Institutions and Business Cycles

Sumru Altuğ, Koç University and CEPR
Mustafa Emin, Bocconi University
Bilin Neyapti, Bilkent University

Introduction

- ✓ Institutions "rule": property rights and the rule of law have positive effects on economic performance.

  See Knack and Keefer (1995), Hall and Jones (1999), Easterly and Levine (2003), and Rodrik, Subramanian and Trebbi (2002).

- ✓ Literature on the effects of monetary and financial institutions on macroeconomic performance

  See Bade and Parkin (1988), Alesina (1988, 1989), Alesina and Summers (1993), Grilli, Masciandro and Tabellini (1991), Cukierman et al (1992, 2002), Eijffinger and Schaling (1993), Allen and Gale (2007), De Haan and Shehzad (2009), among others.

Introduction

✓ Are there institutional underpinnings of business cycle fluctuations?

Giannone *et al* (2010): After controlling for income per capita, financial market depth, banking competition, liquidity, and financial macroeconomic imbalances, policies that favor credit market liberalization tend to correlate negatively with countries' resilience to the current financial crisis.

de Carvalho Filho (2011): Examines post-crisis growth for 51 developed and emerging economies and finds that inflation targeting countries outperformed their peers in terms of GDP growth or the behavior of industrial production.

Diamond and Rajan (2009): Emerging market economies were able to avoid the worst effects of the 2007-2008 crisis due to the many institutional and policy changes that they undertook in response to previous crises.

Our approach

✓ Relate the *average business cycle characteristics* of 62 countries to *institutional factors*, after controlling for structural and macroeconomic factors.

✓ Characterize the business cycle in terms of

the turning points of the business cycle for each country

the duration and amplitude measures for each phase of the business cycle

synchronization of business cycles across countries.

Summary of Business Cycle Characteristics

	Contraction		Expansion	
	duration	amplitude	duration	amplitude
G7	3.37	-2.38	27.83	22.32
EU	3.78	-2.94	28.72	22.96
Indus.	3.20	-3.11	22.75	31.33
LA	4.18	-8.53	14.78	19.16
Emer.	3.72	-6.41	15.11	22.72
Trans.	4.06	-7.83	23.59	41.84

Duration of Contractions

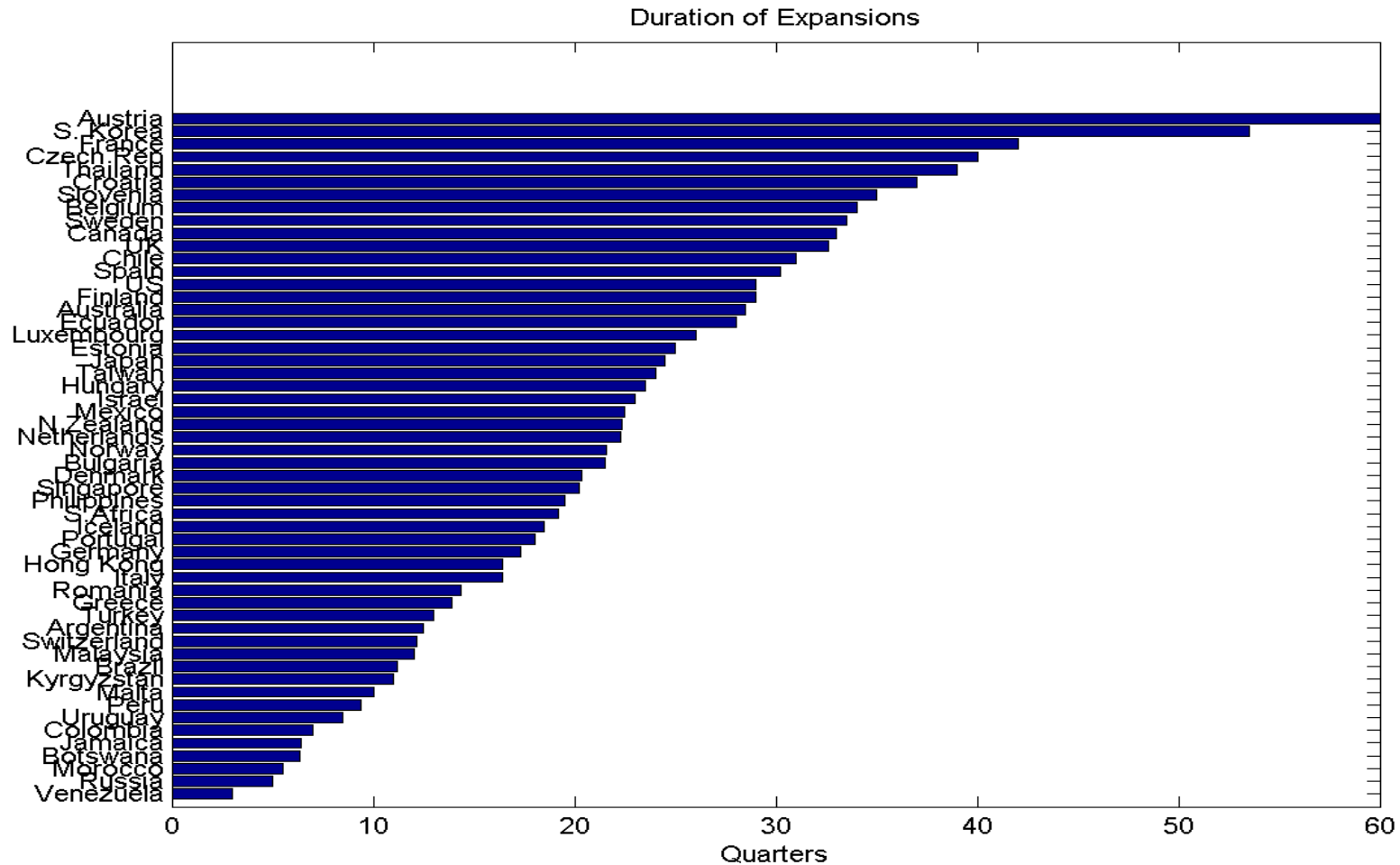Duration of Contractions

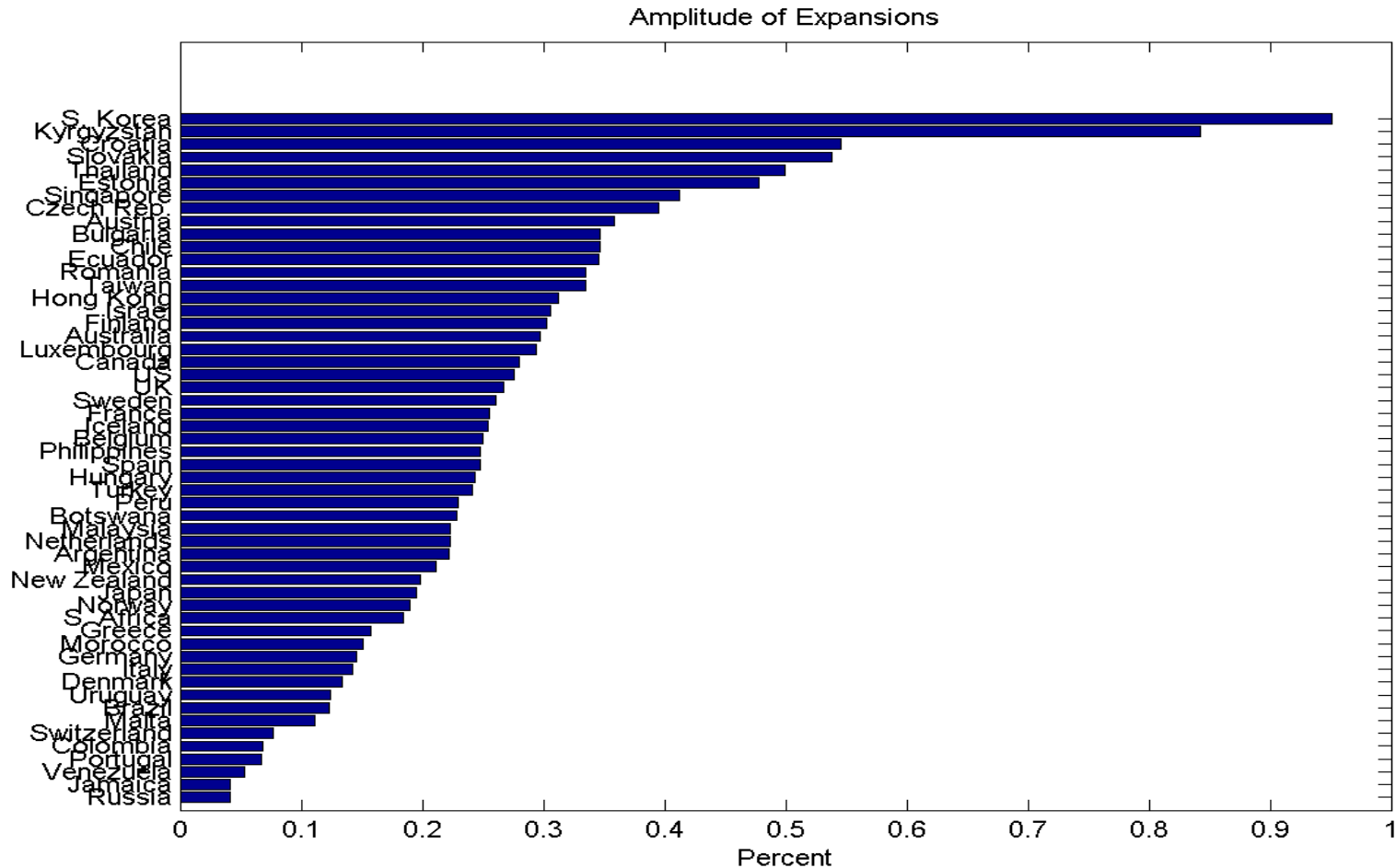# Amplitude of Contractions
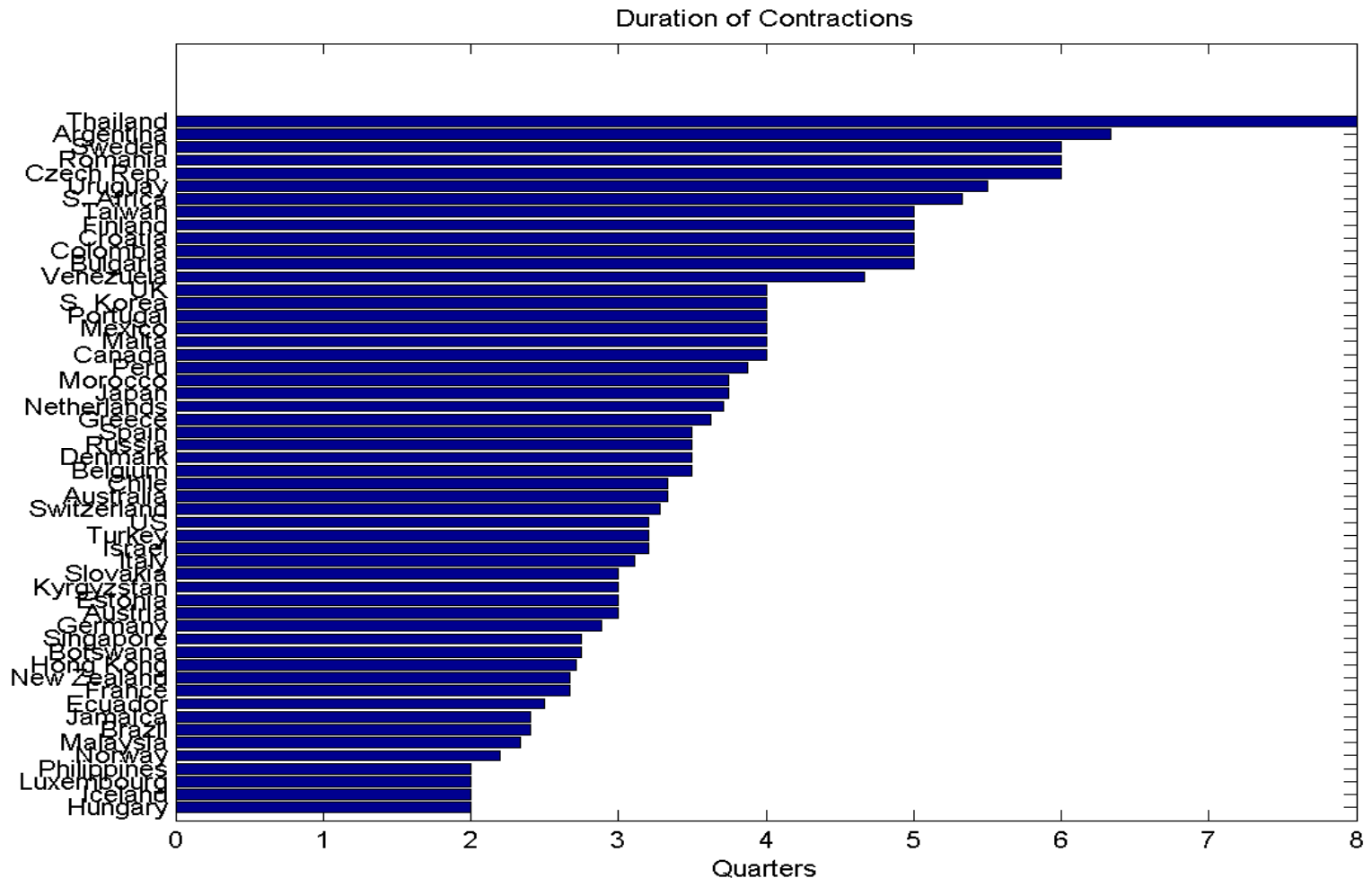
Amplitude of Contractions

Duration of Expansions
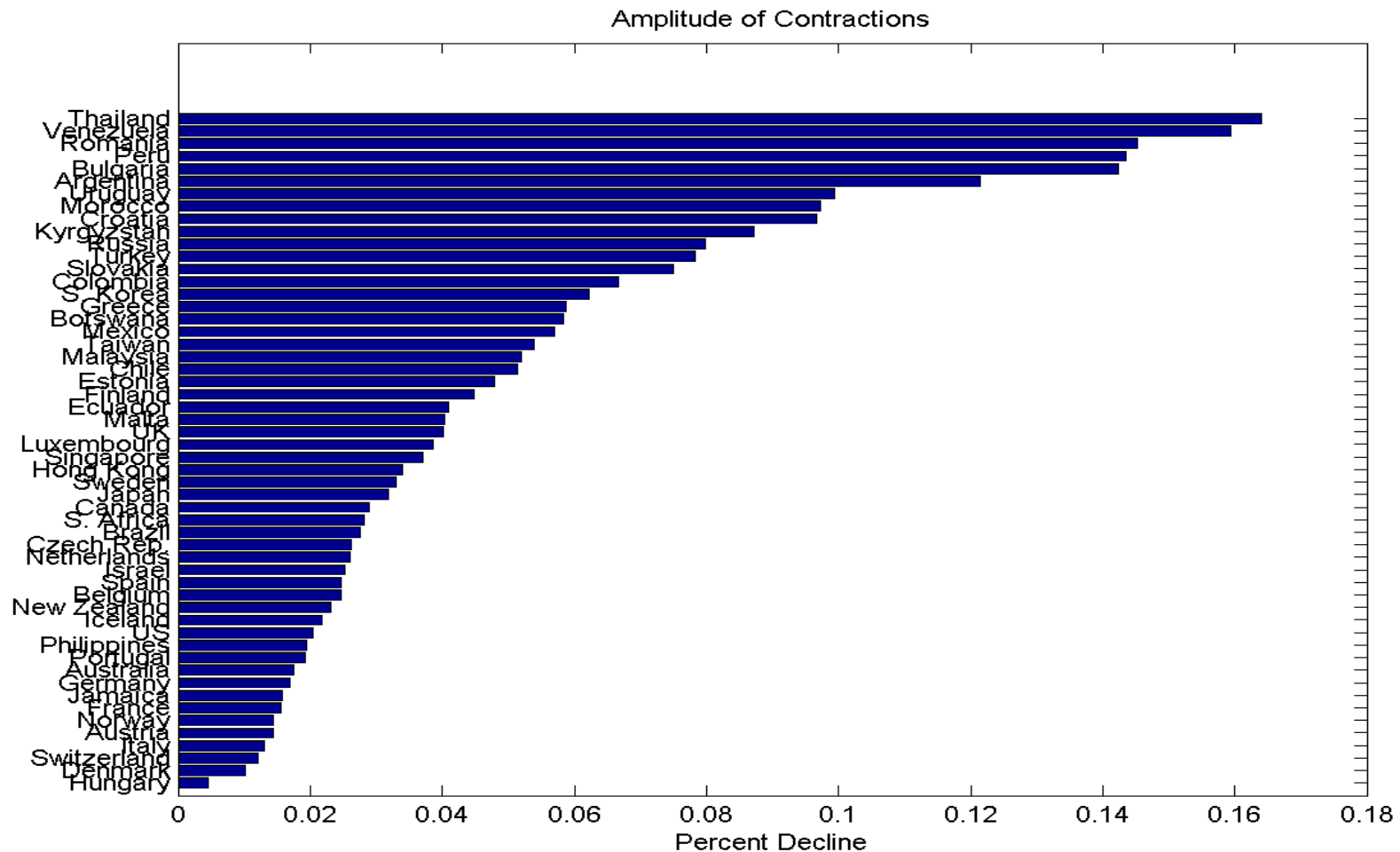
Duration of Expansions

Amplitude of Expansions

Institutional Indicators

- ✓ The Worldwide Governance indices provided by the World Bank (see Kaufman, Kraay and Mastruzzi, 2009). We aggregate
  - (i) voice and accountability, (ii) political stability and absence of violence/terrorism, (iii) government effectiveness, (iv) regulatory quality, (v) rule of law, and (vi) control of corruption for 1996, 1998, 2000 and annually for 2002-2008.
- ✓ The Institutional Profiles Database 2009 (*IPD*) developed by the French Development
  - Focus on level of development of labor and capital markets denoted *ipdlm* and *ipdkm*.

Institutional Indicators

- ✓ The Civil Liberties Index prepared by the Freedom House (*FH*).
  - Data are available annually from 1972-2008 for 192 countries
- ✓ Indices of central bank independence (*CBI*)
  - Cukierman *et al* (1992, 2002) and extended by Arnone *et al* (2007)
- ✓ Dummies for inflation targeting (*IT*), currency boards and currency union regimes (*CB* and *CU*)

Macro/structural Indicators

✓ Structural variables

- openness measured as the sum of exports and imports as a percentage of GDP

- the income share of industrial value added (*iva*)

- country group dummies: *G7*, *LA*, and *CEE*

✓ Macro variables

- inflation (*D*)

- credit extended to the private sector as a ratio to GDP (*cr/Y*)

Macro/structural variables

- ✓ Macro variables (cont'd)
    - current account balance as a ratio to GDP (ca/Y)
    - the ratio of FDI to GDP (fdi/Y)
    - the log of real GDP per capita.
- ✓ We use the principal component of the macro variables
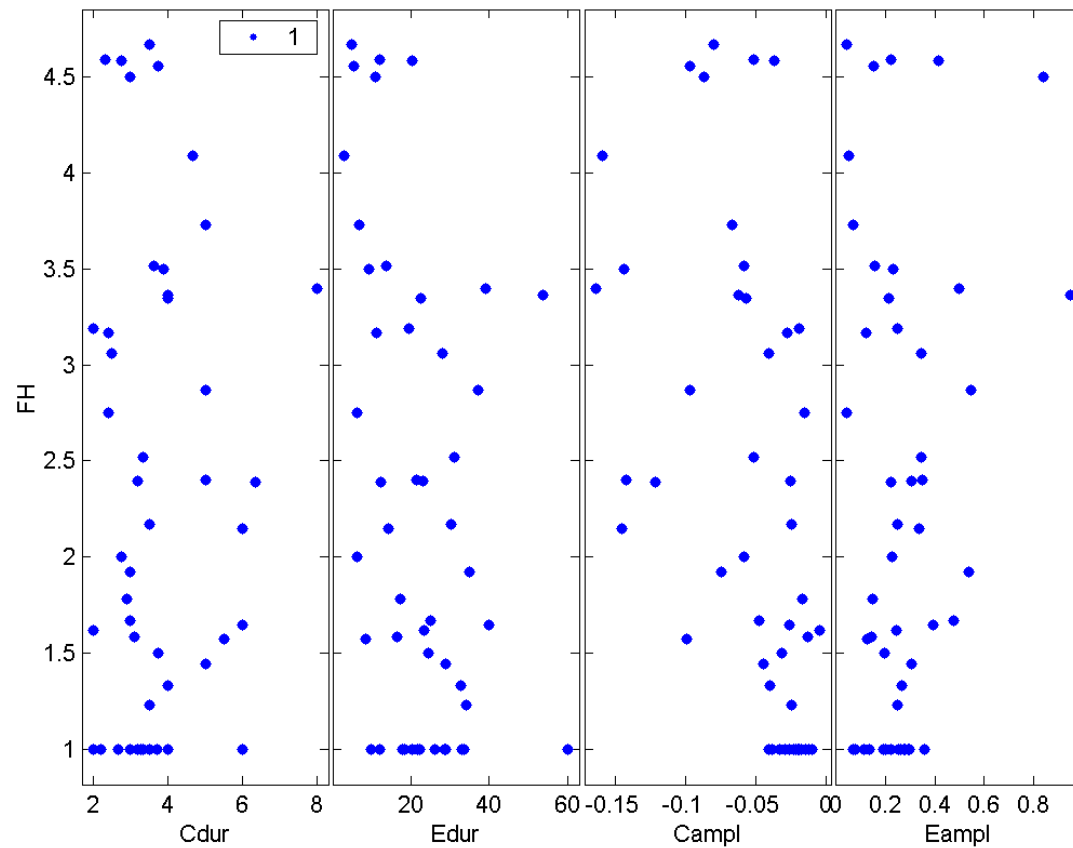- ✓ Data obtained from World Bank's World Economic Indicators database

Preliminary Evidence
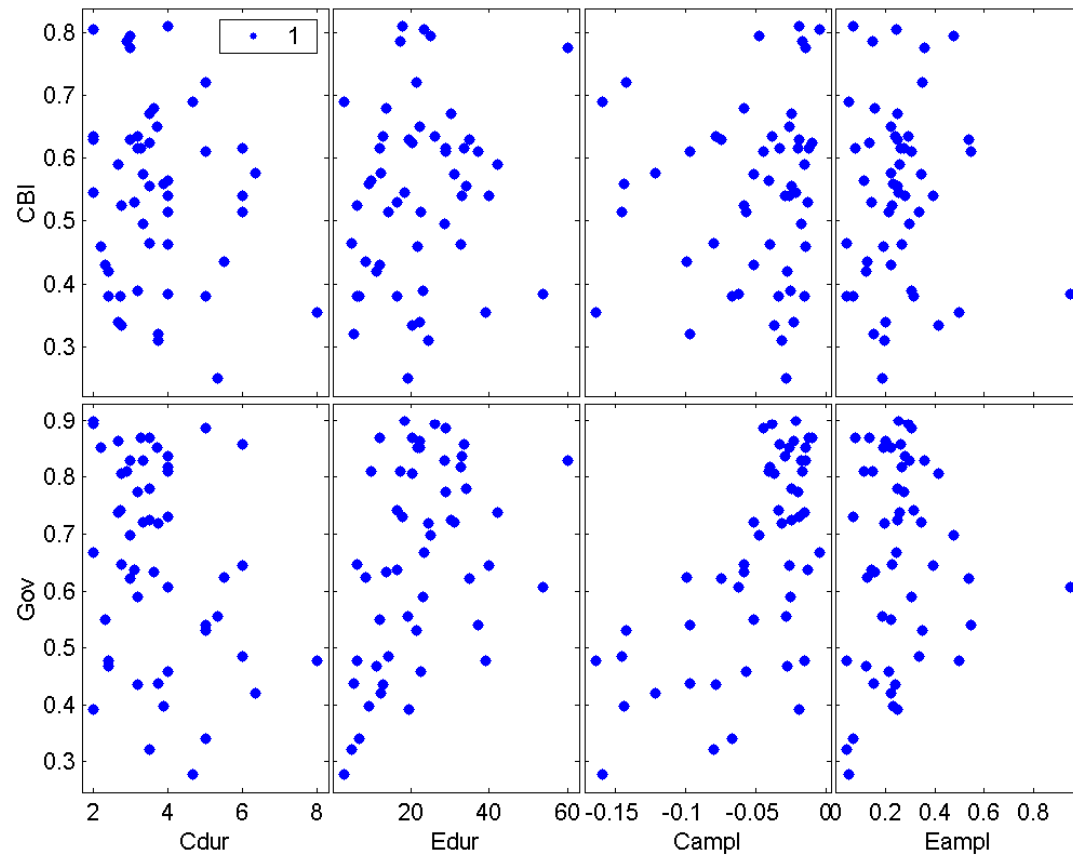
Preliminary Evidence
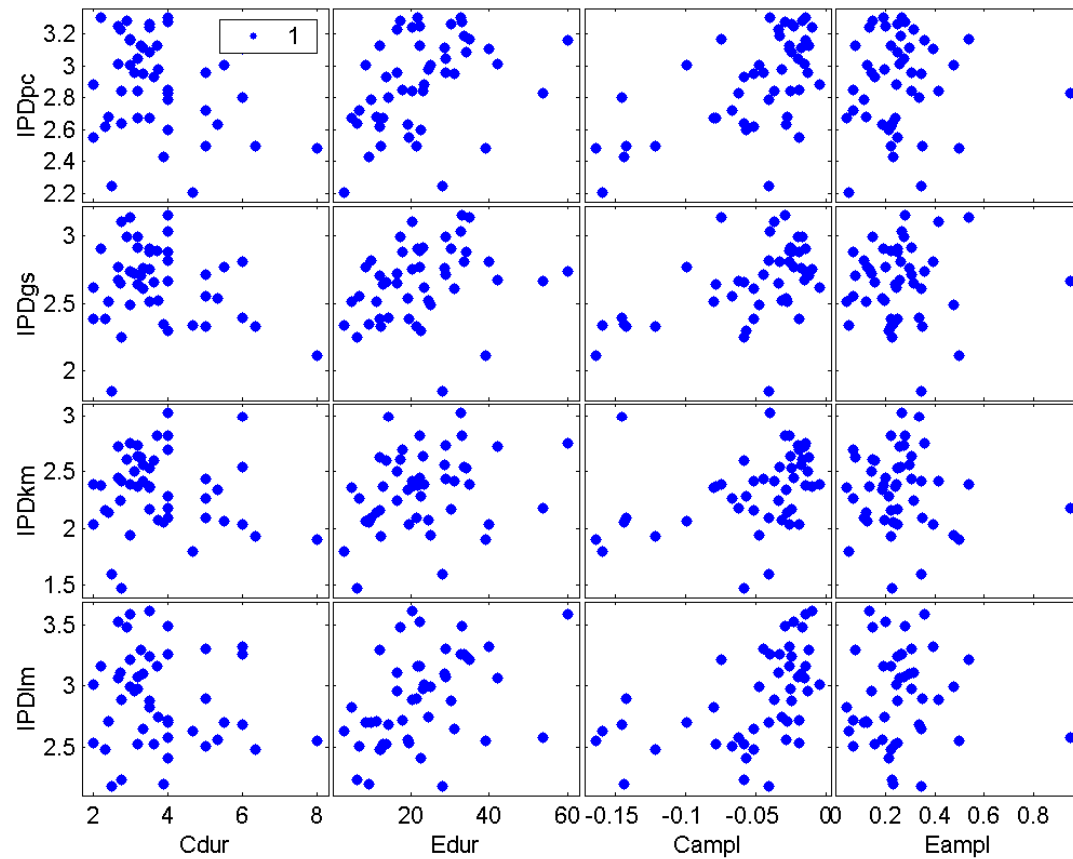
Preliminary Evidence

Regressions

- ✓ **Table 2:** *Gov* and *ipdlm* are positively (while *FH* is negatively) associated with the duration of expansions and the amplitude of contractions.
  - Greater values of denote a lower rating on the freedom index.
- ✓ Thus, countries that score better on a variety of governance indicators tend to experience longer expansions and to display a smaller declines in real output during contractions.
- ✓ Countries with inflation targeting (*IT*) in place also tend to display similar features.

Regressions

✓ No find significant effects of membership in a currency union (*CU*) or central bank independence (*CBI*) on business cycle characteristics.

✓ **Table 3**:Including the first components of the macroeconomic factors together with the individual institutional indicators or with their principal components does not yield a significant effect for the macro factors.

Synchronization

- ✓ Conduct robust analysis of differences in institutional indicators on business cycle synchronization measured as the concordance index.
- ✓ Distance is negatively and bilateral trade intensity positively related to bilateral concordance indices.
- ✓ Differences in the governance and the labor markets indicator together with mutual practice of IT emerge robust explanatory variables of synchronization.

Conclusions

✓ What can be made of these results?

✓ Need to do more analysis exploiting time variation in the variables and the role of conditioning on pre-sample values.

✓ Nevertheless we find a new set of indicators that appear to display significant correlations with business cycle features and synchronization.