A Tale of Two Divides: Regional Growth and Resilience in Italy and the UK

Ben Gardiner, Raffaele Lagravinese, Ron Martin, Pete Tyler

This work forms part of a larger project; How Regions React to Recession: Resilience, Hysteresis and Long Run Impacts (ESRC Grant ES/1035811/1).
1. Motivation for the study

- Study the nature of the North-South regional divide in the United Kingdom and Italy;
- Understanding the dynamics of long-run growth trends (mostly productivity but also some empl);
- Considering growth differentials across regions in each country created by current financial crisis and past recessions (GVA and empl);
- Examine the role played by industrial structure;
North-South Evolutions; Italy and UK compared and contrasted

- Gonzalez (2010); Is the North-South distinction a relevant ‘policy geography’. UK compared and contrasted;

**In Italy;**
- Barca (2001); New Trends and the Policy Shift in the Italian Mezzogiorno;
- Malanima (2012); long-term decline;
- Bryne, Fazio and Piacentino; general lack of TFP convergence. Contrary to conventional wisdom, each region seems to follow its own growth path but importance of convergence;
- Ascari and Di Cosmo (2004); determinants of TFP in Italian regions and differences between North and South;
- Dunford and Greco (2007); impact of restructuring (privatisation) on steel companies and regional implications;

**In United Kingdom;**
2. Long-run patterns
2. Long-run patterns

- Early-80s recessionary shock
- Early 90s recessionary shock
- Late 00s recessionary shock
2. Long-run patterns

Productivity Level (1971=100)

- Italy
- UK

Key events:
- Early-80s recessionary shock
- Early 90s recessionary shock
- Euro launch
- Late 00s recessionary shock
Stereotypical North-South Divides (Italy)

North-South Divides - Italy

Employment Level (1970=100)

North
South
Stereotypical North-South Divides (UK)

North-South Divides - UK

Employment Level (1970=100)

- North
- South

Stereotypical North-South Divides (Italy)
Stereotypical North-South Divides (UK)

Productivity Level (1971=100)

North

South
Cumulative Deviations in Italy

NUTS1

NUTS2
Cumulative Deviations in UK

NUTS1

NUTS2
Productivity and Employment Growth Evolutions in UK and Italy

- Evolution of cumulative productivity and employment growth deviations
- Highlighting some extremes and segmenting (NUTS2) regions into the four possible quadrants
- Also noting regions that have shown ability to turn around / shift between quadrants
Cumulative Productivity and Employment by 2011 (Italy)

Cumulative Productivity Growth 1980-2011 (relative to national)

Cumulative Employment Growth 1980-2011 (relative to national)
## Summary of Regional Evolutions

<table>
<thead>
<tr>
<th>Country</th>
<th>Quadrant 1 (high prod vs high empl)</th>
<th>Quadrant 2 (low prod vs high empl)</th>
<th>Quadrant 3 (low prod vs low empl)</th>
<th>Quadrant 4 (high prod vs low empl)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td></td>
<td>itc4, itd1+2, itd3, itd5, ite1, ite2, ite4,</td>
<td>itc1, itc2, itg1</td>
<td>itc3, itd4, ite3, itf1, itf2, itf3, itf4, itf5, itf6, itg2</td>
</tr>
<tr>
<td>UK</td>
<td>ukd2, uki1, ukj1, ukj2, ukj3, ukm5, ukm6</td>
<td>uke2, ukf2, ukf3, ukg1, ukg2, ukh1, ukh2, ukh3, ukj4, ukk1, ukk2, ukk3, ukk4, ukl2, ukn</td>
<td>ukc1, ukc2, ukd1, ukd3, ukd4, ukd5, uke1, uke3, uke4, ukf1, ukl1, ukm3</td>
<td>ukg3, uki2, ukm2</td>
</tr>
</tbody>
</table>

**Turnaround regions?**

itd5, ite1, ite3, uki1, ukj1, ukj2, ukj3
3. The Role of Industrial Structure

Using dynamic shift Share to investigate the role of industrial structure and regional characteristics on long-term national growth differential

More formally:

\[ X_{ij}^{t+n} - X_{ij}^t = \Delta X_{ij}^{t+n} = NS_{ij}^{t+n} + IM_{ij}^{t+n} + RS_{ij}^{t+n} \]

Each of these three components can be expressed as follows:

\[ NS_{ij} = X_{ij}^t \cdot g_n \]
\[ IM_{ij} = X_{ij}^t \cdot (g_{in} - g_n) \]
\[ RS_{ij} = X_{ij}^t \cdot (g_{ij} - g_{in}) \]

Where:
- \( g \) = the growth of the variable X over the pre-defined time period (between \( t+n \) and \( t \));
- \( g_n \) = the national (percentage) growth of variable X during this period,
- \( g_{in} \) = the national (percentage) growth by industry i of variable X during this period; and
- \( g_{ij} \) = the regional (percentage) growth by industry i of variable X during this period.
Contribution of Industry-Mix, and Region-Specific Factors, to Long-Run Relative Output Performance (Italy, 1980-2011)
Contribution of Industry-Mix, and Region-Specific Factors, to Long-Run Relative Employment Performance (Italy, 1980-2011)

Contribution to Cumulative Differential Growth (pp)
Contribution of Industry-Mix, and Region-Specific Factors, to Long-Run Relative Productivity Performance (Italy, 1980-2011)
Contribution of Industry-Mix, and Region-Specific Factors, to Long-Run Relative Output Performance (UK, 1980-2011)
Contribution of Industry-Mix, and Region-Specific Factors, to Long-Run Relative Employment Performance (UK, 1980-2012)
Contribution of Industry-Mix, and Region-Specific Factors, to Long-Run Relative Productivity Performance (UK, 1980-2011)
4. Assessing Impact of Regions to Recessionary Shocks (for GVA and Empl)

• Our interpretation is that resilience as a concept captures both resistance to the shock and recovery from it

• Resistance and recovery indices both calculated the same

\[ \frac{\Delta X_r}{X_r} - \frac{\Delta X}{X}^E \] \div |\frac{\Delta X}{X}|^E

– where E = national during recession (-ve growth) or recovery (+ve growth) period
– zero => no difference to expected (national) effect
– positive => more resistant / stronger recovery than expected
– negative => less resistant / lower recovery than expected
Resistance vs Recovery Indices - Italy

**Output**

- Average Resistance Index
- Average Recovery Index

**Employment**

- Average Resistance Index
- Average Recovery Index
Resistance vs Long-Run Growth (Italy)

Output

Long-run Growth (%pa, 1970-2011) vs Average Resistance Index

- North
- South

Employment

Long-run Growth (%pa, 1970-2011) vs Average Resistance Index

- North
- South
Resistance vs Recovery Indices - UK

Output

Employment
Resistance vs Long-Run Growth (UK)

Output

Employment

Average Resistance Index

Long-run Growth (%pa, 1980-2011)

North
South

Average Resistance Index

North
South
5. Summary and Conclusions

• Spatial divides in Italy and the UK
  – wider in the UK (for employment)
  – clear north-south divergence, but more detail -> more variation

• Recession and resilience
  – resistance to slowdown and recession is positively associated with ability to recover (moreso for employment)
  – more resilient regions tend to enjoy stronger long-run growth
  – clear north-south spatial patterns emerge

• Role of economic structure vs competitive effects
  – structure has a role to play but less obvious link to performance
  – regional-specific factors are mostly dominant