TTP DEMOGRAPHIC DATA QUALITY REPORT

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| **DATA SOURCE** |
| DATA SUPPLIER: | Census Office |
| DESCRIPTION: | 1991 Census (Entire enumerated population where subject is a student at term time address or subject is not a student)  |
| COVERAGE: | Northern Ireland  |
| NUMBER OF RECORDS: | 1,569,971 <http://www.nisra.gov.uk/census/previous-census-statistics/1991.html> |
| **DATA BACKGROUND** |
| Censuses in Northern Ireland are governed by the Census Act (Northern Ireland) 1969.* [Census Act (Northern Ireland) 1969](http://www.legislation.gov.uk/apni/1969/8)

By virtue of it’s scale of operation, and the fact that persons are compelled by law to respond, a Census is the most comprehensive statistical exercise carried out to enumerate the entire population. The 1991 Census in Northern Ireland was conducted on 21 April 1991, in line with arrangements across the rest of the UK. The Census represents the population recorded as present in Northern Ireland on Census night in private households, communal establishments, ships and other places. The success of a population Census depends greatly on the attitude of the public and their co-operation in completing census returns. The number of households enumerated was 524,688 which represent 98.2% of the estimated total number of households. Results from any population census will inevitably contain some inaccuracies arising from: * Failure to identify all the living accommodation in an enumeration district
* Incorrect classification of accommodation as vacant or occupants absent
* Failure to identify all the households in a building
* Failure to make contact with some households
* Misunderstanding of the form by the form filler

A Census Validation Survey (CVS) attempts to quantify these inaccuracies. This is a voluntary survey covering a sample of 2,000 addresses and provides useful information on both quality and coverage of data. Overall, the CVS indicates that the quality of the responses given in the Census was accurate, particularly in the case of household characteristics and easily defined personal circumstances.  |
| **DEMOGRAPHIC INFORMATION**  |
| Information available to the TTP for linkage purposes -* Postcode information
* Gender
* Date of birth

Name, Address and UPRN are not available for this Census which would make it extremely difficult to match.  |
| **DATA QUALITY & PRE-PROCESSING** |
| Record linkage is highly dependent on the quality of the data being linked. Many key variables can be presented quite differently between datasets as the information has been collected and recorded using different methods. This can greatly complicate record linkage unless understood ahead of time. Pre-processing can be used to standardise these variables into a consistent format prior to linkage.**POSTCODE INFORMATION-** Postcode details are 99.3% populated. It should be noted that postcodes in this data should be treated as a proxy areas indicator as postcode allocation to data in 1991 may be significantly different to postcode assignment for later data. - Postcode information is standardised prior to linkage.**GENDER-** 99.99% of records contain gender. - Gender information should be standardised prior to linkage.**DATE OF BIRTH-** All records contain the Date of Birth.  |
| **MATCHING METHODS** |
| Using the demographic information provided the following matching can be undertaken-- Person matching (using DOB and gender- this would ultimately produce a number of false positives due to a number of people sharing the same DOB)- Address matching (on postcode only- this would ultimately create a number of false positives due to respondents changing address) |
| **PREVIOUS LINKAGE MATCH RATES** |
| The Census 1991 information provided by Census Office has previously been matched to health data as part of the Northern Ireland Longitudinal Study (NILS)1. This typically produces an adjusted match rate2 of approximately 98.1%; More information can be found on the [NILS Metadata](http://www.qub.ac.uk/research-centres/NILSResearchSupportUnit/FileStore/Filetoupload%2C426316%2Cen.pdf). The Census 1991 information has also been matched to death data as part of the Northern Ireland Mortality Study (NIMS) and previous ADRC-NI projects. This typically produces a raw match rate of approximately 90.1% (94.8% adjusted). More information can be found on the [NIMS Metadata](http://www.qub.ac.uk/research-centres/NILSResearchSupportUnit/FileStore/Filetoupload%2C489432%2Cen.PDF). 1. *Due to the statement on the front of the Census 1991 form, “No information about names individuals will be passed by the Census Office to any other Government Department or to any other authority or person”, name and address information were not electronically captured and linkage was carried mainly by a manual exercise using all the 1991 Census Forms.*
2. *For the 1991 Census, using an average of the 2001 and 2011 proportions, an estimate of the number of expected eligible NILS members based on the total Census count was produced.*
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| **EVALUATION** |
| Although the 1991 Census record level information is of good quality, there is insufficient demographic data available to produce good quality matches. Although matching may be carried out using DOB, gender and postcode, the matches would be limited and would include a significant number of false positives.  |

Document Management

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| 1.1 | Created by DIAL, 06/01/16 |  |