Immigration, Economy and Culture: Analysis of Attitudinal Responses

David Card
Department of Economics, Berkeley & CReAM

Christian Dustmann
Department of Economics, UCL & CReAM

Ian Preston
Department of Economics, UCL & CReAM

EASR Conference
July 2005
Introduction
Migration has clear general economic benefits in efficient international allocation of labour
Also potential economic benefits to receiving countries if generating fiscal contributions
Nonetheless immigration attracts widespread antipathy
Addressing concerns requires understanding of source of hostility

Card, Dustmann and Preston 2005
**Economic self interest: labour market competition I**

From an economic perspective, immigration results in a change of skill mix.

Suppose many labour types produce few types of output.

Immigration increases the share of certain labour types in the workforce.

Producers will be persuaded to employ these only if their relative wages fall - otherwise, there will be growth in unemployment.

Relative earnings of complementary labour types rise and average wages may increase.

Under standard assumptions there is an aggregate ‘immigration surplus’ though unequally shared.

Card, Dustmann and Preston 2005
Economic self interest: labour market competition II

If there are many types of traded output then firms will be encouraged to produce more of those goods using immigrating labour intensively.

The whole of the impact may be absorbed by changes in the mix of output with no surplus and no distributional impact on already resident labour.


Fears of such effects may still be an important determinant of attitudes.

Card, Dustmann and Preston 2005
Economic self interest: labour market competition III

Fears should be greatest among those economically active and most similar to immigrants eg those with similar skills, in similar age groups, recent immigrants, ethnic minorities

Recent economic literature uses variation of attitudes with economic characteristics (esp. labour market status, education) as evidence of economic motivation eg Scheve and Slaughter 2001; Gang, Rivera-Batiz and Yun 2002; Mayda 2002

However

• such skill gradients are observed not only in countries where immigration is predominantly low skilled (eg US, Germany, Scandinavia) but also where immigrant skills are similar to natives (eg UK, Spain)

• education is also strongly associated with other dimensions to attitudes

Card, Dustmann and Preston 2005
Economic self interest: welfare burden I

Immigrants pay taxes and consume public services and transfers. These effects may not balance and public finances may need adjustment (Borjas 1999; Auerbach and Greopoulous 1999).

Effect depends upon:

- nature of immigration - older, low skilled immigrants pay lower taxes and are more likely to claim benefits
- horizon considered - immigrants may have distinctive age profiles to earnings and may or may not return to country of origin

No clear empirical consensus (Borjas 1994; Riphahn 1998; Fertig and Schmidt 2001, Sinn et al 2001; Lee and Miller 2000)
Economic self interest: welfare burden II

Incidence of implied effects depend upon political economy of fiscal response

• If tax rates are altered then effects (positive or negative) are felt most strongly by the rich (Fetzer 2000)

• If public benefits are altered then effects (positive or negative) are felt most strongly by the poor

Political process is likely to spread impact

Card, Dustmann and Preston 2005
Social and cultural self interest

Threat may also be perceived to social and cultural prerogatives of current residents (Blumer 1958; Campbell 1965; Blalock 1967; Bobo 1983; Quillian 1995)

Group threat may generate prejudice against immigrants which in turn strengthens within-group cohesion (Sidanius and Pratto 1999)

Negative attitudes to outsiders may sustain social identity in receiving country (Tajfel 1982; Tajfel and Turner 1986; Likata and Klein 2002)
Theories not based on self interest

International altruism can lead respondents to favour immigration if seen as in the interest of sending countries.

Sense of international responsibility may be particularly strong where memories of colonial history are strong.

Immigration may be seen as harmful to source countries if robbing them of skilled workers etc.

Hostility may not be based in consideration of effects but arise from displaced aggression which may have roots in economic hardship (Le Vine and Campbell 1972; Green, Glaser and Rich 1998)
Evidence on relative importance

Citrin, Green, Muste and Wong 1995 show for US that conditioning on noneconomic attitudinal responses can weaken evidence of association between hostility and economic characteristics.

Dustmann and Preston 2003 use British Social Attitudes Survey data from 1980s to show:

- preference for tight immigration policy is much more strongly associated with expressions of racial prejudice than job insecurity or tax concerns
- labour market association is evident only for highly skilled workers
European Social Survey

Immigration module

• distinguishes different sources of immigration
  – similar and different ethnicity
  – richer or poorer origin country
  – European or overseas

• asks directly about opinion on perceived impact
  – labour market effects
  – public welfare burden
  – cultural effects

Card, Dustmann and Preston 2005
Exploring data I
Partition questions on impact according to relevance to seven dimensions:

• labour market competition (wages down; take jobs; hurt poor; fill vacancies)
• public welfare burden (take out more; bad for economy)
• cultural protectionism (undermine culture; create social tension; worse place to live; common customs better; common language better)
• race (mind boss; mind marriage; should be white)
• religion (religious variety bad; should be Christian)
• crime (worsen crime)
• international altruism (helps home country; responsibility to poor; all countries gain)

Card, Dustmann and Preston 2005
Exploring data II

Take mean immigration preference across types (rich European, poor European, rich overseas, poor overseas)

Regress on individual characteristics, country dummies and leading principal components

Latter coefficients differ by country

Card, Dustmann and Preston 2005
Principal components I

Figure 1: Factor coefficients

Card, Dustmann and Preston 2005
Principal components II

Figure 2: Factor coefficients

Card, Dustmann and Preston 2005
Principal components: Culture

Figure 3: Factor coefficients

Card, Dustmann and Preston 2005
Principal components: Labour market competition

Figure 4: Factor coefficients

Card, Dustmann and Preston 2005
Principal components: Welfare burden

Figure 5: Factor coefficients

Card, Dustmann and Preston 2005
Principal components: Internationalism

Figure 6: Factor coefficients

Card, Dustmann and Preston 2005
Model

Latent attitudes to immigration:

\[ y^* = f \Lambda + X A + u , \]

and latent indicator responses:

\[ z^* = f M + X C + w , \]

driven by factor structure:

\[ f = X B + v , \]

where \( u \sim N(0, \Sigma_u) \), \( v \sim N(0, \Sigma_v) \), \( w \sim N(0, \Sigma_w) \) mutually uncorrelated and \( \Sigma_w \) diagonal.
Reduced form

\[
Y^* \equiv \begin{pmatrix} y^* \\ z^* \end{pmatrix} = X \Gamma + \epsilon ,
\]

where

\[
\Gamma = B \begin{pmatrix} \Lambda \\ M \end{pmatrix} + A \begin{pmatrix} C \end{pmatrix} \equiv \begin{pmatrix} \Gamma_1 \\ \Gamma_2 \end{pmatrix}
\]

\[
\epsilon = v \begin{pmatrix} \Lambda \\ M \end{pmatrix} + u \begin{pmatrix} w \end{pmatrix} .
\]
Reduced form

Then \( \epsilon \sim N(0, \Sigma_\epsilon) \), where

\[
\Sigma_\epsilon = \begin{pmatrix}
\Sigma_u + \Lambda \Sigma_v \Lambda' & M \Sigma_v \Lambda' \\
\Lambda \Sigma_v M' & \Sigma_w + M \Sigma_v M'
\end{pmatrix} \equiv \begin{pmatrix}
\Sigma_{11} & \Sigma_{12} \\
\Sigma_{12}' & \Sigma_{22}
\end{pmatrix}
\]

\( \Gamma \) estimated by independent ordered probits

\( \Sigma_\epsilon \) estimated element-by-element by bivariate ordered probit given corresponding elements in \( \Gamma \)

Computation of variance-covariance matrix follows the standard procedure of expanding the score vector - see Muthén 1984, Muthén and Satorra 1995
Structural estimation

Restrictions imposed by minimum distance

\[
\Sigma_{12} = M \Sigma_v \Lambda' \\
\Sigma_{22} = \Sigma_w + M \Sigma_v M'
\]

Diagonal weighting matrix preferred (Altonji and Segal 1996)

No use of \( \Gamma \) or \( \Sigma_{11} \) so no need to assume

- zeros in \( A \) or \( C \)
- diagonality of \( \Sigma_u \)

Card, Dustmann and Preston 2005
Factor identification

Identification clearest if $M$ assumed block diagonal:

- within block correlation identify elements of $M$
- cross block correlations identify elements of $\Sigma_v$
- correlations between indicators and immigration responses identify elements of $\Lambda$

Considerable overidentification provides degrees of freedom to relax block diagonality

Local identification checked by rank condition

Card, Dustmann and Preston 2005
## Indicator loadings I

Table 1: $M$ matrix: Economic effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Labour Market</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competition</td>
<td>Burden</td>
</tr>
<tr>
<td></td>
<td>Coeff</td>
<td>t-ratio</td>
</tr>
<tr>
<td>Wages down</td>
<td>0.621</td>
<td>110.75</td>
</tr>
<tr>
<td>Hurt poor</td>
<td>0.696</td>
<td>131.87</td>
</tr>
<tr>
<td>Fill jobs</td>
<td>-0.335</td>
<td>-50.41</td>
</tr>
<tr>
<td>Take jobs</td>
<td>0.180</td>
<td>15.89</td>
</tr>
<tr>
<td>Take out more</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad for economy</td>
<td>-0.019</td>
<td>-1.20</td>
</tr>
</tbody>
</table>

Card, Dustmann and Preston 2005
## Indicator loadings II

Table 2: $M$ matrix: Other effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cultural Protectionism</th>
<th>Internationalism Protectionism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff</td>
<td>t-ratio</td>
</tr>
<tr>
<td>Undermines culture</td>
<td>0.716</td>
<td>166.95</td>
</tr>
<tr>
<td>Share customs</td>
<td>0.484</td>
<td>93.86</td>
</tr>
<tr>
<td>Religious variety</td>
<td>-0.411</td>
<td>-77.90</td>
</tr>
<tr>
<td>Share language</td>
<td>0.210</td>
<td>32.61</td>
</tr>
<tr>
<td>Social tension</td>
<td>0.660</td>
<td>142.23</td>
</tr>
<tr>
<td>Worse place to live</td>
<td>0.756</td>
<td>178.66</td>
</tr>
<tr>
<td>Bad for home country</td>
<td>-0.109</td>
<td>-13.49</td>
</tr>
<tr>
<td>All benefit</td>
<td>0.447</td>
<td>63.03</td>
</tr>
<tr>
<td>Responsibility</td>
<td>0.781</td>
<td>79.44</td>
</tr>
</tbody>
</table>
### Factor correlations

**Table 3: Σ_\text{v} \text{ matrix}:**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Labour Market</th>
<th>Public Burden</th>
<th>Cultural Protectionism</th>
<th>International Altruism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff</td>
<td>t-ratio</td>
<td>Coeff</td>
<td>t-ratio</td>
</tr>
<tr>
<td>Lab Market</td>
<td>1.000</td>
<td>0.647</td>
<td>68.42</td>
<td>0.679</td>
</tr>
<tr>
<td>Welfare</td>
<td>0.647</td>
<td>68.42</td>
<td>1.000</td>
<td>0.808</td>
</tr>
<tr>
<td>Culture</td>
<td>0.679</td>
<td>113.59</td>
<td>0.808</td>
<td>177.29</td>
</tr>
<tr>
<td>International</td>
<td>-0.328</td>
<td>-38.64</td>
<td>-0.395</td>
<td>-49.88</td>
</tr>
</tbody>
</table>

Card, Dustmann and Preston 2005
### Table 4: \( \Lambda \) matrix: Immigration opinion

<table>
<thead>
<tr>
<th>Variable</th>
<th>Labour Market</th>
<th>Public</th>
<th>Cultural</th>
<th>International</th>
<th>( \text{diag}(\Sigma_u) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competition</td>
<td>Burden</td>
<td>Protectionism</td>
<td>Altruism</td>
<td></td>
</tr>
<tr>
<td>Rich European</td>
<td>-0.084</td>
<td>-0.034</td>
<td>-0.283</td>
<td>-17.14</td>
<td>0.822</td>
</tr>
<tr>
<td>Poor European</td>
<td>-0.114</td>
<td>0.033</td>
<td>-0.439</td>
<td>-25.63</td>
<td>0.629</td>
</tr>
<tr>
<td>Rich overseas</td>
<td>-0.081</td>
<td>0.001</td>
<td>0.10</td>
<td>-21.01</td>
<td>0.779</td>
</tr>
<tr>
<td>Poor overseas</td>
<td>-0.117</td>
<td>0.082</td>
<td>-0.501</td>
<td>-29.26</td>
<td>0.599</td>
</tr>
</tbody>
</table>

Card, Dustmann and Preston 2005
Identification of $B$

If $C = 0$ then $B = \Gamma_2 M'(MM')^{-1}$

Hence first stage probit coefficients from indicator questions can be used to calculate effects of characteristics on factors.
## Factor regression I

Table 5: Factor regression: Economic characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Labour Market</th>
<th>Public</th>
<th>Cultural</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competition</td>
<td>Burden</td>
<td>Protectionism</td>
<td>Altruism</td>
</tr>
<tr>
<td></td>
<td>Coeff</td>
<td>t-ratio</td>
<td>Coeff</td>
<td>t-ratio</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.323</td>
<td>9.559</td>
<td>0.246</td>
<td>7.119</td>
</tr>
<tr>
<td>Inactive</td>
<td>0.181</td>
<td>4.361</td>
<td>0.162</td>
<td>4.120</td>
</tr>
<tr>
<td>Retired</td>
<td>0.095</td>
<td>6.808</td>
<td>0.041</td>
<td>3.076</td>
</tr>
<tr>
<td>Housework</td>
<td>0.033</td>
<td>1.543</td>
<td>0.013</td>
<td>0.622</td>
</tr>
<tr>
<td>High School Grad</td>
<td>-0.264</td>
<td>-6.848</td>
<td>-0.231</td>
<td>-6.417</td>
</tr>
<tr>
<td>College</td>
<td>-0.475</td>
<td>-29.34</td>
<td>-0.403</td>
<td>-25.400</td>
</tr>
</tbody>
</table>

Card, Dustmann and Preston 2005
## Factor regression II

Table 6: Factor regression: Demographic characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Labour Market</th>
<th></th>
<th>Public</th>
<th></th>
<th>Cultural</th>
<th></th>
<th>International</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Competition</td>
<td></td>
<td>Burden</td>
<td></td>
<td>Protectionism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coeff</td>
<td>t-ratio</td>
<td>Coeff</td>
<td>t-ratio</td>
<td>Coeff</td>
<td>t-ratio</td>
<td>Coeff</td>
<td>t-ratio</td>
</tr>
<tr>
<td>Age</td>
<td>0.571</td>
<td>16.454</td>
<td>0.481</td>
<td>13.85</td>
<td>0.597</td>
<td>17.11</td>
<td>0.286</td>
<td>8.633</td>
</tr>
<tr>
<td>Age²</td>
<td>-0.286</td>
<td>-7.530</td>
<td>-0.244</td>
<td>-6.479</td>
<td>0.218</td>
<td>5.660</td>
<td>-0.008</td>
<td>-0.224</td>
</tr>
<tr>
<td>Male</td>
<td>0.032</td>
<td>0.973</td>
<td>-0.115</td>
<td>-3.534</td>
<td>0.060</td>
<td>1.778</td>
<td>-0.096</td>
<td>-3.102</td>
</tr>
<tr>
<td>Native</td>
<td>0.131</td>
<td>3.092</td>
<td>0.296</td>
<td>7.279</td>
<td>0.205</td>
<td>4.858</td>
<td>-0.093</td>
<td>-2.241</td>
</tr>
<tr>
<td>Minority</td>
<td>-0.133</td>
<td>-3.597</td>
<td>-0.175</td>
<td>-4.767</td>
<td>-0.216</td>
<td>-5.817</td>
<td>0.219</td>
<td>5.843</td>
</tr>
<tr>
<td>Father Immigrant</td>
<td>-0.070</td>
<td>-2.155</td>
<td>-0.153</td>
<td>-4.720</td>
<td>-0.172</td>
<td>-5.047</td>
<td>0.171</td>
<td>5.103</td>
</tr>
<tr>
<td>Mother Immigrant</td>
<td>-0.159</td>
<td>-9.754</td>
<td>-0.194</td>
<td>-12.612</td>
<td>-0.146</td>
<td>-9.104</td>
<td>0.042</td>
<td>2.667</td>
</tr>
<tr>
<td>Urban</td>
<td>-0.036</td>
<td>-1.132</td>
<td>-0.134</td>
<td>-4.184</td>
<td>-0.137</td>
<td>-3.844</td>
<td>0.052</td>
<td>1.650</td>
</tr>
<tr>
<td>Rural</td>
<td>0.042</td>
<td>1.080</td>
<td>0.069</td>
<td>1.671</td>
<td>0.101</td>
<td>2.203</td>
<td>-0.029</td>
<td>-0.746</td>
</tr>
</tbody>
</table>

Card, Dustmann and Preston 2005
Conclusion

Economic issues do matter but less than other concerns especially cultural protectionism

Further work:

• More attention required to group differences
  Allow $\Sigma$ to differ by group and impose restrictions allowing $M$ or $\Lambda$ to differ
  Differences across skill groups and across country may be important

• Breakdown cultural effects further
  Cultural homogeneity and cultural harmony may be different dimensions of concern