# Lecture 5:

## Political Institutions and Policy Outcomes

- One the key areas of empirical political economy is to understand the impact that institutions have on policy outcomes

- There are basically two kinds testing grounds for this:
  - comparison across countries
  - comparisons within countries

- The question is how to proceed.

General Issues

Components of the Policy Process

- – **Policy Making Institutions ($I_{1st}$).**
  - * For cross-country situations: bicameralism, presidentialism
  - * For U.S.: Restrictions on the governor's and legislators' freedoms, including tax and expenditure limitations; super-majority requirements for tax increases; the governor's possession of a line item veto; rules for appointing regulators and judges; rules governing whether a state permits direct democracy, such as citizens' initiatives; and rules on whether governors face term limits.

– **Electoral Institutions** $(I_{2st})$.

  * For cross-country situations: majoritarian versus parliamentary system, size of districts

  * For U.S.: Rules affecting who can run for office and who can vote, including those affecting the costs of registering to vote (such as poll taxes and literacy tests); those regulating campaign contributions in state elections; and those governing the conduct of primary elections.

## Preferences

- – Virtually all approaches to political processes take the preferences of voters and partes as given, and we shall do so here.

  – Suppose then that preferences of voters are defined over a policy space $x_{st} \in \mathcal{A}_t$.

  – This is a potentially wide-ranging description of all policies that can be controlled or influenced by state governments in the U.S..

  – Suppose also that heterogeneity across the voting population can be parametrized for voter $i$ by $\theta_i \in \Theta$.

  – Preferences can be written as:

$$v\left(x_{st}, y_{st}, \theta_i\right)$$

where $y_{st}$ is a vector of state demographic and economic characteristics that affect policy preferences.

- – Let $\Theta_{st}$ parametrize the distribution of voter tastes in the population in state $s$ at date $t$.

  – Party preferences:

$$V\left(x_{st}, \chi_{jst}, y_{st}\right) \text{ for } j \in \{P\},$$

where $\chi_{jst}$ parametrizes the distribution of party members and/or influential party elites.

## The Post-Election Policy Process

- To describe the post-election policy process, let $\ell_{st}$ be a variable that characterizes the political outcomes in state $s$ at time $t$.

- There is a legislative outcome function:

$$x_{st} = G\left(\ell_{st}, X_{Dst}, X_{Rst}, I_{1st}, y_{st}\right) \tag{1}$$

where

- – $X_{jst}$ be the "platform" of party $j$ in state $s$ at time $t$, and

- $I_{1st}$ are the policy making institutional variables

- The function $G(\cdot)$ is intended to capture, in reduced-form, a potentially complicated policy process such as a legislative bargaining model or a model of the separation of powers between the executive and the legislature.

- Consider the following empirical model for the $kth$ policy in state $s$ at time $t$ of the form:

$$x_{kst} = \alpha_{ks} + \beta_{kt} + \omega_k I_{1st} + \gamma^k y_{st} + \psi^k \ell_{st} + d_k X_{Dst} + r_k X_{Rst} + \eta_{kst}, \quad (2)$$

where $\alpha_{ks}$ is a state indicator variable and $\beta_{kt}$ is a year indicator. The focus is on how $I_{1st}$ affects the outcome of interest.

- For OLS yield an unbiased estimate of $\omega_k$, all relevant elements of $\ell_{st}$ need to be included, as they are likely to be correlated with $I_{1st}$ and that $(X_{Dst}, X_{Rst})$ must either be fully observed or be uncorrelated with $I_{1st}$.

- Reduced for model:

$$x_{kst} = \alpha_{ks} + \beta_{kt} + \omega_k I_{1st} + \gamma^k y_{st} + \eta_{kst}$$

which gives an unbiased estimate of the direct effect of $I_{1st}$ on policy outcomes ex post only if $I_{1st}$ have no impact on $\ell_{st}$.

## Elections

- Let

$$P\left(\ell; X_{Dst}, X_{Rst}, c_{Dst}, c_{Rst}, y_{st}, I_{2st}, H_{st}\right) \tag{3}$$

  denote the probability that a particular political outcome is $\ell$, when the platforms of the parties are $(X_{Dst}, X_{Rst})$, the candidates' characteristics are $(c_{Dst}, c_{Rst})$, the history of policy is $H_{st}$ and the institutions thought to affect the electoral process are $I_{2st}$.

- The role of the variable $H_{st}$ is potentially quite important and surfaces, in particular, in models of political agency relationships as introduced by Barro (1973) and Ferejohn (1986).

- Let $w_{st}$ be the incumbent's advantage over the challenger, with

$$w_{st} = a_s + b_t + \zeta I_{2st} + \iota y_{st} + \mu H_{st} + \rho_{st} \tag{4}$$

where $a_s$ is a state fixed effect and $b_t$ is a year effect. Then we could suppose that

$$\ell_{st} = \begin{cases} = 1 & \text{if } w_{st} \geq 0 \\ 0 & \text{otherwise.} \end{cases} \tag{5}$$

This kind of model can help to pinpoint policies for which the governor is held to account, which are those elements of $H_{st}$ that influence reelection. It can also be used to see whether reelection rates are dependent on the institutions within a state.

## Party Strategies

- Party preferences induced by (3) be denoted:

$$W\left(X_{Dst}, X_{Rst}, c_{Dst}, c_{Rst}, y_{st}, I_{st}, \chi_{jst}, H_{st}\right) \text{ for } j \in \{D, R\}\,. \qquad (6)$$

- The strategic problem facing parties at election times is to select platforms and candidates to maximize these payoffs.

- For the purposes of taking these relationships to the data, it would typically be assumed that a Nash equilibrium exists and is unique.

- The outcomes are now party platforms and candidate lists.

## Political Outcomes

- Given a set of party strategies, the electoral process (3) gives rise to a particular realization of $\ell_{st}$.

- This could be modeled empirically for the $k$th political outcome, as follows:

$$\ell_{kst} = \zeta_{ks} + \xi_{kt} + \lambda^k I_{st} + \phi^k y_{st} + \nu_{kst}, \tag{7}$$

where $\zeta_{ks}$ is a state indicator, $\xi_{kt}$ is a year indicator.

- In (3), political outcomes were allowed to depend on political and policy history.

- However, in the empirical work to date, estimation of (7) has rarely included history variables. In principle, this could be done by estimating

$$\ell_{kst} = \zeta_{ks} + \xi_{kt} + \lambda^k I_{st} + \phi^k y_{st} + \kappa^k H_{st} + \nu_{kst}. \tag{8}$$

- In practice, $H_{st}$ can be represented by lagged policy and political control.

## Policy Outcomes

- Reduced-form approach:

- $$x_{kst} = \alpha_{ks} + \beta_{kt} + \omega_k I_{st} + \gamma^k y_{st} + \eta_{kst}. \tag{9}$$

- Again, history is generally overlooked in the estimation of policy equations.

- But we could have

$$x_{kst} = \alpha_{ks} + \beta_{kt} + \omega_k I_{st} + \gamma^k y_{st} + \tau_k H_{st} + \eta_{kst}. \tag{10}$$

The variable $H_{st}$ could again include lagged policy and political controls, raising similar econometric issues to those that arise in estimating (8).

## Institutional Change

- Consider

$$\begin{aligned} & \widehat{W}\left(y_{st}, I_{st}, \chi_{jst}, H_{st}\right) \\ = \; & W\left(X^*_{Dst}, X^*_{Rst}, c^*_{Dst}, c^*_{Rst}, y_{st}, I_{st}, \chi_{jst}, H_{st}\right) \\ \text{for } j \; \in \; & \{D, R\} \end{aligned}$$

where the $*$ denotes that we are considering the equilibrium values of platforms and candidate choices which themselves depend upon institutions and other exogenous variables.

- Suppose that a party is in office and, by incurring some costs, could change the institutions that affect future payoffs. Then:

$$I^*_{jst} = \arg\max_{I_{st}} = \widehat{W}\left(y_{st}, I_{st}, \chi_{jst}, H_{st}\right).$$

- From the standpoint of empirical modeling, institutions can be modeled in the same way as policy and legislative outcomes.

- Consider the following:

$$I_{est} = \alpha_{es} + \beta_{et} + \gamma_e H_{st} + \sigma_e w_{st} + \omega_{est}. \tag{11}$$

## Summary

- The effect of policy making institutions $I_{1st}$ on the *ex post* policy process as represented by equation (2).

- The effect of institutions $I_{2st}$ on the electoral process as represented by equation (4).

- The effect of institutions (mainly electoral institutions $I_{2st}$) on political outcomes as represented by equation (7).

- The effect of institutions, $I_{st}$, on policy as represented by the equation (9).

- The process determining institutional change as represented by equation (11).

## Persson and Tabellini

- They have an ambitious research program looking at differences between different systems on policy outcomes:

- Main comparisons which I will focus on here are:
  - Majoritarian versus Proportional Systems
  - Presidential versus Parliamentary systems

- They have recently published a whole book on this which is worth looking at.

- Here, I will focus on their article which is coming out in the AER.

**Table 1 Constitutions, policy outcomes and covariates: Cross sectional data for 85 countries 1990-98**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | *maj*=1 | *maj*=0 | *p*(1,2) | *pres*=1 | *pres*=0 | *p*(3,4) |
| *cgexp* | 25.6 | 30.8 | 0.03 | 22.2 | 33.3 | 0.00 |
| | (8.2) | (11.3) | | (7.2) | (10.0) | |
| *ssw* | 4.7 | 10.1 | 0.00 | 4.8 | 9.9 | 0.00 |
| | (5.4) | (6.6) | | (4.6) | (7.0) | |
| *lyp* | 8.1 | 8.6 | 0.04 | 7.9 | 8.7 | 0.00 |
| | (1.2) | (0.8) | | (0.9) | (0.9) | |
| *trade* | 83.7 | 75.6 | 0.44 | 62.5 | 89.1 | 0.01 |
| | (59.9) | (37.5) | | (27.5) | (54.2) | |
| *prop65* | 6.7 | 9.6 | 0.01 | 5.6 | 10.3 | 0.00 |
| | (4.4) | (4.9) | | (3.5) | (4.8) | |
| *age* | 0.22 | 0.20 | 0.77 | 0.16 | 0.24 | 0.09 |
| | (0.25) | (0.20) | | (0.23) | (0.21) | |
| *gastil* | 2.7 | 2.3 | 0.08 | 3.1 | 2.0 | 0.00 |
| | (1.4) | (1.1) | | (1.2) | (1.1) | |

Mean values by constitutional rules; standard deviations in brackets
*p*(x,y) is the probability of falsely rejecting equal means across groups corresponding to columns x and y, under the assumption of equal variances.

**Table 2 Size of government and constitutions: OLS estimates**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Dep. var. | *cgexp* | *cgexp* | *cgrev* | *dft* | *cgexp* | *cgexp* | *cgexp* |
| *pres* | -5.18 | | -5.00 | 0.16 | -2.65 | -7.75 | -6.46 |
| | (1.93)*** | | (2.47)** | (1.15) | (2.70) | (2.70)*** | (2.98)** |
| *maj* | -6.32 | | -3.68 | -3.15 | -1.45 | -7.94 | -6.33 |
| | (2.11)*** | | (2.15)* | (0.87)*** | (2.32) | (3.74)** | (2.48)** |
| *propres* | | -6.56 | | | | | |
| | | (3.01)** | | | | | |
| *majpar* | | -6.96 | | | | | |
| | | (3.72)* | | | | | |
| *majpres* | | -10.37 | | | | | |
| | | (3.03)*** | | | | | |
| *pres_newdem* | | | | | | 3.50 | |
| | | | | | | (2.72) | |
| *maj_newdem* | | | | | | 3.58 | |
| | | | | | | (4..03) | |
| *newdem* | | | | | | -4.08 | |
| | | | | | | (2.23)* | |
| *pres_baddem* | | | | | | | 2.42 |
| | | | | | | | (4.16) |
| *maj_baddem* | | | | | | | 2.06 |
| | | | | | | | (5.97) |
| *baddem* | | | | | | | -5.73 |
| | | | | | | | (3.46) |
| *F*-test (*pres*) | | 0.43 | | | | 4.01** | 1.40 |
| *F*-test (*maj*) | | | | | | 3.18* | 0.66 |
| Sample | 90s | 90s | 90s | 90s | 60-73 | 90s | 90s |
| Obs. | 80 | 80 | 76 | 72 | 42 | 80 | 80 |
| R2 | 0.71 | 0.70 | 0.68 | 0.50 | 0.79 | 0.72 | 0.70 |

Robust standard errors in parentheses : * significant at 10%; ** significant at 5%; *** significant at 1%

All regressions include our standard controls, *lyp, lpop, gastil, age, trade, prop65, prop1564, federal,* and *oecd*, plus a set of indicator variables for continental location and colonial origin, except that *age* is missing in col 5-6, while *gastil* is missing in col 7 and replaced by *polity* in col 5.

*F*-test (*pres*) refers to tests of the hypotheses that the coefficient for *propres* is equal to the difference between the coefficients for *majpres* and *majpar* (col 2), the sum of the coefficients for *pres* and *pres_newdem* is zero (col 6), and the sum of the coefficients for *pres* and *pres_baddem* is zero (col 7). *F*-test(*maj*) refers to the corresponding tests with regard to *maj* (cols 6 and 7).

## Table 3 Size of government and constitutions: Instrumental-variable, Heckman and Matching Estimates

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Dep. var. | *cgexp* | *cgexp* | *cgexp* | *cgexp* | *cgexp* | *cgexp* | *cgexp* |
| *pres* | -5.29 | -11.52 | -6.51 | -4.22 | -5.89 | -3.23 | -7.45 |
| | (2.18)** | (4.54)** | (3.71)* | (3..99) | (3.02)* | (2.74) | (2.34)*** |
| *maj* | -6.21 | -6.77 | -4.83 | -4.18 | -4.81 | -5.34 | -5.59 |
| | (2.82)** | (1.98)*** | (3.19) | (3.17) | (3.41) | (2.73)* | (2.61)** |
| Conts & Cols | Yes | Yes | *col_uka* | *col_uka, laam* | | | |
| Sample | 90s | 90s | 90s | 90s | 90s | 90s | 90s |
| Endogenous selection | *maj* | *pres* | *pres* *maj* | *pres* *maj* | *pres* *maj* | *pres* *maj* | *pres* *maj* |
| Estimation | Heckman ML | Heckman ML | 2SLS | 2SLS | Stratification | Nearest neighbor | Kernel |
| Rho | 0.05 | 0.62 | | | | | |
| | (0.29) | (0.33) | | | | | |
| Chi-2 | | | 3.29 | 2.23 | | | |
| Adj. R2 | | | 0.59 | 0.59 | | | |
| Obs. | 75 | 75 | 75 | 75 | 66(*pres*) 70(*maj*) | 66(*pres*) 70(*maj*) | 66(*pres*) 70(*maj*) |

Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%.
Always included in second-stage specification in cols 1-4: *age, lyp, trade, prop1564, prop65, gastil, federal, oecd, lpop*; Conts & Cols refer to indicator variables for continental location and colonial history.
Specification of constitution selection in Heckman procedure in cols 1-2 includes: *engfrac, eurfrac, lat01, avelf, lpop, laam*; Rho is the estimated correlation coefficient between the error terms in the first and second stage. Estimation is by maximum likelihood.
First-stage specification of 2SLS in cols 3-4 includes (see Table A2, appendix): for *maj*: *con2150, con5180, con81, engfrac, eurfrac, lpop, avelf*; for *pres*: *con2150, con5180, con81, engfrac, eurfrac, lat01, age* ; Chi-2 is the test statistic for rejecting the over-identifying restrictions implied by exogenous (additional) instruments; critical value chi-2 (5,0.05) = 11.07.
Propensity-score logit estimation underlying cols 5-7 includes: *lyp, prop65, gastil, federal, col_uka, laam* ; estimates of the constitutional effects in these columns are carried out separately rather than jointly; numbers at bottom indicate observations used in estimation (observations outside the common support for the propensity score of each constitutional feature deleted).

**Table 4 Composition of government and constitutions: OLS estimates**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Dep. var. | *ssw* | *ssw* | *ssw* | *ssw* | *ssw* |
| *pres* | -2.24 | | -0.25 | -5.47 | -4.28 |
| | (1.11)** | | (2.06) | (1.19)*** | (1.30)*** |
| *maj* | -2.25 | | -1.02 | -2.66 | -3.03 |
| | (1.25)* | | (1.36) | (1.52)* | (1.50)** |
| *propres* | | -3.22 | | | |
| | | (1.74)* | | | |
| *majpar* | | -3.14 | | | |
| | | (2.18) | | | |
| *majpres* | | -3.91 | | | |
| | | (2.41) | | | |
| *pres_newdem* | | | | 4.97 | |
| | | | | (1.65)*** | |
| *maj_newdem* | | | | 1.74 | |
| | | | | (1.77) | |
| *newdem* | | | | -5.36 | |
| | | | | (1.69)*** | |
| *pres_baddem* | | | | | 5.61 |
| | | | | | (2.00)*** |
| *maj_baddem* | | | | | 3.67 |
| | | | | | (1.62)** |
| *baddem* | | | | | -4.24 |
| | | | | | (1.75)** |
| *F*-test (*pres*) | | 0.83 | | 0.17 | 0.83 |
| *F*-test (*maj*) | | | | 0.65 | 0.19 |
| Sample | 90s | 90s | 72-77 | 90s | 90s |
| Obs. | 69 | 69 | 42 | 69 | 69 |
| R2 | 0.81 | 0.81 | 0.77 | 0.84 | 0.82 |

Robust standard errors in parentheses : * significant at 10%; ** significant at 5%; *** significant at 1%

All regressions include our standard controls, *lyp, gastil, age, prop65, federal,*and *oecd*, plus a set of indicator variables for continental location and colonial origin, except that *age* is missing in col 3-4, while *gastil* is missing in col 5 and replaced by *polity_gt* in col 3.

*F*-test(*pres*) refers to tests of the hypotheses that the coefficient for *propres* is equal to the difference between the coefficients for *majpres* and *majpar* (col 2), the sum of the coefficients for *pres* and *pres_newdem* is zero (col 4), and the sum of the coefficients for *pres* and *pres_baddem* is zero (col 5). *F*-test(*maj*) refers to the corresponding tests with regard to *maj* (cols 4 and 5).

**Table 5 Composition of government and constitutions: Instrumental variables, Heckman and Matching Estimates**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Dep. var. | *ssw* | *ssw* | *ssw* | *ssw* | *ssw* | *ssw* | *ssw* |
| *pres* | 0.20 | -2.38* | 0.75 | 0.49 | -3.06 | -2.28 | -3.79 |
| | (3.27) | (1.33) | (2.00) | (2.14) | (2.67) | (1.79) | (2.36) |
| *maj* | -2.05* | -4.27 | -3.21 | -3.21 | -1.85 | -1.90 | -3.46 |
| | (1.12) | (1.79)** | (1.61)* | (1.62)* | (1.91) | (1.67) | (1.84)* |
| Conts & Cols | Yes | Yes | *col_uka* | *col_uka laam* | | | |
| Sample | 90s | 90s | 90s | 90s | 90s | 90s | 90s |
| Endogenous | *pres* | *maj* | *pres* | *pres* | *pres* | *pres* | *pres* |
| Selection | | | *maj* | *maj* | *maj* | *maj* | *maj* |
| Estimation | Heckman 2-step | Heckman 2-step | 2SLS | 2SLS | Stratification | Nearest neighbor | Kernel |
| Rho | -0.46 | 0.59 | | | | | |
| Chi-2 | | | 9.53* | 9.98* | | | |
| Adj. R2 | | | 0.78 | 0.78 | | | |
| Obs. | 64 | 64 | 64 | 64 | 64(*pres*) 70(*maj*) | 64(*pres*) 70(*maj*) | 64(*pres*) 70(*maj*) |

Standard errors in parentheses; * significant at 10%; ** significant at 5%; *** significant at 1%.
Always included in second-stage specification in cols 1-4: *age, lyp, trade, prop1564, prop65, gastil, federal, oecd, lpop*; Conts & Cols refer to indicator variables for continental location and colonial history.
First-stage specification of Heckman procedure in cols 1-2 includes: *engfrac, eurfrac, lat01, avelf, lpop, laam*; Rho is the estimated correlation coefficient between the error terms in the first and second stage.
First-stage specification of 2SLS in cols 3-4 includes (see appendix): for *maj*: *con2150, con5180, con81, engfrac, eurfrac, lpop, avelf* ; for *pres*: *con2150, con5180, con81, engfrac, eurfrac, lat01, age* ; Chi-2 is the test statistic for rejecting the over-identifying restrictions implied by exogenous (additional) instruments; critical value chi-2 (5,0.05) = 11.07.
Propensity-score logit estimation underlying cols 5-7 includes: *lyp, prop65, gastil, federal, col_uka, laam* ; estimates of the constitutional effects in these columns are carried out separately rather than jointly; numbers at bottom indicate observations used in estimation (observations outside the common support for the propensity score of each constitutional feature deleted).

## Table A1 Electoral rules and forms of government in the 1990s

| Country | *maj* | *pres* | Country | *maj* | *pres* | Country | *maj* | *pres* | Country | *maj* | *pres* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Argentina | 0 | 1 | Finland | 0 | 0 | Netherlands | 0 | 0 | Trinidad&Tob | 1 | 0 |
| Australia | 1 | 0 | France | 1 | 0 | New Zealand | 1 | 0 | Turkey | 0 | 0 |
| Austria | 0 | 0 | Gambia | 1 | 1 | Nicaragua | 0 | 1 | USA | 1 | 1 |
| Bahamas | 1 | 0 | Germany | 0 | 0 | Norway | 0 | 0 | Uganda | 1 | 1 |
| Bangladesh | 1 | 0 | Ghana | 1 | 1 | Papua N Guinea | 1 | 0 | UK | 1 | 0 |
| Barbados | 1 | 0 | Greece | 0 | 0 | Pakistan | 1 | 1 | Ukraine | 1 | 0 |
| Belarus | 1 | 1 | Guatemala | 0 | 1 | Paraguay | 0 | 1 | Uruguay | 0 | 1 |
| Belgium | 0 | 0 | Honduras | 0 | 1 | Peru | 0 | 1 | Venezuela | 0 | 1 |
| Belize | 1 | 0 | Hungary | 0 | 0 | Philippines | 1 | 1 | Zambia | 1 | 1 |
| Bolivia | 0 | 1 | Iceland | 0 | 0 | Poland | 0 | 0 | Zimbabwe | 1 | 1 |
| Botswana | 1 | 0 | India | 1 | 0 | Portugal | 0 | 0 | | | |
| Brazil | 0 | 1 | Ireland | 0 | 0 | Romania | 0 | 0 | | | |
| Bulgaria | 0 | 0 | Israel | 0 | 0 | Russia | 0 | 1 | | | |
| Canada | 1 | 0 | Italy | 0 | 0 | Senegal | 0 | 0 | | | |
| Chile | 1 | 1 | Jamaica | 1 | 0 | Singapore | 1 | 0 | | | |
| Colombia | 0 | 1 | Japan | 1 | 0 | Slovak Rep | 0 | 0 | | | |
| Costa Rica | 0 | 1 | Latvia | 0 | 0 | South Africa | 0 | 0 | | | |
| Cyprus | 0 | 1 | Luxembourg | 0 | 0 | South Korea | 0 | 1 | | | |
| Czech Rep. | 0 | 0 | Malawi | 1 | 1 | Spain | 0 | 0 | | | |
| Denmark | 0 | 0 | Malaysia | 1 | 0 | Sri Lanka | 0 | 1 | | | |
| Dominican Rep | 0 | 1 | Malta | 0 | 0 | St.Vin&Gren | 1 | 0 | | | |
| Ecuador | 0 | 1 | Mauritius | 1 | 0 | Sweden | 0 | 0 | | | |
| El Salvador | 0 | 1 | Mexico | 0 | 1 | Switzerland | 0 | 1 | | | |
| Estonia | 0 | 0 | Namibia | 0 | 1 | Taiwan | 0 | 0 | | | |
| Fiji | 0 | 0 | Nepal | 1 | 0 | Thailand | 1 | 0 | | | |

Classifications follow criteria described in the text: exclusive reliance on plurality rule in (lower house) legislative elections are coded *maj* =1, other countries *maj* = 0; countries in which the executive is not accountable to the legislature through a confidence procedure are coded *pres* = 1, others *pres* =0 (see Persson and Tabellini, 2003 for a discussion of borderline cases). For Fiji, Japan, New Zealand, the Philippines and Ukraine, which all reformed their electoral rules in the mid 1990s leading to a change in *maj*, the pre-reform classification is used.

**Table A2 First-stage specification of 2SLS estimates**

| | (1) | (2) |
|---|---|---|
| Dep. var | *pres* | *maj* |
| *con2150* | -0.04 | -0.13 |
| | (0.14) | (0.12) |
| *con5180* | -0.13 | 0.28 |
| | (0.18) | (0.10)** |
| *con81* | 0.29 | 0.12 |
| | (0.20) | (0.11) |
| *engfrac* | -0.68 | 1.09 |
| | (0.13)*** | (0.13)*** |
| *eurfrac* | 0.39 | -0.21 |
| | (0.11)*** | (0.13) |
| *lpop* | | 0.07 |
| | | (0.02)*** |
| *lat01* | -1.43 | |
| | (0.34)*** | |
| *age* | 0.56 | |
| | (0.31)* | |
| *avelf* | | 0.74 |
| | | (0.21)*** |
| *F*-test | 4.26*** | 3.26** |
| R2 | 0.51 | 0.51 |
| Obs. | 75 | 75 |

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%.
*F*-test refers to joint significance of *con2150*, *con5180*, and *con81*.