I. Introductions, distribute syllabi, and describe & discuss course

A. Robert (Rob) J. Franzese, Jr. (franzese@umich.edu; www.umich.edu/~franzese)

1. Professor of Political Science; here since Fall 1996 (Ph.D. PolSci & Masters in PS & in Econ, Harvard; UG: Cornell); act’ly native Michigander (& lifelong fan: Go Blue!)

2. My research & teaching areas: I study...
   a. Political Economy: primarily economic policymaking in developed democracies
   b. Political Methodology: statistical methods for political & social sciences; been working on spatial-econometric models of interdependence mostly of late, and empirical models of (complex) context conditionality (interactions and other nonlinear models)
   c. Comparative Democratic Politics: particularly electoral, party, and governmental institutions, how they shape effective representation in policymaking.

3. Office Hours: Tu 9:45-11:45 & by Appointment (email to arrange), 4246 I.S.R.

B. GSI: Maiko Heller (miheller); Wed 1-2, Thu 10-12, & by appt., 7744 Haven. Study areas: comparative democracy, political parties, & political economy.
C. Briefest description subject: positive theory of economic policymaking in developed democracies (& empirical evaluation thereof). [Go to syllabus...] 

D. Readings: 5 books - 2 foundational, 3 recent (+1 article, may wish read early) 

E. Papers: 
   1. Describe 2 types: theoretical extension, empirical application. (elaborate from syllabus) 
   2. Describe grammatical and compositional standards. 
   3. Drafts, then revised. Each paper = 20% (8% 1st, 12% 2nd draft). Due as on syllabus. 

F. Participation: Attend, attune, and engage. 10%.“Basketball Shot-Chart” 

G. Exams: Mid-term (in class, after break) & Final (as scheduled by LS&A) 

H. Grading system: curve, then calibrate.
II. What is *Political Economy*:

A. At least four kinds/areas of study:

1. The Political Consequences of Economic Outcomes/Conditions
2. Microeconomic Choice-Theory (utility max & game theory) Applied to Politics
3. Normative Political Economy, two sorts: (pol-econ) philosophy, welfare economics
4. Positive Political Economy: What Policy *is* or *will* be enacted—how the political-economic system works. (Physics, not Metaphysics.)

B. The Political Consequences of Economic Outcomes/Conditions

1. E.g., Economic Voting: how econ performance affects election outcomes
   a. US: economic voting = core of most election-prediction models [See fig’s next pp]
   b. Comparative: (Lewis-Beck, Powell & Whitten, Duch & Stevenson) [See fig’s next pp]

   (1) In all democracies, tendency for incumbents presiding over stronger economic performance to garner more votes

   (2) Comparative insight is that domestic & international political structure, institutions, conditions (such as globalization, e.g.) modify/moderate this relationship
Figure 1. Bread and Peace Voting in US Presidential Elections

Model: \( \text{Vote}_t = \beta_0 + \beta_1 \left( \sum_{j=0}^{14} \lambda j \Delta \ln R_{t-j} \left( \frac{1}{\sum_{j=0}^{14} \lambda j} \right) \right) + \beta_2 \text{CUM KIA}_t \)

<table>
<thead>
<tr>
<th></th>
<th>( \beta_0 )</th>
<th>( \beta_1 )</th>
<th>( \lambda )</th>
<th>( \beta_2 )</th>
<th>( \bar{R}^2 )</th>
<th>SEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Benchmark model, Eq. 1 (1952–1996)</td>
<td>46.1 (42.2/.00)</td>
<td>4.1 (7.4/.00)</td>
<td>0.95 (26.9/.00)</td>
<td>-0.37 (-5.5/.00)</td>
<td>.90</td>
</tr>
</tbody>
</table>
\[ \text{logit}(\pi_{ik}) = \beta_0 + \beta_1 X_{ik} + \sum_{j=1}^{J_k} \phi_{jk} Z_{ijk}. \] (1)

In this notation, \( v_{ik} \) indicates a vote for the chief executive party by voter \( i \) in each of \( k \) election surveys where \( i = 1, \ldots, n_k \). Likewise, \( X_{ik} \) are retrospective economic evaluations measured at the individual level and \( Z_{ijk} \) are other characteristics of individuals that shape

![Economic Vote of Chief Executive](image)

3.1 A map of economic voting for the party of the chief executive. The upper bound of on
Alternatively, same authors, different ways of presenting similar set of estimates:

Notice that magnitude of economic vote generally greater in countries with typically single-party, majority governments (e.g., *inter alia*).
Electoral Accountability and Economic Globalization Dependent
Variable: Incumbent Vote

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
<td>Coefficient</td>
<td>SE</td>
</tr>
<tr>
<td>Previous vote</td>
<td>.478**</td>
<td>.079</td>
<td>.495**</td>
<td>.081</td>
</tr>
<tr>
<td>Economy</td>
<td>.811**</td>
<td>.231</td>
<td>.489*</td>
<td>.223</td>
</tr>
<tr>
<td>Trade openness</td>
<td>2.583</td>
<td>1.558</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital flows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economy × Trade Openness</td>
<td>-.710*</td>
<td>.313</td>
<td>2.238</td>
<td>5.333</td>
</tr>
<tr>
<td>Economy × Capital Flows</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presidential election</td>
<td>-1.430</td>
<td>1.374</td>
<td>-1.211</td>
<td>1.344</td>
</tr>
<tr>
<td>Economy × Presidential Election</td>
<td>.261</td>
<td>.313</td>
<td>.268</td>
<td>.286</td>
</tr>
<tr>
<td>Re-election</td>
<td>6.151**</td>
<td>1.927</td>
<td>5.149**</td>
<td>1.799</td>
</tr>
<tr>
<td>Effective number of parties</td>
<td>-2.959**</td>
<td>.483</td>
<td>-2.952**</td>
<td>.502</td>
</tr>
<tr>
<td>Income</td>
<td>.172**</td>
<td>.043</td>
<td>.177**</td>
<td>.051</td>
</tr>
<tr>
<td>Africa</td>
<td>3.372</td>
<td>3.151</td>
<td>7.310*</td>
<td>2.755</td>
</tr>
<tr>
<td>Asia</td>
<td>2.679*</td>
<td>1.190</td>
<td>2.143</td>
<td>1.246</td>
</tr>
<tr>
<td>Central and Eastern Europe</td>
<td>-3.579</td>
<td>1.935</td>
<td>-3.514</td>
<td>2.115</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>2.957*</td>
<td>1.466</td>
<td>2.774</td>
<td>1.497</td>
</tr>
<tr>
<td>Constant</td>
<td>20.283*</td>
<td>4.501</td>
<td>20.881**</td>
<td>4.534</td>
</tr>
<tr>
<td>Joint F test</td>
<td>4.76**</td>
<td></td>
<td>4.88**</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.633</td>
<td></td>
<td>.643</td>
<td></td>
</tr>
<tr>
<td>F statistic of model fit</td>
<td>53.42**</td>
<td></td>
<td>47.97**</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>424</td>
<td></td>
<td>413</td>
<td></td>
</tr>
</tbody>
</table>

Note: Cells report OLS parameter estimates and robust standard errors clustered within countries.
a. Tests joint significance of the components and interaction term for economy and measure of globalization.

**p < .01, *p < .05. (two-tailed test)

\[ V = ... + .81 \times Econ + 2.58 \times Open - .71 \times Econ \times Open \ldots \]

\[ \frac{\Delta V}{\Delta Ec} = +.81 - .71 \times Open \]
2. Likewise Presidential Approval: econ conditions strongly affect incumbent evaluation
   
a. Central questions: Are voters’ evaluations...
      (1) Pro- vs. Retro-spective?
      (2) Personal vs. Sociotropic?
      (3) Partisan (Differentially) vs. Valence (Commonly) issue-oriented?
      (4) Symmetric vs. Asymmetric in reward and punishment?
      (5) Sensitive to appropriate credit/blame allocation?

b. Some important contributions to this literature:
   (1) Kinder & Kiewet (socio); Kinder & Markus (retro); Achen & Bartels (naive retro)...
   (2) MacKuen, Erikson, Stimson: “Peasants or Bankers” (APSР): forward, economy

3. International Economic Exposure: Trade & monetary open ⇒ interdependence ⇒ (?)
   a. Keohane-Nye & the IPE interdep lit: interdep states have shared not just conflict interests
   b. 1 strand liberal peace lit: interdep states no war

4. Growth/Development & Democratization
   a. Huntington’s Pol. Order in Changing Soc.’s: effect econ struct & change on soc-pol stbly
   b. Political Dev’p Lit (Deutsch, Przeworski et al.): relation ec devp to “pol devp” (see fig...)
The Relationship Between the
Degree of Democracy and of Economic Development

Dem=26.1 -2.29(GDP)
s.e. (2.27) (.286)
N = 121, r = .59
C. Microecon Choice-Theory (utility max & game theory) applied to politics

1. International Relations Applications
   a. Ken Waltz’ *Theory of International Politics*: market-structure theory of international system (billiard-ball states, maxing power, security, etc.) ⇒ Bipolar stable, balancing
   b. Thomas Schelling’s *The Strategy of Conflict*: game-theory applications to international conflict – importance of focal points.
   c. Coop in anarchy: Int’l Relations as iterated PD (Axelrod’s *Evolution of Cooperation*)

---

**The Prisoners' Dilemma**

- **Confess**: (10 years, 10 years)
- **Confess**: (free, 15 years)
- **Confess**: (15 years, free)
- **Stay Sent**: (5 years, 5 years)

---

- ● Prisoner One
- ○ Prisoner Two
2. US Politics Applications: Legislative (comm’s, vetoes, etc.) & Party Pol
a. Black’s Median-Voter Theory: 1-D preferences, 3+ voters → median rules

LEFT |---A--B------------C-----------------------------------D-------E---------|RIGHT

Note: Salaries in thousands of dollars.

Figure 6.1. Voter Preferences for Political Scientist Salaries
b. Down’s *Economic Theory of Democracy*: Hotelling-style locational theory of 2-party systems (convergence) – 2-prty compete on 1 dim., certainty, & all vote ⇒ full converge to median
c. Condorcet, Arrow, McKelvey-Schofield *Chaos Theorems*:

1. 2+ Dimensions ⇒ majority-rule & simple MVT does not generally work / ⇒ chaos, etc.
2. Bottom-left shows example of circular indifference curves for actors with solid-dot ideal points through hollow-dot *status quo* or proposal; and other, smaller indifference circles of higher utility.
3. Example at bottom-right:
   a. *Status Quo* at X, voters’ ideals at p1, p2, p3;
   b. Any proposal in shaded areas beats it (called “winset of X”, btw);
   c. Such a winning proposal, call it Z, becomes the new *status quo*, so imagine three new circles, centered at p1, p2, and p3, going through Z. Creates three new lens-shaped winsets any proposal in which would beat Z and become the new status quo, and so on...
d. Figure shows example of extreme agenda-power & illustrates McKelvey-Schofield’s from almost anywhere to almost anywhere result. More generally, however:

(1) We don’t have dem’s w/ this free-wheel anyone make any proposal anywhere at any time; rules proposal, amend, vote can induce (different) eqba (eg. Shepsle, Baron-Ferejohn, Romer-Rosenthal)

(2) [Maybe can’t give the outcome the normative appeal of “public will”, but at least get an outcome, with at least some manner of public input.]
3. Comparative Politics Applications: Same as U.S., plus...

a. Tsebelis: **Veto Actors** retard policy-adjustment. [Explain]

b. BdM$_2$S$_2$: **Winset-Selectorate** model.
   (1) Systems w/ larger winsets leaders prefer maintain coalition by public-good generation.
   (2) ...w/ large winsets relative to selectorates favors more equal distributions among coalition
   (3) ...w/ small winsets relative to selectorates favor leaders, w/ less to even the small winning coalition

c. Studies of Coalition Formation: e.g., Laver & ... (Hunt, Schofield, Shepsle (x2)), Riker...
   (1) Minimum-Winning Coalitions (MWC) [explain logic];
   (2) Ideologically compact MWC's

   (1) Majoritarian (low DM) / Proportional Representation (large DM)
      ⇒ High Disproportionality & High Thresholds Entry / High Proportionality & Low Thresholds
      ⇒ Few parties, tending toward 2 as DM toward 1 / More fractionalized party systems
      ⇒ Tendency toward single-party, majority gov’t / Coalition & minority government
D. Normative Political Economy, two sorts:

1. PE Philosophy:
   a. Rawls and others apply microeconomic methods to enquire re: “justice” & “fairness”: e.g., what would rep agent choose from behind veil of ignorance
   b. Sen et al. on economic “justice” & “fairness”; broader conceptualization, operationalization, and measurement of economic performance.

2. Welfare Macro/International Economics:
   a. What policy should (normatively) be enacted to achieve “ideal” (i.e., pareto optimal, i.e., efficient) outcomes. What’s done in most economics:
      (1) Model the economy, with policies to be exogenously set,
      (2) Ask what policies a “benevolent social planner” (usu. meaning policymaker utility = unweighted sum of citizens’ utilities) would enact, given that model of how exogenous policies would affect outcomes of interest to those citizens.
   b. What policy would (hypothetically) be enacted under some set of ideal conditions
      (1) Sometimes these normative welfare-economic analyses even taken as basis for predictions of what policies policymakers would in fact enact.
      (2) Or, policymakers might be given some other utility functions, intended to reflect their own political preferences, but economy and private citizens left without political preferences or options.
E. **Positive Political Economy (PPE):** What Policy *is* or *will* be enacted – i.e., Physics, not Metaphysics.


2. Limitations of Welfare Macro/International Economics
   a. *Not* benevolent social-planners but politically constituted governments ⇒ No reason to expect ideal policies. Policymakers actors with interests like everyone else.
   b. Also, private actors’ preferences may extend beyond those arising in the formal, exchange, market economy.
   c. Plus, private actors’ options for action not constrained to the market; they may have political options as well.
   d. Still more, private actors’ and/or policymakers ‘rationality’ may be limited in some way(s).

3. Implications of these limitations
   a. Even the understanding of what economic outcomes certain policies may produce likely flawed when political & social considerations ignored. I.e., by ignoring 2a-d, economics alone can even get the (economic) theories of relations policies ⇒ outcomes wrong.
   b. ⇒ *A fortiori* that welfare economics is incompletely equipped to answer what actual policies and what actual outcomes we may expect. We need positive political economy theories.
III. Joint Determination of Social, Political, & Economic Outcomes: (could call this the first principle of political economy)

Economics Affects Politics and Society
Politics Affects Economics and Society
Society Affects Politics and Economics
The Cycle of Political Economy

Examples of the Elements at Each Stage:

(A) Interests:
   - Sectoral Structure of Economy
   - Income Distribution
   - Age Distribution
   - Trade Openness

Elections:
   - Electoral Law
   - Voter Participation

Government Formation:
   - Fractionalization
   - Polarization

(B) Representation:
   - Partisanship

Policy:
   - Fiscal Policy
   - Monetary Policy
   - Institutional Adjustment

Government Termination:
   - Replacement Risk

(C) Outcomes:
   - Unemployment
   - Inflation
   - Growth
   - Sectoral Shift
   - Debt
   - Institutional Change

Result of Outcomes at T-1

Action at Time T0

Result of Outcomes at T0

On to T+1
IV. Standards for Theory (From Olson, *The Rise & Decline of Nations*)

A. No Ad Hocery ⇒ must insist that any explanation fits some data or observations beyond that/those from which it derived.

1. Case-by-case identification of some unique characteristic of nation or nation-time is insufficient explanation because...
   a. ...cannot test against broad enough array evidence or experience to evaluate the theory;
   b. ...almost always possible to construct an ‘irrefutable explanation’ if one completely free to draw from any of an infinite number of unique characteristics of any given country-time.

2. Sum: “unless the differences invoked also apply to other cases, we are making inferences from a sample of 1” (p. 11) [& can draw ∞ lines relating XtoY thru 1 pt]

B. High Power/Parsimony Ratio: the goal of any theory is to explain as much as possible with as little as possible.

1. Given some amount of explanatory power, more parsimony preferred.
2. Given some amount of parsimony, more explanatory power preferred.
3. Given that optimal on both dimensions, becomes largely a matter of taste, or of how theory to be used, how much explan. pow. willing cede for greater parsimony or v.v.
C. **Consilience**: theory explains quite diverse facts (e.g., Darwin’s *Evolution*). [A *desideratum* of good positive theory, not a requirement]

D. Theory must explain some cases beyond that/those from which derived.

E. Theory must specify what sorts of observations would decrease confidence and what sorts of observations would increase confidence that it is correct [useful].
   
   1. ∃ no expectation that any one theory should explain everything.
      
      a. In fact, highly doubtful any one or even any combination of theories could.
      b. Not necessary claim that theory stresses only, the most important, or even a particularly important aspect of systematic relations. Just that a systematic.

   2. Our predictive statements are **probabilistic**: we state conditions that make some outcome more or less likely to occur, ceteris paribus.
      
      a. ⇒ there is no such thing as a “critical case”.
      b. ⇒ all predictive statements include *ceteris paribus* (all-else =) proviso.
V. *A Positive Epistemology: Building & Empirically Evaluating Positive Theory*

A. Viewing the Socio-Politico-Economic World Positively:

1. *Systematic & Stochastic Features*: We think of world as characterized by more-or-less systematic features & more or less random (or stochastic) features.

   a. We must think there is something systematic, else:

      (1) Why lament bad policies? If simply random, nothing to be done about them. Unless something systematic about whatever causes policies, we would have no blame to lay. E.g., Why hate or love congress as ‘always the same’ if policies strictly random? Must be something systematic.

      (2) Socio-politico-economic reality generally, & political economy more specifically, not entirely random (see figures below & above).

         (a) If right-wing govt succeeds left-wing, would taxes, pub-spend, infl., UE, ineq. rise or fall, *ceteris paribus*?

         (b) Comparing dev’d ctry with under-dev’d, which faces greater threat of violent social unrest (*cet. par.*)?

         (c) Comparing dev’d ctry with under-dev’d, which more likely to have dem gov’t or greater civ lib’s (*cet. par.*)?
b. **No Proper Nouns:** One trick to beginning to see systematic aspects of social reality is to rid exposition of arguments of proper nouns.

(1) Not Jesse Helms caters to social conservatives & tobacco industry, but...Senators (representatives, politicians) respond to interests of constituencies that (elect, support) them.

(2) Former may seem to explain, but notice that it’s no help to say what happens when Helms died/replaced. Latter helps...

(3) ...and incidentally opens new lines for inquiry: why does one constituency win over its opponents? Shear numbers? How does Helms ever get his way if other Sen’s do not have similar constituencies? If he doesn’t get his way, how re-elected?

c. Another trick is to posit some claim, some prediction:

(1) A positive claim: If more/less of this moving part of some contexts, then we will have more/less of such-and-such outcome. Often helpful to think in *degrees* not in *dichotomies* like this.

(2) Then, of course, must ask why you think it so–what is it about the moving parts that make it happen that way?

(3) **In social science, the only motive forces are people,** so ultimately you must here be asking why does more or less of this condition induce certain important actors to make certain decisions and not others or to do more of something or less of something else. In other words:
2. Steps of building a positive social-scientific theory:
   
a. Identify the important actors in some context of interest.
      
      (1) E.g., Tufte: economic policymaking in democracies ⇒ incumbent (elected) policymakers & voters.
   
b. Determine those actors’ interests and options.
      
      (1) E.g., Tufte: voters—support the incumbent or do not; value recent economic performance. Incumbents—seek reelection, have various policy tools that could be used to shape voters’ recent economic performance (or perceptions thereof).
   
c. Determine the relation between the actors’ actions, their chosen options, and outcomes. Have actors choose actions according to some logical decision rule.
      
      (1) E.g., Tufte explains how various policies affect voters’ (perceptions) of recent economic performance and how those perceptions shape their votes.
      
      (2) E.g., Tufte’s actors apply rational choice (i.e., cost-benefit analysis of options, choose one with highest (lowest) perceived net benefit (cost)). Here: Incumbents choose policies that maximize their probabilities of reelection and voters reward / punish the delivery of benefits / costs.
   
d. Derive the conclusions:
      
      (1) E.g., Tufte: there is an electoral-calendar periodicity and timing to economic policymaking in democracies (because incumbent politicians electioneer &/because voters reward that).
3. Systematic Features of Social World amount to a set of (probabilistic) relationships between variables:

a. That is, we think of some feature(s) $X$ that make $Y$ more or less likely to occur or tend to ↑ or ↓ amount of $Y$ that occurs.

(1) Examples of hypothesized such relationships

(a) Comparative-Politics Examples:

i) Huntington: Rapid socio-econ change produces political instability, coups, riots, & rebellions in under-dev’d ctrys

$\Rightarrow$ Probability of Social Strife = an increasing function of rate of change in society & economy + other stuff

ii) Right-of-center govts run lower deficits than left-of-center govts do $\Rightarrow$ Budget Deficit = $f$(partisanship, $\varepsilon$)

(b) American-Politics Examples:

i) Divided government responds slowly if at all to shocks $\Rightarrow$ Policy Response-Rate = $f$(Divided government, $\cdot$)

ii) Voters “rally around the flag”, supporting president when s/he’s involved in international events $\Rightarrow$ Presidential Approval Rating = some function of how involved is president in international events + noise & other stuff

(c) International-Relations Examples:

i) Ken Waltz: number of great powers affects likelihood or amount of systemic war $\Rightarrow$ Amount of War = some function of number of great powers + some other stuff (stochastic &/or other factors not considered at moment)

ii) Paul Huth: number of nuclear weapons and latent threat of nuclear use by defender will not increase probability of extended deterrence success when potential attacker is not a nuclear power $\Rightarrow$ Likelihood Extended Deterrence Success ≠ function nuclear power of defender if potential attacker also nuclear

b. Some Important Notes:
c. **Statements are Probabilistic**: speak of likelihoods of events, tendencies, fertile ground for Y to happen being created, *etc.*

1. *E.g.*, generally less interested in the particular event that triggered some specific riot, more interested in environmental features which make riots more or less likely (systematic)

2. *E.g.*, not generally interested in whether some aspect of Kennedy’s personality determined his choices during Cuban missile crisis (specific, deterministic), though may be interested in particular characteristics of pres’s personalities may make them more/less likely to enact certain sorts policies (general, probabilistic)

---

d. **Statements about Relationships**: theories not so much about predicting *per se*, though that certainly part of their product, but rather more commonly about how some X (set of X’s) relates to Y (or not): “X increases” tends to make “Y up/down...”: i.e., statements of $dY/dX$

e. **Positive Theories are Simplifications**:

1. *No* implicit claim that the X’s highlighted = everything (or even necessarily most or very important thing) relevant to phenomenon, Y, being predicted. In other words, an implicit *ceteris paribus* (other things equal) statement accompanies any positive-theoretical statement.

2. *No* intention explain everything about Y. World partly random--unless believe *all* systematic--we not aiming to explain all of Y, but rather to grasp some systematic feature(s) of the social world.

3. *Not* looking for photographic completeness & detail; in fact, would not be particularly useful as *theory* if were. Theory summarizes.

   (a) Indeed, if world partly random, then can explain too much: i.e., can seem explain, render systematic, what is actually random. Theory that does this generally very bad at “out-of-sample” explication.
B. Conceptualization and Hypothesizing

1. Some simple strategies, or schematics, for constructing a positive argument:

a. Write \( Y = f(X_1, X_2, X_3, \ldots, X_k, \varepsilon) \) where \( X_1 \) to \( X_k \) representing the systematic parts and \( \varepsilon \) the random parts and any parts we are leaving out omitting.

(1) Then reason/logic or construct (formal) model to derive theoretically expected relations \( X \) to \( Y \).

(2) E.g., \( Y = \text{probability(deterrence success)} \). \( X \) defender relative military might. Arg: \( \uparrow X \Rightarrow \uparrow Y \).

b. Arrow Diagrams: \( X \rightarrow Z \rightarrow Y \)

c. Tables and Games:

<table>
<thead>
<tr>
<th>Explanator 1 ( \downarrow ) Factor 2 ( \rightarrow )</th>
<th>( X_2 = \text{Ctrl Bank Indep} = \text{low} )</th>
<th>( X_2 = \text{Ctrl Bank Indep} = \text{high} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( X_1 = \text{Coord Wage Barg} = \text{low} )</td>
<td>( (\text{low,low}) \Rightarrow ? {\text{Moderate Unemp?}} )</td>
<td>( (\text{low,high}) \Rightarrow ? {\text{High Unemp?}} )</td>
</tr>
<tr>
<td>( X_1 = \text{Coord Wage Barg} = \text{high} )</td>
<td>( (\text{high,low}) \Rightarrow ? {\text{Moderate Unemp?}} )</td>
<td>( (\text{high,high}) \Rightarrow ? {\text{Low Unemp?}} )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actor 1 ( \downarrow ) Actor 2 ( \rightarrow )</th>
<th>( X_2 = \text{Capital Levy} = 0 )</th>
<th>( X_2 = \text{Capital Levy} = 1 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( X_1 = \text{Invest} = 0 )</td>
<td>( (0,0) \Rightarrow ? )</td>
<td>( (0,1) \Rightarrow ? )</td>
</tr>
<tr>
<td>( X_1 = \text{Disinvest} = 1 )</td>
<td>( (1,0) \Rightarrow ? )</td>
<td>( (1,1) \Rightarrow ? )</td>
</tr>
</tbody>
</table>

2. Identify alternative hypotheses: Easiest & always relevant: predict \( Y \) positively related to \( X \) \( \Rightarrow \) counter hypothesis negatively or not related. More powerful to i.d. specific theoretical counter-predictions if can: predict military spending responds to econ conditions, Waltz predicts responds to systemic threat, Waltz to perceived local threat. Determine what you would expect to see differently if each were true.
C. Operationalization and Measurement

1. Operationalization:
   a. Theories usually constructed at fairly abstract level. Relating abstract theoretical concepts (e.g., Walt’s ‘perceived threat’) to empirically observable counterparts = operationalization.
   b. Must be every bit as careful and theoretically minded here as in building theory. When it comes time to evaluate evidence, “findings” will only inform about the theory to the degree measures match these theoretical abstractions.

2. Measurement: data collection stage. May involve primary sources, secondary sources, or pre-processed data-bases like CoW, NES, PWT, OECD, IMF, etc.
   a. Everything that exists in the observable world can be measured and measurement implies quantitative measurement:
      (1) At bare minimum on present/absent basis, or possibly informal index or ranking; either way...
      (2) Inability to measure perfectly does not imply immeasurable; it’s a mistake to think that by not explicitly talking about discussing measurement you have not measured because:
   b. You cannot make any positive statements about the world without having made, explicitly or implicitly some measurement. (Given that logical truth, I find little persuasive arguments saying that we ought to leave it implicit.)

3. This stage should not be slighted Researchers should not slight this stage because:
“Operationalization, measurement, and specification must be theoretically informed for empirical evaluation to be theoretically informing.”

D. Empirical Evaluation

1. Broad intuition of most empirical evaluation is to examine whether the comparative-historical evidence (only database we have) aligns more with your theoretical expectations than was likely just by chance (or under some other alternative).

2. The two-by-two table:

<table>
<thead>
<tr>
<th></th>
<th>Y=0</th>
<th>Y=1</th>
</tr>
</thead>
<tbody>
<tr>
<td>X=0</td>
<td># of (0,0) cases</td>
<td># of (0,1) cases</td>
</tr>
<tr>
<td>X=1</td>
<td># of (1,0) cases</td>
<td># of (1,1) cases</td>
</tr>
</tbody>
</table>

3. Regression analysis (see figures to come, and (much) more on this later)

E. Reconsidering Theory in Light of Evidence:

1. Once the “data have spoken,” in practice, scholars go back return to the beginning and reconsider: revise, amend, augment, delete & start anew.

2. Again: “Operationalization, measurement, and specification must be theoretically informed for empirical evaluation to be theoretically informing.”
The Relationship Between the Degree of Democracy and of Economic Development

Dem=26.1 - 2.29(GDP)
\[ \text{s.e.} \ (2.27) \ (.286) \]
\[ N = 121, r = .59 \]
Average Government Partisanship 1950-88

GSpending = 48.3 -2.32 GPart  \quad r = +.28
\quad (1.82) \quad N = 21

Soc. Sec. Transfers as % of GDP in 1988

Transfers = 17.5 -1.11 GPart  \quad r = +.43
\quad (0.55) \quad N = 20
The "Catch-Up" Hypothesis

Correlation = 0.90    # pts = 21

\[ y = 0.178 + -0.0176x \]

(0.0019)
The "Small Government" Hypothesis

Correlation = .27   # pts = 21
y = 0.0391 + -0.0354x
(0.0292)
Natural Log (1+WWII Battle Deaths / 10K Population)

R-square = 0.00304   # pts = 21

\[ y = 0.0309 + -0.000264x \]

Result of WWII as it Relates to Internal Disruption

0=Neutral; 1=Part. on For. Soil; 2=Part. on Dom. Soil; 3=Conquered by Axis; 4 Conquered by Allies, Restructured

R-square = 0.151   # pts = 21

\[ y = 0.0253 + 0.00235x \]
By the way, the relative performances change radically comparing those first 35 years to the last 20. Most notable thing, though, is how much slower growth has been across the board.

The “catch-up hypothesis” (a.k.a., neoclassical growth model) still has some of the explanation, but it’s a lot less strong than before.

Small-government hypothesis doesn’t fare well at all.
F. We’ll discuss further how to interpret empirical-estimation results like these, and (much) more sophisticated versions of these, as we get to them in the course of the semester.

G. Of course...

1. More than one thing matters... (*multicausality* and *controls*);

2. How things matter may depend on other things... (*context conditionality* and *interactions & nonlinearity*);

3. Correlation does not imply causality... (*ubiquitous endogeneity* and *causal identification* strategies):
   
   a. The *poor man’s exogeneity* (time)...
   
   b. System specification...
   
   c. Instrumentation...
   
   d. Discontinuity...
   
   e. Matching...
   
   f. Experimentation...

VI. [Go to brief intro to interpreting regression analysis...]