

Statistics Research



NORTERN IRELAND LABOUR FORCE SURVEY

PERFORMANCE AND QUALITY MONITORING REPORT

March 2006

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NI Labour Force Survey

Quality Monitoring Report - Introduction

Data quality guidelines provide a checklist of quality measures and indicators for measuring and reporting on the quality of statistical outputs. The guidelines are not a National Statistics protocol but represent best practice for measuring quality at various stages of the data collection – output cycle.

Aim and purpose of the guidelines

The overall aim of the guidelines is to outline best practice for measuring and reporting on quality of GSS outputs. In particular, the guidelines have been developed so that information is made available to users of statistical outputs to help them understand:

- the context in which the data were assembled and analysed;
- methods adopted and limitations they impose;
- the reliability of the figures; and
- the way they relate to other available data on the same subject.

What is quality?

Quality, when referred to in terms of statistical outputs can generally be thought of as the degree to which the data meet user needs, or simply put, the degree to which the data are ‘fit for purpose’.

Quality has often been associated with accuracy and timeliness. But even if statistics are accurate and timely, they cannot be deemed to be good quality if they are not based on concepts which are meaningful and relevant to the users. In addition, different users will have different needs. Quality measurement and reporting for statistical outputs is therefore concerned with providing the user with sufficient information to judge for themselves whether or not the data are of sufficient quality for their intended use(s).

It is recommended that the quality of a statistical output should be determined by its performance against a range of attributes that together can be used to assess whether an output meets users’ quality criteria. The quality measures and indicators in the remainder of this document have been developed around the six data quality dimensions as defined by the European Statistical System (ESS). A good summary of quality will contain a blend of quality measures from each of the six ESS quality dimensions outlined below.

Dimensions of Quality

Definition	Key components
1. RELEVANCE	
The degree to which the statistical product meets user needs both in coverage, content and detail.	Any assessment of relevance needs to consider: <ul style="list-style-type: none"> • who are the users of the statistics? • what are their known needs? • how well does the output meet these needs?
2. ACCURACY	
The closeness between an estimated result and the (unknown) true value.	The main sources of error are sampling and non-sampling error, where non-sampling error includes: <ul style="list-style-type: none"> • coverage error; • non-response error; • measurement error; • processing error; and • model assumption error.
3. TIMELINESS AND PUNCTUALITY	
Punctuality refers to the time lag between the actual delivery date of the data and the target date when the data should have been delivered. Timeliness is the degree to which data produced are up to date, published frequently and on time.	An assessment of timeliness and punctuality should consider the following: <ul style="list-style-type: none"> • production time; • frequency of release; and • punctuality of release.
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 additional advice provided.	Specific areas where accessibility and clarity may be addressed include: <ul style="list-style-type: none"> • needs of analysts; • assistance to locate information; • clarity; and • dissemination.
5. COMPARABILITY	
The degree to which data can be compared over time and domain.	Comparability should be addressed in terms of comparability over: <ul style="list-style-type: none"> • time (for data derived for the same purpose); • spatial domains (sub-national/ national/international); and • domain or sub-population (industrial sector, household type).
6. COHERENCE	
The degree to which data that are derived from different sources or methods, but which refer to the same phenomena are similar.	Coherence should be addressed in terms of coherence between: <ul style="list-style-type: none"> • provisional and final statistics; • sources and data produced at different frequencies; • other statistics in the same socio-economic domain; • sources and outputs.

NI Labour Force Survey - Background

The Labour Force Survey (LFS) is carried out throughout the UK, under the terms of an EC Regulation. From 1973 to 1983, the LFS was carried out biennially in both Northern Ireland (NI) and Great Britain. Following a change in the requirements of the EC Regulation, from 1984 an annual survey was conducted and results referred to the spring months of each year. In March 1992 the GB portion of the survey moved onto a quarterly cycle and in December 1994 a quarterly survey was introduced in (NI).

The LFS is a sample survey carried out by interviewing individuals about their personal circumstances and work. It is the biggest regular household survey in NI and provides a rich source of information on the labour force using internationally agreed concepts and definitions.

Only private household addresses are included in the LFS as it is a survey of the private household population. Every selected address is interviewed on five successive occasions, such that in any one quarter, a fifth of the sample will be receiving their first interview, one fifth their second and so on, with one fifth receiving their fifth and final interview. This results in an 80% sample overlap between quarters.

The Department of Enterprise, Trade and Investment is responsible for ensuring that the survey is conducted in NI and for the analysis and interpretation of the results. However, the day-to-day management of the fieldwork, including data collection and database creation, rests with the Central Survey Unit (CSU) of the NI Statistics and Research Agency. CSU are also in charge of the creation of a Computer Assisted Interviewing questionnaire (designed to mirror that used in GB), the sampling of addresses and the carrying out of fieldwork using a team of specialist interviewers.

LFS results are produced after the grossing of sample numbers to population levels. This process involves giving a weight or "grossing factor" to each individual participating in the survey, based on that person's age and sex. In this way the final grossed results give the population total for NI and reflect the distributions by sex and age shown by the population figures. The Office for National Statistics (ONS) are responsible for grossing the NI survey and for combining the NI dataset into UK results.

1 RELEVANCE

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

The primary purpose of the LFS is "the prompt publication of key aggregate, whole economy, indicators, for the integrated assessment of labour market conditions" (Review of the Labour Force Survey, ONS, 2002). The 'labour market' covers all aspects of people's work, including the education and training needed to equip them for work, the jobs themselves, job-search for those out of work, and income from work and benefits.

The key users of Northern Ireland LFS data are the Department of Enterprise, Trade & Investment and the Department for Employment & Learning, as their primary interest concerns NI economic and labour market policy. They are both interested in a variety of indicators of the state of the labour market, including the number of people in employment, the number of unemployed people and the number economically inactive (defined according to the International Labour Organisation - ILO). They often require more detailed analysis of these series by age groups, sex, changes over time etc.

Other Government bodies such as OFMDFM, local authorities, the Health & Safety Executive and Invest NI, regularly request specific ad hoc analysis from the LFS and are significant users of LFS data. In addition significant 'non-governmental' users of LFS data include Employer's Associations, Universities and academics, the Economic Research Institute of Northern Ireland, academic researchers both home and abroad, the media and the general public.

Northern Ireland LFS data feeds directly into the UK LFS estimates, which are produced by the Office for National Statistics (ONS). The UK estimates are widely used by HM Treasury and the Department of Work & Pensions to formulate and monitor economic and labour market policy. At an international level, UK LFS data is used by the European Parliament, Council and Commission, the European Central Bank, and DG Employment (Directorate-General for Employment, Social Affairs and Equal Opportunities).

The publications and data service for the NI LFS are regularly reviewed and key data users are asked to provide feedback on the content of LFS outputs and the quality of the data service provided. Outputs and procedures are amended accordingly in order to improve the customer service.

Users of LFS data often combine it with related data from other sources to provide an overall view of the state of the labour market (section 6 provides more information about the reconciliation of LFS data with data from other sources). The monthly NI Labour Market Report contains data from a number of different data sources (including LFS) and acts as a reference point for users that want to integrate LFS data with supplementary information.

2 ACCURACY

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

The main threats to accuracy are sources of error, namely sampling error and non-sampling error, where non-sampling error includes: coverage error, non-response error, measurement error, processing error, and model assumption error.

Sampling error arises because the Labour Force Survey is based on statistical samples and is, therefore, subject to sampling variability, such that if many samples were drawn, each would give a slightly different result. This is because each sample would be made up of different people who would potentially give different answers to the questions asked. The spread of these results is the sampling variability which generally reduces with increasing sample size. A confidence interval is a range of values, defined by a lower and upper bound, which indicates the variability of an estimate. The LFS routinely publishes details of achieved sample sizes (2.1, 2.2, 2.3), and 95% confidence intervals, where it is expected that in 95% of samples the range would contain the true value (table 2.4).

Many of the sources of non-sampling error are difficult to measure. However, the NI LFS publishes overall response rates in each quarterly report and makes available details of response rates by wave on request (2.5, 2.7 & 2.8). Response rates are published by Government Office Region for each wave during the particular quarter (table 2.9). The NI LFS also provides details of proxy response rates and imputed responses (tables 2.10 & 2.11) to help inform their customers.

Figures 2.2 and 2.3 show that the achieved number of household and person interviews in NI has been falling in recent years. This downward trend is also seen in the UK (2.6) and is largely due to survey fatigue within the population. DETI and CSU monitor survey response rates and achieved sample sizes in NI very closely and take steps to ensure that the LFS sample size is sufficient to provide robust estimates for key variables.

The measures included within this section provide users with the information required to make an assessment of the reliability and accuracy of the LFS estimates that they require. This information is provided on request and free of charge to all survey users.

Accuracy

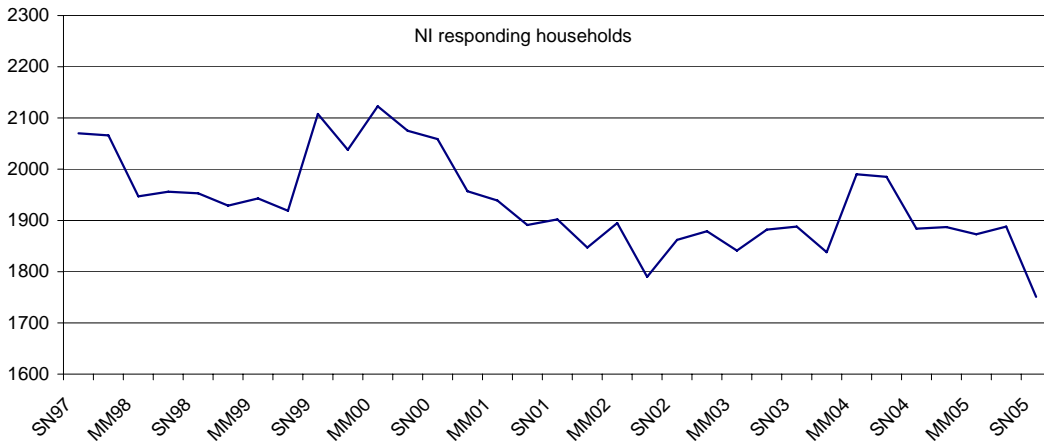
2.1 LFS QUARTERLY SURVEY

Achieved sample by type of household, SN05

	NI			UK		
	Includes imputed	Excludes imputed	% imputed	Includes imputed	Excludes imputed	% imputed
Private households	1,847	1,751	5	52,546	49,649	6
Individuals in private households	4,740	4,481	6	121,309	113,144	7

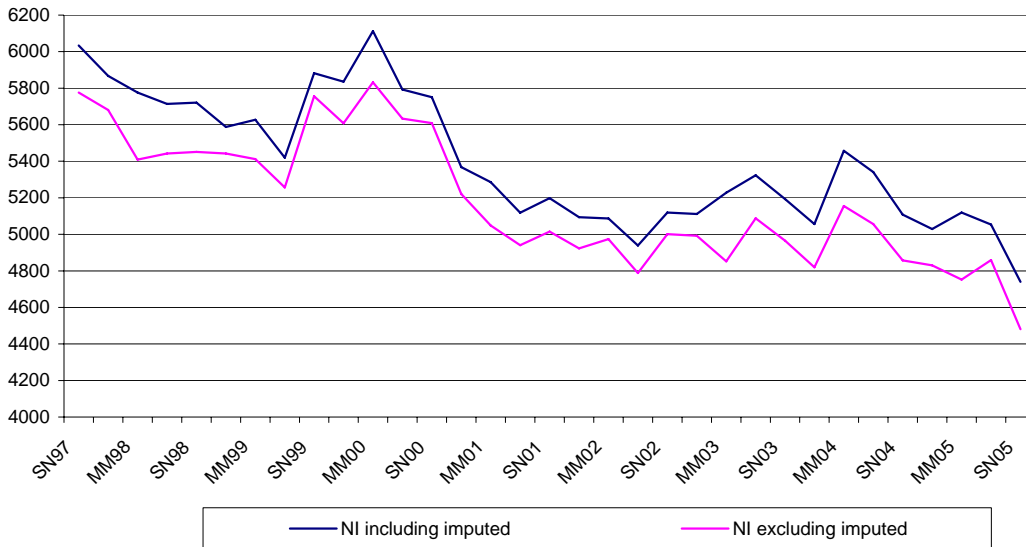
2.2 LFS QUARTERLY SURVEY

Achieved number of household interviews, NI, SN97 to SN05



2.3 LFS QUARTERLY SURVEY

Achieved number of person interviews, NI, SN97 to SN05



Accuracy

2.4 LFS QUARTERLY SURVEY Sampling Variability, NI, SN05

Variable	Level	Sampling Variability	Change on quarter	Sampling variability	Change on year	Sampling variability
Employment (000s)	751	21	-5	15	18	26
Employees (000s)	616	21	-8	15	12	26
Self-Employed (000s)	122	12	2	8	6	15
Unemployment (000s)	38	8	0	8	-3	11
Unemployment rate	4.8%	1.0%	0.0	1.0	-0.5	1.2
Economically Active (000s)	789	19	-6	13	15	24
Economic activity rate (16+)	59.9%	1.7%	-0.5	1.2	0.7	1.3
Economically Inactive (000s)	527	19	8	13	-5	24
Economic Inactivity rate (16+)	40.1%	1.7%	0.5	1.2	-0.7	1.3
Inactive, not wanting a job (000s)	491	18	6	13	-4	15
Inactive, wanting a job (000s)	36	6	3	4	-1	5

Note: estimates in table 2.4 are not seasonally adjusted

Surveys such as the LFS, provide estimates of population characteristics rather than exact measures. In principle, many random samples could be drawn and each would give different results, due to the fact that each sample would be made up of different people, who would potentially give different answers to the questions asked. The spread of these results is the sampling variability, which generally reduces with increasing sample size. A confidence interval is a range of values, defined by a lower and upper bound, which indicates the variability of an estimate. Statistical methods are used to calculate the sampling variability from which the confidence interval can be determined. For example, with a 95 per cent confidence interval, it is expected that in 95 per cent of the survey samples, the resulting confidence interval will contain the true value that would be obtained by surveying the whole population.

The LFS routinely publishes details of achieved sample sizes, standard errors and 95 per cent confidence intervals, where it is expected that in 95 per cent of samples the range would contain the true value (table 2.4). In table 2.4, the sampling variability gives the range above and below the estimate at a 95 per cent confidence interval.

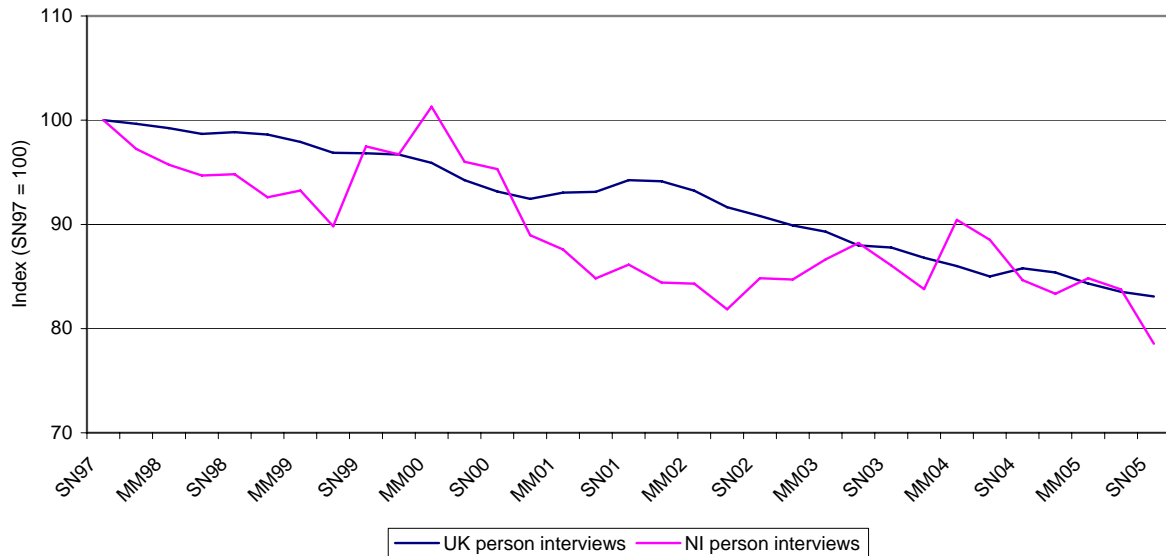
Accuracy

2.5 LFS QUARTERLY SURVEY Autumn 2005 response rates, NI & GB, excluding imputed households

	Wave 1		Wave 2-5		Total		Wave 1		Wave 2-5		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
	Northern Ireland						Great Britain					
Eligible households found at selected units	578	100%	2330	100%	2908	100%	15244	100%	62149	100%	77393	100%
Responding units												
Total	346	59.9%	1405	60.3%	1751	60.2%	11311	74.2%	36595	58.9%	47906	61.9%
Full	339	58.7%	1394	59.8%	1733	59.6%	10734	70.4%	34175	55.0%	44909	58.0%
Partial	7	1.2%	11	0.5%	18	0.6%	577	3.8%	2420	3.9%	2997	3.9%
Non-responding units												
Circumstantial refusal	36	6.2%	72	3.1%	108	3.7%	790	5.2%	2159	3.5%	2949	3.8%
Outright refusal	67	11.6%	248	10.6%	315	10.8%	1442	9.5%	9058	14.6%	10500	13.6%
Refusal to HQ	15	2.6%	95	4.1%	110	3.8%	626	4.1%	3415	5.5%	4041	5.2%
Non-contact	114	19.7%	456	19.6%	570	19.6%	1075	7.1%	3157	5.1%	4232	5.5%
Addresses not issued for interviewing												
Refusal to re-interview			54	2.3%	54	1.9%			7765	12.5%	7765	10.0%

Notes: Excludes households for which response has been imputed.

2.6 LFS QUARTERLY SURVEY Index of achieved number of person interviews, NI & UK, SN97 to SN05 (SN97=100)



Accuracy

2.7 LFS QUARTERLY SURVEY Wave specific response rates, NI & GB, including imputed households

	Wave 1		Wave 2-5		Total		Wave 1		Wave 2-5		Total	
	#	%	#	%	#	%	#	%	#	%	#	%
	Northern Ireland						Great Britain					
Eligible households found at selected units	578	100%	2330	100%	2908	100%	15244	100%	62149	100%	77393	100%
Responding units												
Total	346	59.9%	1501	64.4%	1847	63.5%	11311	74.2%	39420	63.4%	50731	65.5%
Full	339	58.7%	1394	59.8%	1733	59.6%	10734	70.4%	34175	55.0%	44909	58.0%
Partial	7	1.2%	11	0.5%	18	0.6%	577	3.8%	2420	3.9%	2997	3.9%
Imputed			96	4.1%	96	3.3%			2825	4.5%	2825	3.7%
Non-responding units												
Circumstantial refusal	36	6.2%	54	2.3%	90	3.1%	790	5.2%	616	1.0%	1406	1.8%
Outright refusal	67	11.6%	248	10.6%	315	10.8%	1442	9.5%	9058	14.6%	10500	13.6%
Refusal to HQ	15	2.6%	95	4.1%	110	3.8%	626	4.1%	3415	5.5%	4041	5.2%
Non-contact	114	19.7%	378	16.2%	492	16.9%	1075	7.1%	1875	3.0%	2950	3.8%
Addresses not issued for interviewing												
Refusal to re-interview			54	2.3%	54	1.9%			7765	12.5%	7765	10.0%

Notes: Includes households for which response has been imputed.

2.8 LFS QUARTERLY SURVEY Composition of ineligible addresses, NI

The list of addresses chosen at random from the Valuation & Lands Agency list of domestic properties will contain locations that for a number of reasons will not contain households that are eligible to take part in the survey. A summary of these ineligible addresses is shown below.

Ineligible addresses	SN05	JA05	SN04
Vacant/derelict/under construction	215	221	214
Holiday accomodation	18	22	12
Non-residential	4	7	0
Second residence	30	24	37
No trace of address	6	4	6
Other ineligible	8	10	7
Household moves	15	18	12
Total	296	306	288

Accuracy

2.9 LFS QUARTERLY SURVEY Wave specific response rates, SN05, including imputed households, by GOR

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Total
Tyne & Wear	82	74	70	61	66	71
Rest of North East	74	76	65	66	61	68
Greater Manchester	82	62	53	45	40	56
Merseyside	77	68	61	55	59	64
Rest of North West	78	64	59	55	59	63
South Yorkshire	80	78	71	66	65	72
West Yorkshire	77	71	69	62	64	69
Rest of Yorkshire and Humberside	76	70	68	60	67	68
East Midlands	78	70	65	60	57	66
West Midlands Metropolitan Council	74	66	64	58	56	63
Rest of West Midlands	78	68	63	59	59	65
East of England	71	70	68	63	62	67
Inner London	62	65	55	53	52	57
Outer London	69	62	59	52	54	59
South East	73	75	69	65	64	69
South West	72	71	69	64	65	68
England	74	70	65	60	60	65
Wales	76	61	54	49	45	65
Strathclyde	72	55	51	46	46	63
Rest of Scotland	77	65	58	53	55	71
Scotland	75	61	55	50	51	67
Northern Ireland	60	62	64	65	66	64

Accuracy

2.10 LFS QUARTERLY SURVEY Proxy response, NI, SN05

		All responses	Proxy	%
Age	Total (16+)	3632	1421	39
	16-24	584	442	76
	25+	3048	979	32
Gender	Total (16+)	3632	1421	39
	Male	1691	847	50
	Female	1941	574	30
Economic activity (INECAC05)	Total (16+)	3632	1421	39
	Employees	1634	749	46
	Self-Employed	342	184	54
	Government schemes	26	21	81
	Unpaid family workers	13	1	8
	ILO Unemployed	97	50	52
	Inactive	1520	416	27

2.11 LFS QUARTERLY SURVEY Imputed response, NI, SN05

		All responses	Imputed	%
Age	Total (16+)	3632	196	5
	16-24	584	42	7
	25+	3048	154	5
Gender	Total (16+)	3632	196	5
	Male	1691	98	6
	Female	1941	98	5
Economic activity (INECAC05)	Total (16+)	3632	196	5
	Employees	1634	113	7
	Self-Employed	342	18	5
	Government schemes	26	0	0
	Unpaid family workers	13	0	0
	ILO Unemployed	97	7	7
	Inactive	1520	58	4

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.

Publication of NI LFS results

There are three main vehicles used to publish Northern Ireland Labour Force Survey results; the Rolling Monthly Tables in the Labour Market Report, the LFS Quarterly Supplement and LFS Special Feature Bulletins.

Rolling Monthly Tables - Labour Market Report

Key LFS estimates for NI are produced on a monthly basis and are published by DETI in the NI Labour Market Report (LMR). The release of NI estimates is scheduled to coincide with the release of UK wide estimates by ONS and usually takes place at 9.30am on the second Wednesday of each month. There is approximately a six-week time lag between the end of fieldwork and data collection to the publication of results in the LMR.

The LFS Quarterly Supplement

The LFS Quarterly Supplement contains a detailed analysis of LFS microdata and provides users with explanatory narrative in conjunction with the data. Currently 4 LFS supplements are produced for the Spring, Summer, Autumn and Winter quarters. Each of these are published approximately seven weeks after the end of fieldwork.

LFS Special Feature Bulletins

LFS Special Feature Bulletins are used to highlight interesting aspects of the NI labour market and to provide users with detailed analysis on specific individuals or topics e.g. NI Graduates, Self-Employment in NI. The publication of these bulletins is scheduled to fit in with other LFS publications and the availability of time series data, so there is no specific time lag between the end of data collection and the publication date.

LFS Publication Schedule

All NI LFS bulletins are released in line with pre-announced publication dates. These dates are set at least six months in advance and are publicly available on the DETI website (www.statistics.detini.gov.uk). To date all NI LFS publications have been released in accordance with the pre-announced dates contained within the publication schedule, with the National Statistics Protocol on Release Practices being followed at all times.

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.

Labour Market data, including data from the LFS, is published every month, and includes text, tables and charts. The LMR and LFS publications are available, free of charge, either by download from the website (www.statistics.detini.gov.uk) or in hard copy if requested. All publications contain Technical Notes that explain LFS procedures and sampling errors and provide definitions of the terms used.

Statistics Research Branch, DETI also provide, free of charge, a NI LFS analytical service for data users (subject to resource availability). The information provided from this service is available in a range of electronic formats or in hard copy. Any data provided is annotated with relevant definitions and details of the effects of sampling error.

In addition to the NI data service the UK Data Archive at Essex University provide free access to the various UK LFS datasets, and can be contacted via the website: (<http://www.data-archive.ac.uk>).

Also a highly disaggregated UK dataset, which covers a wealth of data for local areas, is available free from NOMIS (www.nomisweb.co.uk).

5 COMPARABILITY

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

Background

The LFS began in 1973, and was carried out every 2 years until 1983. Between 1984 and 1994, data were collected annually, and the survey has been running in its present form, with quarterly sampling, since Winter 1994/95. It is carried out under European Union Regulations which specify the way in which the survey should be conducted, the quality of the results that Member States supply to Eurostat, and the timetable for supplying results. Although the LFS began as a survey designed to meet international obligations, its primary purpose is now (as stated in section 1, Relevance) "the prompt publication of key aggregate, whole economy, indicators, for the integrated assessment of labour market conditions" (Review of the Labour Force Survey, ONS, 2002).

Definitions

The definitions of the three economic activity groups - employed, unemployed and economically inactive - which are used in the LFS are the standard International Labour Organisation (ILO) definitions.

A person is economically active if they are either employed or unemployed in the survey reference week.

Employed - those aged 16 or over, who are in employment if they did at least one hour of work in the reference week (as an employee, as self-employed, as unpaid workers in a family business, or as participants in government-supported training schemes), and those who had a job that they were temporarily away from (for example, if they are on holiday).

Unemployed - those aged 16 or over who are without work, want a job, have actively sought work in the last four weeks and are available to start work in the next two weeks; or are out of work but have found a job and are waiting to start it within the next two weeks.

Economically inactive - those who are neither in employment nor unemployed. This group includes, for example, all those who are looking after a home or family, have a long-term illness or disability which prevents them working, or are retired.

It should be noted that although the LFS uses ILO definitions, these definitions are not interpreted and applied in exactly the same way in different countries. For example, although 'working age' is a common term, different countries have different statutory school leaving and retirement ages. However, Eurostat collects data from Member States and adjusts them to produce comparable estimates.

Harmonisation

Detailed information about harmonisation and the LFS can be found in the Labour Force Survey User Guide Volume 1: LFS Background & Methodology which can be accessed through the website:

(<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=1537>).

COMPARABILITY

Special interest modules and quarter specific questions

In order to limit respondent burden and keep the LFS questionnaire at a manageable length, some LFS questions are not asked in every quarterly survey. These questions are either asked in a specific quarter of each year (e.g. questions on work-related accidents are only asked in the Winter quarters) or less frequently as part of a special interest module (e.g. Child care modules are asked approximately once every two to three years). This has an obvious effect on the availability of data over time. Users are informed of and can download a list of the LFS data variables that are available in each quarter via the following website.

<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=1537>

Discontinuities in time series data

Where possible LFS data is collected and analysed using standard categories and definitions, thereby enabling comparisons with other data sources and analysis over time. However, some discontinuities do occur in time series data due to the revision of data collection codes in order to meet international requirements or to address current issues of importance. For example, the Industry and Occupation codes used to analyse LFS data have been periodically revised to mirror the latest Standard Classifications (i.e. SIC & SOC) and the 'Highest Qualification' variable is regularly revised to include new qualifications.

These changes to LFS variables are fully noted in the LFS User Guide (see link <http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=1537>) and their effect on any LFS analysis is fully explained to users in the notes to publications.

6 COHERENCE

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

Data Sources

The LFS is one of a number of sources of data about the labour market. The monthly LMR incorporates data from a number of labour market sources with the LFS being one of the main contributors. Some of the other sources provide data which overlaps with LFS data on employment, unemployment and earnings etc. The DETI website contains an explanation of each of these sources and ONS has published guidance about the strengths and limitations of each source.

Employment

The LFS provides a more complete measure of employment than the Workforce Jobs series (which is based on surveys of employers and mainly counts employees) and is the only source of detailed information about the characteristics (occupations, home-working, work patterns, and so on) of people's work. However the Workforce Jobs series provides a more accurate industrial breakdown compared to the LFS.

Unemployment

The LFS provides a more complete measure of unemployment (under the ILO definition) than the claimant count, especially for women, and is better suited to international comparisons. However, the claimant count is more accurate at small area level (below regional level) and is useful as a timely indicator of up-to-date changes in unemployment.

Earnings

The Annual Survey of Hours and Earnings (ASHE) has a larger sample size than the LFS and is therefore the preferred source of the earnings data for NI. However, the LFS is very valuable for providing data about the earnings of specific groups within the labour market (e.g. graduates) and is also useful for providing information on low-paid employees.

7 SUMMARY OF METHODS

The LFS covers private households, including persons who are temporarily absent. The resident population comprises persons who regard the sample address as their main address, and also those who have lived in the dwelling for more than six consecutive months, even if they do not regard this as their principal dwelling. Persons absent for more than six months are not regarded as members of the resident population. A private household comprises one or more persons whose main residence is the same dwelling and/or who share at least one meal per day. Students living in halls of residence are sampled via the private households of their parents.

The LFS survey year is divided into quarters of 13 weeks. Prior to January 2006, these were seasonal quarters: winter (December to February), spring (March to May), summer (June to August) and autumn (September to November). From January 2006, the LFS is being conducted on the basis of calendar quarters: January to March, April to June, July to September and October to December.

In Northern Ireland, the Valuation & Lands Agency list of domestic properties is used as the survey base. In Great Britain, the survey base is the Royal Mail's PAF (Postcode Address File), a database of all addresses receiving mail. This list is limited to addresses receiving fewer than 25 items of post per day, so as to exclude businesses.

In NI, addresses are ordered by District Council and Ward and a random start, fixed interval sampling technique is then used to select 650 new addresses each quarter. This ensures a proportional representation across the District Council areas in NI.

A rotation system comprising five waves is used. Respondents are questioned 5 times at 13-week intervals and one-fifth of the sample is replaced each quarter. Interviews are carried out on a face-to-face basis with the help of portable computers (CAPI) for interviews in the first wave. The remaining interviews for the second to fifth waves are carried out, wherever possible, by telephone (CATI).

Further details of the methodology used in the LFS can be found in the Labour Force Survey User Guide Volume 1: LFS Background & Methodology, which can be accessed through the website:

<http://www.statistics.gov.uk/statbase/Product.asp?vlnk=1537>.

8 TECHNICAL DEFINITIONS

Imputation - If a respondent is unavailable for interview, but was interviewed in the previous wave, responses from the previous wave are rolled forward. This is referred to as 'imputation'. Imputation is carried out to compensate for non-response. Rolling forward is carried out for one wave only. If the respondent is unavailable for interview during the following wave, then the interview is classified as a non-response. Tables and charts containing responses which have been rolled forward from the previous wave are denoted by the term 'including imputed'. Tables and charts which do not contain responses which have been rolled forward from the previous wave are denoted by the term 'excluding imputed'. Sample sizes and response rates which include imputed values will be higher than sample sizes and response rates which exclude imputed values.

Proxy Interviews - The LFS allows interviewers to take answers to questions by proxy if a respondent is unavailable. This is usually from another related adult who is a member of the same household, although there are exceptions to this rule:

- (i) a young person, of the same household, may translate for a non-English speaking relative;
- (ii) a carer, of the elderly or infirm, although not related, may answer for someone in their care if it can be established that they know the respondent well enough;
- (iii) anyone can respond by proxy with the personal permission of the head of household or spouse.