Gender and Ethnic Bias in Sentencing – evidence from Brazil

- Economic and Social Research Council (ESRC) ‘Pathfinder’ project
  - Brian Francis (Lancaster University, UK)
  - Ignacio Cano (UERJ)
  - Les Humphreys (Lancaster University, UK)
  - Eduardo Ribeiro (UERJ)
Gender and Ethnic Bias in Sentencing – a Study using Brazilian Microdata

- Optimising the value of Brazilian microdata
- Building networks between UK and Brazilian researchers
  - Mailing list
  - Web 2.0 website
- Training and capacity building
  - We delivered a course for quantitative Brazilian criminologists in Rio
Substantive Work – Outline

- Measure racial and gender bias in custodial sentence length
  - Focus on state of Rio de Janeiro
  - Previous work in Brazil suffers from methodological inadequacies
  - Compare findings with UK data
- Compare actual bias to perceived bias in the population via opinion surveys (in Brazil)
- This will provide valuable insights into the relationship between treatment by the Criminal Justice System and attitudes to it

ESC Liege September 2010
Data: Sentencing Bias in the UK

- Provided by the Home Office and supplied from the Police National Computer (PNC)
- Includes sanctioned offences dealt with by all police forces in the UK and some other forces e.g. forces within the armed forces
- Crime information on:
  - Arrests
  - Sanction outcomes – cautions etc, convictions
  - Disposals
- Individual information on
  - Age
  - Gender
  - Ethnicity
- All information is matched providing full offending histories for all offenders

ESC Liege September 2010
The PNC sample

- Official criminal histories of 68,359 proven offenders sanctioned in January 2001 – 177,954 sanctioned offences
- Followed up until middle/end of 2004
Measuring sentencing bias: Outcome variables

Two approaches dominate sentencing research. Each uses a different outcome variable

1. The in/out decision – probability of custodial sentence versus other sanctions. Cases in the judicial neighbourhood of a custodial sentence are considered. These probabilities are compared across groups.

2. Sentence length – only custodial sentences are considered. We compare the average length of sentence received by offenders of different groups under the same circumstances.
British Data v Brazilian Data: Outcome Variables

- PNC
  - Disposal awarded

- Brazilian data
  - Prison sentence awarded
  - Time spent in prison
<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offence Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Previous Offences of Same Type</td>
<td>0.156787</td>
<td>0.005048</td>
<td>964.7961</td>
<td>1</td>
<td>8.0624E-212</td>
<td>1.170</td>
</tr>
<tr>
<td>Number of Previous Sanctions</td>
<td>0.092398</td>
<td>0.001637</td>
<td>3187.047</td>
<td>1</td>
<td>0</td>
<td>1.097</td>
</tr>
<tr>
<td>Year of Sanction</td>
<td>657.0104</td>
<td></td>
<td></td>
<td>14</td>
<td>3.8187E-131</td>
<td></td>
</tr>
<tr>
<td>Age of Offender (at sanction)</td>
<td>407.4538</td>
<td></td>
<td></td>
<td>17</td>
<td>5.1215E-76</td>
<td></td>
</tr>
<tr>
<td>Sex (0=Male; 1=Female)</td>
<td>-0.26748</td>
<td>0.029109</td>
<td>84.43515</td>
<td>1</td>
<td>3.97027E-20</td>
<td>0.765</td>
</tr>
<tr>
<td>Ethnic Minority</td>
<td>0.445682</td>
<td>0.026661</td>
<td>279.4487</td>
<td>1</td>
<td>9.90231E-63</td>
<td>1.562</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.14317</td>
<td>0.077688</td>
<td>761.0474</td>
<td>1</td>
<td>1.5897E-167</td>
<td>0.117</td>
</tr>
</tbody>
</table>
PNC Covariates

- Age
- Gender
- Ethnicity
- Number of previous sanctions in entire history
- Number of previous sanctions in entire history for the same offence
- Year of sanction
Data: Sentencing Bias in Rio de Janeiro

- Lack of transparency
- Inferring the intention of the data system designer and operator directly from the data
Sources of data in Rio de Janeiro

- Criminal Execution Court (CEC): disposals
- Fed by data from Secretary of Prison Administration (SPA): prison sentences
  - Information Systems designed for management of individual cases, not for analysis
  - Only prison disposals
  - No acquittals -> Dependent Variable: Length of prison sentence
  - Does bias work the same for.... ?
    - the probability of conviction?
    - The probability of a prison disposal?
    - The length of prison sentence?
Several integrated datasets, which are linked through offender \textit{identity number}:

- **Offender profile**: this contains information on the offender’s individual profile, which is relatively permanent (sex, age of birth, etc.) – 137,150 records (offenders);

- **Legal proceedings**: this contains information about the legal enquiries and proceedings in which the offender was involved (e.g. date of offence, date of charge, type of crime etc) – 185,657 records (legal proceedings);

- **Occurrences**: this includes all relevant events along the application of the penalty. In the case of prison sentences, this set contains information on date of entry and release, disciplinary proceedings, participation in educational or work activities in the prison, etc – 1,060,204 records (occurrences).

- **Calculation of time to be served**: this data set is devoted to calculating time to be served (in prison or otherwise) and is fed partially by the occurrences above. It contains information on \textit{length of sentence}, time served, time deducted due to good behaviour, work, etc – 136,938 records (calculations) Note that disciplinary problems or time worked in prison may have an impact on the actual time to be served.
Criminal Execution Court Data System

Module: OCCURRENCES
1,060,204 records (occurrences) that relate to 125,840 offenders.
Data on:
- Prison Entry
- Release from Prisons
- Number of Days worked in prison
- Number of Minutes Studied in Prison Schools,
- etc.

Module: OFFENDER’S PROFILE
137,150 records (defendants)
Data on:
- Name
- Nationality
- Date of Birth
- Sex
- Ethnic membership
- Schooling, etc.

Module: LEGAL PROCEEDINGS
185,657 records (legal proceedings)
Data on:
- Date of offence
- Date when charges were pressed
- Date of sentence
- Type of Crime, etc.

Module: CALCULATION OF TIME TO BE SERVED
136,938 records (calculations)
Data on:
- Length of Sentence
- Time Served
- Time Shortened (because of work or study)

ESC Liège September 2010
Secretary of Prison Administration System

- Several integrated datasets, which are linked through a *person numeric code*

- Provides further information on:
  - **Prisoner’s conditions**: conditions of incarceration (cell location, type of incarceration)
    - **Visits**
    - **Transfers**
  - **Problems with offenders’ identification**
    - Digital imprint’s identification only in the SPA system
Race and Gender Bias in Sentencing in Rio

- Two stages at which bias can manifest itself
  - Bias in Sentence issued
  - Bias in Sentence served

- Objective: Creation of a single data base with information on:
  - Length of sentence awarded and served (reconstructed from occurrences)
  - Offender characteristics
  - Prisoner event records
  - Crime characteristics
  - Previous Convictions

- Problems merging data from several data bases: partial matching

- Possibility of using some kind of matching procedure with a random component and testing the results
Progress to date and next steps

- Created a database with information on 66,108 sentences (length of sentence issued – 1954 – 2006)
  - 95% male
  - 30% white, 20% black, 25% brown
- Uncontrolled analysis suggests no bias in terms of sentence given
- 38,642 of these sentences have been served. We will calculate time served and use this as the outcome variable
- Determine whether or not bias works in the same way for sentence issues/served