Integration, growth, and policy design: lessons for EU accession countries

- **Ongoing challenge for all:**
  - Monetary & fiscal discipline
  - Sustainable supply side growth

- **Institutions affect choice of macro regime**

- **Regime affects institutional reform**

- **Need right pillars for monetary policy**
Simultaneous policy failures

- Commitment problems in:
  - monetary, fiscal, structural

- Fixing monetary alone not optimal

- Integration a chance to make progress on fiscal and structural
Post 1990: Europe & Latin America

• Disinflation largely successful

• Episodes of monetary reversal
  – causes often fiscal indiscipline

• Growth
  – most reliable when macro discipline
  – goal of EU accession a huge help
Formal model

- Poor country has low tax capacity $T$
- Taxes above $T$ distort output
- Costly structural adjustment raises $T$
- Baseline model takes $T$ as fixed
- For simplicity, make coefficients unity
(1) \[ y = \pi^u - \tau + \varepsilon \] output equation
\[ \tau = t^e - T \] tax distortion

(2) \[ G = t + \pi \] budget financing

(3) \[ L = \pi^2 + y^2 + g^2 \] loss function
\[ g = G - G^* \] g defined

(4) \[ g = \tau - h + \pi \] budget

(5) \[ h = G^* - t^+ > 0 \] inherited structure
• $h$ indexes remaining transition \quad ($h^* = 0$)

• monetary policy more flexible than fiscal

• Hence timing:

  \quad $h$ fixed at start of period

  Then private expectations formed

  Then fiscal policy set

  Then shock $\varepsilon$ observed

  Then monetary policy & inflation
First best (conditional on h)

Expected policy:

\( \tau, \pi^e \) minimise \( [\pi^e + \tau^2 + (\tau - h + \pi^e)^2] \)

- \( h/3 = \pi^e = \tau \)
- \( g^e = y^e = -h/3 \)

High inflation & low output BOTH caused by poor structural inheritance (large \( h \))
Accommodation of shocks:

Assume \( \pi^u = A\epsilon \) & \( g^u = \pi^u \)

A minimises \( \sigma^2[A^2 + (1+A)^2 + A^2] \)

\( \pi^u = g^u = - \epsilon / 3 \), \( y^u = 2\epsilon / 3 \) \hspace{1cm} (6)

Optimally exploits informational advantage of flexible monetary policy
Monetary discretion

- Monetary policy chooses inflation
  *taking expectations as given*
  *but knowing $\pi^u$ affects $g^u$*

- Everyone anticipates this,
  *hence deduce $\pi^e(\tau, h)$*

- Fiscal policy then chooses $\tau$
(a) $\pi^u$ rule still best: Same loss from shocks

(b) Comparing expected levels

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<thead>
<tr>
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<th>Ist best</th>
<th>Discretion</th>
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<tbody>
<tr>
<td>$\tau$</td>
<td>$h / 3$</td>
<td>$h / 4$</td>
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<tr>
<td>$\pi^e$</td>
<td>$h / 3$</td>
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<td>$y^e$</td>
<td>$-h / 3$</td>
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<td>$g^e$</td>
<td>$-h / 3$</td>
<td>$-h / 4$</td>
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<td>$L(\pi^e, y^e, g^e)$</td>
<td>$(3/9)h^2$</td>
<td>$(3/8)h^2$</td>
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Delegating monetary policy

- **Rogoff**: ‘conservative central banker’
  
  Lower $\pi^e$ but too little shock accommodation

- **Svensson** Delegate inflation target $\pi^*$

- **Loss functions**
  - **Central bank** $[\pi - \pi^*]^2 + ky^2$
  - **Government** $\pi^2 + y^2 + g^2$

Choose fiscal policy knowing how central bank then behaves
3 key results

• Policy design \[ k = \frac{1}{2}, \quad \pi^* = \frac{h}{6} \] decentralises the first best

- \( \pi^* \) offsets the inflation bias, but still need conservative central bank, now to offset fiscal externality

• Euroisation at \( \pi = 0 \) inferior to domestic monetary discretion in this model
So why join EMU?

• Also affects trade, growth, and potential output (Frankel & Rose)

• Currency unions affect fiscal discipline
  – Need fiscal commitment problems

• Currency unions affect reform
  – Also need reform commitment problems
Endogenising structural adjustment

• Benefit of lower $h$ (higher tax capacity):
  higher $y$, lower $\pi$, higher $g$

• Assume $V^e = L^e + (h-h_{-1})^2 + \phi (V_{+1})^e$

• Solve for optimal rate of reform $h = \rho h_{-1}$

• Less discounting (larger $\phi$) makes adjustment more rapid

• Costs same, benefits bigger
Distortions & structural adjustment

• Larger distortions raise benefit of reform

• Hence monetary discretion speeds structural adjustment

• Monetary union might slow growth

• So far only monetary failures: now need to allow fiscal and structural too
Fiscal failures

- Fiscal policy chosen after private expectations but before shock and monetary response

- Output equation: \[ y = \pi^u - \tau^e + \varepsilon \]
  surprise taxes are lump sum taxes

- Hence choose lump sum taxes to achieve \( g^e = 0 \)

- Private sector anticipates this

- Monetary commitment alone may make things worse – first best needs fiscal commitment too
Fiscal and reform failures

• Suppose ordering is reform, fiscal, monetary

• Suppose dollarise or join tough monetary union (exogenous low $\pi$)

• Now no contemporaneous benefit to reform: $[\pi$ fixed, and fiscal always sets $g^e = 0]$ 

• Surprise reform only raises future output

• If sufficiently myopic, growth stagnates

• 3 commitment failures + 1 externality
Lessons for EU entrants

• Inflation targeting the right ECB pillar

• Some kind of SGP is required
  – *But cyclically adjusted is better*

• Structural reform still matters a lot
  – *Here EU fatigue is not helpful*

• Current regimes fine for ERM2
  – *Provided they avoid exchange rate crises*