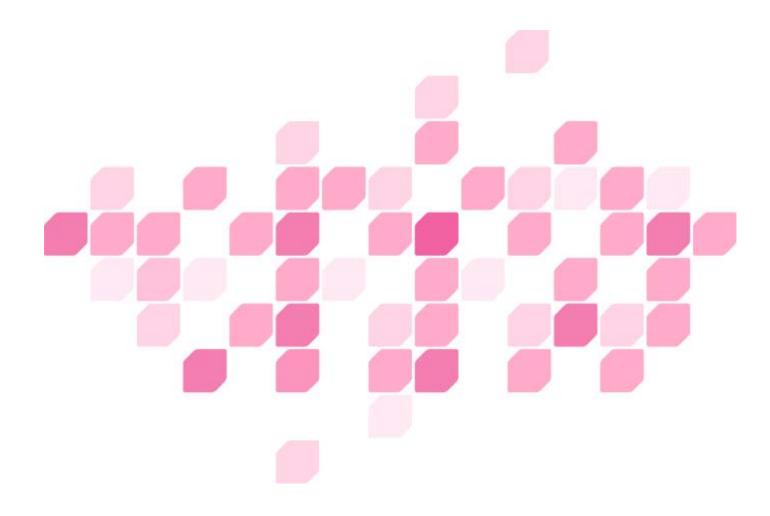


**English Business Survey:** 

User Guide for reading the tables

February 2012



### Introduction

The purpose of this document is to help people interpret the results of the new English Business Survey. It will introduce broad concepts which are important in order to understand the monthly Statistical Releases and accompanying set of data tables. Where possible these concepts are illustrated with screenshots of data tables from the *English Business Survey – December 2011*.

As the survey is still in its infancy, the results have been designated as Experimental Official Statistics. This means they may be subject to revision if improvements in methodology are identified. All revisions will be pre-announced. Results should be interpreted with this in mind.

More detailed information about the survey and its results is presented separately. Information on how the questionnaire was designed is available in the *English Business Survey: Report on Questionnaire Development*. A separate document, the *English Business Survey: Technical Annex*, provides in-depth information on the methodology used for the survey, how the results were compiled and other statistical concepts related to the survey.

Both these documents, together with the Statistical Releases, accompanying tables and the *English Business Survey: Questionnaire*, are accessible at <a href="http://www.bis.gov.uk/analysis/statistics/sub-national-statistics/ebsurvey">http://www.bis.gov.uk/analysis/statistics/sub-national-statistics/ebsurvey</a>.

This is the first version of this document. If you have any feedback on its content, clarity and readability please email <a href="mailto:ebsurvey@bis.gsi.gov.uk">ebsurvey@bis.gsi.gov.uk</a>. Any suggestions will inform the next version of the document.

### What is the EBS? Who is it for?

The English Business Survey, or EBS, is a new survey commissioned by the Department for Business, Innovation and Skills (BIS) in 2011. It provides a monthly assessment of business perceptions of current, past and expected future economic conditions in each English region.

A detailed understanding of businesses' perceptions and plans across England will inform the Government's economic growth and rebalancing agendas. The EBS will contribute toward this understanding. It will be valuable to the Government, policy makers and local partners in helping to guide policy and support private sector growth in all parts of England. The outputs of the survey may also provide valuable intelligence about the local economic and business conditions to businesses.

## Why is the EBS useful?

The survey has a number of advantages:

• It is a workplace-based survey, which means that results below the national level should represent what is happening in local areas.





A business can be a single workplace, or it can belong to a larger enterprise. Many businesses only consist of a single workplace. The main purpose of the EBS is to provide regional information. For this reason, business conditions at local workplaces are very important and therefore the interviews were conducted with, or with reference to, specific workplaces. The region, employment size and industry sector all relate to that of the workplace and not the enterprise. A workplace can be a factory, a shop or an office.

- The workplaces interviewed are sampled from the most comprehensive list of registered businesses in England, the Inter-Departmental Business Register, or IDBR, which covers all industry sectors.
- Data collected at the workplace level are weighted to represent total employment in England.



EBS results give a snapshot of economic conditions. For this reason, it makes sense to give workplaces which contribute more to the economy a larger weight in the results. This would ideally be done using turnover or Gross Value Added but this information is not available at the workplace level. Instead results are weighted to reflect the distribution of employment. Responses from larger workplaces, in terms of employment, will be given more weight when combining results to obtain a total figure; this is a way of measuring a workplace's contribution to the economy. Results therefore should not be interpreted as 'x% of workplaces said ...' but rather 'workplaces representing x% of employment said ...'.

More information on weighting can be found in section 6 of the *Technical Annex*.

- Some 3,000 workplaces are interviewed each month. This sample is large enough to provide results at a regional level<sup>1</sup>.
- Results are generally published within two months of the period to which they refer.
   This timeliness is of a critical importance to policymakers in providing a prompt response to issues as they arise in the current macroeconomic climate.

#### The survey also has some **limitations**:

- The nature of the data collection being at workplace level mean that inferences about the enterprise-level business population are more limited.
- The workplaces sampled come from the IDBR, which does not cover unregistered businesses, so it excludes the very smallest non-employing businesses that are not registered for VAT or PAYE. This is potentially important as such businesses make

<sup>&</sup>lt;sup>1</sup> The monthly sample does not allow results below the regional level to be produced, however, three months worth of data will be combined to give a sample of 9,000 and then the possibility of producing sub-regional results will be assessed.



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- up such a significant proportion of the overall business population (55% of businesses<sup>2</sup>) although they account for a smaller share of employment.
- The survey is in its infancy, so it is too early to fully understand any time series that
  may result. Therefore it is sensible to treat each new month of results as a snapshot
  in time and not try to draw comparisons over time.

## **Key points**

To correctly interpret the tables of statistics, there are five points to keep in mind:

- 1. The *December 2011 English Business Survey* or *December 2011 Release* is the survey of how workplaces in England perceived the economic situation to be in December 2011.
- 2. The EBS is a <u>workplace</u> survey so characteristics (e.g. region, employment size and industry sector) relate to the workplace rather than the enterprise (see Note #1).
- 3. Employment is used as a way of measuring a workplace's contribution to the economy (see Notes #2 and #4 for more details).
- 4. The balance shown in some of the tables indicates whether workplaces thought certain factors were 'Higher', 'The same' or 'Lower', but responses to these basic questions do not take into account the size of any changes. The difference in size between two higher percentages simply means that a higher percentage of workplace employment has reported higher growth (see the 'Balance' sub-section in the 'How can I use the results?' section for more details).
- 5. <u>Month-on-month comparisons</u> of the results are <u>not meaningful</u> at this early stage of the survey's existence (see the 'Comparing EBS results' section for more details).

## Which periods are covered?

The monthly data tables that accompany the *December 2011 Release* relate to 15 key questions which cover business and economic conditions such as output, employment, wage costs and output prices. The survey also covers capital investment and capacity constraints.

For more details on the questions workplaces were asked, please refer to the *English Business Survey:* Questionnaire, accessible at: <a href="http://www.bis.gov.uk/analysis/statistics/sub-national-statistics/ebsurvey">http://www.bis.gov.uk/analysis/statistics/sub-national-statistics/ebsurvey</a>.

EBS Releases are labelled by the period which workplaces are asked about (the main reference month). (This was key point 1.) For most questions, workplaces are asked to compare the reference month with the situation three months ago and expectations for three months in the future. For example, for the December 2011 EBS most backward-looking questions compare December 2011 with September 2011 and most forward-looking questions compare March 2012 with December 2011. However, care should be taken as the

<sup>&</sup>lt;sup>2</sup> Source: BIS National Statistics publication Business Population Estimates for the UK and Regions 2011.



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reference month for questions on capital investment, capacity constraints and annual output differs slightly. Periods being compared are clearly labelled on the monthly data tables. In addition, an overview of the periods covered is provided in the table below.

	For all questions in particular for Workforce and Capital Use questions	For most (but not all) questions	For most (but not all) questions	For the Annual Output only question	For Capital Investment only questions	For Capital Investment only questions
When workplaces were surveyed or Fieldwork month	When workplaces were asked to report their base performance in the Reference month	When workplaces were asked to compare to their past performance in the Backward comparison month	When workplaces were asked what they expected for their future performance in the Forward comparison month	When workplaces were asked to compare to their past annual performance in the Annual backward comparison month	When workplaces were asked whether they had invested in the Backward investment period month	When workplaces were asked whether they planned to invest in the Forward investment period month
Nov-11			Jan-12		0	
Dec-11			Feb-12			Dec 11-Feb 12
Jan-12		1				Jan 12-Mar 12
Feb-12						Feb 12-Apr 12
Mar-12		_	May-12			
Apr-12			Jun-12			
May-12						
Jun-12 Jul-12					Mar 12-May 12 Apr 12-June 12	
Aug-12					•	
Sep-12					Jun 12-Aug 12	Sept 12-Nov 12
Oct-12		,	_		Jul 12-Aug 12 Jul 12-Sept 12	Oct 12-Nov 12
Nov-12						
Dec-12					Sept 12-Nov 12	
Jan-13					•	
Feb-13						

### How can I use the results?

The data tables published are produced monthly and can be accessed at: <a href="http://www.bis.gov.uk/analysis/statistics/sub-national-statistics/ebsurvey">http://www.bis.gov.uk/analysis/statistics/sub-national-statistics/ebsurvey</a>.

Overall there are two categories of tables - those showing how workplaces perceive the current situation of their business compared with three months before and those showing how workplaces expect the current situation of their business will compare in three months' time.

#### **Navigation**

Data tables have been produced using Microsoft Excel and are therefore easily accessible. The workbook presents a number of worksheets which can be navigated in three different ways.

The first worksheet is the table of contents (or TOC) page and, from there, clicking on the table title will automatically lead to the corresponding table. Secondly, you may use the keyboard shortcuts **Ctrl+Page Up** and **Ctrl+Page Down** to navigate from one tab to the next. Finally, you can click on the relevant numbered tab at the bottom of the screen.



	Α	В	C -			
1						
100	Tah	la o	f Contents			
2	Iab	ie o	Contents			
3						
4		T1	QOUTPUT Level of business activity or volume of output in Dec-11 compared with Sep-11			
5		T2	QFUTOUT Expectation of level of business activity or volume of output in Mar-12 compared with Dec-11			
6		T3	QOUTYR Volume of business activity or output in Dec-11 compared with Dec-10			
7		T4	QSTOCK Volumes of stocks or inventories in Dec-11 compared with Sep-11			
8		T5	QFTSTOCK Expected volume of stocks or inventories in Mar-12 compared with Dec-11			
9		T6	QPPL Number in employment in Dec-11 compared with Sep-11			
10		T7	QFTPPL Expected number in employment in Mar-12 compared with Dec-11			
11		T8	QCPT Whether workforce were underutilised, used at a satisfactory level or overstretched in Dec-11			
12		T9	QINVEST Whether made any new capital investment in the period Oct 11-Dec 11			
13		T10	QFTINVEST Whether expect to make any new capital investment in the period Jan 12-Mar 12			
14		T11	QCPTB Whether capital was underutilised, used at a satisfactory level or overstretched in Dec-11			
15		T12	QPRCBKA Wage and other labour costs in Dec-11 compared with Sep-11			
16		T13	QPRCFT Expected wage and other labour costs in Mar-12 compared with Dec-11			
17		T14	QPCHRD Average prices charged in Dec-11 compared with Sep-11			
18		T15	QPCHRDFT Expected average prices charged in Mar-12 compared with Dec-11			
14 4	N					

#### Table of results

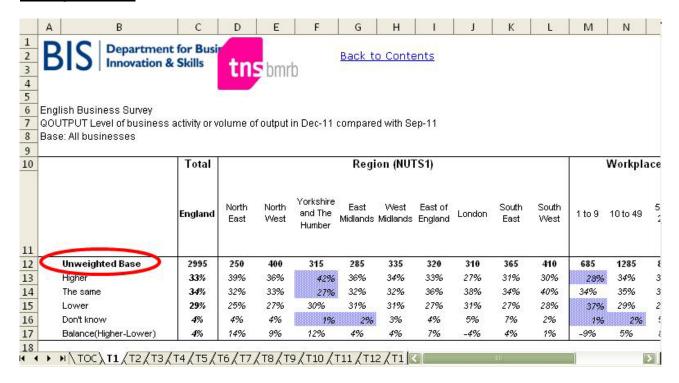
The table overleaf is an example of the layout of a typical data table. It shows the result for the QOUTPUT question on Level of business activity or volume of output in Dec-11 compared with Sep-11.

This title information can be found in row 7 of the worksheet.

Row 8 shows which businesses were asked the question covered by the table. In the table below this was all businesses that were interviewed. In the Stocks table used later in the 'Presentation' section, the question was only asked of those industry sectors that commonly hold stocks.



#### **Unweighted Base**



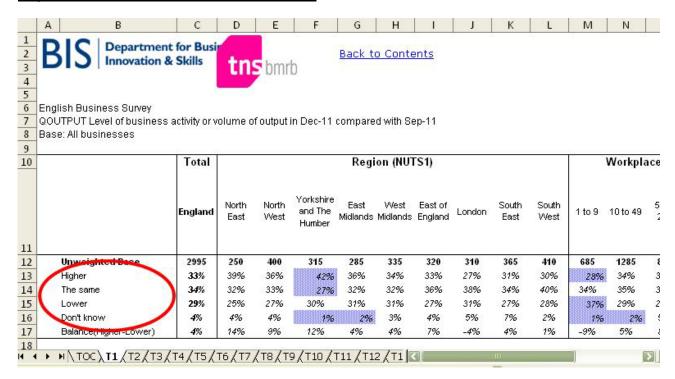
Row 12 shows the number of workplaces who responded to the question. Results are provided at national level ('England' column), at regional level ('Region' columns), by broad size of the workplace ('Workplace size' columns) and by broad industry sector (not seen in this screenshot but are to the right of the Workplace size results).

In this example, 2,995 English workplaces were interviewed. Of these, 410 were located in the South West and 685 workplaces employed between 1 and 9 employees. Note that, in this table, figures by characteristics (e.g. region, workplace size and industry sector) are independent of each other. In other words the 685 workplaces employing 1 to 9 employees are spread across the regions; this table does not show how many of these workplaces are located in the South West, for instance.

Figures on this row are unweighted and are rounded to the closest 5 to preserve confidentiality. Unweighted means that the different contribution each workplace makes to the overall economy has not been corrected for, it is simply the size of the sample in each category which helps assess how reliable results are likely to be (results based on small unweighted counts would generally be less reliable).



#### 'Higher', 'The same', 'Lower' and 'Don't Know'



Moving down the left-hand side of the table shows the responses workplaces could give to the question on how output compared with three months previously (in this example, December 2011 compared with September 2011).

Looking at the 'Higher' row in the 'England' column shows that workplaces accounting for 33% of employment in England felt that business activity in December 2011 was higher than in September 2011.

At the regional level, sometimes referred to as NUTS1<sup>3</sup>, workplaces accounting for 31% of employment in the East Midlands felt that business activity in December 2011 was lower than in September 2011.



It would be *incorrect* to conclude that 'workplaces in the East Midlands accounting for 31% of employment in *England as a whole* felt that ...'. This was key point 2.



The percentages have been weighted to take into account economic influence and therefore give a view of conditions across the whole economy. This was key point 3.

Results are weighted and then percentages calculated and rounded to the closest whole number. Due to rounding, column percentage figures may not always add up to 100%. These percentages represent an indication of the contribution different workplaces made to the overall economy.

<sup>&</sup>lt;sup>3</sup> The acronym NUTS stand for Nomenclature of Territorial Units for Statistics. The digit '1' indicate the level of these statistics; in this case, the English regional level.

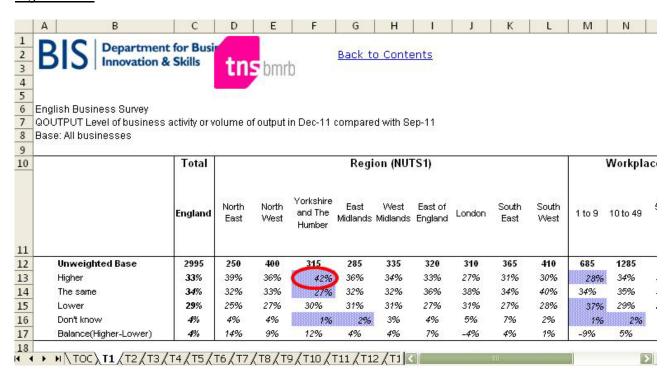


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Many of the tables which accompany the Statistical Release are based on similar style directional questions to that explained above (i.e. 'Higher', 'The same', 'Lower'). However, there are a few differences:

- Questions on workforce and capital use ask about whether the workforce/capital
  were overstretched, used at a satisfactory level or underutilised in the reference
  month (for the December 2011 EBS this is December 2011); this question can be
  treated in a similar way to questions reporting 'Higher', 'The same', 'Lower'.
- Questions on capital investment ask if any capital investment has been made in a certain 3-month period (for the December 2011 EBS this is October 2011-December 2011) or if there are any plans to make any capital investments in the next 3 month period (for the December 2011 EBS this is January 2012-March 2012). This is a yes/no question rather than a directional question.

#### Significance



All estimates based on a sample of the population rather than a census are subject to sampling error. This error allows the calculation of a range or interval between which it is quite likely the result for the whole population lies within. The sampling errors can be used to determine whether it is likely the results for a certain sub-group, for example the North East, is significantly different to that for England. Calculation of the final sampling errors for the EBS is still being developed and will be released when available. However, provisional information on the likely size of these sampling errors is provided in the *Technical Annex*. These initial estimates of the errors have been used to test for statistically significant differences (at the 95% level) between the various sub-groups (regional, workplace size and industry) and the national results located in the 'Higher', 'The same', 'Lower' and 'Don't Know' rows.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> It is possible to test for statistically significant differences at different levels. 95% is the standard level used.



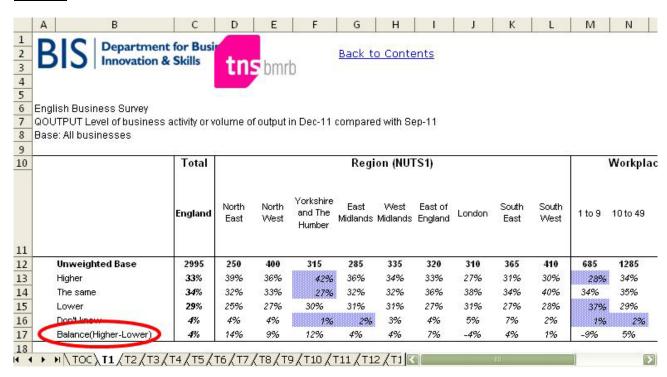
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For example the table above shows that workplaces accounting for 42% of employment in Yorkshire and The Humber report output being higher in December 2011 compared with September 2011. This cell is highlighted, indicating that 42% is significantly different from the 33% seen in the 'England' column.

The results of these tests are marked with a blue shading on the accompanying tables. **Due to additional complexities**, **testing has not yet been done on the balance statistics** (balance statistics are explained further below).

More details on sampling errors for the EBS are available in section 7.2 of the *Technical Annex*.

#### **Balance**



The last row in the table shows a balance statistic, which is calculated as the 'Higher' percentage minus the 'Lower' percentage. The balance can take any value in the range of -100% (if all workplaces were to provide negative responses) to +100% (if all workplaces were to provide positive responses), with a zero index indicating a balanced picture.

For example, taking the London region in the table above, workplaces accounting for 27% of employment reported that the level of business activity in December 2011 was higher than in September 2011, 38% said 'The same' and 31% said 'Lower'. Therefore, the balance statistic would be -4% (i.e. 27% - 31%).

A given value for a balance statistic can be achieved through a number of different scenarios in the underlying results. For example, a balance statistic of zero can be achieved through 'Higher' and 'Lower' both being 0% or both being 50%. It is therefore important to consider the underlying figures.

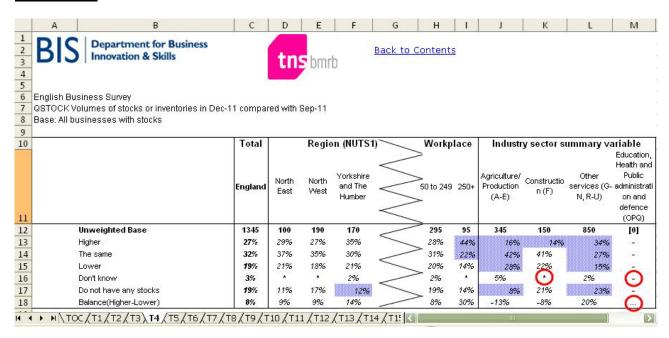




It is important to remember that the questions only ask workplaces whether output was higher or lower and this does not take into account the size of any changes. Therefore a balance of +50% does not necessarily mean output growth will be higher than if the balance was +20%, as the growth rate seen by those contributing to the +20% balance may in aggregate outweigh the growth rates seen or expected by those contributing to the +50% balance. The difference in size between two higher percentages simply means that a higher percentage of workplaces, by employment, reported that output was higher. This was key point 4 at the start of the document.

Balance statistics are calculated based on unrounded figures and rounded independently. Therefore the balance statistics presented in the tables may not exactly equal the difference between the rounded percentage figures from the tables. Again, statistical testing has not yet been carried out on the balance statistics and so it is not possible to say with certainty whether a given balance statistic differs significantly from the 'England' balance statistic. The methodology to do this is being developed and the results will be published once available.

#### Presentation



The table above shows the result for the *QSTOCK* question on Volumes of stocks or inventories in *Dec-11* compared with *Sep-11*. Some of the percentages have been suppressed and replaced with a star (\*), a dash (-) or three dots (...).

In some cases, the figure suppressed can be deduced arithmetically. Traditionally suppressions (primary and sometimes secondary) are used to preserve the confidentiality of individual records; this is not the case with the EBS tables. Instead, figures in certain cells have been suppressed to indicate they were too small to be used.

The star (\*) means that the percentage was suppressed because there were too few workplace responses in this particular cell to produce a reliable estimate - for example, the small percentage of 'Don't know' responses reported in the Construction sector.

The dash (-) means that the percentage was suppressed because there were too few workplace responses in this particular column to produce any reliable results. Looking at the



table, workplaces in the Education, Health and Public administration and defence sector were too few to be displayed – in this example this was because the stocks questions were not asked of this sector, given they typically do not hold stocks.

The three dots (...) means the balance was suppressed because the count of workplaces in the 'Unweighted Base' row for the corresponding cell was too small and the column was suppressed or that one or both of the 'Higher' or 'Lower' percentage cells was suppressed so that the balance statistic could not be calculated. For instance, there were no workplaces asked this question in the Education, Health and Public administration and defence sector so the balance statistic could not be calculated.

# **Comparing EBS results**

As mentioned in the fifth and last key point at the beginning of this document, month-onmonth comparison of EBS results would not be meaningful at this stage.

This is because data from the EBS is still in its infancy. It is likely that comparisons over time will show large changes for certain groups. These changes could be true changes, but they could also be a result of seasonal patterns, due to the survey not yet being fully established or due to smaller sample sizes achieved for some groups. Given this, until the series is better understood, it is sensible to treat each new month of results as a snapshot in time, rather than trying to draw comparisons over time.

### Who is surveyed?

TNS-BMRB was commissioned by the Department for Business, Innovation and Skills (BIS) to conduct the EBS. Interviews are carried out by telephone using Computer Assisted Telephone Interviewing (CATI). The survey aims to interview 3,000 workplaces a month across England and each interview lasts, on average, for 11 minutes. By workplaces this means individual sites within an enterprise located in England - for example, it can be a factory, a shop or an office.

The sample of workplaces interviewed is taken from the Office for National Statistics' (ONS) Inter-Departmental Business Register (IDBR). The IDBR covers all businesses registered to pay VAT or that have a PAYE scheme in operation. It is regarded as the most comprehensive list of registered businesses in England and therefore provides the best sampling frame available. However, it does not cover unregistered businesses, so it excludes the very smallest non-employing businesses that are not registered for VAT or PAYE. The IDBR sample is selected on a quarterly basis and includes workplaces from all industry sectors (including public sector and not-for-profit organisations).

Workplaces across all industry sectors in England are selected randomly from the IDBR, with a greater sampling probability assigned to those with higher employment (i.e. a probability proportional to size sample design.) This is to make the survey as representative as possible of total employment (not workplaces) in England. This was the first key point. More detail on the survey can be found in the *Technical Annex*.



## **Next steps**

Once the EBS is more established, the aim is to publish a wider set of supporting tables through an online reporting tool, which is being developed by TNS-BMRB to allow users flexible access to the results. A link to the reporting tool will be added to future releases once it is ready. The microdata for the survey will also be deposited in the ONS Virtual Microdata Laboratory (VML) so approved researchers can use it for further analysis.

It is envisaged that quarterly tables combining three months of data (c.9,000 interviews) will be published when the survey is more well-established. The feasibility of including a subregional breakdown in these quarterly tables will be explored.



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