

Summary Quality Report for Annual Business Inquiry Part 2 (ABI/2)

1 Introduction

This report is part of a rolling programme of quality reports being introduced by the Office for National Statistics (ONS). The full programme of work being carried out on [Statistical Quality](#)¹ is available on the National Statistics website.

The Annual Business Inquiry (ABI) collects information via two surveys. The ABI/1 solely concentrates on business employment details and the ABI/2 collects information relating to the financial information of a business. This report specifically concentrates on the ABI/2, and aims to provide users with guidance to assess the quality and usability of the ABI/2 estimates.

The [ABI/2 Information Page](#)² on the National Statistics website has a comprehensive online guide to the methods and terminology used in compiling business and economic statistics.

2 Summary of Quality

2.1 Relevance

The degree to which the statistical product meets user needs for both coverage and content.

The Annual Business Inquiry Part 2 (ABI/2) collects comprehensive financial information from various businesses representing the majority of the UK economy. The ONS ABI/2 survey collects business information for England, Scotland and Wales. The Department of Enterprise Trade and Investment ([DETINI](#))³ of Northern Ireland collect the same ABI information ([NIABI](#))⁴ independently. Both data sources are then combined to produce ABI/2 estimates on a UK basis.

In terms of business turnover the ABI/2 sample covers approximately two thirds of the whole economy including industry areas such as Production, Construction, Service Trades and Distribution sectors. A complete listing of the industry groups can be seen in the National Statistics publication '[UK Standard Industrial Classification of Economic Activities 2003](#)'⁵. The ABI/2 data and estimates are used widely, both within and outside the government and are a vital source of business financial information.

	ABI/2
What it measures	Business and financial information including Total Turnover, Total Employment costs, Total Purchases, Total Taxes and many other aggregates.
Frequency	Annual
Sample Size	Approximately 64,000 across the UK.
Periods available	From 1997
Sample frame	Inter Departmental Business Register (IDBR)
Sample design	Stratified random sample where the strata are defined by Standard Industrial Classification (SIC), Country and employment size of a business.
Weighting	Each business represents a number of similar businesses, based on number of employees and the standard industrial classification (currently SIC 2003). Weights are updated annually.

Estimation	Ratio estimation is carried out for all businesses not included within the ABI/2 sample.
Imputation	Automatic imputation using period on period movements is carried out for non-responding businesses with 100+ employment. Manual construction is used in exceptional circumstances. For example an influential key responder would have a manual construction if it did not respond.
Outliers	Firms with extreme or atypical key variable returns for their business size are treated as outliers. Outlier business information is placed into a separate 'one-in-one' stratum.

Data from the ABI/2 outputs are used by a wide range of users. The ABI/2 is vital for a variety of internal and numerous external customers. The key users and uses of the output include:

- National Accounts - for the compilation of Supply and Use tables, which provide a framework for understanding and analysing the interdependence of industries in the UK
- Indices of Services and Production – to give weights for index aggregation and turnover deflation
- Eurostat – for policy monitoring and formulation by the European Union, and as a source for annual structural statistics for the Structural Business Statistics (SBS) Regulation
- The Scottish Executive and the Welsh Assembly – data on production and construction are essential inputs in the calculation of the Scottish and Welsh Indices of Production while data on all sectors are incorporated into the Scottish and Welsh Input-Output tables and may also be utilised in internal briefings
- The Department of Business, Enterprise & Regulatory Reform (BERR) - BERR uses the ABI/2 data to assess the structure and performance of industries. They also have specific interest in the purchases of energy products

Additional users include other local and national government departments and bodies, businesses, academics and the general public.

The national [ABI First Release](#)⁶, together with other ABI outputs, provide a comprehensive overview of the UK economy. User groups are consulted to ensure that data remain relevant to their needs.

2.2 Accuracy

The closeness between an estimated result and the (unknown) true value.

Estimates from this survey are subject to various sources of error. Total error consists of two elements, the sampling error and the non-sampling error. More detail on estimates and measures of these errors can be found on the National Statistics website under [ABI Quality Measures](#)⁷.

Sampling error

This occurs because estimates are based on a sample rather than a census. The ABI/2 estimate this error through standard errors and coefficients of variation by industry type.

Non-sampling error

Non-sampling errors are not easy to quantify and include errors of coverage, measurement, processing and non-response. Response rates give an indication of the likely impact of a random non-response error on the estimates.

In seeking to maximise accuracy of the survey, the sample selection for ABI/2 is carried out after the major Inter Departmental Business Register (IDBR) update processes for the year

are complete. This should minimise the selection of misclassified businesses and inadequate coverage of newly established businesses and defunct reporting units.

Various procedures are in place to ensure that errors are minimised. Year on year comparisons are made at contributor data and aggregate level. Disparities are investigated to ensure consistent annual returns. Congruence checks are made against other surveys to ensure that the industries are reporting mutually consistent values from different surveys.

Another indicator of accuracy is reliability, which can be measured by assessing the difference between the first published estimate, and the final revised figure. ABI/2 adheres to a Revisions Policy which can be seen in the [ABI First Release](#)⁶. Late returns or information received in the course of the following year's inquiry may make changes to source data after publication. If the changes have a significant effect on estimates, published data will be revised. Significantly revised data will be highlighted at the time of the release. Further detail is available on the [ABI/2 revisions history](#)⁸ for each inquiry year.

2.3 Timeliness and Punctuality

Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the time lag between the actual and planned dates of publication.

The [National Statistics Release Calendar](#)⁹ is available on the National Statistics website and provides twelve months advance notice of releases. ABI/2 has consistently met the target publication deadlines. In the unlikely event of a change to the pre-announced release schedule, public attention should be drawn to the change and the reasons for the change should be explained fully at the same time, as set out in the [Code of Practice for Official Statistics](#)¹⁰.

The following list shows the time lag between publication and the reference period to which the ABI/2 data refer.

Provisional National Results Release: November, 11 months after the reference period.
Final National Results Release: June, 18 months after the reference period.

The publication of the Provisional National Results Release was brought forward by one month with effect from the 2005 reference year.

2.4 Accessibility and Clarity

Accessibility is the ease with which users are able to access the data, also reflecting the format(s) in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.

National ABI/2 data are published twice for every annual survey, once in November at the provisional level and then a final release in the following June. Each release includes tables, text and charts relating to each industry classification.

The [ABI First Release](#)⁶ is available in a paper format directly from the press office and time series data contained within the releases are available to download free of charge, from the National Statistics website.

The [ABI/2 publication team](#)¹¹ can advise on additional data and alternative data formats.

2.5 Comparability

The degree to which data can be compared over time and domain.

The ABI/2 covers selected parts of the Standard Industrial Classification (SIC). Data for 1995 - 2002 have been collected under [SIC 92](#)¹² and data from 2003 have been collected under [SIC 2003](#)¹³.

The designation of [key variables](#)¹⁴ for the ABI/2 has remained fairly consistent since implementation in 1997, with only minor changes being made to the questionnaires in accordance with customer needs and requirements.

The ABI/2 has been published on a comparable basis since 1997. Whenever methodological changes or other factors, such as changes to the SIC, impact on the latest data, every effort is made to ensure that all previous data are amended to make them directly equivalent.

Key discontinuities are highlighted in the [ABI/2 First Release](#)⁶ and information on discontinuities dating back to earlier than 2003 can be accessed in the [Background Notes to ABI](#)¹⁵.

2.6 Coherence

The degree to which data that are derived from different sources or methods, but which refer to the same phenomenon, are similar.

The users of ABI/2 require aggregate data to be coherent with other surveys. Where possible, ABI/2 data are coherent with various short term indicators produced from the Monthly Production Inquiry (MPI) and Monthly Inquiry into the Distribution and Services Sector (MIDSS). In addition, ABI/2 also aims, where possible, to be consistent with related annual and quarterly inquiries, such as the Annual Business Inquiry - Employment questionnaire (ABI/1), Capital Expenditure (Capex), Products of the European Community (PRODCOM), Retail Sales Index (RSI) and inquiries conducted by The Department of Business, Enterprise & Regulatory Reform (BERR).

Each of the named ONS surveys uses the same sampling frame, the IDBR. Thus samples for these surveys are selected from the same universe as the ABI/2 sample. However there are also specific disparities. For example the ABI/1 collects employment data at a given point in time; conversely the ABI/2 returns may relate to different reporting periods. The MIDSS and MPI surveys both collect turnover information. Nevertheless their sample sizes are much smaller than the ABI/2 and as such, this will cause variation in the returns for these short term surveys and the ABI/2. In addition, ABI/2 Construction data and the ONS Construction survey are comparable; however these surveys use a different sampling frame and have some significant differences in their contributor sample selection methods.

3 Summary of Methods Used to Compile the Output

Coverage

The ABI/2 estimates cover UK businesses registered for Value Added Tax (VAT) and/or Pay As You Earn (PAYE) and are classified to [SIC 2003](#)¹³. The ABI/2 obtains the required details on these businesses from the IDBR which is then used as the ABI/2 sampling frame. The ABI/2 sample covers all major industry groups, such as Production, Construction, Distribution, Service Trades, Catering and Property.

The Sample and Design

The ABI/2 sample covers around 64,000 contributors across the majority of the UK economy. The IDBR is used as the sampling frame from which a stratified random sample is drawn. The strata are defined by SIC at industry level, by country and by employment size, with all employment sizes of businesses being covered.

The sampling scheme is designed to give the best estimates of the population totals for a given sample size and involves selecting all the largest businesses with a progressively reducing fraction of smaller businesses. This method will ensure that the sample targets those businesses with the largest contribution to an industry. It also ensures that the survey sample size of the smaller businesses minimizes the compliance burden on them.

Weighting and Estimation

As it is not possible to survey every business in the population, to obtain estimates of the population values it is necessary to weight the data. ABI/2 uses two weights, one to represent the effect of stratified sampling and the other to represent the effect of ratio estimation.

The implementation of weights ensures the estimates take into account the characteristics of non-selected businesses. Further details on ABI methodology can be found in the [Background Notes to ABI](#)¹⁵.

Statistical Disclosure

Statistical disclosure control methodology is also applied to ABI/2 data. This ensures that information attributable to an individual organisation is not disclosed in any publication. The [Code of Practice for Official Statistics](#)¹⁰, and specifically Principle 5: Confidentiality, set out practices for how we protect data from being disclosed. The Principle includes a guarantee to survey respondents to "ensure that official statistics do not reveal the identity of an individual or organisation, or any private information relating to them". More information can be found on the ONS [Statistical Disclosure Control Methodology](#)¹⁶ page.

Further information on the initial Implementation of the Annual Business Inquiry can be found in a paper written by Dr Gareth Jones (2000) '[The Development of the Annual Business Inquiry](#)'¹⁷

4 References

	Title of Reference	Website Location
1	Statistical Quality Programme	http://www.statistics.gov.uk/about/data/methodology/quality/default.asp
2	The Annual Business Inquiry	http://www.statistics.gov.uk/abi
3	Department of Enterprise, Trade and Investment (DETINI)	http://www.detini.gov.uk/cgi-bin/gethome
4	Northern Ireland ABI (NIABI)	http://www.detini.gov.uk/cgi-bin/get_builder_page?page=1930&site=4&parent=57&prevpage=2125
5	UK Standard Industrial Classification of Activities 2003	http://www.statistics.gov.uk/methods_quality/sic/downloads/uk_sic_vol1(2003).pdf
6	The ABI First Release	http://www.statistics.gov.uk/abi/whatsnew.asp
7	ABI Quality Measures	http://www.statistics.gov.uk/abi/quality_measures.asp
8	Revisions History	http://www.statistics.gov.uk/abi/revisions_history.asp
9	National Statistics Release Calendar	http://www.statistics.gov.uk/ReleaseCalendar/currentreleases.asp
10	Code of Practice for Official Statistics	http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
11	ABI Publication team	http://www.statistics.gov.uk/abi/contacts.asp
12	SIC 92	http://www.statistics.gov.uk/methods_quality/sic/contents.asp
13	SIC 2003	http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14012
14	Key variables	http://www.statistics.gov.uk/abi/variable_info.asp
15	ABI Background Notes	http://www.statistics.gov.uk/abi/background_info.asp
16	Statistical Disclosure Control Methodology	http://www.statistics.gov.uk/about/data/methodology/general_methodology/sdc.asp
17	The Development of ABI	http://www.statistics.gov.uk/CCI/article.asp?ID=74

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