# **2001 Census**

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**Data Management and Analysis** 

# Outline

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- One Number Census
- SDC issues in 2001 Census
- Standard Outputs
- Double Geography
- Advice

### 2001 One Number Census

- The answer to 1991 Census users' needs
  - All perturbation contained in the database
  - All tables internally consistent
  - Consistent data across geographies
  - Only one 'population'
- The reality
  - Small cell adjustment
  - Tables still internally consistent!
  - Loss of cross-table consistency
  - Loss of additive consistency
  - Any 'population' you choose

#### **2001 SDC Measures**

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- Low response
- Imputation of missing records
- Imputation of missing variables
- Record swapping between areas
- Combined categories for OA output variables
- SCAMing

## **Additional 'Measures'**

• In over 60 LAs in E&W the 2001 MYE were significantly altered from original 2001 Census-based estimates

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- 'lost forms'
- Demographic Analysis
- Address Matching
- LA Studies
- 275k 'missed' in E&W, of which 134k in London
  - ie 1 in 189 missed in E&W; 1 in 53 in London
- Time Delay from enumeration to delivery

#### **Who Benefited?**

- Individuals?
- National Statistician & ONS?
- Researchers?
- General Users?



### **Standard Outputs**

- Comparisons across tables
  - Different figures confusion
- Summation (ie OAs to Wards)
  - Inconsistency
- Producing Indicators
  - Numerator and Denominator from different tables
  - Inconsistency leading to dubious comparability
  - Not adequate for modelling



### **Origin-Destination Data**

• Comparisons: SWS and Theme Tables

#### Workers in Clementswood Ward (Redbridge)

	SWS301	TT10	Diff.
All	8810	8059	751
Underground	303	263	40
Car Driver	4646	4005	641
Bus	1567	1554	13

#### **Origin-Destination Data**

#### Workers in Hyde Park Ward (Westminster)

	SWS301	TT10	Diff.
All	17024	16712	312
Underground	5739	5298	441
Car Driver	2779	2954	-175
Bus	1835	1852	-17

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- Why the differences?
  - Different SDC in each table
  - Relative sparcity of certain modes of travel
  - Summation through OAs

### **Origin-Destination Data**

- Ethnic Migration into London Boroughs
  - Ten Ethnic Groups
  - 32x32 Matrix plus 11 other origins
  - 5-year ages and gender
- 550k cells and 1018k migrants
- Majority of cells SCAMed or true zero
- 3 Bangladeshis 'moved' from Bexley to Bromley all age '0'

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- Difficult to trust summed data
- Fit for Purpose?

#### **Advice: to Users**

- Summed cells
  - use row, column, and table totals with minimum number of primary cells
- Individual cells
  - model to 'best estimate' of total
- Scrutinise Indicators for out of range
  - choose another indicator
- Commission your own tables with precision
  - problems may persist with differencing
- Some O-D data must be considered as just not fit for purpose

**Data Management and Analysis** 

### **Advice: to ONS**

- Listen to Users
- Reconsider who is being protected from who/what
- Make SDC intelligible ....
- .... and invisible ....
- .... and keep SDC inside the database
- Consistency of approach across the UK
- If in doubt do as the Scots do.

