (For example, when a combination existed in the full data but not in the sample). Further difficulties led to an approach in which differing grossing-up factors were derived for different deciles of assessable value for each benefit type.

P11D forms received for employees earning less than £8,500 a year

2.8 It is not obvious that this extremely complex approach is genuinely worthwhile. Apart from in one aspect (the ability to set taxable benefits to zero for the small proportion of individuals with total earnings of less than £8,500 a year) the sample is not needed to produce totals for number of recipients and total taxable value. The sample is needed to estimate average tax and NIC liability. It is also needed to produce the split of number of recipients and total taxable value by total income, reported in tables 4.2 and 4.3.

2.9 The £8,500 issue relates to a rule whereby most benefits in kind are not taxable in employments where the employee earns at a rate of less than £8,500 a year. For comparison with the £8,500 figure, earnings include the value of any benefits in kind.

2.10 Technically no such cases should appear in our data as the benefits in kind would not need to be reported if they were not taxable.

2.11 In our previous methodology we assumed any such cases in the data had been incorrectly reported and discarded them.

2.12 However we know that some of the cases will have been correctly reported and should not be discarded. Because the earnings test relates to the rate of earnings, there will be incidences of employments which lasted part of a year in which total earnings were lower than £8,500 but a tax liability on the benefit exists.

2.13 Even in the sample we do not have sufficient information to judge accurately whether the benefits for those with earnings below £8,500 were taxable or not.

2.14 From the 2007/08 P11D data which was merged with the Survey of Personal Incomes, about 4.5% had earnings under £8,500, where their earnings included the value of any benefits in kind.

2.15 Of these individuals with earnings under £8,500, almost half of them were in receipt of private medical and dental benefits. This compares with about 70% from those earning above £8,500.

2.16 Individuals earning under £8,500 tended to be more likely to receive particular types of benefits. These included provided living accommodation and services provided. They were less likely to receive car or car fuel benefit.

2.17 Of these individuals earning under £8,500, a sample was interrogated on a case-by-case basis. Some appeared to be genuine taxable benefits where the pay related to only a portion of the year whereas others appeared to have been filled in incorrectly.

2.18 A decision was taken to treat all benefits reported by these individuals as genuine taxable benefits since it was difficult to distinguish genuine taxable benefits from incorrect returns. This also meant that the average benefit values reported in our tables were not distorted, as it would not have been possible to remove any individuals earning under £8,500 for any but the merged cases with the SPI.

Overview of new methodology

2.19 These considerations encouraged us to develop a new model and methodology in which the full data are used to calculate elements which do not depend on income such as total number of recipients and total taxable values.

2.20 The sample data are used to calculate the following elements:

- Average tax rates and average NIC rates for each benefit/expense type to apply to total taxable values in tables 4.1 and 4.5 ;
- Average tax rates and average NIC rates for each CO_2 emission range to apply to total taxable values in table 4.4 ;
- The percentage income breakdowns of total taxable values which are used to generate the values for each income range row in tables 4.2 and 4.3.

2.21 Full details of the new methodology are given in the statistical release accompanying the publication.

Impact of change

Differences between Table 4.1 under the new methodology, ordered by taxable value of the benefit.

Category	Taxable Value	Recipients	Taxable value	Tax liability	NIC liability
	Amount (£ millions)	Number (thousands)	Amount (£ millions)	Amount (£ millions)	Amount (£ millions)
Car	3950	-5%	-3%	0%	-4%
Car fuel	1510	0%	0%	1%	-2%
Private medical and dental	870	-4%	-3%	-2%	-4%
Beneficial loans	210	0%	0%	2%	-1%
Mileage allowance	200	0%	0%	**7%**	-2%
Van	200	0%	3%	**6%**	-1%
Services provided	190	0%	0%	1%	1%
Transferred assets	170	0%	0%	**6%**	-4%
Provided accommodation	120	-2%	0%	-1%	0%
Payments on behalf of employee	50	1%	0%	-5%	2%
Other benefits (Class 1)	40	-1%	1%	0%	**-7%**
Other benefits (Class 1A)[1]	30	-1%	-2%	0%	**-12%**

1 Bold figures represent a percentage change of greater than 5%.

2.22 The number of recipients reported are similar for each benefit under the new methodology compared to the previous methodology. At most there is around a 5% reduction for car benefit and private medical and dental.

2.23 The taxable value reported is similar for each benefit under the new methodology compared to the old methodology.

2.24 There are some differences in the tax liability calculated. The tax liability for mileage allowance is about 7% higher under the new methodology and about 6% higher for van benefit and transferred assets.

2.25 The NIC liability reported is similar for most benefits. Where there are larger discrepancies, it is because the benefits reported are much smaller in value, so the percentage changes are much more sensitive.

3 Treatment of expense payments

Background

3.1 Employers are generally required to report all expense payments to employees on P11Ds, unless HMRC has granted a dispensation. Dispensations are extremely common and are granted when HMRC is satisfied that a certain type of expense payment provided by a particular employer will be non-taxable. Typically this will happen when employers show they are not exceeding tax-free limits or are simply reimbursing allowable actual expenses.

3.2 Employers who do not have a dispensation however are required to report all expense payments, including those which may not be taxable. In such cases, to prevent the employee being over-taxed on a non-taxable expense, claims for relief from the tax due on the expense payment must be submitted to HMRC.

3.3 Previous National Statistics publications allowed for these relief claims, but only if they were submitted by employers together with the P11D forms. They did not allow for cases where the relief was claimed directly by the employee at a later stage, for example through a self-assessment return. All such cases were treated as being fully taxable.

3.4 This issue affects the following types of expenses:

Expense type	Amount reported 2007/08 (£m)
General expenses	180
Travelling and subsistence	550
Entertainment	120
Home telephone	30
Subscriptions	50
Vouchers/credit cards	140
Other expenses (apart from relocation expenses)	20

3.5 It does not affect the following types of expenses, where non-taxable expenses are never required to be reported:

- Mileage allowances
- The non-qualifying relocation expenses element of "Other expenses"

Analysis

3.6 It is not possible to establish a reliable central estimate of the extent to which the affected expense payments are subsequently relieved. Relief claims frequently reflect not only expenses reimbursed by the employer but also allowable expenses incurred which were not reimbursed, and this makes reconciliation difficult. However we undertook an examination on a case by case basis of a sample of reported P11D expenses from 2007-08 which were linked to other data on relief claims.

3.7 This suggested the following estimated range for the proportion of reported expenses which were subsequently relieved and therefore not taxable:

- General expenses : 57%-79%
- Travelling and subsistence : 74%-86%
- Entertainment : 66%-91%
- Subscriptions : 16%-70%
- Vouchers/credit cards : 63%-78%

Summary and handling

3.8 It is clear that previous published tables have been misleading in the figures reported for taxable expenses. The figures published represent an upper bound for true taxable expenses, rather than a central estimate.

3.9 Since it is not practical to establish reliable central estimates for the expense types affected, we have decided to remove them from future tables. A footnote to tables 4.1 and 4.5 will note that the expense types are excluded and our regular release documentation will explain the issue and provide similar background information to that set out above.

3.10 There are two expense payment types which will be retained. The first is Mileage Allowance which has its own category in our tables and represents the taxable element of mileage allowances paid to employees for business travel. The second is non-qualifying relocation expenses paid to the employee which has been included under "Other expenses" in our tables in the past. Since amounts of non-qualifying relocation expenses are small, at about £5m of taxable benefit in 2007/08, and all other elements of Other Expenses are being removed, we will reallocate them to "Other benefits Class1"; this seems appropriate as this category already includes the related qualifying relocation expenses.

3.11 For the former 2007-08 table 4.1 the impact is firstly to reduce the number of categories from 19 to 13 and secondly to impact the total line as follows:

Total recipients reduced from 4.11 million to 3.89 million.

Total taxable value reduced from £8.78 billion to £7.55 billion.

Total tax liability reduced from £2.77 billion to £2.46 billion.

Total NIC liability reduced from £1.16 billion to £0.98 billion.

3.12 For the former 2007-08 table 4.2, the impact to the total line is as follows:

Total recipients for directors reduced from 460,000 to 410,000.

Total taxable value for directors reduced from £2.4 billion to £1.81 billion.

Average benefit value for directors reduced from £5,220 to £4,400.

Total recipients for employees reduced from 3.65 billion to 3.42 billion.

Total taxable value for employees reduced from £6.39 billion to £5.74 billion.

Average benefit value for employees reduced from £1,750 to £1,680.

3.13 For the former 2007-08 table 4.3, the impact to the total line is as follows:

Total recipients receiving car benefits reduced from 1.12 million to 1.07 million.

Total taxable value for car benefits reduced from £4.06 billion to £3.95 billion.

Total recipients receiving car fuel benefits reduced from 340,000 to 330,000.

Total taxable value for car fuel benefits reduced from £0.9 billion to £0.87 billion.

Total recipients receiving private medical and dental benefits reduced slightly from 2.29 million to 2.28 million.

Total taxable value for private medical and dental remained the same at £1.51 billion.

3.14 For the former 2007-08 table 4.4, in addition to the changes in total recipients and taxable value for car benefits, reported in table 4.3, the impact to the total tax and national insurance liability is as follows:

Total tax liability for car benefit is unchanged.

Total National Insurance liability has reduced from £520 million to £510million.

4 Assignment of cases to carbon emission bands

4.1 Table 4.4 shows a breakdown of company cars by range of carbon emission levels.

4.2 A change was made to the method used to assign an individual and his or her car benefit to a particular emission range when the individual had more than one car during the year.

4.3 The old methodology was to assign the whole of a case to the emission range of the car with the highest taxable benefit during the year. So if an individual had a 200g/km vehicle for half a year with a benefit value of £4,000 and a 160g/km vehicle for half a year with a benefit value of £3,500, the case would be entered against the range containing 200g/km as one recipient with a benefit value of £7,500.

4.4 In the new methodology we assign the car benefits accurately for each car, and assign the unit value for the recipients column in proportion to the periods of possession for the different cars. So in the previously quoted example, the range containing 200g/km would include half a recipient and a benefit value of £4,000 and the range containing 160g/km would include half a recipient and a benefit value of £3,500.

4.5 This methodology was applied accurately for those with up to three cars during the year; for the very small number of cases with more than three cars, some approximation was used.

4.6 The new methodology reflects more accurately the distribution of company cars by carbon emission level during the year.

4.7 The impact of the change on the reported distribution was very minor. The only change of note was that there was an increase in the proportion of recipients and benefit value assigned to the highest emission range. For example the rounded estimate of the number of recipients for the highest range increased from 20,000 to 30,000; it should be noted however that the increase in the unrounded figures was less than 3,000.

4.8 We had expected a minor shift in the other direction; this result reflects a small number of cases where a higher emission car contributed less to the annual total of car benefit value than a lower emission car.

5 Changes to table formats

5.1 Some changes were made to the bands used to break down totals by income range and CO_2 emissions.

5.2 The income bands reported in tables 4.2 and 4.3 have been changed as shown in the following table. The figures shown are the lower bounds of the range, so 0 represents £0-£8,500.

Income Ranges
for Tables 4.2 and 4.3

Lower bounds for old ranges £	Lower bounds for new ranges £
0	0
8,500	8,500
10,000	15,000
12,500	20,000
15,000	30,000
20,000	40,000
25,000	50,000
30,000	75,000
35,000	100,000
40,000	150,000
45,000	200,000
50,000	
60,000	
70,000	
80,000	

5.3 The change was made to reflect better the current income distribution of individuals receiving benefits in kind. Previous income bands were quite small and stopped at £80,000. About 30% of directors and 10% of employees had incomes greater than £80,000, so we felt it would be helpful for users to know more about these high earners. Therefore we increased the top income band to £200,000 or more.

5.4 The CO_2 emissions reported in table 4.4 have been updated to:

New CO_2 emission band ranges
Less than 115 g/km
115 - 124
125 - 134
135 - 144
145 - 154
155 - 164
165 - 174
175 - 184
185 - 194
195 - 204
205 - 214
215 - 224
225 - 234
235 - 244
245 g/km and over

5.5 Previously the lowest range represented emission values up to 145g/km. We have split this range into 4 new ranges. This is to reflect individuals receiving company cars using lower emitting cars.

5.6 Previously, the CO_2 emissions were reported as the rounded down figure to the nearest 5g/km. For example “145 and 150” represented the range 145-154 g/km. This can cause confusion so the ranges have now been more clearly specified to aid the user in identifying the relevant row of interest in the table.

5.7 The units have now been more clearly specified under each column of the table. The number of recipients are reported in thousands, the taxable value of the benefit is reported in millions of pounds and the average value of the benefit is reported in pounds. This is to aid users in interpreting the table.