

# Commitment Institutions and Electoral and Political Instability

## A Reduced-Form Approach

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# Do the commitment institutions of central bank independence and fixed exchange rates affect electoral and political instability?

- ▶ Net Welfare Benefits
  - ▶ Inflation Time Inconsistency
  - ▶ Political efficacy, access to capital
  - ▶ Economic Voting, Increased Stability
- ▶ Political Business Cycles
  - ▶ Inability to manipulate economy or satisfy partisans
  - ▶ Monetary (perhaps fiscal) policy
  - ▶ Economic voting, Decreased Stability

## Can Trump fire Fed Chair Jerome Powell?

Adriene Hill, Janet Nguyen, and Daisy Palacios

Dec 24, 2018



# Theoretical Mechanisms

Figure: Effects of Limiting Institutions on Instability



(a) Welfare Model

(b) Political Business Cycle Model

- ▶ Bernhard and Leblang (2002)
  - ▶ OLS, 16 parliamentary democracies since 1970s
  - ▶ CBI increases cabinet duration by 3mos, Fixed rates by 5mos, especially with open trade and capital account
- ▶ Clark, Golder, and Poast (2013)
  - ▶ Survival Analysis, 19 OECD countries since 1970s
  - ▶ Both institutions increase leader survival but only after 7y in office
- ▶ Contribution:
  - ▶ Far larger dataset including non/semi-democracies
  - ▶ More consideration of endogeneity: choice of institutions based on stability consideration, de jure independence
  - ▶ Political, not just electoral stability (coups, civil wars, etc), consideration for specific governmental positions

- ▶ Panel of 192 countries, 1970-2016
- ▶ Varieties of Democracy
  - ▶ V2elturnhos, v2eltturnhog, v2eltvrig
  - ▶ 0 for same individual (no turnover), 1 for same party or coalition (half turnover), 2 for new party & ind. (full turnover)
  - ▶ WGI Political Violence (neg = unstable)
  - ▶ Instability Event- coup, civil war, internal conflict
- ▶ Garriga (Cukierman, Webb, Neyapti)- de jure CBI
- ▶ Dreher et al.- Irregular turnover of governor- de facto CBI
- ▶ Reinhart, Rogoff Exchange Rates: 16 categories (higher = float)

- ▶ Separate regressions (bad control problem)
- ▶ FEs, clustered SEs
- ▶ De Jure CBI and more instability: PBCs
- ▶ De Facto CBI (high irregular turnover) and less lower chamber turnover
- ▶ Fixed rate and less HOS turnover
- ▶ Welfare Benefits of De Facto CBI, Fixed Rates?

# Fixed Effects Regression with Clustered Standard Errors

**Table:** De Jure CBI, Fixed Effects Regression with Clustered Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	0.276 (1.44)	0.303* (2.30)	0.389* (1.99)	-0.417** (-2.75)	1.000*** (11.15)
Fixed Rate	-0.0120 (-1.61)	-0.0207*** (-3.45)	-0.00615 (-0.71)	0.0106 (1.69)	0.00690 (1.33)
Constant	0.618*** (6.15)	0.390*** (5.43)	0.535*** (4.99)	0.0283 (0.31)	-0.113* (-2.20)
Observations	1399	1399	1141	2141	4207

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Fixed Effects Regression with Clustered Standard Errors

**Table:** De Facto CBI, Fixed Effects Regression with Clustered Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	-0.117 (-1.68)	-0.0512 (-0.81)	-0.211** (-2.81)	0.00955 (0.36)	0.0244 (1.36)
Fixed Rate	-0.00548 (-0.82)	-0.0117* (-2.06)	0.00444 (0.53)	0.0153* (2.08)	0.0128** (2.73)
Constant	0.805*** (9.91)	0.521*** (7.75)	0.865*** (9.43)	-0.247*** (-3.54)	0.261*** (6.77)
Observations	1651	1651	1334	2669	4491

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



# Ordered Logit (Mean Marginal Effects)

- ▶ Nothing changes in terms of significance, except for fixed Erates and HOG
- ▶ xtologit; random effects

# Ordered Logit Mean Marginal Effects

**Table:** De Jure CBI, Mean Marginal Effects, Ordered Logit Panel Regression, Random Effects, Clustered Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L.H. Turnover
De Jure CBI			
No Turnover	-0.146 (-1.93)	-0.208*** (-3.54)	-0.316*** (-3.65)
Half Turnover	0.0152 (1.80)	0.0390*** (3.32)	0.0980** (3.21)
Full Turnover	0.131 (1.93)	0.169*** (3.47)	0.218*** (3.68)
Fixed Rate			
No Turnover	0.00792* (2.45)	0.00896** (3.21)	0.00392 (0.96)
Half Turnover	-0.000826* (-2.22)	-0.00168** (-3.00)	-0.00122 (-0.96)
Full Turnover	-0.00710* (-2.46)	-0.00728** (-3.18)	-0.00271 (-0.96)
Observations	1399	1399	1141

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Ordered Logit Mean Marginal Effects

**Table:** De Facto CBI, Mean Marginal Effects, Ordered Logit Panel Regression, Random Effects, Clustered Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L.H. Turnover
De Facto CBI			
No Turnover	0.0734* (2.23)	0.0356 (1.30)	0.119** (3.19)
Half Turnover	-0.00756* (-2.02)	-0.00655 (-1.24)	-0.0296** (-3.05)
Full Turnover	-0.0658* (-2.23)	-0.0290 (-1.31)	-0.0890** (-3.14)
Fixed Rate			
No Turnover	0.00384 (1.32)	0.00473 (1.93)	-0.00440 (-1.19)
Half Turnover	-0.000396 (-1.27)	-0.000870 (-1.87)	0.00110 (1.18)
Full Turnover	-0.00345 (-1.32)	-0.00386 (-1.92)	0.00331 (1.19)
Observations	1651	1651	1334

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Panel Logit (binary instability event variable) Mean Marginal Effects

- ▶ Fixed effects
- ▶ More evidence that de jure CBI increases political instability
- ▶ Fixed exchange rate (low RR rate classification) increases pol. instability, but very small effect size

# Binary Instability Event Logit, Mean Marginal Effects

**Table:** Instability Event Panel Logit, Fixed Effects and Clustered Standard Errors, Mean Marginal Effects

	(1) Instab. Event
De Jure CBI	0.376*** (12.93)
Fixed Rate	0.00227** (2.99)
Observations	3912

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Binary Instability Event Logit, Mean Marginal Effects

**Table:** Instability Event Panel Logit, Fixed Effects and Clustered Standard Errors, Mean Marginal Effects

	(1) Instab. Event
De Facto CBI	0.0282 (1.18)
Fixed Rate	0.0152*** (6.71)
Observations	4163

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## IV1: Tertiary Ed Enrollment (CBI), Aggregate GDP (Fixed Rate)

- ▶ Good first stages
- ▶ Poor exclusion restrictions for political stability, better ones for electoral stability/turnover
- ▶ De jure CBI now increases lower chamber turnover, but no longer HOS; strange sign for WB stability
- ▶ Fixed rates appear to increase instability
- ▶ De facto CBI more or less insignificant

# Tertiary Education and Aggregate GDP Instruments

**Table:** Instruments of Tertiary Education Enrollment Rate and Aggregate GDP, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	0.629 (1.55)	-0.478 (-1.42)	0.847* (1.97)	6.976*** (13.27)	0.835*** (4.30)
Fixed Rate	-0.00669 (-0.19)	0.0171 (0.51)	0.0266 (0.76)	-0.0865** (-2.84)	-0.0295 (-1.66)
Constant	0.401 (1.28)	0.576* (2.01)	0.0636 (0.22)	-3.422*** (-9.22)	0.292 (1.65)
Observations	851	851	686	1865	2047

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



# Tertiary Education and Aggregate GDP Instruments

**Table:** Instruments of Tertiary Education Enrollment Rate and Aggregate GDP, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	1.295 (1.19)	-0.626 (-0.74)	2.071 (1.66)	39.47* (1.97)	-18.01 (-0.46)
Fixed Rate	0.0152 (0.46)	-0.0101 (-0.32)	0.0864* (2.08)	0.581 (1.49)	-0.131 (-0.47)
Constant	-0.538 (-0.50)	1.085 (1.32)	-1.708 (-1.39)	-40.72 (-1.96)	17.29 (0.48)
Observations	962	962	788	2236	2011

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## IV2: Population Share Social Science/Business Grads (CBI), Agg GDP (Fixed Rates)

- ▶ Better Exclusion Restriction
- ▶ Very limited data but strong result for de jure CBI and political instability

# Population Share Social Science/Business Grads and Agg GDP Instruments

**Table:** Instruments of Social Science/Business Graduates Population Share and Aggregate GDP, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	44.33 (0.49)	14.48 (0.47)	-22.04 (-0.48)	-19.44 (-0.24)	2.704*** (4.11)
Fixed Rate	-1.277 (-0.47)	-0.422 (-0.44)	0.704 (0.51)	0.722 (0.27)	-0.129 (-1.60)
Constant	-19.38 (-0.50)	-6.144 (-0.46)	10.39 (0.52)	8.414 (0.25)	
Observations	20	20	17	53	12

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Population Share Social Science/Business Grads and Agg GDP Instruments

**Table:** Instruments of Social Science/Business Graduates Population Share and Aggregate GDP, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability
De Facto CBI	-18.95 (-0.83)	-5.278 (-0.40)	19.37 (0.80)	-7.488 (-0.66)
Fixed Rate	0.0129 (0.22)	-0.0133 (-0.25)	0.131* (2.07)	0.0659 (1.16)
Constant	19.38 (0.85)	5.799 (0.44)	-19.06 (-0.79)	7.212 (0.64)
Observations	59	59	52	187

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Just Aggregate GDP for Fixed Rates

- ▶ Clearer case for fixed rates decreasing pol and electoral stability (PBC)
- ▶ Note on exclusion restriction: still an imperfect case
  - ▶ Agg GDP proxies for economy size (optimum currency area)
  - ▶ Arguably not as connected to GDP per capita to stability

# Aggregate GDP Instrument for Fixed Rates

**Table:** Instrument of Aggregate GDP for Fixed Exchange Rates, Robust Standard Errors

	(1) L. H. Turnover	(2) WB Pol. Stability
Fixed Rate	0.0779*** (3.35)	-0.257*** (-4.13)
Constant	0.0991 (0.58)	1.992*** (4.16)
Observations	835	437

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Table of Lags (see paper)

- ▶ Additional observations for the longer term:
  - ▶ T-3 sees strongest de jure CBI political instability impact
  - ▶ T-6, T-8 de jure CBI increases pol instability. T-8 reduces HOG turnover (electoral instability) (similar to Clark, Golder, and Poast).
  - ▶ Fixed rates increase instability in the same T-6 and up range
  - ▶ De facto CBI not very significant
  - ▶ Similar results with lagged ordinal logit specification, though de facto CBI more significant in reducing L.H. turnover

# Institutional Interaction Terms

- ▶ De jure CBI and fixed rates jointly grow political instability
- ▶ Signs mixed for other kinds of instability
- ▶ De facto CBI and fixed rates in combination somewhat increase instability relative to individually
- ▶ Pseudo Mundell-Fleming trilemma and PBCs: more difficult to manage the economy
  - ▶ Is CBI a good representation of “domestic monetary autonomy”?
  - ▶ See appendix for test with capital controls explicitly



# Summary

- ▶ De jure CBI generally decreases (esp. pol) stability, suggesting limits on PBCs
- ▶ Unclear sign for de facto CBI though it appears to increase stability if anything
- ▶ Fixed rates mostly appear to increase stability in fixed effects regressions, but the sign flips in more robust models (IV, lags)
- ▶ Combinations/interactions of commitment institutions more destabilizing
- ▶ Commitment institutions more often politically costly relative to previous literature
- ▶ Robust results
  - ▶ Not covered: institutional controls for federalism and corporatism do not affect signs or cause large changes in effects, expected results on HOS = HOG and legislative power in practice, interactions with democracy do not behave as expected, capital account openness generally destabilizing, somewhat mitigated with interactions

- ▶ More complex theory for de jure versus de facto CBI puzzle, importance of credible commitment
- ▶ Diverging predictions for Head of Government, Head of State, Lower House Turnover
  - ▶ HOS and Lower House seem to have strongest relationships
- ▶ Endogenous elections
- ▶ Dynamic panel (A-Bond)?
- ▶ Ordinal logit regression with IV (different procedure)

## Further Explorations

- ▶ Regional government exists and has autonomy and authority, checks and balances/horizontal accountability
- ▶ Not strictly necessary
  - ▶ Many items already included in FEs
  - ▶ No sign flips for main variables
- ▶ Omitted: Corporatism
- ▶ The controls themselves are often significant and somewhat interesting

# Controls Excluding Corporatism

**Table:** All Controls Excluding Corporatism, Fixed Effects and Clustered Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	0.181 (0.62)	0.151 (0.70)	0.481 (1.25)	-0.531 (-1.98)	0.961*** (5.33)
Fixed Rate	-0.00641 (-0.48)	-0.0356*** (-3.93)	0.00257 (0.15)	-0.000489 (-0.05)	0.0232* (2.49)
Reg. Govt. Exists	0.863*** (3.65)	0.0000816 (0.00)	1.010*** (3.50)	0.107 (1.98)	-0.221* (-2.22)
Horiz. Acctability	0.390** (3.30)	0.371** (3.38)	0.220 (1.85)	0.0639 (0.56)	0.100* (2.20)
Checks and Balances	-0.0126 (-0.31)	-0.0392 (-1.40)	0.00165 (0.04)	0.00951 (0.75)	0.00762 (0.63)
Autonomous Regions	-0.714 (-1.37)	-0.0764 (-0.58)	-1.274*** (-4.10)	-0.359*** (-7.85)	-0.0416 (-0.69)
State Govt. Auth.	0.306 (0.40)	0.0825 (1.19)	0.465 (1.65)	0 (.)	-0.0651 (-1.28)
Constant	-0.317 (-0.73)	0.522** (2.67)	-0.676* (-2.35)	0.168 (0.95)	-0.164 (-1.46)
Observations	483	483	415	780	1389

# Controls Excluding Corporatism

**Table:** All Controls Excluding Corporatism, Fixed Effects and Clustered Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	-0.264* (-2.39)	-0.119 (-1.13)	-0.321* (-2.57)	0.0570 (1.44)	0.0307 (0.98)
Fixed Rate	-0.00661 (-0.56)	-0.0207* (-2.16)	0.00415 (0.24)	-0.000246 (-0.03)	0.0311*** (3.53)
Reg. Govt. Exists	0.681** (2.75)	0.0312 (0.33)	0.985*** (5.03)	0.0731 (0.68)	-0.0622 (-0.36)
Horiz. Acctability	0.306** (3.17)	0.308** (3.24)	0.223 (1.81)	0.0329 (0.34)	0.133* (2.36)
Checks and Balances	-0.0415 (-1.22)	-0.0507 (-1.74)	-0.00753 (-0.20)	0.01000 (0.61)	-0.00346 (-0.27)
Autonomous Regions	-0.553 (-1.10)	-0.0437 (-0.64)	-1.206** (-3.16)	-0.302*** (-7.57)	0.0203 (0.23)
State Govt. Auth.	0.308 (0.38)	0.0861 (1.41)	0.615* (2.52)	0 (.)	0.123 (1.45)
Constant	0.322 (0.71)	0.651*** (4.73)	-0.134 (-0.56)	-0.192 (-1.12)	0.0226 (0.15)
Observations	563	563	477	993	1416

# HOS = HOG?

- ▶ V2exhoshog is an indicator for whether HOS and HOG are the same person
- ▶ De jure CBI has more of an impact on both positions when they are the same individual
- ▶ However, fixed rates only affect HoS turnover when the head of state and head of government are not the same individual
- ▶ Overall, in most cases, effects occur when  $\text{HoS} = \text{HoG}$  (and definitely HoS effects mostly appear when this is the case. See paper for lagged interaction term analysis.)
  - ▶ Logically more accountability for HoG, unless they are the same person
  - ▶ Direct accountability under presidentialism?

# HOS = HOG, Tertiary Education Instrument

**Table:** HOS = HOG, Tertiary Education Instrument, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	1.912** (2.58)	1.882* (2.51)	1.047 (1.25)	3.978*** (4.63)	0.709** (2.84)
Fixed Rate	-0.0142 (-0.26)	-0.0140 (-0.26)	0.000305 (0.01)	-0.164*** (-6.15)	-0.0122 (-0.54)
Constant	-0.280 (-0.64)	-0.268 (-0.61)	0.0264 (0.07)	-1.484*** (-3.46)	0.179 (1.12)
Observations	291	291	247	654	765

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



# HOS = HOG, Tertiary Education Instrument

**Table:** HOS = HOG, Tertiary Education Instrument, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	14.23 (0.39)	17.59 (0.40)	3.692 (0.39)	-26.08 (-0.92)	-1.598 (-1.81)
Fixed Rate	0.196 (0.41)	0.241 (0.41)	0.0972 (0.74)	-0.320 (-0.89)	-0.0238 (-0.85)
Constant	-12.74 (-0.38)	-15.91 (-0.38)	-3.186 (-0.36)	25.22 (0.92)	1.987* (2.30)
Observations	323	323	279	760	734

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# HOS NOT HOG, Tertiary Education Instrument

**Table:** HOS NOT HOG, Tertiary Education Instrument, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	0.196 (0.43)	-0.0412 (-0.12)	0.471 (1.05)	7.754*** (6.82)	0.0619 (0.12)
Fixed Rate	-0.0306 (-0.69)	0.0661** (2.64)	0.0482 (1.14)	0.190 (1.37)	-0.0965 (-1.87)
Constant	0.859 (1.70)	-0.237 (-0.82)	0.141 (0.30)	-6.252*** (-3.41)	1.284 (1.91)
Observations	560	560	439	1211	1282

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# HOS NOT HOG, Tertiary Education Instrument

**Table:** HOS NOT HOG, Tertiary Education Instrument, Robust Standard Errors

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	0.475 (0.31)	0.535 (0.41)	1.872 (0.97)	145.7 (0.41)	40.28 (0.05)
Fixed Rate	-0.0120 (-0.16)	0.0841 (1.62)	0.110 (1.11)	4.603 (0.39)	-0.224 (-0.12)
Constant	0.404 (0.21)	-0.893 (-0.57)	-1.730 (-0.69)	-176.0 (-0.40)	-33.39 (-0.05)
Observations	639	639	509	1476	1277

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Legislative Power in Practice

- ▶ Examining robust results, effects on lower house turnover are somewhat more in line with expectations when it has power in practice
- ▶ See paper for lagged interaction term analysis

# Democracy/Nondemocracy

- ▶ Classification based on Polity IV scores
- ▶ Tested:
  - ▶ De jure versus de facto CBI matters more in democracies due to rule of law
  - ▶ Electoral versus political turnover/instability matters more in democracies
- ▶ Not really any consistent pattern of major differences. All items generally more significant in democracies
- ▶ See paper for lagged interaction term analysis, which somewhat challenges the last point

# Democracies, Tertiary Education Instrument

Table: Instrumental Variable of Tertiary Education, Democracies

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	-0.453 (-0.77)	-1.933*** (-3.32)	0.128 (0.21)	6.173*** (10.70)	1.032*** (4.25)
Fixed Rate	0.0486 (1.21)	0.0754 (1.85)	0.0554 (1.37)	-0.118*** (-4.41)	-0.0471** (-2.70)
Constant	0.737* (2.54)	1.103*** (3.79)	0.326 (1.20)	-2.778*** (-8.71)	0.271 (1.83)
Observations	615	615	510	1297	1387

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Democracies, Tertiary Education Instrument

Table: Instrumental Variable of Tertiary Education, Democracies

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	-0.842 (-0.87)	-2.290* (-2.07)	0.452 (0.53)	23.30* (2.43)	9.329 (0.98)
Fixed Rate	0.0120 (0.39)	-0.0157 (-0.44)	0.0775** (2.77)	0.252 (1.65)	0.0354 (0.35)
Constant	1.492 (1.72)	2.673** (2.76)	-0.134 (-0.17)	-23.09* (-2.49)	-7.906 (-0.91)
Observations	716	715	596	1582	1387

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Nondemocracies, Tertiary Education Instrument

Table: Instrumental Variable of Tertiary Education, Nondemocracies

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	-1.939 (-0.99)	-0.295 (-0.30)	1.116 (0.63)	15.47 (1.49)	5.034 (0.71)
Fixed Rate	0.110* (2.14)	0.0316 (0.99)	0.0887 (1.42)	-1.014 (-1.76)	-0.183 (-0.97)
Constant	0.173 (0.22)	-0.0254 (-0.06)	-0.779 (-1.01)	1.248 (0.62)	-0.207 (-0.13)
Observations	194	194	146	476	602

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



# Nondemocracies, Tertiary Education Instrument

Table: Instrumental Variable of Tertiary Education, Nondemocracies

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	76.68 (0.05)	-33.62 (-0.08)	0.748 (0.19)	-1.311 (-0.41)	-1.726 (-0.68)
Fixed Rate	2.058 (0.05)	-0.588 (-0.08)	0.108 (0.72)	-0.559*** (-3.58)	-0.0535 (-0.69)
Constant	-85.72 (-0.05)	34.88 (0.08)	-1.102 (-0.24)	5.928* (2.20)	2.491 (1.25)
Observations	186	187	146	522	566

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Capital Account Openness Interactions

- ▶ Strange sign on effects for the following slides
- ▶ If anything, open capital accounts lead to more significance (logical given increased Mundell-Fleming tradeoff)
- ▶ See paper for lagged interaction term analysis. Some results agree with Bernhard et al. (2002)
- ▶ Interesting side result on the political optimality of Bretton Woods (closed capital account, fixed rates, de facto CBI)

# High Capital Account Openness, Tertiary Education Instrument

Table

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	1.036 (0.91)	-1.759 (-1.63)	1.585 (1.16)	12.70*** (6.24)	1.960* (2.57)
Fixed Rate	-0.00654 (-0.13)	0.0410 (0.84)	0.0157 (0.30)	-0.217*** (-3.87)	-0.0199 (-0.90)
Constant	0.138 (0.30)	1.213** (2.75)	-0.322 (-0.61)	-6.097*** (-5.69)	-0.441 (-1.24)
Observations	468	468	392	1023	981

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# High Capital Account Openness, Tertiary Education Instrument

Table

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	1.416 (1.02)	-1.320 (-1.07)	2.343 (1.28)	15.39** (3.29)	4.248 (1.32)
Fixed Rate	0.0181 (0.59)	-0.0133 (-0.40)	0.0764 (1.89)	0.0870 (0.91)	0.0334 (0.69)
Constant	-0.705 (-0.56)	1.777 (1.69)	-1.954 (-1.18)	-14.51*** (-3.36)	-3.497 (-1.17)
Observations	571	570	476	1320	1001

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Low Capital Account Openness, Tertiary Education Instrument

Table

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Jure CBI	-0.0646 (-0.09)	-0.0470 (-0.09)	0.398 (0.60)	7.875*** (4.23)	-1.194 (-1.03)
Fixed Rate	-0.0557 (-1.05)	0.0461 (1.28)	-0.0320 (-0.55)	0.182 (1.70)	-0.161 (-1.94)
Constant	1.166 (1.66)	0.0628 (0.14)	0.784 (1.23)	-6.084*** (-3.49)	2.294* (2.00)
Observations	383	383	294	842	1066

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Low Capital Account Openness, Tertiary Education Instrument

Table

	(1) HoG Turnover	(2) HoS Turnover	(3) L. H. Turnover	(4) WB Pol. Stability	(5) Instab. Event
De Facto CBI	1.205 (0.76)	-0.435 (-0.48)	-0.244 (-0.19)	-7.957** (-3.03)	241.5 (0.01)
Fixed Rate	-0.0404 (-0.75)	0.0184 (0.53)	-0.0473 (-0.82)	-0.106 (-1.22)	-16.01 (-0.01)
Constant	0.0372 (0.02)	0.640 (0.71)	1.349 (1.10)	7.554** (2.89)	-84.95 (-0.01)
Observations	391	392	312	916	1010

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$