Structure and Co-Fluctuations

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Determinants of Business Cycles Correlation

• Openness to Trade in Goods and Services (Frankel-Rose)

• Openness to Capital Flows (Forbes)

• Disaggregated Structure (not necessarily sectoral shocks, e.g. Kraay-Ventura)
Approach

• Cross-section of (bilateral BP filtered) GDP correlations (PWT Version 6.0 – 49 countries, 1950-1998)
• Cross-section of (bilateral) trade intensities (IMF Direction of Trade)
• Cross-section of capital account changes (Lane-Milesi-Ferreti)
• Cross-section of similarity in sectoral shares (UN Statistical YearBook – 1-digit Value Added, covering whole economy)
Approach (cont.)

• Similarity index in sectoral shares:

\[ \sum_i |s_{ij} - s_{ik}| \text{ with } s_{ij} = \frac{y_{ij}}{\sum_i y_{ij}} \]

• Panel – causes of increased synchronization, as well as their change over time.
Bilateral Similarity Indices
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Issues

• Endogeneity of Trade Intensity?
Trade cycles with GDP, so synchronized economies trade in booms and don’t in recessions. No implication on average intensity. In doubt: IV with Gravity variables, Sachs-Warner dates

• Endogeneity of Capital Account Co-Movements?
Possibly simultaneous. IV with lagged values, or instrument with IMF indices of capital controls.

• Endogeneity of Sectoral Similarity?
Possibly – specialization responds to business cycles (long-run?) characteristics. Instrument with initial values.
Issues (cont.)

• Are Bilateral Correlations significantly different from each other? (they are significantly different from 0).

i.e. variance-covariance structure of the cross-section of bilateral correlations

• Accounting for relative size? (e.g. in capital inflows or trade as % of receiving GDP)

Control for relative size?

Use \((X_{ij}/Y_i + X_{ji}/Y_j)\)?