



Instructor's Guide to Electoral Entry

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 the preparation, implementation, and classroom discussion of the electoral entry and citizen-candidate family available through the Behavioral and Experimental Economics Research Lab (BEER Lab) at the Department of Economics of Tecnológico de Monterrey. It is intended for instructors with different levels of familiarity with experimental and behavioral economics.

The document offers three reading paths. The **opening chapter** supports session preparation. The operational chapters explain each screen used by instructors and students. The conceptual chapters present the theories, predictions, and empirical findings needed to lead the post-game discussion.

Access instructions and common screens are explained once. Each variant then focuses only on what changes relative to the basic game: configuration, group size, decisions, predictions, relevant outcomes, and academic literature.

Author

This guide was prepared by Stanislaw 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

This guide follows the English-language interface. Spanish configurations use the same logic. Never project individual codes or connect outcomes to names, student identification numbers, or seats in the room.

Contents

How to use this guide	i
1 Preparation and purpose	1
1.1 Entry as a political decision	1
1.2 Objectives, prerequisites, and curricular scope	2
1.3 People, groups, and encounters	2
1.4 Access from the laboratory website	2
1.5 Demo, rooms, and configuration choice	4
2 Rules, accounts, and decisions	5
2.1 Citizen preferences and implemented policy	5
2.2 A citizen candidate's account	5
2.3 Professional and voter accounts	6
2.4 Closing, no candidates, and a sole candidate	7
2.5 Welcome and comprehension before choosing	7
3 Elections and lotteries	9
3.1 Human ballots and plurality	9
3.2 Automated sincere voting and exact weights	9
3.3 Ties, lotteries, and expected values	11
4 Models and analytical benchmarks	12
4.1 Entry as a counterfactual comparison	12
4.2 Enumerating entry equilibria	12
4.3 What the median citizen means	13
4.4 Simultaneous entry and common knowledge	13
4.5 Sequential entry and credible threats	13
4.6 Professional platforms and finite adaptation	14
5 Variants and comparisons	16
5.1 Costs, rewards, and the outside policy	16
5.2 Polarization and citizens sharing ideals	16
5.3 Citizens with human ballots: reference	17
5.4 Citizens with automatic voting: analytical reference	17
5.5 Low cost: competition and redundant entries	17
5.6 High cost: fewer entrants need not improve policy	17
5.7 No office reward: policy motivation	18
5.8 High reward: competition for office	18
5.9 Low default: provision and shared benefit	18
5.10 Polarized preferences: measuring two distributions	18
5.11 Shared median: identities and policies	19
5.12 Shared median with a high reward	19

5.13	Citizens with sequential entry	19
5.14	Professionals with automated voting	20
5.15	Professionals with human ballots	20
5.16	Sequential professionals with automated voting	20
5.17	Sequential professionals with human ballots	20
6	Results and data	22
6.1	Private report, denominators, and disclosure	22
6.2	CSV, pending rows, and account reconstruction	23
6.3	Individual results and stable completion	23
7	Teaching, exercises, and discussion	25
7.1	Debrief sequence and interpretation errors	25
7.2	Introductory class: one carefully discussed decision	25
7.3	Advanced module: comparing institutions	26
7.4	Worked exercise: policy, cost, and reward	26
7.5	Worked exercise: professional competition	26
8	Literature, scope, and operation	27
8.1	Osborne and the citizen-candidate literature	27
8.2	Experimental evidence and limits of transfer	27
8.3	Privacy, evidence, and participation	28
8.4	Incidents and session recovery	28
9	Configuration inventory and sources	29
9.1	References and attribution	30

List of Figures

1.1	Shared institutional navigation: CLASE / CLASSROOM	3
1.2	Catalog: search by title, topic, or JEL; this family is pending publication	3
1.3	Four rooms isolated by language and edition	4
1.4	Basic form with three modes and group-size requirements	4
2.1	Native instructions: resources and rules before choosing	6
2.2	Native sole-candidate result, without invented ballots	7
2.3	Explained correction while retaining other answers	8
3.1	Human ballot with closed candidates and positions	10
3.2	Mechanical results labeled as automated weights	10
4.1	Only earlier decisions are observed during sequential entry	14
4.2	Professional entry and binding platform; zero is valid	15
6.1	Native instructor report with controlled disclosure	22
6.2	A partial session retains pending rows and denominators	23
6.3	Stable closing without a next button	24

Preparation and purpose

Purpose	Study costly entry, representation, and elections
Participants	Groups of 5 citizens; 8 people with professionals; reassignment minimum 10
Suggested duration	30–45 minutes one encounter; 60–90 ten with discussion
Experimental unit	Group during one encounter; repetitions are not independent
Basic edition	One encounter, ten fixed, ten reassigned, in ES/EN
Extended edition	Fifteen treatments per language; 36 configurations and 4 rooms overall
Decision	Entry; professional platform; ballot when applicable
Payoff	100 ECU initial account; citizen cost 10, reward 20, distance loss 0.5 per point. Professionals: cost 10, reward 60
Topics	Electoral entry; citizen candidates; spatial competition; strategic voting; candidacy costs; platform commitment
JEL	A22, C72, C92, D72
Proposed access; publication pending: https://electoralentry.beer-lab.org/room/electoral_entry_en	

1.1 Entry as a political decision

For the instructor

An election starts before ballots are cast. Someone must decide whether to bear the cost of running and, depending on the institution, which policy commitment to offer. This activity makes the formation of the available choice set observable. Its main question is why someone enters when they might benefit from another person's policy without paying candidacy costs. The answer depends on the reward for winning, policy preferences, and expectations about what other people will do.

The game distinguishes two institutions. In the first, candidates are citizens who also value the implemented policy. Winning commits them to their own preferred positions. In the second, three professional politicians compete for office and choose binding platforms. Their accounts depend on entry costs and the electoral reward, while five citizens value policy. Preserve this difference when interpreting results. Comparing the institutions changes both the identity of potential candidates and their payoff functions. It does not isolate the effect of a descriptive label. Students should first reconstruct the available actions, then the election, and finally the accounts. This sequence clarifies why a familiar voting rule may generate different political outcomes when the candidate pool becomes endogenous.

1.2 Objectives, prerequisites, and curricular scope

Students should distinguish entry, platforms, and ballots; calculate citizen and professional accounts; and explain why entrants pay even after losing. They should reconstruct a tie, identify the policy used when nobody runs, and distinguish an automated-voting prediction from an explanation of human ballots. These skills require elementary arithmetic, distances on a line, and a basic understanding of best responses. Introduce Nash equilibrium after the first encounter if students have not studied it.

This family belongs to political economy and game theory. Its topics are electoral entry, citizen candidates, spatial competition, strategic voting, candidacy costs, and platform commitment. JEL codes are A22, C72, C92, and D72. It complements the laboratory's electoral competition, redistribution, and territorial spending games: those may designate candidates in advance, while registration is chosen here. It does not replace a turnout game. The electorate is fixed, and abstention is unavailable when several candidates compete. An introductory course should start with five citizens and an account calculation. An advanced course can compare automated and human voting or examine entry order. Choose one comparison before the session so that students know which institutional difference their evidence can address.

1.3 People, groups, and encounters

Citizen sessions require complete groups of five. Each local position receives a preferred policy: 10, 30, 50, 70, or 90 in the reference condition. All five people may enter, and all five vote when at least two candidates compete. Professional sessions require eight people: three potential professionals and five citizens with those preferences. Only professionals can enter, and only citizens vote. Do not fill groups with fictional roles or describe absent participants as having cast human ballots.

The basic edition offers one encounter, ten with fixed groups, and ten with reassigned groups. Reassignment requires at least ten participants and retains one citizen of each preferred position in every group. A person keeps their preference type across encounters while interacting with different people. Extended conditions use ten encounters with fixed groups. One encounter includes entry, closing, a ballot if needed, and settlement, rather than two elections. Repetition allows learning but does not create ten independent groups. As a planning estimate, allow thirty to forty-five minutes for one explained encounter and discussion, and sixty to ninety minutes for repeated play. Human decision speed can change these times. Prefer fewer carefully discussed encounters to an unexplained sequence of rapid choices.

1.4 Access from the laboratory website

Start at the BEER Lab institutional website and select CLASSROOM to open the teaching-experiment catalog. Spanish navigation uses CLASE. The catalog supports title searches and topic or JEL filters. Search electoral entry or citizen candidates, then confirm the card's language and selected edition. Catalog language does not automatically determine session language.

The proposed family host is electoralentry.beer-lab.org. Until publication, use the local preview prepared with this package. Institutional-site images illustrate shared navigation and do not establish that this new family is publicly available. The local address works on the computer running the server; it is not a public link for remote students. Before class, verify the actual access path your group will use. This access check is separate from the game's approved logic tests and does not require replaying every treatment.

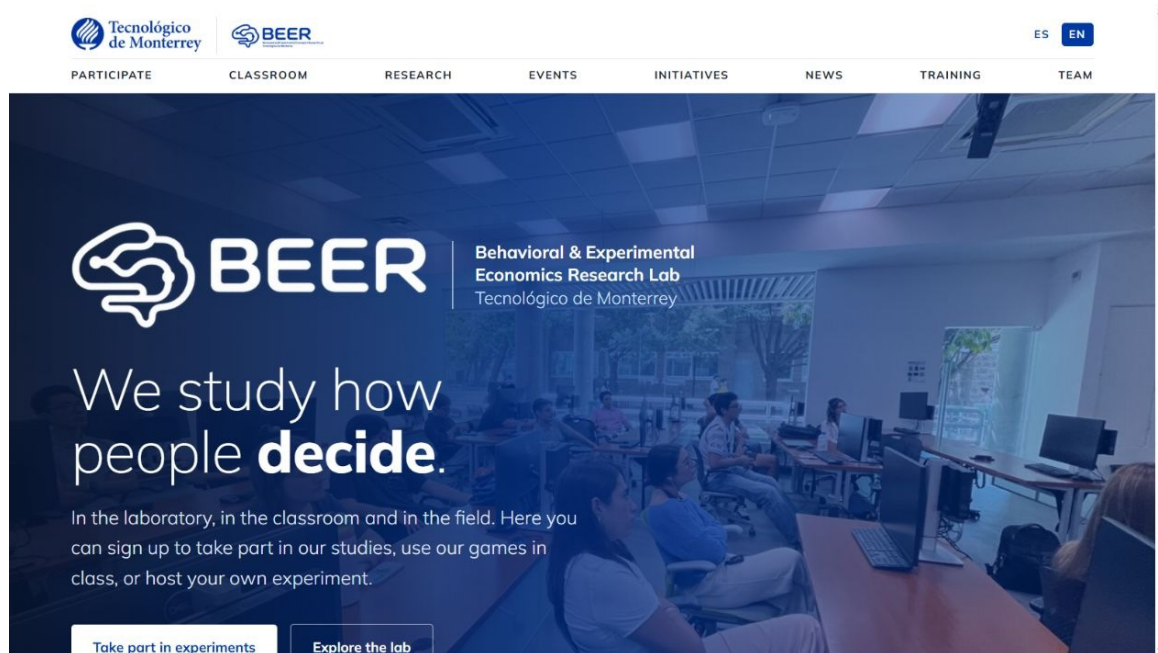


Figure 1.1: Shared institutional navigation: CLASE / CLASSROOM

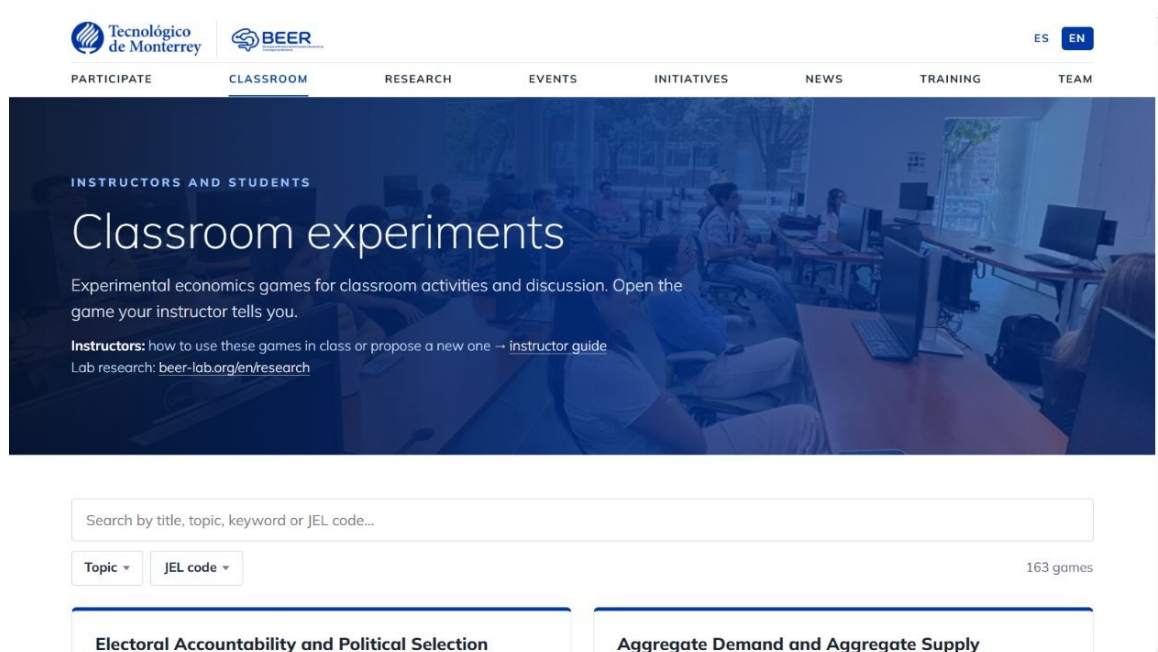
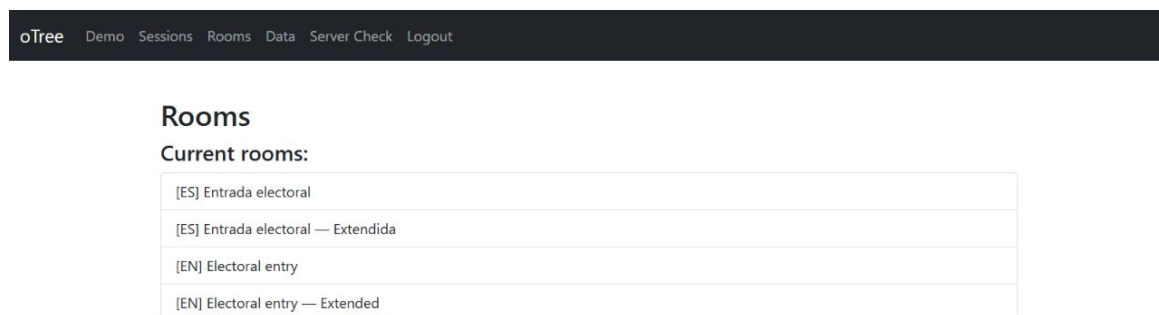


Figure 1.2: Catalog: search by title, topic, or JEL; this family is pending publication

1.5 Demo, rooms, and configuration choice

Demo contains only this family's thirty-six configurations: three basic and fifteen extended per language. Rooms lists four rooms: `entrada_electoral_es`, `electoral_entry_en`, `entrada_electoral_extendida`, and `electoral_entry_extended`. Basic forms offer only their three modes; extensions remain in their corresponding room. Confirm that the selected name describes the mechanism you intend to compare before creating a session.

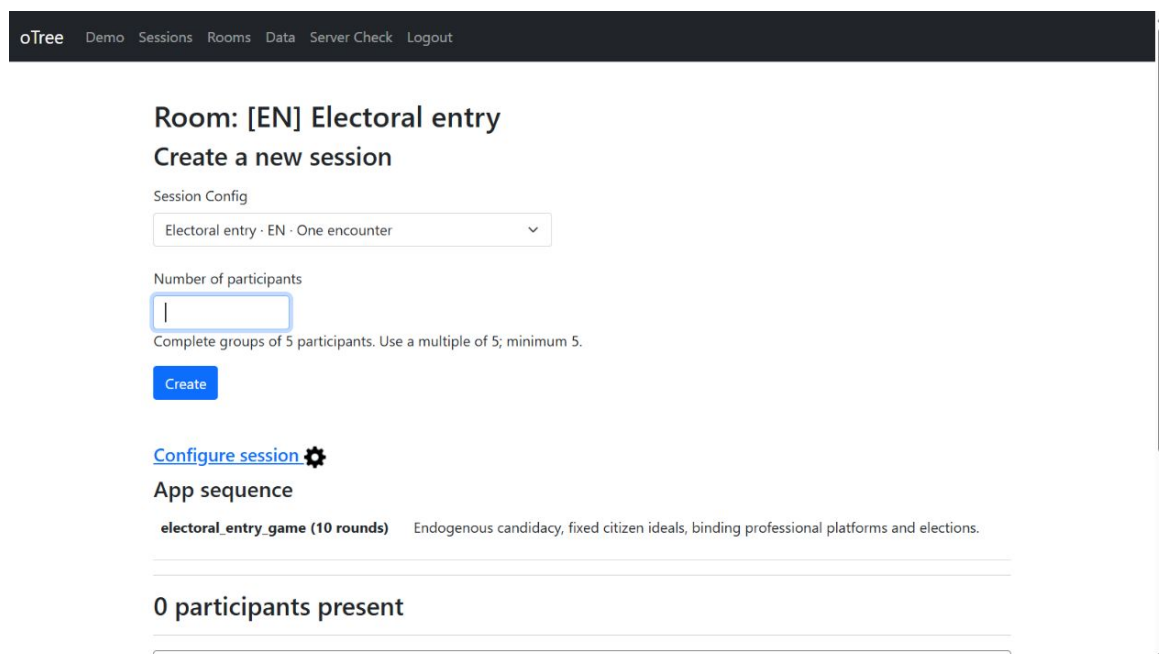
Participant counts must satisfy actual group requirements: five or multiples of five for citizens, eight or multiples of eight for professionals. Basic reassignment needs at least ten. The administrative form explains these restrictions, and session creation checks them again. Do not turn an already-created citizen session into a professional session merely to reuse links: roles and group sizes change. Create the correct new session and keep the earlier session clearly identified so their results are not pooled accidentally.



The screenshot shows the oTree interface with a dark navigation bar at the top containing links: oTree, Demo, Sessions, Rooms, Data, Server Check, and Logout. The main content area is titled 'Rooms' and 'Current rooms:'. Below this is a table with four rows:

[ES] Entrada electoral
[ES] Entrada electoral — Extendida
[EN] Electoral entry
[EN] Electoral entry — Extended

Figure 1.3: Four rooms isolated by language and edition



The screenshot shows the oTree interface for the 'Room: [EN] Electoral entry'. The navigation bar is the same as in Figure 1.3. The main content area has the title 'Room: [EN] Electoral entry' and a sub-header 'Create a new session'. Below this is a 'Session Config' section with a dropdown menu showing 'Electoral entry · EN · One encounter'. Underneath is a 'Number of participants' section with a text input field containing the value '1'. Below the input field is a note: 'Complete groups of 5 participants. Use a multiple of 5; minimum 5.' and a blue 'Create' button. Further down is a link 'Configure session' with a gear icon. Below that is the 'App sequence' section, which shows 'electoral_entry_game (10 rounds)' and a description: 'Endogenous candidacy, fixed citizen ideals, binding professional platforms and elections.' At the bottom, it says '0 participants present'.

Figure 1.4: Basic form with three modes and group-size requirements

Rules, accounts, and decisions

2.1 Citizen preferences and implemented policy

Each citizen has a preferred position and loses half an ECU for every point of absolute distance from the implemented policy. A citizen at 30 loses 10 ECU when policy is 50 and 20 when it is 70. Direction does not matter in this payoff function: equally distant policies produce equal losses. Preferred positions are assigned by the protocol and do not represent participants' actual ideologies. The numbers are not labeled left or right and are not attached to existing parties.

In the citizen model, someone whose ideal is 30 necessarily offers policy 30. Entry does not let them move toward the center. This captures the absence of commitment to a policy different from one's own ideal. In the professional model, citizen ideals still determine citizen accounts, but they do not restrict professional platforms. Everyone knows the preference list and the rules before choosing. Complete information focuses discussion on entry, coordination, and voting. A private-information extension would require different instructions and analysis; it is not already included. Ask students to use the assigned payoff schedule even when their personal views differ from it. The exercise studies incentives under a transparent rule, rather than measuring the class's political opinions.

2.2 A citizen candidate's account

What participants will see

Every citizen starts an encounter with 100 ECU, meaning experimental currency units. Their final account subtracts distance loss and any entry cost, then adds the office reward if they win. Reference entry costs are 10 and the office reward is 20. A citizen at 30 who enters and wins implements 30 and receives 110: there is no distance loss, entry costs 10, and office adds 20. If they enter and lose to policy 50, their account is 80. If they stay out and policy 50 is implemented, their account is 90.

These examples separate participation costs from the benefit of a favorable policy. Entry can matter even without victory if it changes which other candidate wins. Conversely, it may be unnecessary if another citizen would implement the same policy. A correct comparison holds other people's actions fixed and examines how changing one's own entry affects the election. Comparing an observed winner's account with a loser's account does not establish an entry incentive because their positions and consequences differ. Accounts are renewed every encounter and added at the end. Accumulated wealth does not constrain the ability to run again. Students should calculate both the observed account and the relevant counterfactual before calling an entry decision profitable.

$$\pi_i = 100 - \frac{1}{2}|x - z_i| - ce_i + b\mathbf{1}\{i = w\}. \quad (2.1)$$



Instructions

Resources and unit of account

Each citizen receives 100 ECU at the start of each encounter. ECU means experimental currency units. Your final account is 100 minus 0.5 for each point of distance between the implemented policy and your preferred position, minus 10 ECU if you enter, plus 20 ECU if you win. Entry costs are paid even if you lose. If nobody enters, policy 50 applies and nobody receives the office reward.

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

This session does not convert ECU into real money.

Encounter 1/1 · Your role: **Citizen** · Your local code: 2 · Your preferred position: **30**

All five people are citizens: everyone can enter and vote, including candidates. The winner must implement their own preferred position; they cannot choose a different platform.

Preferred positions of the five citizens: **[10, 30, 50, 70, 90]**

Entry decisions are simultaneous and remain private until all decisions are closed.

With at least two candidates, each citizen chooses one. The largest number of votes wins; abstention is unavailable. A tie for the maximum is resolved by a uniform lottery among tied candidates.

A sole candidate wins automatically, without ballots. With no candidates, the default policy applies. Entry cannot be withdrawn after closing.

Figure 2.1: Native instructions: resources and rules before choosing

2.3 Professional and voter accounts

A professional receives 100 ECU, pays 10 if entering, and obtains an additional 60 for winning. Their account is 150 after victory, 90 after entering and losing, and 100 after staying out. Implemented policy produces no distance loss for this role. The five citizens retain their account of 100 minus half an ECU per point of distance. They neither pay candidacy costs nor receive office rewards.

This separation supports a useful interpretation exercise. If a professional chooses a platform near the median citizen, that location cannot be attributed to a material taste for centrist policy: professional accounts contain no such preference. Observing a central platform does not establish equilibrium either. Beliefs about rival entry and voting are also required. A citizen may choose a candidate other than the nearest if they consider another option uncompetitive or want to change the electoral result. Human voting allows such choices, without asking participants to disclose personal motivations. Keep citizen and professional accounts separate when comparing mean earnings. A pooled mean changes meaning when role composition changes. For example, a larger office prize raises professional winner earnings mechanically; it is not by itself an improvement in citizen representation or policy performance.

$$\pi_j^P = 100 - ce_j + b\mathbf{1}\{j = w\}, \quad (2.2)$$

$$\pi_i^V = 100 - \frac{1}{2}|x - z_i|. \quad (2.3)$$

2.4 Closing, no candidates, and a sole candidate

Entry closes once every authorized person has decided. In simultaneous entry, rival decisions remain hidden until that point. In sequential entry, only the prefix of completed decisions is public. A closed registration cannot be withdrawn or revised after the final list becomes known. This matters because allowing withdrawal would define a different game.

When nobody runs, the reference condition implements policy 50 and pays no office reward. No citizen pays entry costs. A citizen at 10 consequently receives 80, while the citizen at 50 receives 100. The low-default condition implements 0 instead and changes accounts accordingly. A sole candidate wins automatically. The game neither requests ballots nor invents five favorable votes. That winner still pays entry costs and receives the relevant reward. The report and CSV distinguish an uncontested victory from an election with five actual ballots. Missing ballots in these branches are structural, rather than abstentions or lost data. Ask students to explain why the outside policy can affect willingness to enter even though it is observed only when the candidate set is empty. Its incentive effect operates through a counterfactual comparison.

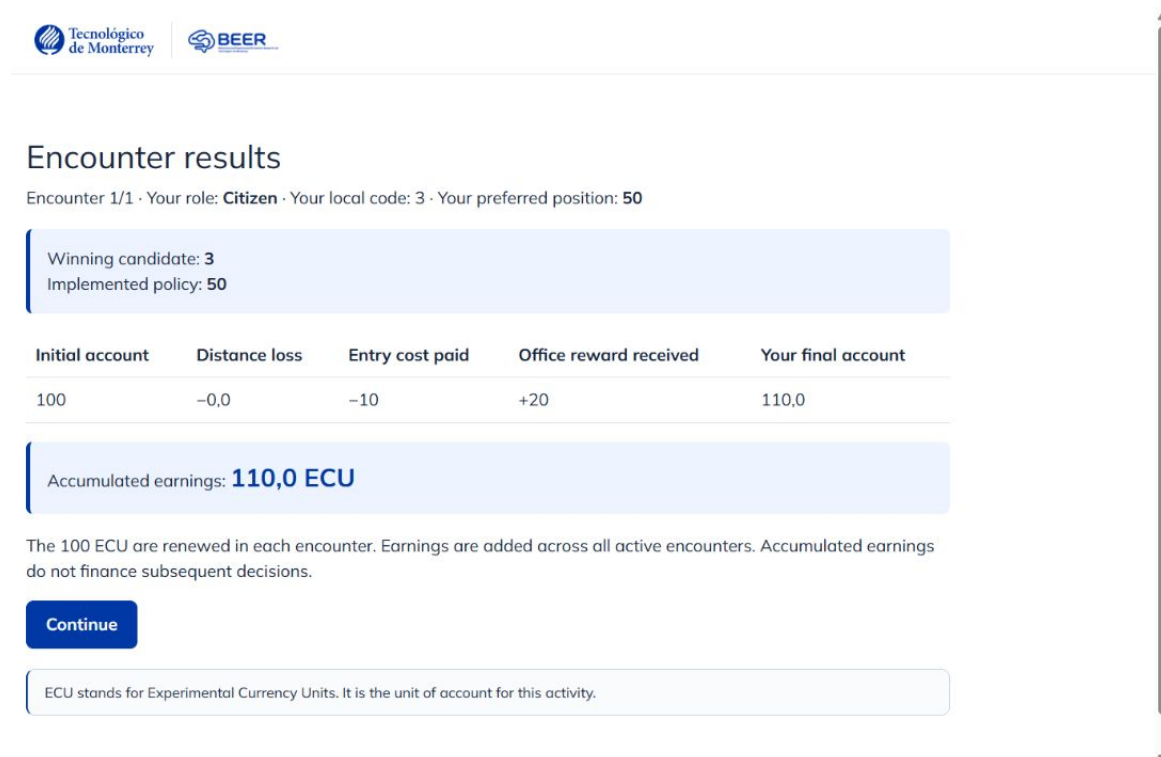


Figure 2.2: Native sole-candidate result, without invented ballots

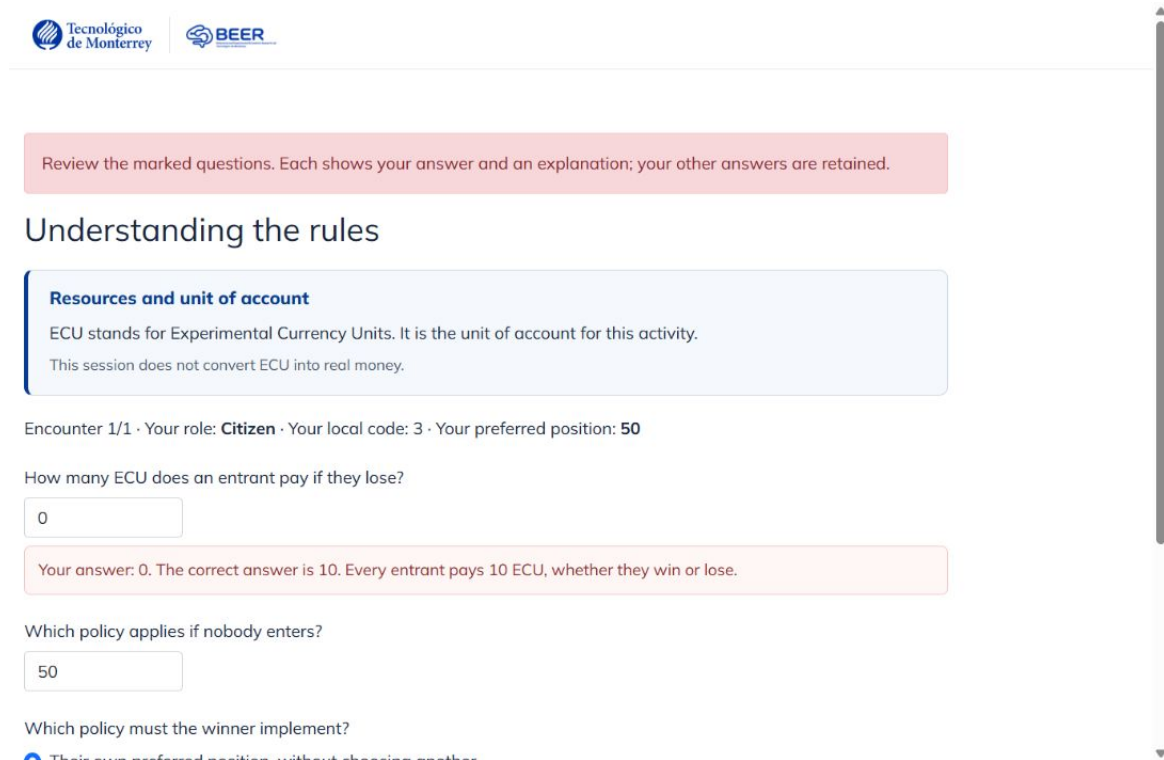
2.5 Welcome and comprehension before choosing

Checkpoint

The first screen presents laboratory conduct rules and requests confirmation that they were read. Instructions then explain starting resources, ECU, roles, and timing. The local session does not convert ECU into real money. Do not announce a different conversion without defining it explicitly in the classroom protocol.

Four questions check a losing entrant's cost, the no-candidate policy, the winner's policy com-

mitment, and a losing candidate's account without distance loss. Answers depend on treatment: cost 30 implies an account of 70 rather than 90. An incorrect response displays the submitted value, the correct answer, and an explanation while preserving other answers. This feedback is formative. If someone continues to misunderstand, return to the relevant rule and reconstruct an example. Resolve comprehension before interpreting choices as responses to the intended incentives. A correct numerical answer should be accompanied by an explanation of which payoff components apply.



The screenshot shows the BEER Lab interface. At the top, there are logos for 'Tecnológico de Monterrey' and 'BEER'. Below the logos, a pink banner reads: 'Review the marked questions. Each shows your answer and an explanation; your other answers are retained.' The main heading is 'Understanding the rules'. Under this, a blue box titled 'Resources and unit of account' contains the text: 'ECU stands for Experimental Currency Units. It is the unit of account for this activity. This session does not convert ECU into real money.' Below this, the user's status is shown: 'Encounter 1/1 · Your role: Citizen · Your local code: 3 · Your preferred position: 50'. The first question is 'How many ECU does an entrant pay if they lose?'. The user has entered '0' in the input field. A pink feedback box below the input field states: 'Your answer: 0. The correct answer is 10. Every entrant pays 10 ECU, whether they win or lose.' The second question is 'Which policy applies if nobody enters?'. The user has entered '50' in the input field. The third question is 'Which policy must the winner implement?'. The user has selected 'Their own preferred position, without choosing another'.

Figure 2.3: Explained correction while retaining other answers

Elections and lotteries

3.1 Human ballots and plurality

With at least two candidates and human voting, each of the five citizens chooses a registered candidate. There is no abstention and no runoff. The highest vote total wins even without an absolute majority. Two votes can therefore suffice when the remaining three ballots are dispersed across different alternatives. Citizen candidates also vote, while professional politicians are outside the electorate.

A ballot may reflect proximity, coordination, or expectations. Observing it does not identify which explanation generated it. To examine possible strategic voting, reconstruct the candidate set and compare the ballot with available positions. Then ask whether another ballot could change the outcome while all other ballots stayed fixed. A five-person electorate makes this calculation transparent. It also shows that a ballot for someone other than the nearest candidate need not be pivotal. Avoid calling every deviation from proximity an error or every winning ballot rational. Rationality requires specifying the voter's objective and information. Individual ballots are not displayed to other participants; totals are published at settlement. Discussion should focus on these anonymous totals and reconstructed alternatives, rather than asking named students to justify politically suggestive choices in front of the class.

3.2 Automated sincere voting and exact weights

The automated condition removes ballot choice. Each citizen assigns one unit to the candidate nearest their ideal. If several candidates are exactly equally close, the unit is divided equally. Scores use exact fractions so that rounding cannot determine the winner. With candidates at 30 and 70 and ideals 10, 30, 50, 70, and 90, each side obtains two units, while the central citizen splits one. The result is 2.5 against 2.5.

These are mechanical weights, rather than five observed human decisions. The interface labels them accordingly, and actual human ballots remain zero. The rule makes entry incentives tractable without solving a second voting game. It also limits conclusions. An entry profile stable under this rule may cease to be stable when citizens choose ballots. Comparison with human voting holds population, entry costs, and office rewards fixed while changing the electoral continuation rule. Describe it as an institutional intervention on voting. Do not interpret an automatic assignment as the participant's own revealed choice. Students can use the mechanical scores as a counterfactual, provided they clearly distinguish what the rule generates from what people actually chose in another condition.



Your ballot

Encounter 1/1 · Your role: **Citizen** · Your local code: 5 · Your preferred position: **90**

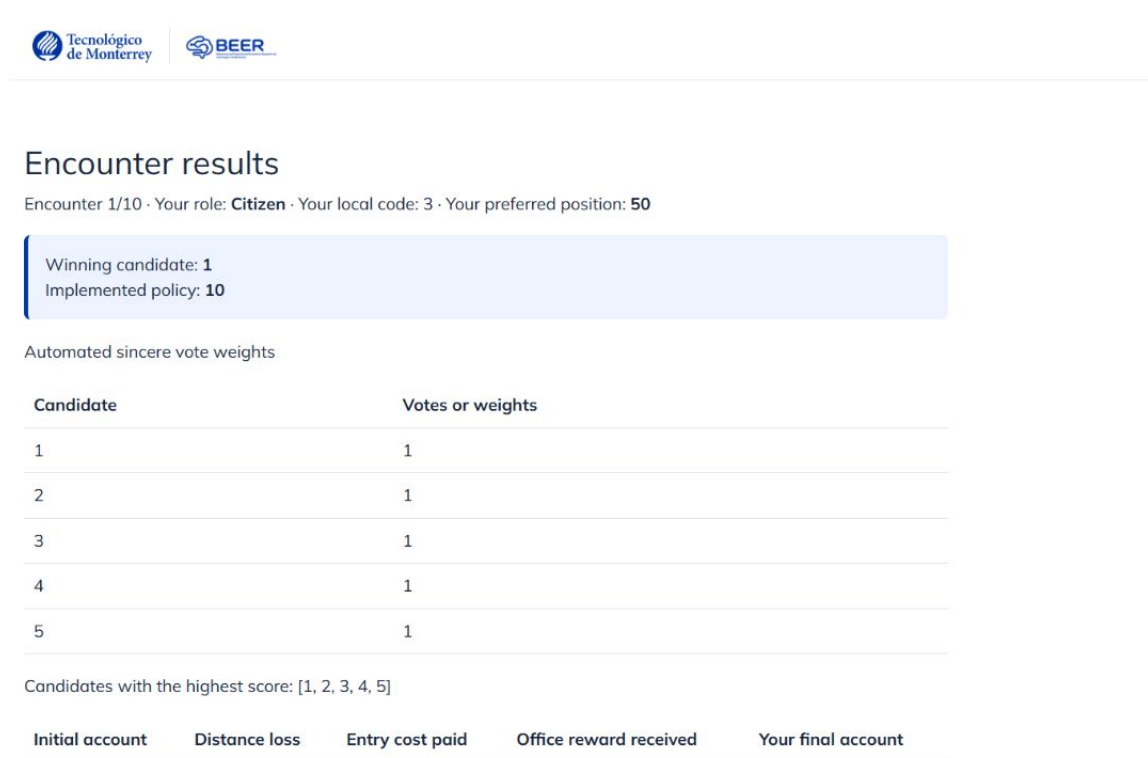
Candidate	Binding position
1	10
2	30
3	50
4	70
5	90

With at least two candidates, each citizen chooses one. The largest number of votes wins; abstention is unavailable. A tie for the maximum is resolved by a uniform lottery among tied candidates.

Choose a registered candidate

☐ Candidate 1 · 10
☐ Candidate 2 · 30
☐ Candidate 3 · 50
☐ Candidate 4 · 70
☐ Candidate 5 · 90

Figure 3.1: Human ballot with closed candidates and positions



Encounter results

Encounter 1/10 · Your role: **Citizen** · Your local code: 3 · Your preferred position: **50**

Winning candidate: **1**
Implemented policy: **10**

Automated sincere vote weights

Candidate	Votes or weights
1	1
2	1
3	1
4	1
5	1

Candidates with the highest score: [1, 2, 3, 4, 5]

Initial account	Distance loss	Entry cost paid	Office reward received	Your final account
-----------------	---------------	-----------------	------------------------	--------------------

Figure 3.2: Mechanical results labeled as automated weights

3.3 Ties, lotteries, and expected values

If several candidates share the highest score, a uniform lottery chooses among them. Two tied candidates each have probability one half; three each have probability one third. Only candidates reaching the maximum enter the lottery. A zero-vote candidate is excluded if someone else has a positive score. The tied set and realized winner are recorded so accounts can be reconstructed.

A realized payment differs from its expectation before the lottery. In the automated example with candidates at 30 and 70, the candidate at 30 certainly pays 10, receives 20 with probability one half, and faces equally likely policies at 30 and 70. Expected distance loss is 10, giving an expected account of 90. Realized accounts are 110 after victory and 70 after defeat. This distinction explains why a profile may be stable in expectation even though someone loses after the draw. Do not judge entry solely by one lottery result. Equilibrium calculations average all possible winning policies with their stipulated probabilities and retain indifferences. A useful classroom exercise asks students to compute the expected account first, then verify that it equals the probability-weighted average of the two realized accounts.

Models and analytical benchmarks

4.1 Entry as a counterfactual comparison

Assessing entry requires comparing two outcomes: entering and staying out, while holding everyone else's actions fixed. For citizen candidates, the difference combines policy change, a certain cost, and an expected office reward. A losing entrant may alter vote distribution and the winner's identity. Winning probability therefore does not exhaust the entry incentive.

Consider a citizen expecting another person to implement exactly their ideal. Staying out yields 100. Entering against one identical candidate, with each equally likely to win, gives an expected account of 100 minus 10 plus half the office reward. With reward 20 the citizen is indifferent. With reward 60 the account is 120, making entry strictly better under those assumptions. This calculation does not establish that the rival will stay in or that nobody else will enter. It is a conditional best response. Requiring students to write that condition prevents a local calculation from becoming an unsupported equilibrium claim. A useful answer names the action being changed, the actions held fixed, and the resulting policy lottery before presenting the numerical difference.

4.2 Enumerating entry equilibria

Theoretical foundation

Five citizens with two entry actions generate thirty-two possible profiles. Under automated voting, each profile determines scores, a winning set, and expected accounts. The program evaluates the five possible unilateral switches in every profile: enter if out, or leave if in. A profile is a pure equilibrium if none of these switches strictly increases the switching person's expected account. Comparisons use exact fractions and do not discard indifferent best responses.

The displayed benchmark applies only to simultaneous citizen entry with automated voting. With human ballots, later choices are strategic too. Enumeration that replaces those choices with proximity does not establish an equilibrium of the full game. Sequential entry requires evaluating continuation behavior after every history, including histories never observed. Professionals also choose platforms. The citizen benchmark is not presented as solving those problems. In class, choose a proposed profile, calculate accounts, and ask each position to identify a possible deviation. All five positions must be checked, rather than only the winner. Students can report several stable profiles or no stable pure profile if their calculations support that conclusion. A mixed equilibrium requires a separate analysis and is not inferred from an observed frequency of entry.

4.3 What the median citizen means

With ideals 10, 30, 50, 70, and 90, the median citizen is at 50. This location has a pairwise-comparison property under distance preferences: against an alternative on one side, the median position attracts majority support when only those two options are compared. That observation does not determine who bears candidacy costs or how ballots are distributed among three or more alternatives.

A policy near the median may be implemented even when the median person does not run. Several candidates may also divide central votes. Pairwise comparison, plurality scores, and entry equilibrium are different objects. Ask students to distinguish them during discussion. A platform at 50 has different institutional meanings across the two modes: the central citizen is committed to it by their preference type, whereas a professional chooses it. The instructor can use an identical numerical outcome to show that different actions support it. An odd number of voters does not automatically establish convergence. To assess a proposed argument, ask whether it concerns policy comparison, candidate profitability, ballot choice, or the entire sequence of decisions. This simple classification often reveals which missing assumption drives an overly broad claim.

4.4 Simultaneous entry and common knowledge

Simultaneity means nobody observes rival entry decisions before confirming their own. Preferences and rules remain public. It does not mean everyone acts in the same second or forgets classmates' behavior in earlier encounters. Waiting screens synchronize closure without rewarding faster responses with extra information.

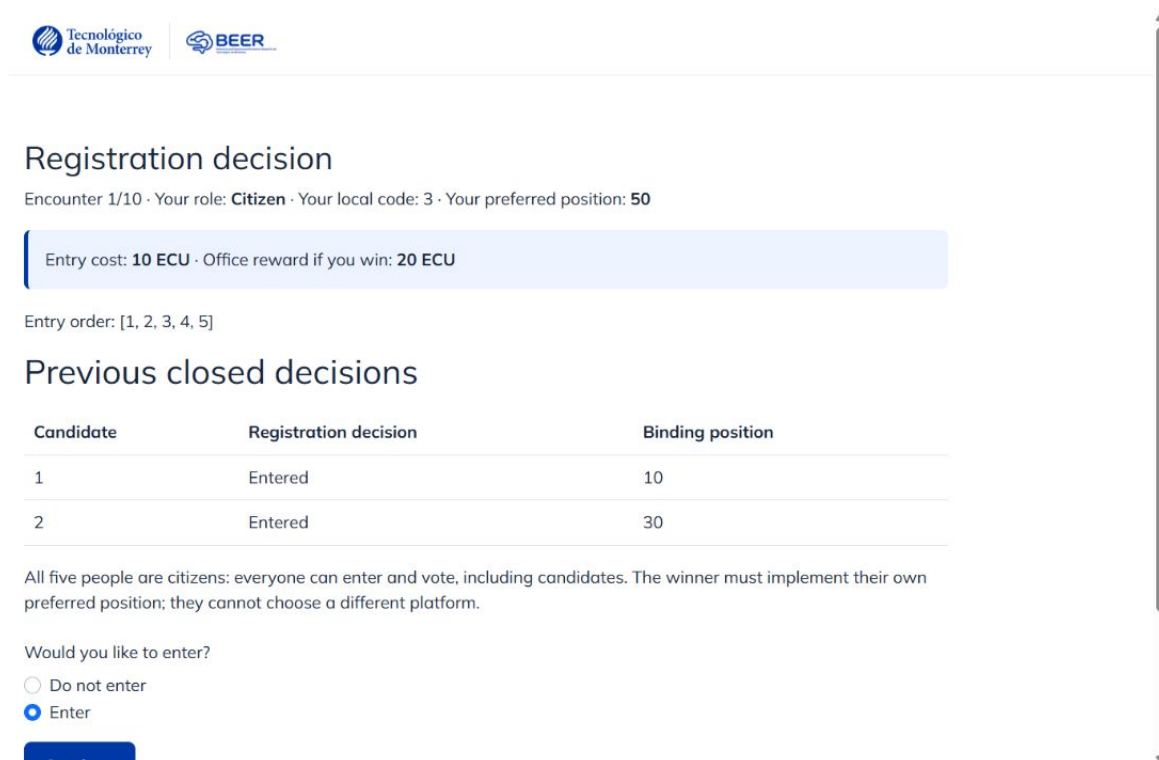
Fixed groups may coordinate through experience: candidates may alternate, one candidacy may persist, or citizens may expect a central person to enter. Such patterns are neither contractual commitments nor authorized communication. Discuss them as possible expectations built through play. Reassignment changes opportunities to recognize a previous interaction while preserving preference composition. It does not erase learning about the activity itself. Compare group averages and trajectories without calling each round an independent observation. Classroom outcomes can illustrate a hypothesis, but a causal test would require treatment assignment and enough independent units. Students should describe both the matching rule and the number of distinct groups before discussing apparent treatment differences. This makes clear whether the evidence reflects several populations or repeated choices by the same small population.

4.5 Sequential entry and credible threats

Sequential entry lets each actor observe previously closed decisions. Citizen ideals remain fixed, and everyone eventually receives an entry opportunity. In professional sessions, only three potential candidates act, each choosing entry and platform in their turn. Entry order shifts cyclically across encounters so that a local position is not always first. Rotation is public and does not change citizen or professional roles.

An observed entry may discourage a redundant candidacy or induce competition. To interpret a threat of later entry, ask whether that action would remain desirable after the relevant history occurred. A statement that someone would have entered is insufficient: continuation behavior must be a best response at that point. Backward induction requires specifying subsequent voting and the treatment of indifferences. Human play supports discussion of this reasoning, but the game does not automatically compute or announce a subgame-perfect equilibrium. The simultaneous-sequential comparison preserves payoffs within each model while changing information available at entry.

Because order rotates deterministically, a raw association between being first and entering may also reflect the encounter number. Advanced analyses should account for both order and learning.



Registration decision

Encounter 1/10 · Your role: **Citizen** · Your local code: 3 · Your preferred position: **50**

Entry cost: **10 ECU** · Office reward if you win: **20 ECU**

Entry order: [1, 2, 3, 4, 5]

Previous closed decisions

Candidate	Registration decision	Binding position
1	Entered	10
2	Entered	30

All five people are citizens: everyone can enter and vote, including candidates. The winner must implement their own preferred position; they cannot choose a different platform.

Would you like to enter?

☐ Do not enter

☒ Enter

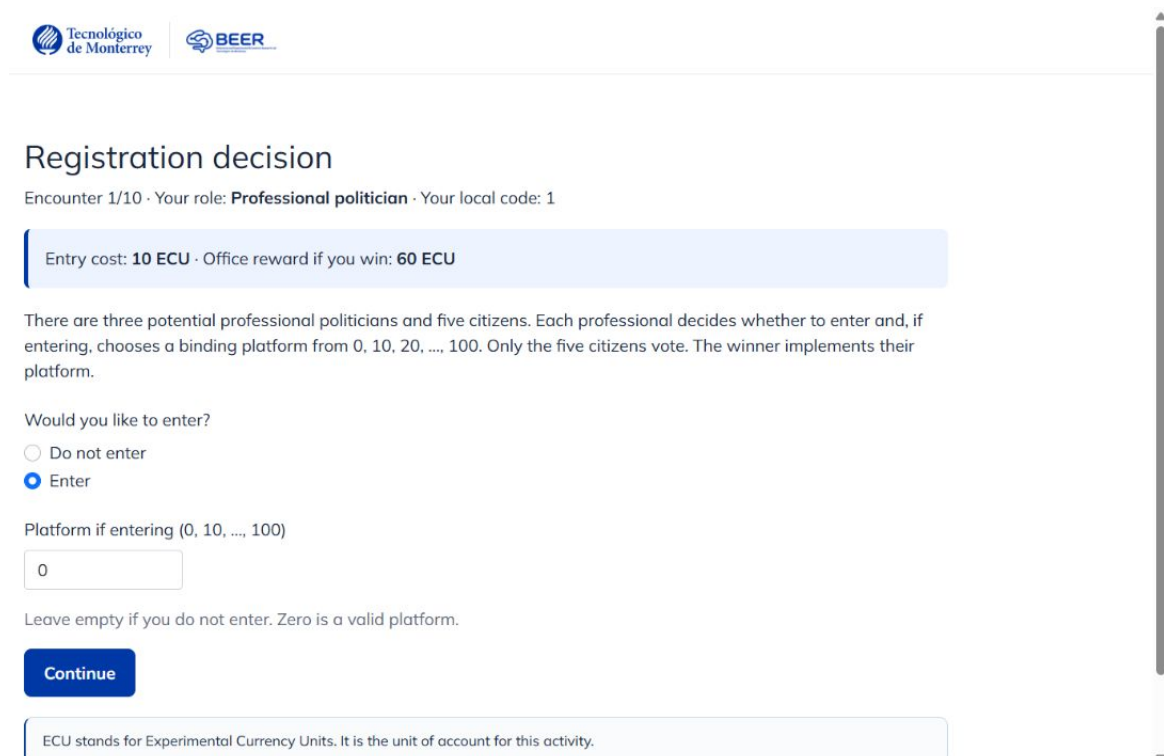
Continue

Figure 4.1: Only earlier decisions are observed during sequential entry

4.6 Professional platforms and finite adaptation

Each professional can stay out or enter with a platform on the grid 0, 10, 20, and so on through 100. Zero is a valid option, rather than an empty field. The platform is fixed at registration, and the winner is committed to implementing it. If a professional stays out, any number typed in the platform field is discarded and the stored platform remains empty. This avoids treating a nonentrant's unused number as an electoral offer.

The grid and five voters make this a finite adaptation. Results proved for continuous platforms, different utility curvature, or particular restrictions on voting strategies do not transfer automatically. Osborne organizes the comparison among professional entry, sincere voting, strategic voting, and citizen candidacy. This implementation preserves those mechanism distinctions while fixing classroom numbers, roles, and procedures. Ask students to assess deviations to neighboring grid points. An equilibrium defense must also consider leaving the election and choosing more distant locations, rather than only small moves. Platform clustering can be an informative observation, but its interpretation requires the entry pattern and the continuation rule as well as the locations themselves.



The screenshot shows the 'Registration decision' screen of the BEER Lab. At the top, there are logos for 'Tecnológico de Monterrey' and 'BEER'. Below the logos, the title 'Registration decision' is displayed. Underneath the title, it says 'Encounter 1/10 · Your role: Professional politician · Your local code: 1'. A light blue box contains the text 'Entry cost: 10 ECU · Office reward if you win: 60 ECU'. Below this, a paragraph explains the game: 'There are three potential professional politicians and five citizens. Each professional decides whether to enter and, if entering, chooses a binding platform from 0, 10, 20, ..., 100. Only the five citizens vote. The winner implements their platform.' The question 'Would you like to enter?' is followed by two radio buttons: 'Do not enter' (unselected) and 'Enter' (selected). Below this, the text 'Platform if entering (0, 10, ..., 100)' is followed by a text input field containing the number '0'. A note states 'Leave empty if you do not enter. Zero is a valid platform.' A blue 'Continue' button is located below the input field. At the bottom, a light blue box contains the text 'ECU stands for Experimental Currency Units. It is the unit of account for this activity.'

Tecnológico de Monterrey

BEER

Registration decision

Encounter 1/10 · Your role: **Professional politician** · Your local code: 1

Entry cost: **10 ECU** · Office reward if you win: **60 ECU**

There are three potential professional politicians and five citizens. Each professional decides whether to enter and, if entering, chooses a binding platform from 0, 10, 20, ..., 100. Only the five citizens vote. The winner implements their platform.

Would you like to enter?

☐ Do not enter

☒ Enter

Platform if entering (0, 10, ..., 100)

0

Leave empty if you do not enter. Zero is a valid platform.

[Continue](#)

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

Figure 4.2: Professional entry and binding platform; zero is valid

Variants and comparisons

5.1 Costs, rewards, and the outside policy

Low- and high-cost conditions change entry costs to 2 and 30 ECU. Zero- and high-reward conditions set office rewards to 0 and 60. The alternative default condition changes the no-candidate policy from 50 to 0. Each comparison preserves the other reference citizen rules, including simultaneous entry and human ballots. Avoid changing several parameters together when the objective is to explain one specific difference.

Costs affect every entrant; office rewards affect only the winner; the default policy is implemented only with no candidates. Their expected effects are not equivalent. Higher costs may eliminate competitive or redundant entries, while a larger reward can attract several people offering identical policies. An unfavorable outside policy may create a provision incentive: someone pays to prevent it, and everyone else benefits. No monotonic response of implemented policy is guaranteed because entry also changes competition and ballots. Record hypotheses before seeing results, and distinguish candidate-count predictions from predictions about citizen distance. A treatment may reduce costly entry while moving policy farther from some citizens. Whether that is preferable depends on an explicit welfare criterion, not on counting candidates alone.

5.2 Polarization and citizens sharing ideals

The polarized condition assigns ideals 0, 10, 50, 90, and 100. It retains five citizens and a median at 50 while increasing distances and changing incentives near the extremes. It does not introduce uncertainty about preferences. Compare realized citizen distance and candidate locations as well as the number entering. Polarization of preferences differs from polarization of the candidate pool.

Shared-median conditions use ideals 20, 50, 50, 50, and 80. Three different people can offer policy 50. Their candidate codes remain distinct: a candidacy is not the same thing as a unique policy. Human ballots may split across them, and automated voting divides units among equally close alternatives. The high-reward version preserves this preference distribution and raises the reward from 20 to 60. That matched pair supports discussion of office competition among representatives offering identical policies. Policy equality does not imply equal accounts because only the winner receives the reward while every entrant pays the cost. When plotting positions, retain candidate identities or record multiplicity. Collapsing all entries at 50 into one point would conceal the competition this treatment is designed to expose.

5.3 Citizens with human ballots: reference

The `citizen_election` condition retains ideals 10, 30, 50, 70, and 90, entry cost 10, reward 20, and default 50. It is the extended reference and shares the basic edition's mechanism. Use it when ten fixed encounters are needed for comparison with another extension. People choose entry without seeing rivals and then vote over the closed list.

Before the first encounter, ask students to predict the candidate count and give a payoff-based reason. Compare predictions with observed counts afterward and request an explanation using the actual alternatives. Do not use the automated benchmark to grade human decisions. A valid explanation may depend on ballot expectations that are not directly recorded. This condition is particularly useful for revealing the difference between a mechanically nearest vote and an endogenous electoral continuation.

5.4 Citizens with automatic voting: analytical reference

The `citizen_sincere` condition preserves reference accounts and replaces human ballots with proximity weights. It is the clearest starting point for checking equilibrium profiles. Exact calculations produce two pure profiles: local citizen 3 alone, with ideal 50; and local citizens 2 and 4, with ideals 30 and 70.

The second profile creates an automatic tie and lottery, so median policy is not implemented with certainty. Citizens staying out must also have incentives to remain outside. Ask students to assess entry by the central citizen, recalculating all weights rather than retaining the old totals. This equilibrium list belongs to these parameter values. It is not a list of every outcome that humans might produce or a claim that one profile will be selected during repeated play.

5.5 Low cost: competition and redundant entries

In `cost_low`, entry costs 2 ECU. The reward remains 20 and the default remains 50. Lower costs can make a low winning probability materially attractive, but electoral probability is not fixed: it depends on other entries and subsequent ballots.

Compare this condition with `citizen_election` using the same encounter count and matching rule. Examine candidate counts and mean distance. More entry with unchanged distance may suggest additional costs without a substantial representation change, but does not by itself identify coordination failure. As an exercise, calculate a hypothetical professional's winning-probability threshold with cost 2 and reward 60: it is $1/30$ when there is no policy effect. Clarify that the implemented low-cost condition uses citizens, who do value policy, so that professional threshold is an illustrative comparison rather than its complete entry rule.

5.6 High cost: fewer entrants need not improve policy

In `cost_high`, entry costs 30 ECU. A citizen who wins at their own ideal receives 90 because the reward of 20 does not cover the cost. They may nevertheless prefer entry to avoid a sufficiently distant policy. This demonstrates why comparing prize and cost alone cannot settle a citizen's decision to run.

Request a numerical example of profitable entry despite a prize smaller than the cost. Students must identify the policy that would apply if they stayed out and show that reduced distance loss

offsets the difference. If fewer candidates appear, ask which positions are no longer represented. Lower total candidacy costs can coexist with greater political distance for some voters. No-entry outcomes are valid data, rather than evidence that the application failed to conduct an election.

5.7 No office reward: policy motivation

The `office_zero` condition removes the office reward while retaining entry cost 10. The winning citizen receives no identity-based bonus. Any benefit comes from moving implemented policy toward their ideal. A noncandidate can also enjoy that policy without paying. The activity links entry to provision of a political alternative from which other people benefit.

Compare two citizens with the same ideal when one already runs. If policy remains unchanged, a second entry costs money without providing an office reward, so it produces no material improvement under that counterfactual. With different ideals, entry can shift policy or change the winner. Do not label every observed entry altruistic: it could reflect own policy interests, mistaken expectations, or uncertainty about ballots. The condition removes one incentive component, rather than revealing personal motivation directly.

5.8 High reward: competition for office

In `office_high`, the citizen reward rises from 20 to 60 while entry cost stays at 10. Winning at one's own ideal yields 150. Losing entrants pay the cost and retain distance loss from realized policy. The larger reward therefore increases the difference between winning and losing without removing policy considerations.

Before seeing data, elicit separate predictions about entry and representation. A larger prize can attract people but does not guarantee a winner nearer the median. Compare candidate distributions by ideal, rather than only winner earnings. Higher winner accounts contain a mechanical forty-ECU increase from the additional reward. To discuss behavior, focus on decisions and policy changes while separating that mechanical transfer. Otherwise, the class may mistakenly interpret a programmed payment increase as evidence of improved political performance.

5.9 Low default: provision and shared benefit

In `default_low`, policy 0 applies when nobody enters. The citizen at 50 would receive 75 without candidates, compared with 100 under the reference default. Entering and winning alone yields 110, increasing that citizen's benefit from preventing an empty contest.

Effects differ across people: the citizen at 10 receives 95 under policy 0 but 80 under policy 50. The default is therefore not a common punishment. Use these calculations to show how one institution changes incentives heterogeneously. Compare entry by ideal and the share of groups without candidates. A provision interpretation must identify who pays and which other citizens gain or lose relative to the counterfactual. Aggregate no-entry rates alone cannot reveal this distributional structure.

5.10 Polarized preferences: measuring two distributions

The polarized condition retains cost 10, reward 20, and default 50. It changes only ideals to 0, 10, 50, 90, and 100. The center stays fixed while the lateral pairs move farther apart. When

comparing with the reference, show both population distributions before displaying observed candidate distributions.

Distance from 50 can describe candidate locations, while citizen distance from implemented policy describes realized representation. These measures are not interchangeable. Ask whether a more dispersed population generates more dispersed candidates, more entry, or less central outcomes. These are separate hypotheses and may receive different answers in the same class. Preferences remain public, which separates this condition from experiments using private ideals. This distinction should appear beside any comparison with published evidence on candidate polarization.

5.11 Shared median: identities and policies

In `same_median`, ideals are 20, 50, 50, 50, and 80. Retain the three central people's codes when examining the list: they are three potential candidates despite offering the same policy. A second central entry may divide ballots or office-winning probability without necessarily changing expected policy.

With two central candidates and reward 20, each receives expected reward 10 in a symmetric tie, matching entry costs. Indifference can sustain several best responses. Do not discard it through rounding or treat it as a numerical error. Ask what happens if a third central citizen enters under automated voting: expected office reward becomes twenty thirds per candidacy, below ten, when others' actions stay fixed. This exercise isolates reward competition among identical policies.

5.12 Shared median with a high reward

The `same_median_high_office` condition retains ideals 20, 50, 50, 50, and 80 and raises the reward to 60. Compare it with `same_median`. With three tied central candidates, each person's expected office reward would be 20 against cost 10. This differs from the previous incentive even if policy remains at 50.

Request a table containing candidate count, unique-position count, and implemented policy. Three candidates at 50 are three entries but one offered position and, if one wins, one central policy. This separation supports discussion of competition for office without confusing it with diversity of representation. Identical policy does not make the election irrelevant for individual accounts because the winner alone receives the office reward.

5.13 Citizens with sequential entry

The `citizen_sequential` condition preserves reference accounts and preferences while revealing previous decisions. The first order is 1, 2, 3, 4, 5; the second starts at 2 and ends at 1. Everyone decides once and cannot withdraw entry.

Compare with `citizen_election` to study information during registration. Record order position as well as ideal: a central citizen acts early or late depending on the encounter. For an advanced exercise, supply a history containing two entries and ask students to evaluate the next actor's decision. Their answer must consider people who have not yet chosen. Ignoring later actors incorrectly treats an intermediate history as a final candidate list. Rotating order helps distribute experience but is not a random assignment of every possible history.

5.14 Professionals with automated voting

Professional_sincere uses three professionals and five citizens. Professionals choose entry and platform simultaneously. Citizens do not choose ballots: their positions assign automated weights. This condition connects a chosen political offer with an electorate whose response rule is fixed.

Compare professional accounts with winning probability: the expected gain relative to staying out is sixty times that probability minus ten. The threshold is one sixth when everything else is fixed. This expression does not by itself determine the best platform because each location changes scores and rival incentives. Ask students to calculate one specified platform set before proposing a generalization. The rule is tractable precisely because the later ballot stage is stipulated rather than strategically solved.

5.15 Professionals with human ballots

Professional_election preserves professional population and accounts while allowing citizens to cast ballots. Its direct comparison is professional_sincere. Professional candidates may anticipate proximity, coordination, or other responses, and citizens observe closed platforms before voting.

Compare offers with actual electoral totals rather than assuming that distance alone determines winning probability. A professional at 50 may lose if voters coordinate elsewhere, while a lateral offer may receive strategic support. Professional earnings do not reveal why citizens chose as they did. During debrief, reconstruct the automated result for the same candidate list and label it explicitly as a counterfactual. It is not another observed human decision. Differences between those results locate where ballot behavior matters without identifying the underlying motive automatically.

5.16 Sequential professionals with automated voting

Professional_sequential_sincere combines entry order with automated electoral response. Each professional observes the entry and platform choices of earlier actors. Order rotates among three professionals; the five citizens wait for the final list. An earlier platform may deter or attract later entry depending on scores and reward opportunities.

Backward analysis can start with the third decision conditional on two earlier actions. That actor compares staying out with eleven possible platforms. Next, evaluate the second decision anticipating the continuation. Preserve indifferences: arbitrarily selecting one continuation may conceal other outcomes. The package makes this structure observable but does not announce a unique sequential professional equilibrium as though it had been proved for every history. This is a suitable advanced modeling exercise after students understand exact vote weights.

5.17 Sequential professionals with human ballots

Professional_sequential_election retains ordered professional entry and leaves ballots to citizens. It has the most strategic decisions: entrants anticipate later candidates' responses and the final election. Use it after explaining at least one simpler branch.

Compare with professional_election to isolate sequential information within the professional human-voting model, or with professional_sequential_sincere to change the ballot rule while retaining order. Do not combine both contrasts into one causal claim. Ask which later choices

support a proposed strategy. If an explanation requires an electoral threat by citizens, explain why that threat would be credible under the accounts and the candidate list they would actually observe. The condition is useful for exposing the assumptions needed to turn a plausible narrative into a complete strategic argument.

Results and data

6.1 Private report, denominators, and disclosure

The instructor report pools every active encounter of the selected session, even when the administrator is positioned at the final technical round. It displays completed participant-encounters, pending rows, and completed group-encounters. Aggregate results remain concealed until the instructor opens the disclosure control. Reveal them after eliciting predictions, rather than while some participants are still choosing.

The candidate-count distribution counts completed groups. The no-entry rate divides groups without candidates by completed groups in that encounter. Mean distance first uses the five citizen distances within each group and then summarizes groups. Professionals are not treated as citizens with zero preference distance. The pooled account mean is descriptive and depends on role composition. A dash indicates no observations, rather than zero. Empty sessions explain that no encounters are complete. In partial sessions, future encounters remain in progress counts and the CSV but do not contaminate realized means. Ask students to state the denominator beside every percentage they report. This is especially useful when some groups finish early: the visible mean may summarize a selected subset of groups rather than the whole class.

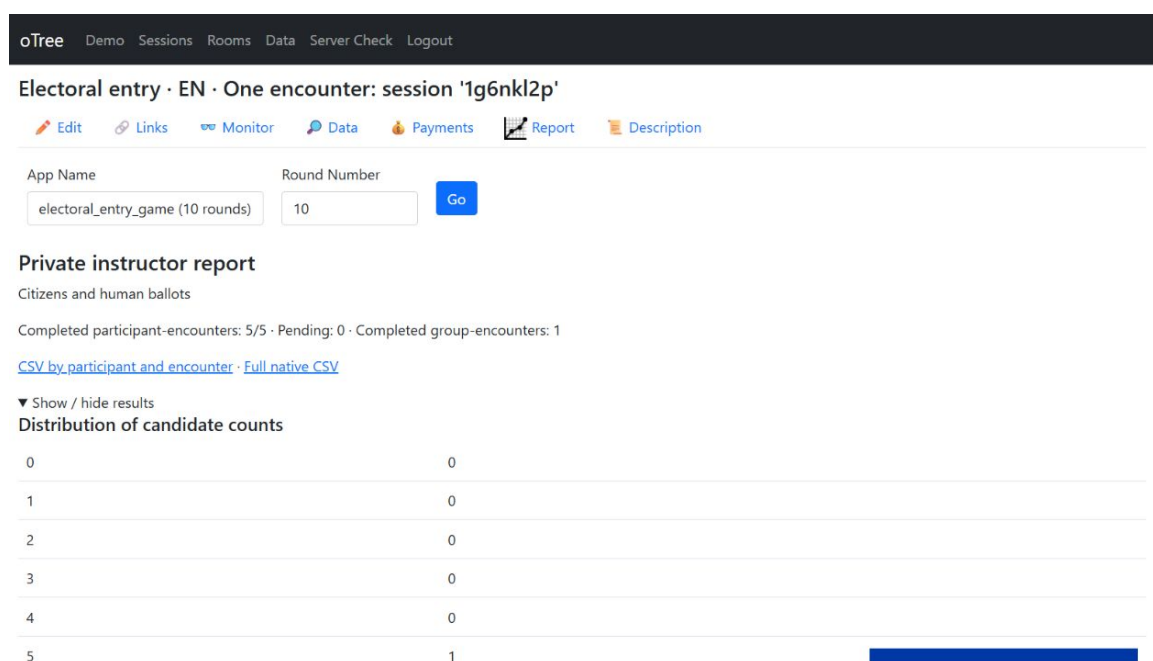


Figure 6.1: Native instructor report with controlled disclosure

6.2 CSV, pending rows, and account reconstruction

Attention

The long download has one row per participant and active encounter. It includes session, group, and participant codes; language, treatment, and matching; role and ideal; entry, platform, and ballot; electoral outcomes and account components. Costs, rewards, default policy, and the preference distribution allow the rules to be reconstructed. Negative entry decisions remain false, while pending values remain empty. Never replace every empty cell with zero.

Winner, implemented policy, realized scores, and earnings of incomplete groups stay empty in the report export. Decisions already taken may be available to the instructor, but they are not represented as completed outcomes. The native oTree download is an administrative alternative with wide structure and technical rounds; the long download is prepared for teaching analysis. Check one complete row using the account identity: 100 minus distance loss minus entry paid plus reward received equals encounter earnings. To accumulate payments, sum a person's completed rows rather than multiplying a group mean by the number of rounds. Retain the completed indicator in any analysis file so that pending rows cannot silently enter summaries as zero earnings.

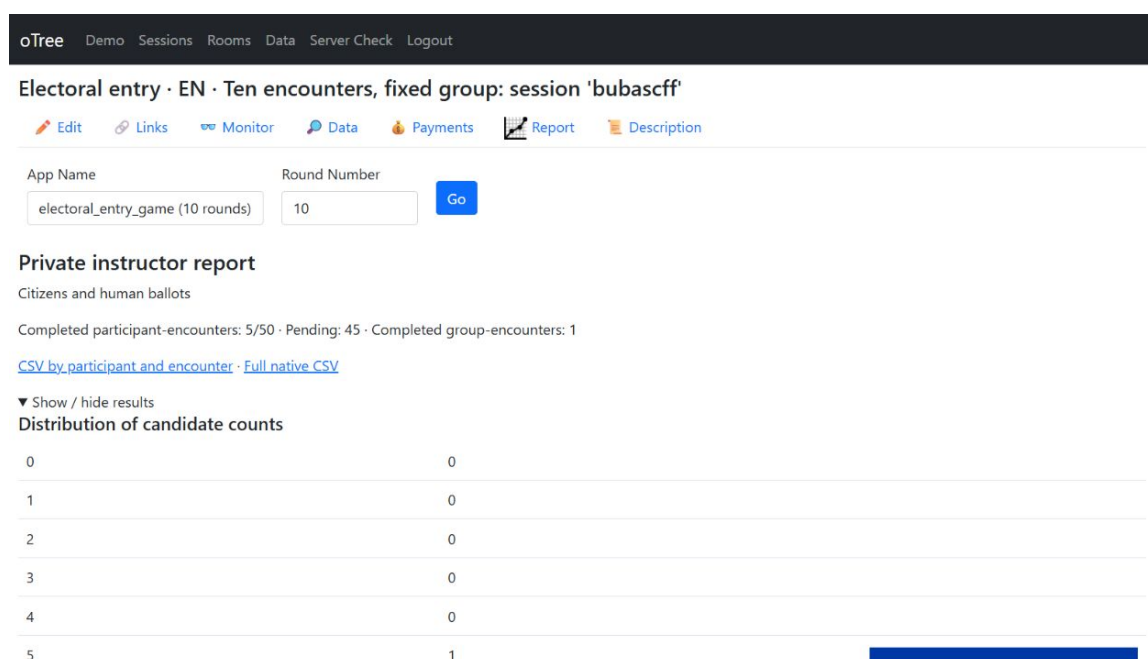


Figure 6.2: A partial session retains pending rows and denominators

6.3 Individual results and stable completion

After settlement, each person sees the winner or absence of a winner, implemented policy, and an account decomposition. Contested elections also display scores and the highest-scoring set. Automated scores are weights; human scores represent actual ballots. Accumulated earnings add completed encounters and do not finance the next registration.

The final activity screen displays accumulated earnings without a button leading to an empty page. The one-encounter version uses only its first economic encounter even though oTree retains technical rounds for the shared architecture. The long report filters this distinction. At class

closing, download the correct session and retain treatment information in the filename. Do not combine inactive technical rows with genuine decisions or compare accumulated accounts from one and ten encounters without normalization. Keeping an encounter-level account alongside the cumulative total prevents this simple but consequential comparison error.



Activity completed

Accumulated earnings: **70,0 ECU**

The 100 ECU are renewed in each encounter. Earnings are added across all active encounters. Accumulated earnings do not finance subsequent decisions.

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

Powered by [oTree](#)

Figure 6.3: Stable closing without a next button

Teaching, exercises, and discussion

7.1 Debrief sequence and interpretation errors

Feedback script

Start with the observed sequence: who could enter, which positions were offered, how the winner was determined, and which policy was implemented. Ask next for one citizen account and one candidate account. Only then discuss expectations, best responses, and possible explanations. This sequence prevents words such as polarization or coordination from replacing reconstruction of the rules.

Ask what would have changed if a particular candidate had stayed out and whether a different ballot would have been pivotal. Separate automated-voting counterfactuals from those requiring assumptions about human voting. Compare groups under the same rules before comparing treatments. Finally, request one limitation of the evidence. An extreme winner does not prove the electorate prefers extremes; entry and vote splitting may explain the outcome. A central candidate does not establish equilibrium. A high account does not prove that the group minimized citizen distance. Feedback should connect actions to consequences through explicit assumptions, without judging classmates or attributing ideology from assigned positions. End with a short written statement containing a claim, supporting observation, and condition under which that claim would fail.

7.2 Introductory class: one carefully discussed decision

An introductory class can use one citizen encounter. Begin by drawing five positions and calculating two distance losses. Explain entry, costs, and rewards next, then ask for a losing candidate's account. After comprehension is complete, allow choices without commenting on who should enter.

At settlement, ask the class to reconstruct the candidate list and election. Reveal anonymous aggregates and solve one entry counterfactual. A written exercise can have three parts: an account identity, a reason someone might stay out, and a condition that would change that decision. Grade rule accuracy and reasoning rather than electoral success. If time is short, omit extensions. Adding conditions without discussing their differences weakens learning more than reducing the encounter count. One transparent comparison can establish the distinction between policy preference and willingness to finance candidacy.

7.3 Advanced module: comparing institutions

For a two-class module, start with citizens and automated voting. Assign verification of all thirty-two profiles or, without programming, checking the two reference equilibria and rejecting selected alternatives through profitable deviations. The second class can introduce human ballots or sequential entry while preserving accounts. Each team must identify which assumption from the first reference has changed.

An alternative module compares professional automated and human elections. Students calculate winning probabilities and evaluate platforms on a grid. Do not introduce every extension simultaneously: choose the pair answering the course question. The final product can be a short note containing rules, prediction, evidence, and limitation. Conclusions should address the selected contrast, and any full-equilibrium claim must describe subsequent decisions as well. This requirement distinguishes an interesting narrative from a strategy profile that survives relevant deviations.

7.4 Worked exercise: policy, cost, and reward

Suppose citizens at 30 and 70 enter and the citizen at 70 wins. The citizen at 10 receives 70, the candidate at 30 receives 70, the citizen at 50 receives 90, the winner at 70 receives 110, and the citizen at 90 receives 90. The total is 430. Total distance loss is 70, total entry costs are 20, and total office rewards are 20: initial resources of five hundred minus seventy minus twenty plus twenty equal four hundred thirty.

Now remove the office reward. Holding the winner fixed reduces the total to 410 and changes only the winner's account in this mechanical calculation. This does not establish that behavior would remain unchanged in office_zero. The exercise separates recalculating accounts from predicting new decisions. Ask which additional observations would support a behavioral comparison rather than a formula comparison.

7.5 Worked exercise: professional competition

Suppose three professionals enter at platforms 0, 50, and 100, while citizens retain reference ideals. Under automatic voting, ideals 10 and 30 assign their units to 0 and 50 respectively; ideal 50 assigns to 50; ideal 70 assigns to 50; ideal 90 assigns to 100. Scores are 1, 3, and 1. Policy 50 wins. Its professional receives 150, while the other two receive 90 each.

Citizens receive 80, 90, 100, 90, and 80, totaling 440. Professional accounts total 330. Ask what a losing professional receives by staying out while other platforms remain fixed: 100 rather than 90. That profitable deviation rejects this profile as a professional entry equilibrium under the stated conditions. A central winning platform is insufficient to establish stability of the complete profile.

Literature, scope, and operation

8.1 Osborne and the citizen-candidate literature

The primary source is chapter 10 of Martin J. Osborne’s *Models in Political Economy*, published in 2025. Sections 10.1 through 10.3 distinguish simultaneous and sequential professional entry and the role of sincere or strategic voting; section 10.4 introduces citizen candidates. This teaching package adapts those mechanisms to small groups, public preferences, a professional platform grid, and laboratory accounts. Read theoretical results with their original assumptions, particularly when they require strict concavity or other conditions differing from the linear distance loss used here.

Osborne and Slivinski’s 1996 paper and Besley and Coate’s 1997 paper provide foundational references on citizen candidacy and representative democracy. They locate the mechanism in the literature rather than implying that this activity reproduces all their assumptions. An instructor can assign a model comparison: identify who may run, which policies can be promised, and how electoral behavior is represented. A strong answer separates source assumptions from transparent implementation choices. Students should cite the relevant section or article and explain the difference in rules, rather than attaching a theorem’s name to a classroom outcome merely because both involve elections.

8.2 Experimental evidence and limits of transfer

Großer and Palfrey experimentally study citizen-candidate entry with private information about preferred positions. Their article, published online in 2018 and in the 2019 volume, reports relatively frequent entry by extreme citizens and differences associated with directional party information. Those findings belong to their design and are not guaranteed empirical predictions for this classroom. Here positions are public and party labels are absent.

The comparison offers a methodological lesson: information about who might represent others is part of the model. Changing information can alter selection and entry without formally changing plurality voting. When discussing the article, request one precise protocol difference and a hypothesis about its effect on decisions. Do not present this package’s synthetic screenshots as human data or as a replication. They demonstrate application behavior. A research replication would require separate review of the original protocol, incentives, recruitment, and analysis plan. Classroom observation remains valuable for teaching even when it cannot establish a published effect. Its value comes from making assumptions and incentive calculations visible, rather than claiming external validity from a small session.

8.3 Privacy, evidence, and participation

Do not project individual codes linked to names or request partisan justifications. Ideals and roles are protocol assignments. The activity is not a test of personality, civic commitment, or moral quality. Instructors may assess calculations and arguments, but should not award academic credit for winning, entering, or selecting a particular policy.

Guide screenshots come from a synthetic database and show native application states. Example outcomes represent neither a real cohort nor evidence about political behavior. For data analysis, distribute an explicitly synthetic file or anonymous classroom aggregates. Reusing observations for research would require a separate protocol and its authorizations and procedures. Preserve the pedagogical character of the interaction and focus discussion on rules, incentives, and limits of inference. This keeps an election exercise useful without turning assigned policy positions into claims about students' actual beliefs.

8.4 Incidents and session recovery

When someone remains on a waiting screen, first inspect the instructor monitor to identify who has not completed the stage. Waiting can be correct while another actor chooses sequentially. Do not recreate the session or reset its database to solve an ordinary delay: that would break the relationship between links and decisions. Browser reloads retain assignment in an active session.

If attendance cannot complete the required group size, adjust before starting or use another complete group. Do not change electorate size during an election. Following a server interruption, preserve the local database and restart only this family's instance. After access returns, distinguish groups already settled from groups still pending. Empty report fields preserve that distinction without imputing outcomes. Record any incident changing information or communication before interpreting classroom data. Recovery should restore the intended decision sequence rather than silently supply choices for absent participants.

Configuration inventory and sources

Full configuration names are listed to avoid confusing mechanisms when selecting sessions.

Electoral entry · EN · One encounter

`electoral_entry_en_one`

Electoral entry · EN · Ten encounters, fixed group

`electoral_entry_en_fixed`

Electoral entry · EN · Ten encounters, reassigned groups

`electoral_entry_en_random`

Electoral entry · EN · Citizens and human ballots

`electoral_entry_extended_citizen_election`

Electoral entry · EN · Citizens and automated sincere voting

`electoral_entry_extended_citizen_sincere`

Electoral entry · EN · Low entry cost

`electoral_entry_extended_cost_low`

Electoral entry · EN · High entry cost

`electoral_entry_extended_cost_high`

Electoral entry · EN · No office reward

`electoral_entry_extended_office_zero`

Electoral entry · EN · High office reward

`electoral_entry_extended_office_high`

Electoral entry · EN · No-candidate policy: 0

`electoral_entry_extended_default_low`

Electoral entry · EN · Polarized preferences

`electoral_entry_extended_polarized`

Electoral entry · EN · Three central citizens

`electoral_entry_extended_same_median`

Electoral entry · EN · Three central citizens, high office reward

`electoral_entry_extended_same_median_high_office`

Electoral entry · EN · Sequential citizen entry
 electoral_entry_extended_citizen_sequential

Electoral entry · EN · Professionals and automated sincere voting
 electoral_entry_extended_professional_sincere

Electoral entry · EN · Professionals and human ballots
 electoral_entry_extended_professional_election

Electoral entry · EN · Sequential professionals, automated voting
 electoral_entry_extended_professional_sequential_sincere

Electoral entry · EN · Sequential professionals, human ballots
 electoral_entry_extended_professional_sequential_election

9.1 References and attribution

Osborne, M. J. (2025). Models in Political Economy. Open Book Publishers. Chapter 10, sections 10.1–10.4, pp. 301–338. <https://doi.org/10.11647/OBP.0490.10>

Osborne, M. J., and Slivinski, A. (1996). A Model of Political Competition with Citizen-Candidates. Quarterly Journal of Economics, 111(1), 65–96. <https://academic.oup.com/qje/issue/111/1>

Besley, T., and Coate, S. (1997). An Economic Model of Representative Democracy. Quarterly Journal of Economics, 112(1), 85–114. <https://doi.org/10.1162/003355397555136>

Großer, J., and Palfrey, T. R. (2019; online 2018). Candidate Entry and Political Polarization: An Experimental Study. American Political Science Review. <https://www.cambridge.org/core/journals/american-political-science-review/article/abs/candidate-entry-and-political-polarization-an-experimental-study/1B5492304F3DD796E7F8EB5A368BD350>

American Economic Association. Official JEL classification: A22, C72, C92, D72. <https://www.aeaweb.org/econlit/jelCodes.php?view=jel>

Original BEER Lab teaching adaptation. No book figures are reproduced. Screenshots are native synthetic fixtures; logos use institutional assets from the canonical guide.