

Summary Quality Report for the MIDSS Survey

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. Summary Quality Reports are overview notes which pull together key qualitative information on the various dimensions of quality as well as providing a summary of methods used to compile the output.

This report relates to the MIDSS (Monthly Inquiry into the Distribution and Services Sector) survey. This is a statutory survey that measures the sales turnover (monthly) and employment (quarterly) of businesses in Great Britain (Northern Ireland is not included). Turnover statistics, unadjusted, at current prices, are published monthly on the web - see [Distributive and services trades](#)², and are available as a time series - see [Distributive and services trades data sets](#)³. Employment statistics are published in [Labour Market First Release](#)⁴ and the [Economic and Labour Market Review](#)⁵.

This report relates mainly to the turnover output that is published in the [Distributive and services trades](#)² web release.

2 Summary of Quality

2.1 Relevance

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

The MIDSS survey produces monthly estimates of turnover for the Service Industry excluding Retail, which has its own survey – the [Retail Sales Inquiry](#)⁶. Questionnaires are sent to a sample of approximately 25,000 businesses every month. The survey covers sectors G to O of the [Standard Industrial Classification \(SIC 2003\)](#)⁷.

Survey	MIDSS
What it measures	Sales turnover and employment.
Frequency	Monthly for turnover, quarterly for employment.
Sample size	25,000 approximately.
Periods available	Most series are available as a monthly time series from April 2000. All series are available from January 2001.
Sampling frame	Inter-Departmental Business Register (IDBR).
Sample design	Stratified simple random sampling with 100 per cent coverage of businesses with register employment above 99.
Weighting	In strata without 100 per cent coverage, each business represents a number of similar businesses, based on the number of employees and the standard industrial classification (currently SIC 2003). Weights are updated monthly.
Estimation	Ratio estimation uses a ratio between the survey variable (turnover) and an auxiliary variable (register turnover) to make estimates for non-sampled units.
Imputation	A link factor is calculated and applied to previous returns for each non-responder. The original construction for a never-responding business is calculated from a ratio (calculated from other respondent values in the same strata) being applied to the register turnover. For subsequent periods, imputed values will be based on movements in similar sized businesses.
Outliers	Outliers are detected automatically and are treated by applying a Winsorion weight to their estimation, thereby reducing the outliers' impact on the overall estimate.

Data from MIDSS survey make up a significant component (40 per cent) of the [Index of services \(IoS\)](#)⁸. These economic indicators are becoming increasingly important as the service sector increases its market share. Data are also used in the calculation of the output measure of [Gross Domestic Product \(GDP\)](#)⁹ to which MIDSS survey contributes approximately 30 per cent of the source data. The data on jobs derived from the MIDSS survey feed into the Workforce Jobs (WFJ) series, which is an important labour market indicator. The MIDSS jobs data are also used in conjunction with other sources to derive the income measure of GDP and various productivity statistics.

The Bank of England (BoE) Monetary Policy Committee is a key user of the IoS and WFJ as indicators of short-term changes in the economy for setting interest rates.

HM Treasury (HMT) uses the outputs for purposes of analysis and assessment of macroeconomic developments and prospects.

Department of Business Enterprise and Regulatory Reform (formerly DTI) makes regular use of MIDSS survey data for briefings. Data are also used for policy related publications, for example on Globalisation, Innovation, etc.

Eurostat receives the UK data under a European Council and Parliament Short Term Statistics Regulation of 1998, amended in July 2005. The regulation requests EU Member States to deliver data on turnover, number of persons employed and output prices for all activities listed in divisions 50, 51 and sections H to K, M to O of NACE Rev. 1.1.

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 that can be categorised into sampling error and non-sampling error.

Sampling error occurs because estimates are based on a sample rather than a census. The MIDSS survey estimates the size of this error by estimating standard errors and coefficients of variation. For the monthly turnover estimate for the whole of the MIDSS survey, coefficients of variation around 0.5% are to be expected. The equivalent for the quarterly employment estimate is 0.6%. For an individual 3-digit series coefficients of variation can be in double-digit percentage points. Should the coefficient of variation of a published series be greater than 20%, then the estimate will not be published, being deemed too unreliable. Coefficients of variation are published as part of the MIDSS Basic Quality Information (BQI) document which will be in place in the 2009-10 financial year.

Non-sampling errors are not easy to quantify and include errors of coverage, measurement, processing and non-response. Various procedures are in place to ensure errors are minimised. Validation checks on data, based on, for example, percentage movements from month to month are carried out to highlight unusual changes in turnover data. Disparities in data are investigated by contacting the contributor for clarification if necessary.

The MIDSS survey usually exceeds a target monthly response rate of 75 per cent by forms and 80 per cent by turnover and employment. During 2008 the average response rate for the survey was 76 per cent by forms and 87 per cent by turnover. Response rates are published monthly as part of the MIDSS BQI. Editing rates give an indication of the cleaning applied to the data. Editing refers to the action of changing contributor data either automatically, in the cases of an obvious error in the returned data (for example, a £ thousands error) or after contacting the contributor to clarify suspect data. Editing rates for the MIDSS survey are published annually commencing in 2009, for the 2008 reference year.

Reliability. Assessing the difference between the first published estimate and the final revised figure provides an indication of reliability. Revisions are analysed over time in terms of their size, direction and volatility. This is to monitor the accuracy of various statistical processes, such as, imputations for non-response, which can be replaced by late responses

thereby causing revisions or to monitor the impact of any methodological changes. The turnover estimates are revised back 13 months at a 2-digit level, ie a comparison can be made between a first estimate 13 months ago and a current revised figure. MIDSS survey revisions are published in the MIDSS BQI.

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 MIDSS survey data collection closes down on the 20th working day of the calendar month after the month of the survey. Data are passed to the IoS team on the 21st day. Publication of the IoS takes place around the 19th working day of the second month after the month of the survey. The 'Distributive and services trades' publication is published two months after the month of the survey. Employment estimates are published two and a half months after the month of the survey.

The [National Statistics Release Calendar](#)¹⁰ is available on the National Statistics website and provides twelve months' advance notice of releases. The MIDSS survey has consistently met the publication deadlines. In the unlikely event of a change to the release dates, public attention will be drawn to the change and the reason fully explained as set out in the [Code of Practice for Official Statistics](#)¹¹.

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.

In a User Survey carried out recently for the [MIDSS Triennial Review](#)¹², 89% of users stated that they had no problem accessing the MIDSS survey data. Furthermore, 73% of users found the clarity of the data either very good or good.

The [Distributive and services trades](#)² monthly data consists of turnover data, unadjusted, at current prices at a 3-digit industry level. Some comparisons of month-on-month and year-on-year changes are also provided. An indication of the earliest period that a series has been revised is also given.

2.5 Comparability

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

The MIDSS survey was originally designed to collect turnover data for the service sector. The turnover question has not changed since the commencement of the survey. However, there have been some changes to the survey as outlined in the table below.

1991	Quarterly survey commenced
1995	Some sectors converted to monthly collection of turnover
1996	Quarterly employment question added
2001	All sectors converted to monthly collection of turnover
April 2002	74.150 was discontinued as part of 74.1
April 2002	80.3 and 80.4 discontinued
April 2002	85.140 discontinued as part of 85.11/85.14
October 2004	80.3 and 80.4 re-instated
Q2 2006	Last reference period for quarterly publication
July 2006	First reference period for monthly publication

A comparison with statistical methodology from other countries can be found in the relevant sections of the [MIDSS Triennial Review](#)¹²

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.

Annual turnover data for the service sector is compiled by the [Annual Business Register survey \(ABI2\)](#)¹³.

There is no formal process which compares the data from these two surveys. However, from time to time, there are ad-hoc investigations into the level of coherence between the two surveys. However, it should be noted that there are some differences in coverage between the two surveys. For example the annual turnover estimates from MIDSS survey is an aggregation of 12 months data, January to December. The ABI annual turnover survey compiles data from businesses' fiscal reporting periods and these are, in many cases, April to March.

3 Summary of Methods Used to Compile the Output

Coverage and Sample

There are 203 service industries in the survey for turnover and quarterly employment, as defined by the [Standard Industrial Classification \(SIC 2003\)](#)⁷, collected as 101 series, either individual industries or composites. In addition there are 20 service industries which only collect employment information. Turnover is collected in £ thousands for all industries and employment is collected as the number of employees on a specified date each quarter. In 2008 approximately 300,000 questionnaires were sent out to businesses in Great Britain (Northern Ireland is not included) collecting data on turnover and employment. The sampling frame used is the Inter Departmental Business Register (IDBR). The number of employees recorded in the register is used as the basis for stratification; businesses with 100 or more employees are fully enumerated. A random sample is selected for each of the other strata. The strata used for most industries are: 0-9, 10-19, 20-99 employees. For some industries the upper limit for sampling is 250, when the strata used are: 0-9, 10-19, 20-249 employees. An additional band was defined covering businesses with low employment and exceptionally large turnover; these were defined as having 10-99 (or 10-249) employees with an annual turnover of £40 million or more. All businesses that meet these criteria are fully enumerated. The sampled industries are selected for the survey for approximately 27 months, except for businesses with 0-9 employees which are only included for 15 months, after which they are guaranteed not to be selected for another three years following the Osmotherly rule.

Weighting and estimation

As it is not possible to survey every business in the population it is necessary to weight the data to provide estimates for the full population. In strata that are not fully enumerated there are two weights applied to data collected in the MIDSS survey

1. 'a' weight. This takes into account the ratio of the size of a sample to the size of the population from which the sample is selected.
2. 'g' weight. This takes into account how representative a sample's register turnover is compared to the register turnover of the population from which the sample is selected.

Estimates are produced using a ratio estimation method, which uses an auxiliary variable (register turnover, obtained from VAT or PAYE business data).

Imputation

Estimates for businesses that don't respond are imputed. Imputation is based on the pattern of responses for similar businesses. A link factor is calculated from responses received and applied to previous returns for each non-responder. The original construction for a never-responding business is calculated from a ratio (calculated from other respondent values in the

same strata) being applied to the register turnover. For subsequent periods, imputed values will be based on movements in similar sized businesses.

Disclosure

Statistical disclosure control methodology is also applied to data. This ensures that information attributable to an individual organisation is not disclosed in any publication. The Code of Practice for Official Statistics, 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](#)¹⁴ page.

4 References

	Title of Reference	Website Location
1	Statistical Quality Programme	http://www.statistics.gov.uk/about/data/methodology/quality/default.asp
2	Distributive and services trades	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=1477&Pos=&ColRank=1&Rank=208
3	Distributive and services trades data sets	http://www.statistics.gov.uk/statbase/tsdataset.asp?vlnk=4702
4	Labour Market First Release	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=1944
5	Economic and Labour Market Review	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=14692&Pos=&ColRank=1&Rank=240
6	Retail Sales Inquiry	http://www.statistics.gov.uk/statbase/Product.asp?vlnk=870
7	Standard Industrial Classification (SIC 2003)	http://www.statistics.gov.uk/abi/sic92_desc.asp
8	Index of services (IoS)	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=9333&Pos=&ColRank=2&Rank=1000
9	Gross Domestic Product (GDP)	http://www.statistics.gov.uk/CCI/SearchRes.asp?term=gdp&x=17&y=11
10	National Statistics Release Calendar	http://www.statistics.gov.uk/ReleaseCalendar/findreleases.asp?releasetitle=Distributive&releaseorganisation=&releasetheme=&daterange=1&showHits=10&sortOrder=0
11	Code of Practice for Official Statistics	http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
12	MIDSS Triennial Review	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=10214
13	Annual Business Register survey (ABI2)	http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=7381&Pos=1&ColRank=1&Rank=192
14	Statistical Disclosure Control Methodology	http://www.statistics.gov.uk/about/data/methodology/general/methodology/sdc.asp

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