



Instructor guide to democratic erosion and emergency powers

Laboratory implementation, theoretical foundations,
experimental evidence, and variants

Behavioral and Experimental Economics Research Lab
Department of Economics



Revised edition | October 2026

<https://beer-lab.org/>

How to use this guide

This guide supports preparation, implementation, and discussion of the **Democratic Erosion and Emergency Powers** family at the Behavioral and Experimental Economics Research Lab (BEER Lab), Department of Economics, Tecnológico de Monterrey. It is written for instructors in political science, political economy, institutions, and game theory, including readers with no prior experience with classroom experiments or oTree.

The document offers three routes. The quick guide is sufficient to organize a session.

Operational chapters explain access, screens, and results. Conceptual chapters develop the trade-off between constraints, gridlock, and executive discretion. Common material appears once; each variant states only what changes, its prediction, the relevant report measure, and its limits.

Author

This guide was prepared by Stanislao Maldonado, research professor in the Department of Economics at Tecnológico de Monterrey, Monterrey Campus. For questions or suggestions about its content, please contact the author at stanislao.maldonado@tec.mx.

For the instructor

The protocol is an original teaching adaptation motivated by research on political gridlock, checks and balances, and executive delegation. It is not a replication of the Forteza, Mussio, and Pereyra experiment. Roles are abstract and do not elicit real partisan preferences. Keep discussion focused on mechanisms and institutions rather than attributing political positions to participants.

Contents

How to use this guide	i
1 Quick implementation guide	1
1.1 Access through the updated laboratory website	1
1.2 Family summary	5
1.3 Minimum sequence	6
1.4 Learning objectives	6
2 Access and preparation	7
2.1 Portal, catalog, and isolated family	7
2.2 Pedagogical preparation	7
2.3 Operation, data, and troubleshooting	7
2.3.1 Waiting pages and incomplete groups	8
2.3.2 Links and databases	8
2.3.3 Export and privacy	8
2.3.4 Technical control	8
2.4 Scope and responsible use	8
3 Participant flow	9
3.1 Welcome, rules, and instructions	9
3.2 Comprehension and examples	10
3.3 Vote, executive choice, and result	10
4 Formal mechanism and worked example	16
4.1 Sequence	16
4.2 Fully worked example	16
4.3 Review, persistence, and sunset	17
4.4 Political-economy foundations	17
4.5 Checks and balances	17
4.6 Delegation and political agency	17
4.7 Gridlock and democratic erosion	17
4.8 Endogenous institutions and selection	17
4.9 Affinity, legitimacy, and scope	18
4.10 A benchmark instructors can calculate	18
4.11 Risk, trust, and social preferences	18
4.12 What the literature contributes and what this protocol adapts	19
5 Basic and extended editions	20
5.1 Central rule	20
5.2 Gridlock: 0%, 25%, and 50%	20
5.3 Factorial decomposition: no gridlock and cap 20	21
5.4 Factorial decomposition: no gridlock and cap 100	21

5.5	Factorial decomposition: 50% gridlock and cap 20	22
5.6	Factorial decomposition: 50% gridlock and cap 100	23
5.7	Persistent powers	23
5.8	Shared affinity	23
5.9	Different affinity	25
5.10	Sunset clause	26
5.11	Judicial review	26
5.12	One interaction	26
5.13	Fixed groups and rematching	27
6	Instructor report, session, and debrief	28
6.1	Controlled revelation	28
6.2	Measures and denominators	28
6.3	Debrief protocol	30
6.3.1	A worked reading of the report	30
6.3.2	Separate description, mechanism, and evaluation	30
6.4	Lesson plans	31
6.4.1	A 45-minute session	31
6.4.2	A 60-minute session	31
6.4.3	An 80-minute session	31
6.4.4	Neutral opening script	31
6.4.5	Follow-up product	31
6.5	Discussion bank and exercises with answer paths	31
6.5.1	Closing task and assessment criteria	35

List of Figures

1.1	Current institutional website. Select CLASSROOM in the top navigation menu to open the teaching experiments. Captured on October 7, 2026.	1
1.2	Current catalog: search by title, topic, or JEL code. Then locate this family's card and select language and edition. Captured on October 7, 2026.	2
1.3	Demo contains only the configurations of this game family, in both languages and editions. Continuation 1/2.	3
1.5	Rooms contains the four rooms for this family: basic and extended editions in Spanish and English.	4
1.6	Session-creation form for the basic English room. Check the selected configuration and participant requirement before creating the session.	5
3.1	Participant entry and common information. Welcome and laboratory rules. Continuation 1/2.	9
3.3	Current basic-edition instructions, with initial resources and experimental units. .	11
3.4	Current comprehension check: specific feedback explains the incorrect answer and preserves the other responses.	12
3.5	Three numerical examples.	13
3.6	The two central choices. Citizen institutional vote.	13
3.7	Executive extraction decision.	14
3.8	The same collective outcome with the individual payoff highlighted. Citizen result.	14
3.9	Executive result.	15
3.10	Explicit activity completion screen.	15
5.1	Visible parameters and institutional assignment. 25% gridlock probability.	21
5.2	Exogenously assigned rule.	22
5.3	Information on delegation duration. Persistent powers.	24
5.4	Two-round sunset.	24
5.5	Artificial labels without personal political information. Shared affinity.	25
5.6	Different affinity.	25
5.7	Review follows initial delegation and precedes extraction.	27
6.1	Controlled revelation of instructor results. Report before revelation.	28
6.2	Revealed indicators and distributions.	29

Quick implementation guide

1.1 Access through the updated laboratory website

Start at <https://beer-lab.org/en/>. Select **CLASSROOM** in the top navigation menu; it opens <https://teaching.beer-lab.org/en/>. In the **Classroom experiments** catalog, use the search box to locate the activity by name. You can also filter by **Topic** or **JEL code**. Clear any filters left from an earlier search before looking for another game.

Each family's card distinguishes **Español** and **English** access links. The **Show extended version** checkbox selects that edition before following a link. Catalog language and session language are separate choices: verify both. Students use the room specified by the instructor; the instructor prepares and monitors the session through this family's own administrative pages.



Figure 1.1: Current institutional website. Select CLASSROOM in the top navigation menu to open the teaching experiments. Captured on October 7, 2026.



Figure 1.2: Current catalog: search by title, topic, or JEL code. Then locate this family's card and select language and edition. Captured on October 7, 2026.

Checking resources, comprehension, and participant requirements

Before opening the room, check the selected configuration and the number of students present. The session-creation form states the group size and minimum required by that configuration. An individual activity accepts any positive participant count; an interactive activity must satisfy its stated requirement: complete groups when size is fixed, or a minimum participant count when size is flexible. Requirements may change across treatments, for example when adding a third party or changing an institution's size. If you edit a grouping parameter, check the requirement for the edited configuration, rather than relying only on the demo's suggested count.

In the instructions, ensure that students can identify what each role receives, what they can decide, and how the outcome is calculated. An initial account, a distributable budget, and final earnings need not be the same amount. Refer to the resources panel and the example for the selected treatment. Do not carry the basic edition's endowment into a treatment that changes accounts or introduces additional positions.

ECU stands for *Experimental Currency Units*: the activity's unit of account. An outcome of 100 ECU does not automatically equal 100 pesos or 100 dollars. Conversion depends on the session configuration. Before announcing a payment, confirm with the laboratory whether money is paid, the conversion rate, and which decisions count for payment. In hypothetical modules, describe amounts as outcomes in the stated situation.

When a comprehension check is included, an incorrect response receives an explanation beside that question, identifying the submitted answer and the correct answer. Other answers remain in the form. Ask the student to return to the example, locate the relevant rule, and redo the calculation before correcting the response. Avoid revealing answers to the entire class for an individual error, and do not interpret a comprehension mistake as an economic choice in the game.

ocrática — una interacción	Erosión democrática y poderes de emergencia / Democratic Erosion and Emergency Powers — BEER Lab Seleccione una variante de este juego. Select a version of this game.
ocrática — 10 rondas, grupo fijo	
ocrática — 10 interacciones independientes con reasignación	
Erosion — one interaction	
Erosion — 10 rounds, fixed group	
Erosion — 10 independent interactions with rematching	
ocrática extendida — regla central	
ocrática extendida — sin riesgo de bloqueo	
ocrática extendida — riesgo de bloqueo de 25%	
ocrática extendida — riesgo de bloqueo de 50%	
ocrática extendida — paquete asignado $q=0\%$, límite=20	
ocrática extendida — paquete asignado $q=0\%$, límite=100	
ocrática extendida — paquete asignado $q=50\%$, límite=20	
ocrática extendida — paquete asignado $q=50\%$, límite=100	
ocrática extendida — poderes persistentes	
ocrática extendida — afinidad compartida	
ocrática extendida — afinidad diferente	
ocrática extendida — cláusula de caducidad	
ocrática extendida — revisión judicial	
emocratic Erosion — central rule	
emocratic Erosion — no gridlock risk	
emocratic Erosion — 25% gridlock risk	
emocratic Erosion — 50% gridlock risk	
emocratic Erosion — assigned package $q=0\%$, cap=20	
emocratic Erosion — assigned package $q=0\%$, cap=100	
emocratic Erosion — assigned package $q=50\%$, cap=20	
emocratic Erosion — assigned package $q=50\%$, cap=100	
emocratic Erosion — persistent powers	

Figure 1.3: Demo contains only the configurations of this game family, in both languages and editions. Continuation 1/2.

BE	ocrática extendida — paquete asignado q=0%, límite=20
	ocrática extendida — paquete asignado q=50%, límite=20
	ocrática extendida — paquete asignado q=50%, límite=100
	ocrática extendida — poderes persistentes
	ocrática extendida — afinidad compartida
	ocrática extendida — afinidad diferente
	ocrática extendida — cláusula de caducidad
	ocrática extendida — revisión judicial
	emocratic Erosion — central rule
	emocratic Erosion — no gridlock risk
	emocratic Erosion — 25% gridlock risk
	emocratic Erosion — 50% gridlock risk
	emocratic Erosion — assigned package q=0%, cap=20
	emocratic Erosion — assigned package q=0%, cap=100
	emocratic Erosion — assigned package q=50%, cap=20
	emocratic Erosion — assigned package q=50%, cap=100
	emocratic Erosion — persistent powers
	emocratic Erosion — shared affinity
	emocratic Erosion — different affinity
	emocratic Erosion — sunset clause
	emocratic Erosion — judicial review

Figure 1.4: Demo contains only the configurations of this game family, in both languages and editions. Continuation 2/2.

Rooms

Current rooms:

[ES] Erosión democrática y poderes de emergencia
[EN] Democratic Erosion and Emergency Powers
[ES] Erosión democrática y poderes de emergencia — Extendida
[EN] Democratic Erosion and Emergency Powers — Extended

Figure 1.5: Rooms contains the four rooms for this family: basic and extended editions in Spanish and English.

Room: [EN] Democratic Erosion and Emergency Powers

Create a new session

Session Config

[EN] Democratic Erosion — one interaction

Number of participants

Complete groups of 6 participants. Use a multiple of 6; minimum 6.

Create

[Configure session](#) 

App sequence

democratic_constraints_game (10 rounds)

Citizens choose checks and balances or emergency delegation, then an executive chooses extraction.

Figure 1.6: Session-creation form for the basic English room. Check the selected configuration and participant requirement before creating the session.

Downloading a session with several rounds

For the instructor

Open **Data** within the relevant session and use that session's CSV or CSV-for-Excel download link. The general export has one row per participant and columns for the different rounds. Ten rounds do not necessarily mean ten rows per person. When the family provides its own long-format export, observations may instead be organized by participant and round or another unit defined by the design.

Save the original file together with the configuration name, session code, and active-round count. Check that columns for the last active round are present and that the data belong to the selected session. Empty cells can represent inactive rounds, a pending decision, or a field that does not apply to a role; do not automatically recode them as zeros. To compare learning, preserve round and group identifiers alongside participant identifiers. Share only anonymous aggregates in class, and record session incidents before constructing derived tables.

1.2 Family summary

Purpose	Analyze when citizens delegate power to avoid gridlock and how an Executive uses the resulting discretion.
Experimental unit	Group of six: one Executive and five Citizens.
Basic edition	One interaction, ten rounds with a fixed group, or ten independent rematched interactions.
Extended edition	Gridlock risk, a gridlock-by-cap factorial, persistence, affinity, sunset, and judicial review.

Decision	Five Citizens vote C or D and, when applicable, review delegation. The Executive chooses extraction within the current cap.
Payoff	Without gridlock: Executive $20 + r$ and each Citizen $(100 - r)/5$. With gridlock: Executive 20 and each Citizen 10 ECU.
Topics	democratic erosion; emergency powers; checks and balances; political gridlock; delegation; political economy.
JEL	A22; C92; D02; D72; P16.
Participants	Multiples of six.
Suggested duration	35–45 minutes for one interaction; 55–80 minutes for six or ten rounds.
Basic route	https://democraticconstraints.beer-lab.org/room/democratic_constraints_en .

1.3 Minimum sequence

1. Confirm that attendance is a multiple of six and select a modality compatible with available time.
2. Enter through beer-lab.org, open teaching.beer-lab.org, and select this family.
3. At democraticconstraints.beer-lab.org/demo, choose language, edition, and treatment.
4. Create the session. Keep Monitor and Report in separate tabs and share only the student room.
5. Give a neutral introduction. Do not announce that delegation, constraint, or extraction is the correct response.
6. Wait until everyone reaches the closing page. Reveal aggregates only when the debrief begins.
7. Start with rules and denominators; then discuss calculations, patterns, and alternative explanations.

Checkpoint

Before admitting participants, verify family, language, treatment, rounds, and group size. Demo must contain 32 configurations and Rooms exactly four rooms with counts 3, 3, 13, and 13.

1.4 Learning objectives

Students should distinguish four concepts that are often conflated. Constraints limit how much an officeholder can appropriate. Gridlock means that an institution may prevent action and destroy surplus even while containing abuse. Delegation changes another player's feasible actions. Institutional selection means that citizens choose rules while anticipating who will use them, so observed institutions are not randomly assigned.

Predictions depend on expected extraction. Delegation can avoid gridlock when extraction is low; constraints protect citizens when it is high. This is a choice between institutional packages, whose attributes the extensions separate for comparison.

Access and preparation

2.1 Portal, catalog, and isolated family

The route begins at the laboratory website and continues to the teaching catalog. The card should display title, description, topics, JEL codes, routes, and guide. The proposed host is <https://democraticconstraints.beer-lab.org/>. Until DNS and deployment are complete, the local instance reproduces the structure at <http://localhost:8095/demo>. Localhost is available only on this computer.

Student routes are https://democraticconstraints.beer-lab.org/room/erosion_democratica_es, https://democraticconstraints.beer-lab.org/room/democratic_constraints_en, https://democraticconstraints.beer-lab.org/room/erosion_democratica_extendida, and https://democraticconstraints.beer-lab.org/room/democratic_constraints_extendded. Instructors use Demo or Rooms with administrative credentials and never share that view or individual links.

Attention

If the domain displays other game families, do not create a session. Verify `GAME_FAMILY=democraticconstraints` and a separate database. Room filtering alone does not isolate Sessions and Data.

2.2 Pedagogical preparation

Collect a prediction before play. Ask whether delegation will rise when gridlock moves from zero to fifty percent, or request expected extraction under each rule. Record responses without grading them. The gap between prediction and observation later creates room to discuss beliefs, social preferences, and learning without moralizing.

Reserve computers, a projector, and recovery time. Twenty-four students form four groups; thirty form five. If one person is absent, do not silently begin with an incomplete group. Reorganize or assign observers before creating the session. Explain that ECU is an experimental unit that makes incentives comparable even if it is not converted to cash.

2.3 Operation, data, and troubleshooting

2.3.1 Waiting pages and incomplete groups

Waiting pages synchronize votes, review, draws, and extraction. If a computer remains there, inspect Monitor and identify the missing stage. Do not refresh every machine. If someone exits before voting, the group cannot complete; document the incomplete observation rather than inventing a choice.

2.3.2 Links and databases

“This user does not exist” indicates a link from an earlier session or a reset database. Create a new session. Never run `resetdb` during production teaching. Every game domain needs its own instance and database so Demo, Rooms, Sessions, and Data remain isolated.

2.3.3 Export and privacy

The export includes session, pseudonymous participant, round, role, treatment, rule, aggregate votes, review, probability, draw, gridlock, cap, extraction, and payoff. Project aggregates for teaching. Never show participant codes or connect decisions to names, student numbers, or seats. Research use requires its own ethical review and consent.

2.3.4 Technical control

Restart the instance after code changes because a production server does not reload automatically. Confirm HTTP 200 for Demo and Rooms, four rooms, correct counts, and no foreign families. Complete one session per language, the final page, and the hidden and revealed report. A basic room must default to a basic configuration in the correct language.

2.4 Scope and responsible use

The game does not reproduce a country. It omits parties, ideology, professional courts, bureaucracy, media, mobilization, real coercion, and constitutional enforcement. Gridlock is a teaching draw and extraction is an ECU transfer. Its value is to isolate a trade-off among action, constraint, and appropriation.

A classroom treatment difference is descriptive when assignment is not comparable or the number of groups is small. Even with assignment, uncertainty can be large. Report magnitudes, distributions, and denominators; do not use the session to diagnose individual democratic attitudes. Artificial affinity requires particular care.

For the instructor

A useful conclusion has three sentences: “The rule allowed...,” “In our session we observed...,” and “The pattern is consistent with..., although it could also reflect....” This structure separates design, evidence, and interpretation.

Participant flow

3.1 Welcome, rules, and instructions

The opening identifies the laboratory, explains the general purpose, and requires acceptance of silence, privacy, and continuity rules. This operational confirmation is not an opinion item. Instructions present the two institutional packages and formulas. Participants see the treatment's gridlock probability before choosing.



Welcome to the BEER Lab

The Behavioral and Experimental Economics Research Lab of the Department of Economics at Tecnológico de Monterrey is a space designed to study economic and political decision-making through controlled activities.

Figure 3.1: Participant entry and common information. Welcome and laboratory rules.

This activity examines how citizen choices between institutional constraints and emergency delegation, and how a participant in executive office responds.

What participants will see

The interface uses “Constraints” and “Delegation” as functional labels. It does not claim that either is morally superior. Gridlock probability and the extraction cap are explicit so participants can calculate consequences.

- Do not refresh, close, or leave this page.
- If you have a problem, raise your hand and wait for assistance.

Welcome to the BEER Lab

The Behavioral and Experimental Economics Research Lab of the Department of Economics at Tecnológico de Monterrey is a space designed to study economic and political decision-making through controlled activities.

This activity examines how citizens choose between institutional constraints and emergency delegation, and how a participant in executive office responds.

General laboratory rules

- Remain silent throughout the activity.
- Do not talk or communicate with other participants.
- Make decisions individually and privately.
- Do not refresh, close, or leave this page.
- If you have a problem, raise your hand and wait for assistance.

☐ I confirm that I have read and will follow these rules.

Start

Powered by [oTree](#)

Figure 3.2: Participant entry and common information. Welcome and laboratory rules.
Continuation 2/2.

3.2 Comprehension and examples

Three questions verify the three-vote threshold, the 10 ECU citizen payoff under gridlock, and the relevant cap. Errors receive specific feedback without exposing other choices. Worked examples cover extraction of 20 and 100 and the gridlocked outcome. Do not let a participant advance by mechanical trial; after repeated errors, explain the formula privately and ask the participant to reproduce it.

3.3 Vote, executive choice, and result

Round information announces role, probability, matching, and history. Citizens vote simultaneously. The Executive waits without seeing individual votes and, if the round is not gridlocked, chooses an integer extraction. Results display the effective rule, aggregate votes, gridlock, extraction, and role payoffs. Judicial review reveals only whether its threshold restored constraints.

The final page replaces oTree's automatic ending. It summarizes rounds and payoffs and asks participants to wait. If an old link reports that the user does not exist, the database changed or the link belongs to a prior session; create and distribute a new session.



CENTRAL RULE: CONSTRAINTS VERSUS DELEGATION

Democratic Erosion and Emergency Powers

Resources and unit of account

Initial fund per round: 100 ECU.

ECU stands for Experimental Currency Units. It is the unit of account for this activity.

This session does not convert ECU into real money.

Your group has one Executive and five Citizens. Every round begins with a public fund of 100 ECU.

Institutional constraints (C)

Executive extraction is capped at 20 ECU. There is an announced probability of gridlock. If gridlock occurs, the decision is not implemented: every citizen earns 10 ECU and the Executive earns 20 ECU.

Emergency delegation (D)

There is no gridlock and the Executive may extract from 0 to 100 ECU. Delegation is adopted with at least three of the five citizen votes.

Payoffs without gridlock

If the Executive extracts r ECU, the Executive earns $20 + r$. Every citizen earns $(100 - r)/5$. The remainder is divided equally among the five citizens.

Rule in this session: Citizens choose each round between constraints with 50% gridlock and delegation without gridlock.

Continue

Con tecnología de oTree

Figure 3.3: Current basic-edition instructions, with initial resources and experimental units.



Review the marked questions. Each shows your answer and an explanation; your other answers are retained.

CENTRAL RULE: CONSTRAINTS VERSUS DELEGATION

Comprehension questions

Resources and unit of account

ECU stands for Experimental Currency Units. It is the unit of account for this activity.

This session does not convert ECU into real money.

How many citizen votes are required to delegate emergency powers?

Your answer: 4. The correct answer is 3. Delegation requires three citizen votes.

How many ECU does each citizen earn if gridlock occurs?

What is the maximum extraction under the stated condition?

Confirm decision

Con tecnología de oTree

Figure 3.4: Current comprehension check: specific feedback explains the incorrect answer and preserves the other responses.

CENTRAL RULE: CONSTRAINTS VERSUS DELEGATION

Worked examples

1 With constraints, no gridlock, and extraction of 20 ECU: every citizen earns 16 ECU and the Executive earns 40 ECU.

2 With delegation and extraction of 100 ECU: every citizen earns 0 ECU and the Executive earns 120 ECU.

3 If gridlock occurs: every citizen earns 10 ECU and the Executive earns 20 ECU.

[Continue](#)Powered by [oTree](#)

Figure 3.5: Three numerical examples.

ROUND 1 OF 1

Institutional choice

Vote to retain constraints or delegate emergency powers to the Executive. Option D is adopted with at least three votes.

Probability of gridlock under constraints: 50%

- ☐ Retain institutional constraints (C)
☐ Delegate emergency powers (D)

[Confirm decision](#)Powered by [oTree](#)

Figure 3.6: The two central choices. Citizen institutional vote.



ROUND 1 OF 1

Executive decision

The effective rule is Emergency delegation. You may extract between 0 and 100 ECU from the public fund.

Executive extraction (ECU)

Extraction: 0 ECU

Confirm decision

Powered by [oTree](#)

Figure 3.7: Executive extraction decision.



ROUND 1 OF 1

Round result

Effective rule
Emergency delegation

Votes for delegation
5 / 5

Did gridlock occur?
No

Extraction
40 ECU

Citizen
12 ECU

Executive
60 ECU

Your role: Citizen

Your payoff: 12 ECU

Continue

Powered by [oTree](#)

Figure 3.8: The same collective outcome with the individual payoff highlighted. Citizen result.

ROUND 1 OF 1
Round result

Effective rule Emergency delegation	Votes for delegation 5 / 5	Did gridlock occur? No	Extraction 40 ECU
---	--------------------------------------	----------------------------------	-----------------------------

Citizen 12 ECU	Executive 60 ECU
---------------------------------	-----------------------------------

Your role: Executive **Your payoff: 60 ECU**

[Continue](#)

Powered by [oTree](#)

Figure 3.9: Executive result.

BEER LAB
Activity completed

You have completed all rounds. Keep this screen open and wait for the instructor's directions.

Your role Citizen	Rounds completed 1	Cumulative payoff 12 ECU	Mean payoff per round 12 ECU
-----------------------------	------------------------------	------------------------------------	--

Powered by [oTree](#)

Figure 3.10: Explicit activity completion screen.

Formal mechanism and worked example

4.1 Sequence

Each group has one Executive E and five citizens. In endogenous conditions, citizen i chooses $v_i \in \{C, D\}$. Delegation is adopted when $\sum_i \mathbf{1}\{v_i = D\} \geq 3$. Under C, the cap is 20 and gridlock occurs with probability q . Under D, $q = 0$ and the cap is 100. Factorial cells assign q and the cap without a vote.

Without gridlock, the Executive selects $r \in \{0, 1, \dots, \bar{r}\}$. Payoffs are

$$\pi_E = 20 + r, \quad \pi_i = \frac{100 - r}{5}.$$

Total payoff is 120 ECU for every r : extraction redistributes. Under gridlock, $\pi_E = 20$ and every citizen receives 10, reducing total payoff to 70. Constraints exchange distributive protection for a risk of losing 50 ECU of surplus.

4.2 Fully worked example

Let $q = 0.5$ and suppose citizens expect $r = 20$ under C when the round is not gridlocked. Each citizen expects $0.5(10) + 0.5(16) = 13$ ECU. If expected extraction under D is 40, delegation yields 12. Under those beliefs, C is worth one additional ECU. If $q = 0.25$, C yields $0.25(10) + 0.75(16) = 14.5$. If a delegated Executive credibly chose $r = 20$, D would yield 16 while removing gridlock, reversing the comparison.

There is therefore no unique citizen prediction without a belief about extraction. A materially self-interested Executive selects the maximum: 20 under C and 100 under D. If citizens expect 100 under D, they receive zero and prefer C for every $q < 1$. Social preferences, reciprocity, or legitimacy concerns can produce lower extraction, so the experiment elicits the executive choice instead of automating abuse.

Theoretical foundation

The endogenous institution changes implementation probability and the feasible extraction set at once. The factorial family separates those dimensions; endogenous conditions study how citizens put them back together through voting.

4.3 Review, persistence, and sunset

Under review, D first wins with three votes. Citizens then choose restore or keep; four restoration votes reinstate C before the draw and extraction. Persistent powers remove future voting after one approval. A sunset makes D last for two rounds and then expire. These rules change the horizon and cannot be treated as labels.

4.4 Political-economy foundations

4.5 Checks and balances

Constraints reduce discretion but create veto points. Veto-player theory emphasizes that broader agreement can stabilize policy while making valuable changes harder. Stability can protect citizens from appropriation or block reform. The protocol represents that tension with an observable gridlock probability and extraction cap. It does not reproduce legislatures, professional courts, or federal structures.

4.6 Delegation and political agency

Delegation expands an agent's feasible action set. Citizens value implementation but cannot fully control how authority is used. The Executive has a direct incentive to extract. The problem combines institutional choice and moral hazard: principals grant discretion and then observe an action that may depart from their interests. Repetition creates reputational incentives but no enforceable contract.

4.7 Gridlock and democratic erosion

Forteza, Mussio, and Pereyra experimentally examine why voters weaken checks when a reform is blocked. They report greater support for special powers under gridlock and reactions that can also occur when reform is harmful. This family retains the intuition but changes payoffs, roles, sequence, and horizon; it is a teaching adaptation rather than a replication.

Acemoglu, Robinson, and Torvik show how voters may dismantle checks to obtain a desired policy while exposing themselves to rents. The trade-off is intertemporal: a coalition weighs current policy against appropriation enabled by new authority. In class, votes and later extraction make that relationship visible.

4.8 Endogenous institutions and selection

Citizens who choose D may differ in expectations, trust, or risk tolerance. Comparing their Executive's extraction with C mixes rule effects and selection. Four exogenous cells assign gridlock and caps without a vote. They provide a compact lesson in why causal identification separates institutional choice from institutional consequences.

4.9 Affinity, legitimacy, and scope

Blue and Gold labels follow the minimal-group tradition: arbitrary categories sometimes change behavior without history. Here they ask whether perceived affinity affects institutional trust. They do not measure ethnicity, partisanship, or real polarization. Legitimacy is also broader than majority choice; the report records procedural consent, extraction, and payoff, but not rights, deliberation, or constitutional legality.

Theoretical foundation

A rigorous conclusion is conditional: “Given gridlock risk and beliefs about extraction, this rule changes expected payoff as follows.” Avoid replacing that reasoning with broad labels such as authoritarian, democratic, good, or bad.

4.10 A benchmark instructors can calculate

Theory predicts choices conditional on preferences and beliefs. Let $\bar{r}_C$ denote extraction anticipated under constraints when the round is not gridlocked and $\bar{r}_D$ extraction anticipated under delegation. A risk-neutral Citizen’s expected values are

$$V_C = (1 - q) \frac{100 - \bar{r}_C}{5} + 10q, \quad V_D = \frac{100 - \bar{r}_D}{5}.$$

Delegation is materially attractive when $V_D > V_C$. With $\bar{r}_C = 20$, constraints yield $16 - 6q$. Expected delegated extraction of 30 makes $V_D = 14$ and gives the indifference threshold $q = 1/3$. Constraints are preferred at $q=0.25$; delegation at $q=0.50$. If expected delegated extraction rises to 40, the threshold becomes $2/3$ and constraints pay more at every q offered in this family. The prediction changes because executive beliefs change, not because the theory is adjusted arbitrarily.

Write both examples before opening the report. Ask students to propose an extraction forecast and justify it through incentives or experience. An initial justification may be a belief; later it can use observed history. Do not replace a prior forecast retrospectively with the choice just observed. That would make it impossible to distinguish an unexpected outcome from an explanation constructed after the event.

If everyone maximizes only their own payment and this assumption is common knowledge, the Executive chooses the feasible maximum: 20 under C and 100 under D. Citizens then receive $16 - 6q$ under C and zero under D. For any q between zero and one, C pays at least 10 and dominates D in this benchmark. Introducing gridlock alone therefore does not generate delegation. Expectations of restraint, different preferences, or an additional mechanism are needed. This is central to the lesson: a crisis does not mechanically imply democratic erosion.

Theoretical foundation

Before calling an outcome a theoretical violation, specify the hypothesis: own-payoff maximization with known executive behavior, risk neutrality with stated beliefs, or preferences incorporating distribution and legitimacy. The same vote can support one hypothesis and contradict another.

4.11 Risk, trust, and social preferences

Expected monetary value summarizes payments, but may not rank alternatives for a risk-averse individual. C involves implementation uncertainty; D can involve strategic uncertainty about

extraction. The first has an announced probability. The second depends on another participant. Consequently, varying q and observing a vote does not measure a pure risk attitude. A diagnosis would need additional choices or beliefs about executive conduct.

Trust can be defined here as a favorable expectation about how discretion will be used. Distinguish trust from altruism: expecting low extraction is a Citizen belief; choosing low extraction is Executive behavior. The report observes the second and a vote potentially affected by the first, but does not identify the belief directly. Collect a forecast on paper or in a separate poll if the debrief should contrast expectations with decisions. That instructor supplement changes neither payments nor the automatic game export.

Social preferences offer another explanation for restrained extraction. The Executive may value citizen payoffs, equality, or a norm of power use. An institutional restriction and voluntary restraint are different mechanisms: extracting 20 under C may maximize private payment, while the same extraction under D sacrifices 80 additional ECU. Compare the position of a choice within its feasible set as well as its absolute amount. Equal numbers do not imply equal incentives.

4.12 What the literature contributes and what this protocol adapts

Forteza, Mussio, and Pereyra examine whether political gridlock can undermine checks and balances in a laboratory experiment. The article connects implementation frictions with citizen willingness to expand discretion. Its evidence motivates classroom hypotheses, but our session's numbers must not be presented as reproductions of its estimates. This family uses six participants, ECU, transparent limits, and treatments designed for teaching.

Acemoglu, Robinson, and Torvik explain why dismantling constraints can enter voters' strategic calculations. This motivates asking who benefits from a rule and what conduct voters anticipate. Tsebelis's veto-player framework separates constraints on policy change from the ability to act. Research on emergency powers and temporary legislation motivates questions about who authorizes an exception, its duration, and the mechanism restoring authority. Affinity labels draw on the minimal-group tradition of Tajfel and colleagues. None of these references makes the classroom treatments direct replications of the original protocols.

An instructor unfamiliar with the field can begin the focal article with four questions: which institutional choice is studied, which executive opportunity changes, how gridlock is manipulated, and which outcome supports the claim. Read the design details next and compare them with this guide. Classroom discussion must distinguish a theoretical prediction, published academic evidence, and observations from students. These sources complement one another, but have different units, incentives, samples, and inferential limits.

Basic and extended editions

Each extension changes a principal dimension whenever possible. State predictions before projecting results, hold other parameters constant, and recognize that a classroom session provides descriptive evidence.

5.1 Central rule

Mechanism. Citizens vote every round between constraints, with a 50% probability of gridlock, and delegation without gridlock. The extraction cap changes from 20 to 100 ECU.

Prediction and reasoning. The comparison shows why the same citizens may accept discretion when they place a high cost on inaction. A material-payoff prediction must anticipate executive extraction: delegation is attractive only if avoiding gridlock is worth the expected additional extraction.

Reading the report. Compare delegation, extraction, and citizen payoffs. Do not call a choice irrational without reconstructing beliefs about executive behavior.

Recommended comparison. Read votes and extraction together: citizens may delegate while expecting restraint and then receive high extraction. Compare a prediction collected before play with the observed payoff. Expectations are not elicited by the app, so the instructor must record them separately.

Interpretive risk. The central rule contains no legislative proposals, bargaining between branches, or real crisis. Gridlock is an announced random event. A majority for D establishes acceptance of the experimental package, not support for a particular political regime.

5.2 Gridlock: 0%, 25%, and 50%

Mechanism. Constraints always cap extraction at 20 ECU; only the exogenous probability of gridlock changes. Delegation has no gridlock and keeps the 100 ECU cap.

Prediction and reasoning. As gridlock becomes more likely, monetary preferences and fixed beliefs predict more delegation. The treatment also reveals whether that response is proportional or excessive.

Reading the report. Order treatments by probability and examine delegation and welfare. One random realization is not a measure of institutional quality.

Recommended comparison. Keep the C cap at 20 and the D cap at 100. Derive expected payoffs for each q using the same extraction beliefs. Then show delegation and realized payoffs

separately: a large vote response can coexist with little change in executive behavior.

Interpretive risk. Realized gridlock may differ from the announced parameter. Citizens choose using a known probability; outcomes also reflect chance. Do not judge the vote using only the draw that happened afterward.



The screenshot shows a web interface for a simulation. At the top, it says 'ROUND 1 OF 6' and 'Round information'. Below this, there are three boxes: 'Your role' with the value 'Citizen', 'Probability of gridlock under constraints' with the value '25%', and 'Group composition' with the value 'Fixed group'. A blue box below these states: 'Rule in this session: Constraints carry a 25% probability of gridlock.' Below that, it says 'There are no previous results yet.' and has a 'Continue' button. At the bottom, it says 'Powered by oTree'.

Figure 5.1: Visible parameters and institutional assignment. 25% gridlock probability.

5.3 Factorial decomposition: no gridlock and cap 20

Mechanism. The platform assigns a package with zero gridlock probability and a 20 ECU extraction cap. There is no institutional vote.

Prediction and reasoning. This cell identifies outcomes when procedural effectiveness and executive restraint are both present. It is the clean reference for separating gridlock from discretion.

Reading the report. Use extraction and payoffs by role. The absence of a vote is not evidence of citizen support.

Recommended comparison. Compare this cell with zero gridlock and cap 100 to study discretion without risk. Then compare it with 50% gridlock and cap 20. The first contrast concerns the feasible extraction set; the second concerns implementation.

Interpretive risk. The exogenous cells have no institutional vote. Missing votes mean not applicable rather than rejection. The Executive can still extract below the maximum: a cap restricts possibilities without determining behavior.

5.4 Factorial decomposition: no gridlock and cap 100

Mechanism. The assigned package removes gridlock but permits extraction up to 100 ECU. Citizens do not select the package.

Prediction and reasoning. Its difference from the previous cell identifies the effect of discretion while procedural performance stays constant.

Reading the report. Compare extraction distributions, not only means. Differences reflect both

ROUND 1 OF 6

Executive decision

The effective rule is Assigned package: 20 ECU cap. You may extract between 0 and 20 ECU from the public fund.

Executive extraction (ECU)

Extraction: 0 ECU

Confirm decision

Powered by [oTree](#)

Figure 5.2: Exogenously assigned rule.

opportunities and executive choices.

Recommended comparison. Compare with zero gridlock and cap 20 while holding implementation constant. Check whether the whole distribution shifts upward or only a few large extractions appear. Both can increase the mean, but citizens face different experiences and risks.

Interpretive risk. A larger cap makes new actions feasible without requiring them. Higher extraction can reflect incentives, reference points, or learning. Exogenous assignment removes selection through voting but does not reveal motives.

5.5 Factorial decomposition: 50% gridlock and cap 20

Mechanism. The assigned rule combines gridlock risk with a tight extraction constraint.

Prediction and reasoning. This cell isolates the cost of gridlock without citizen selection. Under gridlock, all players receive fixed payoffs that are below some feasible non-gridlocked outcomes.

Reading the report. Report realized gridlock together with the programmed 50%. Small samples can generate a wide gap.

Recommended comparison. Use zero gridlock and cap 20 as the benchmark. Compare total payoffs across all completed rounds and extraction only across rounds without gridlock. This prevents attributing a poor random outcome to an executive choice that never occurred.

Interpretive risk. Coding extraction as zero during gridlock would artificially lower the mean. No decision occurred. A small class may also experience a realized frequency far from the announced 50%; show both rather than replacing one with the other.

5.6 Factorial decomposition: 50% gridlock and cap 100

Mechanism. The package combines possible gridlock with broad extraction authority. It deliberately differs from the usual political bundles.

Prediction and reasoning. The cell completes the 2 by 2 design and prevents students from treating control and effectiveness as a single attribute.

Reading the report. Do not present this package as a historical institution. It is an analytical decomposition.

Recommended comparison. Zero gridlock with cap 100 holds discretion constant and changes implementation. The 50% gridlock cell with cap 20 holds risk constant and changes discretion. Together they separate the two components of the institutional package.

Interpretive risk. This deliberately artificial package prevents treating constraints and gridlock as synonyms. Do not call it a real regime. Its purpose is to separate implementation efficiency from the distribution of feasible benefits.

5.7 Persistent powers

Mechanism. Once approved, delegation lasts for the rest of the block. Citizens do not vote again while it remains active.

Prediction and reasoning. Irreversibility raises the value of forecasting future executive behavior. A useful delegation today can impose costs tomorrow, making institutional commitment central.

Reading the report. Track the first delegation and subsequent extraction. A round-by-round vote rate is undefined after activation.

Recommended comparison. Compare with the six-round central rule, holding q and group composition constant. Separate the first adoption of D from later rounds without voting. Record adoption time and accumulate payoffs from that point to the end: the institutional outcome is a trajectory.

Interpretive risk. A D state in later rounds is not renewed citizen consent. Persistence raises the cost of a mistaken choice. Lower extraction after delegation may reflect social preferences; it cannot automatically be attributed to fear of losing the next institutional vote.

5.8 Shared affinity

Mechanism. The Executive and Citizens receive the same artificial Blue Group label. The label changes no payoff, information, or rule.

Prediction and reasoning. A minimal shared identity can affect trust or expectations even without material information. Self-interested theory predicts no effect.

Reading the report. Compare against different affinity with identical parameters. Do not call an arbitrary label a real political identity.

Recommended comparison. Hold rules, probabilities, and payoffs constant and compare with different affinity. Ask for a trust prediction before opening the report. One testable hypothesis is lower extraction or greater delegation when both sides share the arbitrary label.

Interpretive risk. A shared color does not ensure psychological identification. A null difference can reflect a weak manipulation or a small sample. A positive difference cannot be generalized

ROUND 1 OF 6

Round information

Your role Citizen	Probability of gridlock under constraints 50%	Group composition Fixed group
-----------------------------	---	---

Rule in this session: Once approved, delegation lasts until the block ends.

There are no previous results yet.

[Continue](#)

Powered by [oTree](#)

Figure 5.3: Information on delegation duration. Persistent powers.

ROUND 1 OF 6

Round information

Your role Executive	Probability of gridlock under constraints 50%	Group composition Fixed group
-------------------------------	---	---

Rule in this session: Delegation lasts two rounds and then requires another vote.

There are no previous results yet.

[Continue](#)

Powered by [oTree](#)

Figure 5.4: Two-round sunset.

directly to parties or ethnic identities with histories and real conflict.



ROUND 1 OF 6

Round information

Your role Citizen	Assigned label Blue Group	Probability of gridlock under constraints 50%	Group composition Fixed group
-----------------------------	-------------------------------------	---	---

Rule in this session: The Executive and Citizens receive the same artificial label.

There are no previous results yet.

[Continue](#)

Powered by [oTree](#)

Figure 5.5: Artificial labels without personal political information. Shared affinity.



ROUND 1 OF 6

Round information

Your role Citizen	Assigned label Gold Group	Probability of gridlock under constraints 50%	Group composition Fixed group
-----------------------------	-------------------------------------	---	---

Rule in this session: The Executive and Citizens receive different artificial labels.

There are no previous results yet.

[Continue](#)

Powered by [oTree](#)

Figure 5.6: Different affinity.

5.9 Different affinity

Mechanism. The Executive is assigned Blue Group and Citizens Gold Group. No personal political data are used.

Prediction and reasoning. Categorical distance may reduce trust or increase demand for constraints, but a null effect is also plausible and should be stated ex ante.

Reading the report. Read delegation and extraction jointly. Lower delegation can reflect beliefs, risk, or intergroup preferences.

Recommended comparison. Compare extraction distributions and votes with shared affinity. State two channels: citizen distrust before delegation and reduced distributive concern by the Executive afterward. The channels imply different observable patterns even if both harm citizen payoffs.

Interpretive risk. The label contrast does not separate expectations from preferences. Categories are artificial and do not measure political attitudes. Do not ask participants to disclose party identification to interpret a manipulation that never measures it.

5.10 Sunset clause

Mechanism. Delegation lasts in the approval round and one additional round. It then expires and citizens regain the vote.

Prediction and reasoning. A sunset limits the cost of a mistaken choice and may make temporary delegation more acceptable. It also suspends renewed accountability during its term.

Reading the report. Compare adoption, renewal, and extraction before expiration. Automatic expiration is different from voluntary revocation.

Recommended comparison. Compare with persistent powers and the central rule over the same six-round horizon. Mark approval, the following round, and the return to voting on a timeline. Examine initial acceptance and extraction during and after the two-round term.

Interpretive risk. Expiry is automatic, not a player-chosen removal. Its value depends on how many rounds remain. Delegation near the end creates a different exposure from the same choice at the start.

5.11 Judicial review

Mechanism. After delegation wins, the five citizens decide whether to restore constraints. Reversal requires four votes and occurs before extraction.

Prediction and reasoning. The second vote creates a supermajoritarian safeguard. It can correct or confirm the initial choice, depending on coordination and beliefs.

Reading the report. Show the reversal rate with its denominator: only rounds where delegation first won. Keep initial and review votes distinct.

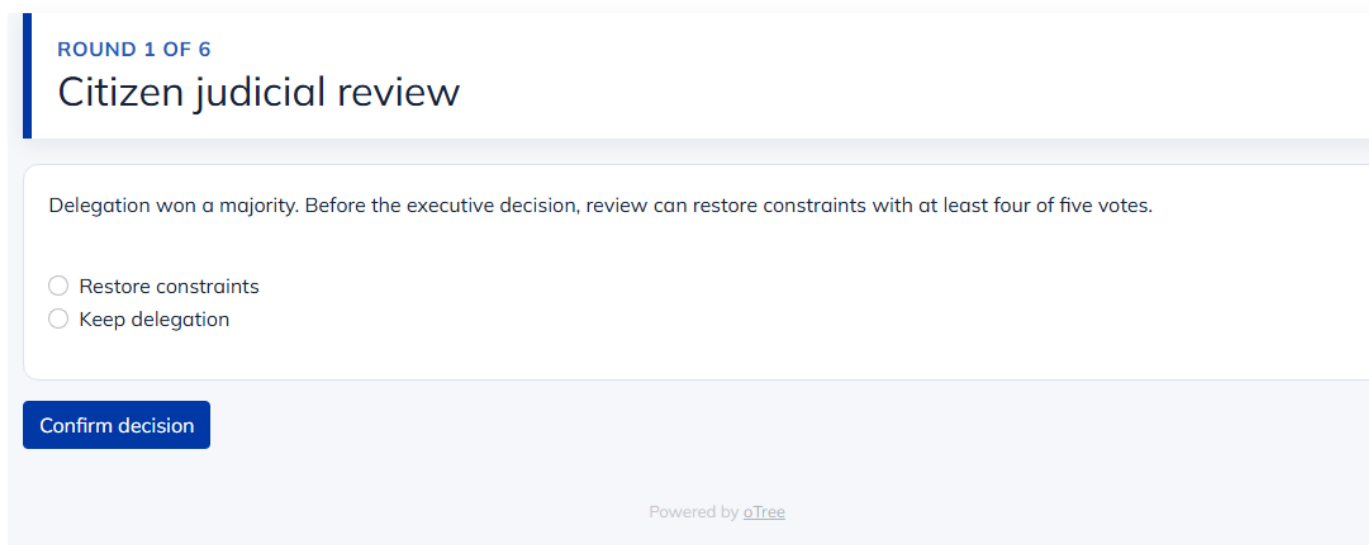
Recommended comparison. Show the initial three-vote majority and the subsequent four-vote threshold separately. Report initial delegations, eligible reviews, and effective restorations. Then compare extraction under the final rule with the central treatment lacking a second stage.

Interpretive risk. Citizen votes stand in for an institution of review; this is not a professional court. Different majorities are not necessarily inconsistent: the later stage can change coordination and has a different threshold before executive action.

5.12 One interaction

Mechanism. The group makes one institutional choice and one executive decision. There is no public history or reputation.

Prediction and reasoning. This version best approximates the static trade-off and supports a direct comparison between expected-payoff calculations and observed behavior.



ROUND 1 OF 6

Citizen judicial review

Delegation won a majority. Before the executive decision, review can restore constraints with at least four of five votes.

☐ Restore constraints

☐ Keep delegation

Confirm decision

Powered by [oTree](#)

Figure 5.7: Review follows initial delegation and precedes extraction.

Reading the report. Use between-group variation and avoid claims about learning.

Recommended comparison. Use one interaction to teach the static calculation before repetition. With several simultaneous groups, compare between-group distributions rather than a nonexistent time trend. Recorded forecasts separate surprise about behavior from surprise about the random draw.

Interpretive risk. One interaction removes within-game history, but classmates may know one another outside the lab. Screen anonymity does not remove prior relationships. One choice also cannot establish a stable political preference.

5.13 Fixed groups and rematching

Mechanism. Fixed groups retain composition for ten rounds; rematching keeps positional roles but changes counterparts and resets each interaction.

Prediction and reasoning. The comparison separates part of general learning, relationship-specific behavior, and reputational discipline. Rematching does not eliminate learning.

Reading the report. Compare round trends and between-group dispersion, noting that repeated choices by the same person are dependent.

Recommended comparison. For fixed groups, reconstruct the information citizens observed before each new vote. For rematching, compare the same rounds with q and decision counts unchanged: counterparts change, not the formula. Show role-specific trends and between-group dispersion.

Interpretive risk. Rematching preserves Executive and Citizen positions; it does not make every participant play both roles. Persistence, sunset, and review retain fixed groups so that an institution governs a clearly defined population.

Instructor report, session, and debrief

6.1 Controlled revelation

The report initially displays participants, completed group-rounds, and pending observations. Aggregates remain hidden until the instructor selects Reveal. This supports prediction collection and prevents groups still playing from observing results. Hiding again does not erase data; it protects projection.

The screenshot shows the oTree web interface. At the top is a navigation bar with links: Demo, Sessions, Rooms, Data, Server Check, and Logout. Below this is a header for the current session: '[EN] Democratic Erosion — one interaction: session 'ce12fsq9' (demo)'. A row of icons provides quick access to New, Links, Monitor, Data, Payments, Report, and Description. The main content area has two input fields: 'App Name' with the value 'democratic_constraints_game (10 rounds)' and 'Round Number' with the value '10', followed by a 'Go' button. Below these is a section titled 'CENTRAL RULE: CONSTRAINTS VERSUS DELEGATION' with the subtitle 'Instructor report' and 'Democratic Erosion and Emergency Powers'. A summary table shows: Participants: 6, Completed group-rounds: 0 / 1, and Pending: 1. An orange banner states: 'Aggregate results remain hidden until the instructor chooses to reveal them.' At the bottom is a blue 'Reveal results' button.

Figure 6.1: Controlled revelation of instructor results. Report before revelation.

6.2 Measures and denominators

Delegation uses rounds with endogenous voting. Gridlock uses completed rounds exposed to its rule. Mean and median extraction exclude gridlock because no Executive chose extraction. Role payoffs include gridlocked rounds. Review reversal uses eligible delegations only. Explain these denominators before comparing percentages.

The histogram shows extraction intervals. A high mean can represent broad moderate extraction or polarization between zero and one hundred. The round table supports learning analysis but does not turn a time trend into a causal effect. Display group counts and dispersion and remember that each person appears repeatedly.

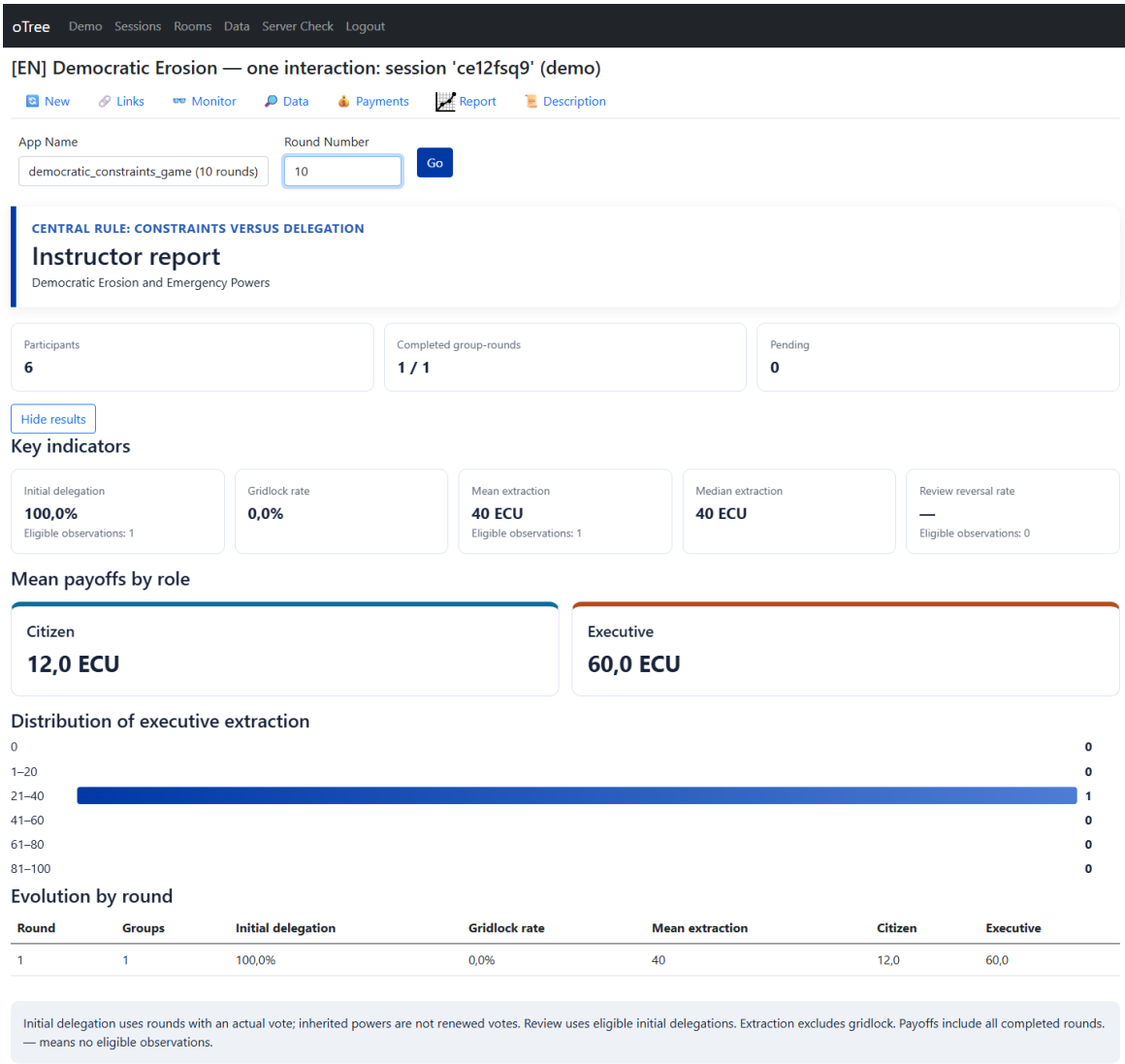


Figure 6.2: Revealed indicators and distributions.

6.3 Debrief protocol

Feedback script

First ask: “What rule was available and what did we predict?” Second: “How many group-rounds are complete and what is the denominator?” Third, describe delegation, gridlock, extraction, and payoffs without explaining them. Fourth, request two compatible mechanisms. Fifth, compare a treatment that changes one dimension. Close with what the session cannot establish.

6.3.1 A worked reading of the report

Suppose four groups play six rounds, producing 24 possible group-rounds. When the instructor opens the report, 20 are complete. These form the available universe for payoffs and outcomes even if all 24 participants are connected. If 16 eligible votes occurred and eight adopted D, delegation is 50

If five completed rounds were gridlocked, there are 15 observed executive decisions. Mean extraction is calculated over those 15. Role payoffs also include the five gridlocked rounds because payments are defined there. Explain that this hypothetical combines denominators to teach interpretation; a particular session uses one treatment and its report displays that structure. With judicial review, eight eligible initial delegations and two restorations produce a 25

Begin by asking a student to state one figure’s numerator and denominator. Then interpret the histogram. Concentration near 20 can reflect restraint under D or use of the maximum under C. The effective rule distinguishes these interpretations. Extraction of 80 is feasible only with cap 100. A common monetary axis aids comparison, but institutional interpretation still requires knowing the opportunities facing each Executive.

6.3.2 Separate description, mechanism, and evaluation

A valid description might be: “Delegation occurred in eight of sixteen votes, and mean extraction was 35 ECU in rounds without gridlock”. A mechanism hypothesis would be: “Expected gridlock made delegation attractive”. Supporting it requires comparing probabilities while holding other conditions constant or using recorded expectations. A normative assessment would be: “The loss of distributive protection was too large”. That claim requires a stated welfare criterion; a percentage alone does not establish it.

Total payments deserve care. Without gridlock they are always 120 ECU, whether extraction is zero or 100. Aggregate surplus therefore does not distinguish equal division from complete appropriation. With $q=0.5$, expected total payoff under C is 95, while D provides 120 without gridlock risk. This efficiency advantage can coexist with worse citizen payments when the Executive extracts heavily. Ask students to represent both statements at once rather than selecting one figure as decisive proof.

End by asking what would have contradicted the prior prediction. If students anticipated greater delegation with higher q , a lower rate at $q=0.50$ than at $q=0.25$ is informative, although not conclusive with few groups. Check changes in extraction, composition, and experience, and acknowledge sample noise. A useful debrief teaches revision of a hypothesis without inventing personal motives to accommodate every observation.

6.4 Lesson plans

6.4.1 A 45-minute session

Allocate 8 minutes to access, 10 to instructions and comprehension, 8 to one interaction, 14 to the report, and 5 to closing. Use the central rule and require an expected-value calculation. This format privileges clarity and cannot study learning.

6.4.2 A 60-minute session

Use six rounds of gridlock variation or the factorial. Reserve 10 minutes for predictions, 20 for play, and 20 for distributions. Assign teams to interpret efficiency, distributive protection, and institutional selection. Require evidence from the report.

6.4.3 An 80-minute session

Compare the central rule with persistence, sunset, or review. Record hypotheses before revealing, allow team discussion, and close with Forteza, Mussio, and Pereyra. The longer horizon justifies teaching commitment rather than only a one-round calculation.

6.4.4 Neutral opening script

“This activity studies choices under different rules. Options do not represent personal opinions and there is no morally correct response. Read probabilities, caps, and formulas. Do not communicate. We will view only aggregate results at the end.” Avoid current political examples before play because they may create demand effects and polarize interpretation.

6.4.5 Follow-up product

Assign a 300-word note containing one figure, one calculation, and one limitation. The note must distinguish observation, interpretation, and prior evidence. A simple rubric scores mechanism accuracy, denominator use, economic reasoning, and inferential caution.

6.5 Discussion bank and exercises with answer paths

Assign these exercises before results are revealed, during the debrief, or afterward. The model answer gives the minimum reasoning; a complete discussion states assumptions and limits. Use extensions to check understanding through a concrete change in parameters or evidence.

1. Expected value of constraints

Question. With expected extraction of 20 ECU, calculate citizen payoff under constraints for $q=0$, 0.25, and 0.50. Compare with delegation and expected extraction of 40.

Answer path. Constraints yield 16 when not gridlocked and 10 under gridlock: expected values are 16, 14.5, and 13. Delegation with extraction 40 yields 12. Constraints yield more in all three cases. Indifference requires $q=2/3$ under these beliefs, outside the family’s treatments.

Extension. Repeat with delegated extraction of 30 ECU: D pays 14. Derive $q=1/3$ as the indifference threshold and explain why the same probability can favor different rules when beliefs change.

2. Delegation threshold

Question. What happens in a 2-to-3 vote and why is it not a tie?

Answer path. There are five citizens. Three votes adopt D, so 3 to 2 delegates. The odd electorate avoids ties and makes majority coordination part of the mechanism.

Extension. A Citizen switches from D to C after an initial 3-to-2 vote. Determine the effect and contrast it with a switch from an initial 5-to-0 vote. Discuss when an individual vote is pivotal.

3. Extraction and distribution

Question. Calculate payoffs for r equal to 0, 20, 40, and 100.

Answer path. The Executive earns 20, 40, 60, and 120 ECU. Each citizen earns 20, 16, 12, and 0. Total payoff without gridlock is always 120; extraction redistributes, while gridlock lowers the total to 70.

Extension. Calculate the Executive's gain and each Citizen's loss from one extra ECU extracted: 1 and 0.2 ECU. Explain how reporting only the executive payoff hides distributive consequences.

4. Social cost of gridlock

Question. Why is gridlock more than a neutral delay?

Answer path. Gridlock produces total payments of 70 ECU rather than 120. The protocol destroys 50 ECU of surplus and therefore creates a material reason to tolerate discretion.

Extension. For $q=0.5$, derive expected total payoff under C: 95 ECU. Compare with 120 under D and explain why higher total payoff need not improve every citizen's payoff.

5. Overreaction

Question. How can an instructor identify excessive reaction to gridlock?

Answer path. State a belief about extraction, derive the indifference probability, and then compare choices. Excessive delegation requires an explicit benchmark; it cannot be inferred from delegation alone.

Extension. With $r_C=20$ and $r_D=40$, solve $16-6q=12$. The threshold is $2/3$. Since the family uses q no higher than 0.5, choosing D requires different beliefs, different preferences, or an error relative to this benchmark.

6. Institutional selection

Question. Why are delegation and extraction correlated even without a behavioral effect?

Answer path. Delegation expands the feasible extraction set and removes gridlock. The endogenous choice changes opportunities. The exogenous factorial design helps separate selection from behavior inside a rule.

Extension. Assign caps exogenously and compare extraction under 20 and 100. Contrast this with groups that chose D; citizen selection changes group composition as well as the rule.

7. Persistent powers

Question. What information is needed for a rational first-round vote?

Answer path. Citizens need the horizon, persistence rule, beliefs about future extraction, and whether another vote is possible. They must evaluate the whole block rather than one round.

Extension. Suppose four rounds remain, with D paying 12 and C paying an expected 13. The accumulated difference is 4 ECU per Citizen. Identify what beliefs would need to change to reverse the preference.

8. Sunset clause

Question. Why might a sunset increase delegation?

Answer path. It limits the duration of a bad choice and returns authority to citizens. It can insure against institutional mistakes even though discretion remains during its term.

Extension. Draw a timeline with approval in round 2: D operates in rounds 2 and 3; voting returns in 4. Compare with permanent approval in round 2 and count lost reconsideration opportunities.

9. Judicial review

Question. If three citizens delegate and four later restore constraints, which rule applies?

Answer path. The first vote activates D, but the subsequent four-vote review restores C before extraction. Sequence is essential.

Extension. Repeat with only three restoration votes. The four-vote threshold is not met and D remains in force. Explain why the two majorities represent different decision rules.

10. Minimal affinity

Question. What does a treatment difference between labels establish?

Answer path. It shows that random categorization changed behavior in this setting, subject to uncertainty. It does not show that real ethnicity or partisanship has the same effect.

Extension. Collect extraction forecasts for both labels. If voting changes but extraction does not, trust is a possible channel. If extraction changes without voting, examine executive behavior.

11. Means and distributions

Question. Two sessions have mean extraction 40. Everyone chooses 40 in one; half choose 0 and half 80 in the other. Are they equivalent?

Answer path. No. Dispersion, citizen risk, and behavioral interpretation differ. The histogram is essential.

Extension. Compare medians, ranges, and high-extraction frequencies in the two distributions. Explain what a mean omits and which claims cannot be supported by six or twelve decisions.

12. Review denominator

Question. Why not divide reversals by all rounds?

Answer path. Review exists only after D wins. Eligible delegation rounds are the correct denominator; all rounds would understate conditional reversal.

Extension. With six eligible delegations and three reversals, the rate is 50%. If twelve rounds were completed, dividing by twelve would give 25% and answer a different question.

13. Fixed groups

Question. Does falling extraction prove reputation?

Answer path. No. Interface learning, social preferences, regression to the mean, or selection can also matter. Compare with rematching and inspect public histories.

Extension. Compare initial and final rounds within groups and then across modalities. Explain why evidence consistent with reputation does not identify reputation by itself.

14. Rematching

Question. Do ten rematched rounds create ten independent observations per person?

Answer path. No. Counterparts change, but the same participant learns and chooses repeatedly. Formal inference must account for within-person dependence.

Extension. Use each participant's first decision as an initial comparison. State the information lost and why later rounds remain useful for studying learning.

15. Welfare and legitimacy

Question. Is the rule with the highest total payoff necessarily more legitimate?

Answer path. No. Aggregate efficiency, distribution, consent, and legitimacy are distinct criteria. The activity records choices and payoffs, not a complete theory of legitimacy.

Extension. Construct a case where D produces total payoff 120 and every Citizen gets zero. Compare efficiency, equality, and consent, identifying which criteria are measured.

16. External validity

Question. Name three political elements omitted from the game.

Answer path. Parties, ideology, bureaucracy, media, real conflict, constitutional enforcement, and long-run consequences are omitted. The activity isolates a mechanism rather than simulating a country.

Extension. Choose a real institution, describe one mechanism represented and two omitted. Explain which classroom comparison is informative and what empirical claim requires additional evidence.

6.5.1 Closing task and assessment criteria

Give this case after play: citizens expect extraction of 20 under constraints and 30 under delegation. Announced gridlock probability is 50%. Ask for expected individual payoff under each rule, expected total payoff, and delegated extraction making citizens indifferent. Individual expectations are 13 with C and 14 with D; expected total payoff is 95 with C and 120 with D. With $q=0.5$ and expected constrained extraction of 20, indifference requires delegated extraction of 35. An Executive extracting 40 would leave 12 and reverse the comparison.

Next, compare two-round approval with persistent approval over four remaining rounds. Under unchanged beliefs, D offers an expected advantage of one ECU per Citizen per round, but greater future extraction can reverse that ranking. Students must state whether their forecasts stay constant or change: comparing horizons without declaring beliefs conceals the commitment problem. End by asking which information the report observes and which requires an external prediction.

Allocate ten points: four for correct formulas and answers, two for denominators and units, two for explaining trust and horizon, and two for acknowledging a limitation. A correct single-round calculation that ignores persistence cannot receive the horizon points. A broad political conclusion unsupported by evidence loses the limitation points. The rubric assesses economic and institutional understanding consistently, regardless of the rule a student selected during play. Instructors can use the response as an individual exit ticket or a group discussion followed by private written answers.

Bibliography

- Acemoglu, D., and Robinson, J. A. (2006). *Economic Origins of Dictatorship and Democracy*. Cambridge University Press.
- Acemoglu, D., Robinson, J. A., and Torvik, R. (2013). Why do voters dismantle checks and balances? *Review of Economic Studies*, 80(3), 845–875.
- Dragu, T., Fan, X., and Kuklinski, J. H. (2014). Designing checks and balances. *Quarterly Journal of Political Science*, 9(1), 45–86.
- Ferejohn, J., and Pasquino, P. (2004). The law of the exception: A typology of emergency powers. *International Journal of Constitutional Law*, 2(2), 210–239.
- Forteza, A., Mussio, I., and Pereyra, J. S. (2024). Can political gridlock undermine checks and balances? A lab experiment. *Journal of Behavioral and Experimental Economics*, 108, 102128. <https://doi.org/10.1016/j.socec.2023.102128>.
- Gersen, J. E. (2007). Temporary legislation. *University of Chicago Law Review*, 74(1), 247–298.
- Shugart, M. S., and Carey, J. M. (1992). *Presidents and Assemblies*. Cambridge University Press.
- Tajfel, H., Billig, M. G., Bundy, R. P., and Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, 1(2), 149–178.
- Tsebelis, G. (2002). *Veto Players: How Political Institutions Work*. Princeton University Press.