



Instructor Guide: Collective Actions and Redress for Dispersed Harm

Laboratory implementation, theoretical foundations,
experimental evidence, and variants

Behavioral and Experimental Economics Research Lab
Department of Economics



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

How to use this guide

This guide supports the preparation, implementation, and classroom discussion of the collective actions and redress for dispersed harm activity 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 **quick guide** is enough to launch a session. 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

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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.

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Preparation and access

1.1 Family overview

Purpose	Connect funding, membership, representation, and redress in actions for dispersed harm.
Experimental unit	a group of 4 people per case
Participants	Multiples of 4; minimum 4.
Suggested duration	20–40 minutes of play; 60–90 with discussion.
Basic edition	One case; ten with fixed groups or rematching with stable roles.
Extended edition	9 conditions, including the reference; ten cases.
Decision	collective actions, access to justice, litigation costs
Payoff	ECU per case; sum of active cases. See role-specific accounts.
Topics	collective actions; access to justice; litigation costs; collective representation; redress
JEL	C92, K41, D71

1.2 Locate the activity and choose a comparison

Start at <https://beer-lab.org/en/> and select CLASSROOM in the top menu. This opens <https://teaching.beer-lab.org/en/>, where you can search for this activity by title and filter by topic or JEL code. The card distinguishes Español and English; Show extended version changes the edition. The directory language does not by itself determine the session language. Check the configuration name before creating a session and clear filters from an earlier search if the card is missing.

The stable address for this family is <https://collectiveclaims.beer-lab.org>. Participants enter through https://collectiveclaims.beer-lab.org/room/collective_claims_en; instructors prepare sessions through <https://collectiveclaims.beer-lab.org/demo> or <https://collectiveclaims.beer-lab.org/rooms>. The preview verified on this computer is <http://localhost:8215/demo>. A local address works only on the computer running it. Classroom use across several devices requires the institutional instance. If the card is not yet visible, its catalog integration remains to be completed. Do not substitute a similar family and thereby change the rules without noticing.

Distinguish four links. The room is the entry point shared with the class. The instructor panel selects configurations and creates sessions. An individual link identifies one specific participant

slot and belongs to one person. The report belongs to that session and contains information reserved for the instructor. Sharing the panel is different from sharing the room: it can expose administrative controls or outcomes that should still remain hidden.

Before inviting participants, define a question: which institution will you compare, and what outcome would be compatible with the proposed mechanism? Select the reference condition and one extension that changes the relevant dimension. Record what remains constant, how you will assign conditions, and when discussion begins. Changing several rules simultaneously can create an interesting class, but prevents attribution of the observed difference to just one rule. The extensions support several lessons; they need not all be run in a single meeting.

1.3 Prepare a usable session

The experimental unit in this family is a group of 4 people per case. The roles are Person 1, Person 2, Person 3, Person 4. Prepare 4 slots per interactive unit where applicable, and check the requirement displayed by the creation form. Rematching needs several units for composition to change; with only one unit there is no alternative counterpart. In an individual activity, each student advances independently. Do not add artificial participants to a real session merely to complete groups: this changes both the experience and the data you intend to discuss.

Open a demonstration beforehand. Read the instructions from every role and solve one numerical example by hand. Check the reference balance, resources already committed, transfers, and costs that consume resources. A starting figure of 100 ECU does not imply that everyone can spend 100 on every decision. Some games subtract a loss or an invested claim before choices occur. Final payment appears at case completion and accumulated payment adds all active cases. This guide explains how to reconstruct those values independently of the results screen.

ECU means Experimental Currency Units. They are the activity's accounting unit, not an automatic equivalence with pesos or dollars. This delivery does not announce a cash conversion. If the laboratory organizes a paid session, agree and communicate the exchange rate and payment rule beforehand. Do not associate higher earnings with a better grade: maximizing points and producing a well-supported academic explanation are different objects of assessment.

Allow time for reading and private questions. Check that each device can enter the room and that participants do not share an individual link. Project only public instructions. A student viewing a private file should not display it to the entire class. Prepare an alternative for someone who does not participate: they can examine aggregated outcomes after the activity and solve the same conceptual exercise without receiving private information during decisions.

For the instructor

Before starting, confirm title, language, edition, number of cases, and participant count. Demo and Rooms must contain only this family's configurations and four rooms. If another game appears, consult laboratory coordination before starting. Correct filtering protects both the instructions and subsequent downloads.

1.4 Accompany the participant sequence

The welcome page introduces the laboratory and its rules: decide privately, remain silent, and seek assistance without communicating decisions. Instructions, the session's specific condition, and comprehension questions follow. These questions check resources, number of cases, ECU meaning, and a central mechanism. An incorrect answer produces a corrective explanation. Ask the student

to identify the relevant rule before submitting again; do not treat that error as evidence about preferences or strategy.

After comprehension, the case page identifies position and period. Decision pages appear when that role must act. In interactive games, waiting pages allow the program to collect the information required before advancing. Waiting does not reveal another person's decision and does not mean a choice was rejected. The individual activity has no synchronization between participants. The instructor should distinguish expected synchronization from a connectivity problem.

Case results show payments and accounting components. The closing page states that the activity is finished and asks participants to remain there. Do not launch another session in the same tab until discussion has ended or data have been saved. If a student finishes early, request silence. Comments about offers, votes, or losses can affect people who are still deciding, particularly in repeated versions.

What participants will see

Each person receives the information needed for their own role. A screen can display a private balance or file that other positions do not know. Instructor assistance should clarify what a rule means without recommending an option or revealing what happened in another unit.

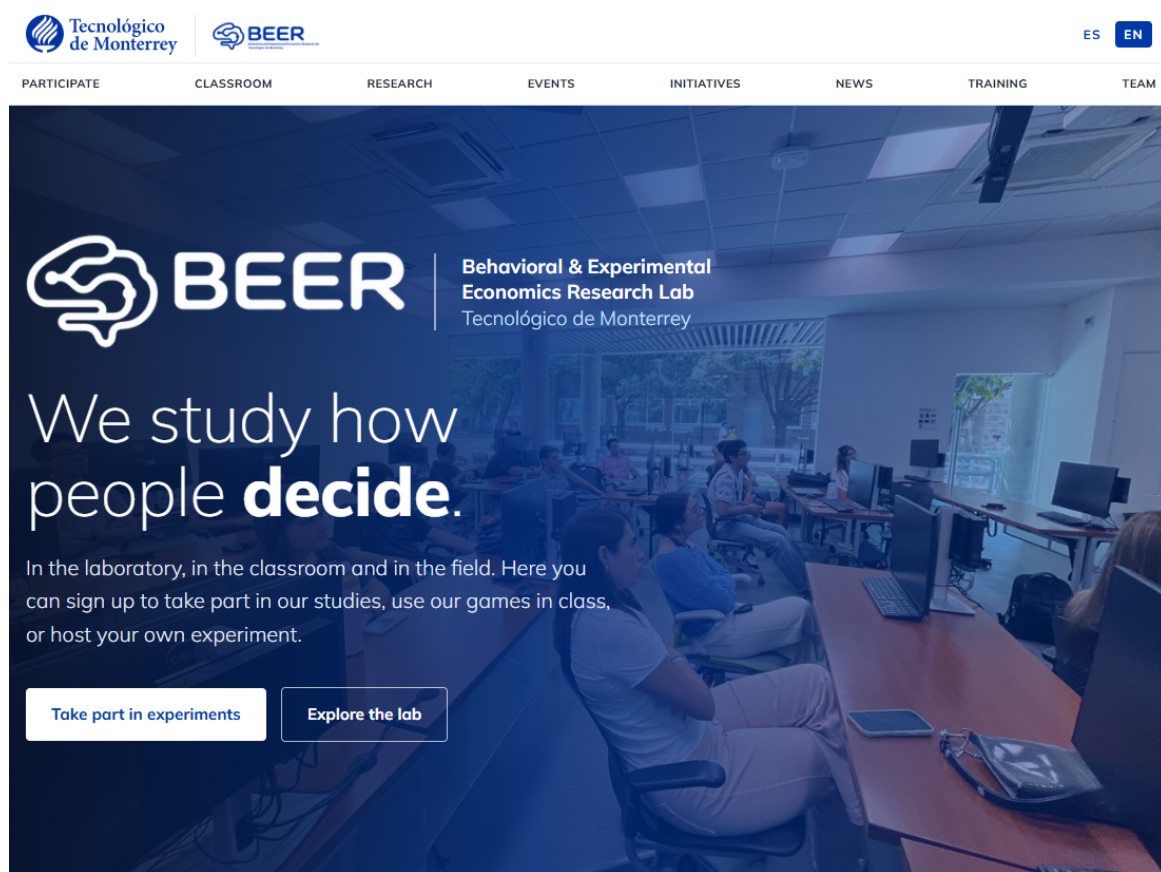


Figure 1.1: Current institutional navigation: select CLASSROOM to open classroom experiments.

The screenshot displays the BEER Lab website interface. At the top, there are logos for 'Tecnológico de Monterrey' and 'BEER'. To the right, there are language selection buttons for 'ES' and 'EN', with 'EN' being the active selection. Below the logos is a horizontal navigation menu with the following items: PARTICIPATE, CLASSROOM (which is underlined), RESEARCH, EVENTS, INITIATIVES, NEWS, TRAINING, and TEAM.

The main content area features a large blue-tinted image of a classroom with students at computers. Overlaid on this image is the text 'INSTRUCTORS AND STUDENTS' in small white letters, followed by 'Classroom experiments' in a large white font. Below this, a paragraph reads: 'Experimental economics games for classroom activities and discussion. Open the game your instructor tells you.' Further down, there is a line of text: 'Instructors: how to use these games in class or propose a new one → [instructor guide](#)' and another line: 'Lab research: beer-lab.org/en/research'.

Below the main content area is a search bar with the placeholder text 'Search by title, topic, keyword or JEL code...'. Under the search bar are two dropdown menus labeled 'Topic' and 'JEL code'. To the right of these menus, it says '103 games'.

Below the search bar, there are two columns of game descriptions. The left column is titled 'Electoral Accountability and Political Selection' and describes a game about officeholder behavior. The right column is titled 'Aggregate Demand and Aggregate Supply' and describes a game about spending choices and equilibrium.

Figure 1.2: Current institutional navigation: search by title, topic, or JEL code and confirm language and edition.

oTree
Demo
Sessions
Rooms
Data
Server Check
Logout

Demo

Acciones colectivas y reparación de daños dispersos · Básica · ES · Un caso
Acciones colectivas y reparación de daños dispersos · Básica · ES · Diez casos · Participantes estables / orden fijo
Acciones colectivas y reparación de daños dispersos · Básica · ES · Diez casos · Reasignación conservando roles
Collective Actions and Redress for Dispersed Harm · Basic · EN · One case
Collective Actions and Redress for Dispersed Harm · Basic · EN · Ten cases · Stable participants / fixed order
Collective Actions and Redress for Dispersed Harm · Basic · EN · Ten cases · Rematching with stable roles
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Incorporación y representación
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Pertenencia con salida activa
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Reparación para todo el grupo
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Menor costo de acceso

Acciones colectivas y reparación de daños dispersos / Collective Actions and Redress for Dispersed Harm — BEER Lab

Seleccione una variante de este juego. Select a version of this game.

Figure 1.3: Demo lists this family's configurations. Confirm language, edition, and horizon before creating a session. (1/2)

Acciones colectivas y reparación de daños dispersos · Extendida · ES · Gasto inicial no reembolsable
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Ratificación por mayoría
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Ratificación unánime
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Daños heterogéneos
Acciones colectivas y reparación de daños dispersos · Extendida · ES · Financiación contingente
Collective Actions and Redress for Dispersed Harm · Extended · EN · Joining and representation
Collective Actions and Redress for Dispersed Harm · Extended · EN · Membership with active exit
Collective Actions and Redress for Dispersed Harm · Extended · EN · Redress for the whole group
Collective Actions and Redress for Dispersed Harm · Extended · EN · Lower access cost
Collective Actions and Redress for Dispersed Harm · Extended · EN · Nonrefundable initial expenditure
Collective Actions and Redress for Dispersed Harm · Extended · EN · Majority ratification
Collective Actions and Redress for Dispersed Harm · Extended · EN · Unanimous ratification
Collective Actions and Redress for Dispersed Harm · Extended · EN · Heterogeneous harm
Collective Actions and Redress for Dispersed Harm · Extended · EN · Contingent financing

Figure 1.4: Demo lists this family's configurations. Confirm language, edition, and horizon before creating a session. (2/2)

oTree Demo Sessions Rooms Data Server Check Logout

Rooms

Current rooms:

Acciones colectivas y reparación de daños dispersos · Básica · ES
Collective Actions and Redress for Dispersed Harm · Basic · EN
Acciones colectivas y reparación de daños dispersos · Extendida · ES
Collective Actions and Redress for Dispersed Harm · Extended · EN

Figure 1.5: Four rooms distinguish language and edition; share only the room corresponding to the session.

oTree Demo Sessions Rooms Data Server Check Logout

Room: Collective Actions and Redress for Dispersed Harm · Basic · EN

Create a new session

Session Config

Collective Actions and Redress for Dispersed Harm · Basic · EN · One case

Number of participants

Complete groups of 4 participants. Use a multiple of 4; minimum 4.

Create

[Configure session](#) ⚙️

App sequence

collective_claims_game (10 rounds)

0 participants present

Start links

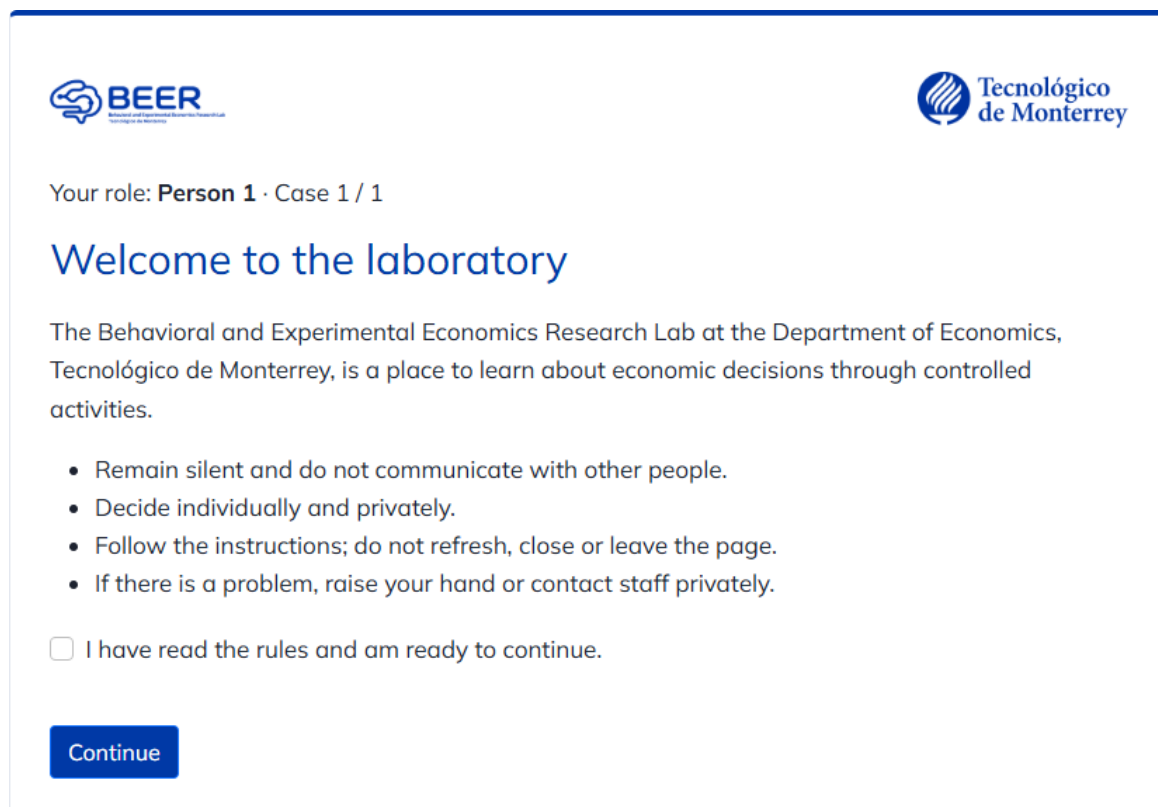
These URLs will stay constant for new sessions, even if the database is recreated.

Room-wide URL

Here is the room-wide URL anyone can use. Don't use this link when testing in multiple tabs on the same browser, because all tabs will be assigned to the same participant, using a cookie.

http://127.0.0.1:8215/room/collective_claims_en

Figure 1.6: Instructor form: check participant count and configuration before creating.



Your role: **Person 1** · Case 1 / 1

Welcome to the laboratory

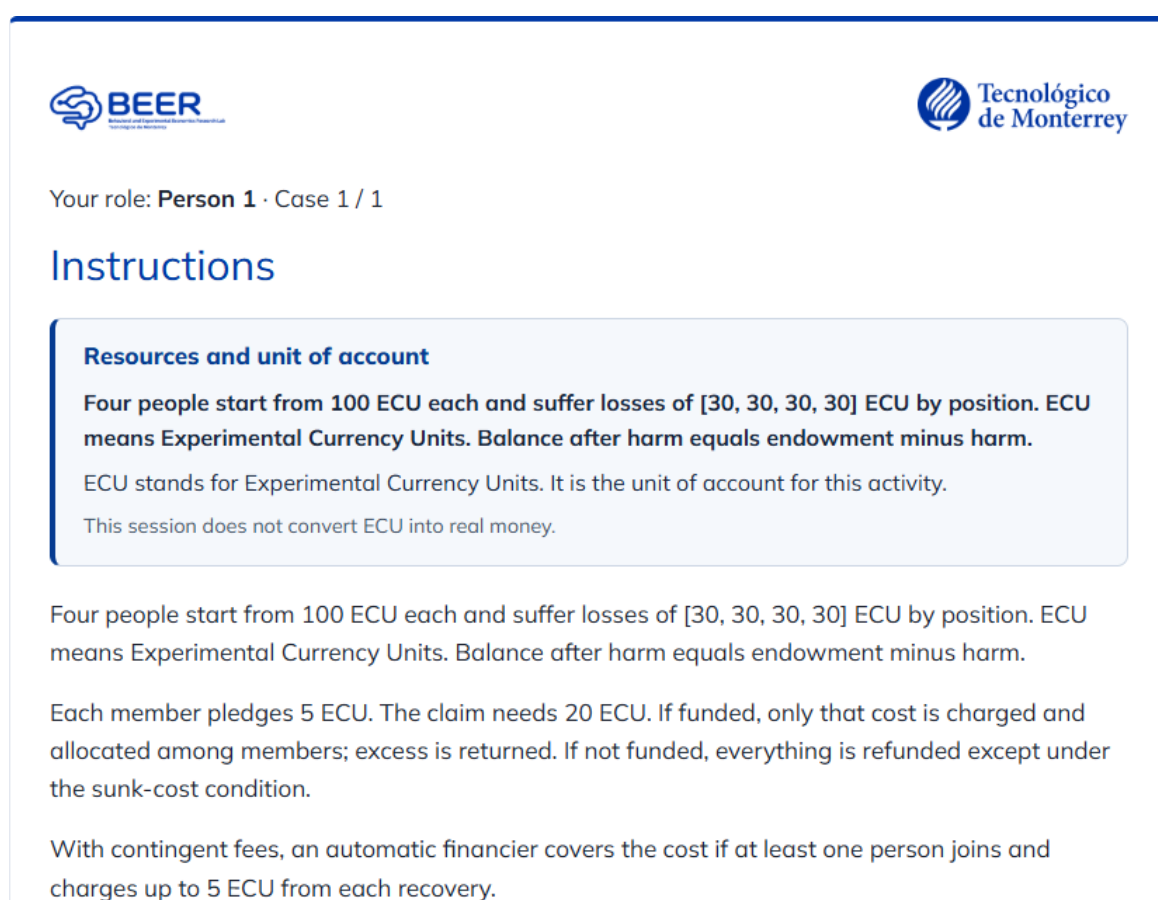
The Behavioral and Experimental Economics Research Lab at the Department of Economics, Tecnológico de Monterrey, is a place to learn about economic decisions through controlled activities.

- Remain silent and do not communicate with other people.
- Decide individually and privately.
- Follow the instructions; do not refresh, close or leave the page.
- If there is a problem, raise your hand or contact staff privately.

☐ I have read the rules and am ready to continue.

Continue

Figure 1.7: The welcome page introduces the laboratory and private-decision rules.



Your role: **Person 1** · Case 1 / 1

Instructions

Resources and unit of account

Four people start from 100 ECU each and suffer losses of [30, 30, 30, 30] ECU by position. ECU means Experimental Currency Units. Balance after harm equals endowment minus harm.

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

This session does not convert ECU into real money.

Four people start from 100 ECU each and suffer losses of [30, 30, 30, 30] ECU by position. ECU means Experimental Currency Units. Balance after harm equals endowment minus harm.

Each member pledges 5 ECU. The claim needs 20 ECU. If funded, only that cost is charged and allocated among members; excess is returned. If not funded, everything is refunded except under the sunk-cost condition.

With contingent fees, an automatic financier covers the cost if at least one person joins and charges up to 5 ECU from each recovery.

Figure 1.8: Actual instructions: identify resources, costs, and the session rule before starting. (1/2)

A randomly chosen member represents the group. They may propose settlement paying 60% of covered harm or proceed to trial. Trial pays full harm with probability 80% and zero otherwise. One draw determines the entire action's result.

The representative's settlement is binding unless majority voting or unanimity is announced. A rejected proposal proceeds to trial. Normally only members recover; under broad coverage everyone recovers.

Joining or leaving requires an active response on screen. Membership wording changes in the opt-out condition; silence is never recorded as a response. The opposing party and financier are announced automatic mechanisms.

Specific rule for this session

Each person chooses whether to join; a randomly selected representative decides on settlement.

Number of cases: 1 · Stable participants / fixed order

Each case begins with the described resources. Final payment sums all active cases.

Continue

Figure 1.9: Actual instructions: identify resources, costs, and the session rule before starting. (2/2)



Your role: **Person 2** · Case 1 / 1

Check the rules

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.

What is the individual reference balance before claims, losses or decisions?

101

Your answer: 101. The correct answer is 100. The reference balance before losses, claims or decisions is 100 ECU. Adjustments are explained separately.

How many cases are included in this session?

Figure 1.10: An incorrect answer receives an explanation. Address understanding before interpreting choices. (1/2)

Your answer: 2. The correct answer is 1. This session contains 1 case(s); this is not group size.

What does ECU mean?

Your answer: An academic grade. The correct answer is Experimental Currency Units. ECU means Experimental Currency Units. No conversion to real money is announced.

Joining pledges always suffice to fund the action.

Your answer: True. The correct answer is False. Pledges must cover the cost; contingent financing needs only one member because a financier intervenes.

Continue

Figure 1.11: An incorrect answer receives an explanation. Address understanding before interpreting choices. (2/2)

Collective actions: access, representation, and redress

2.1 Why combine claims?

A small loss may not justify the cost of individual litigation. Combining claims spreads a fixed cost but introduces choices about membership, funding, and representation. This game separates those stages. People first decide whether to join, funding is then assessed, and a representative chooses settlement or trial, subject to member ratification in some conditions. Redress depends on both access to proceedings and their outcome.

Four people start with 100 ECU and each suffers fictional harm of 30. Balances after harm are 70. Harm has already occurred; it is neither a student choice nor a penalty for participation. Each member pledges 5 and the basic proceeding requires 20. All four must therefore join to fund it. If funding is insufficient, pledges are refunded and no recovery occurs.

A representative is randomly selected among members after funding succeeds. They can accept a settlement paying 60 percent of covered harm or proceed to trial, which pays full harm with probability 80 percent and zero otherwise. One draw resolves the entire action. Members' outcomes are correlated through that common draw; the group does not contain four independent trials.

2.2 A complete access-and-settlement example

If everyone joins, the required 20 is raised and each pays 5. The representative proposes settlement, which is binding under the basic rule. Each recovers 18, because 60 percent of 30 equals 18. Final payment is 100 minus 30 minus 5 plus 18, or 83. Total recovery is 72 and total expenses are 20.

If only three join, pledges total 15 and cannot initiate proceedings. Under the basic condition they are refunded and everyone ends with 70. The difference between 70 and 83 is not exclusively judicial success: it combines the ability to fund proceedings and the decision to accept partial redress. Zero recovery can represent failed access, trial defeat, or exclusion from coverage, depending on the path.

If a funded group goes to trial and wins, each member receives 100 minus 30 minus 5 plus 30, or 95. Losing gives 65. Expected payment is 0.80 times 95 plus 0.20 times 65, or 89. Certain settlement gives 83. Under risk neutrality and monetary self-interest, trial has higher expected value, while settlement eliminates the possibility of ending with 65.

Theoretical foundation

Collective litigation funding can be a threshold problem: pledges must cover a fixed cost before redress is possible. Joining matters differently when it completes the threshold and when proceedings are already funded. Eligibility rules determine whether someone can receive redress without contributing.

2.3 Participation, risk, and representation

In the basic condition, a person expecting all three others to join can make proceedings viable through their own pledge. If trial is anticipated, expected member payment is 89 compared with 70 outside an unfunded action. The incentive is positive. If another person definitely refuses and the threshold will not be reached, joining does not change payment because the pledge is refunded.

Imperfect coordination is possible without a distributional conflict. Everyone could benefit from funding, yet expectations of low participation can sustain inactivity. Do not label every refusal free riding: a basic-condition nonmember receives no redress. The incentive operates differently when coverage extends to nonmembers and a lower cost permits funding without everyone.

The representative controls a shared outcome. With equal harm and fees already paid, trial exceeds settlement in expected value for all risk-neutral members. Risk preferences may nevertheless differ: someone may prefer a certain 83 while another accepts a lottery with expectation 89. Random selection of a representative does not remove this conflict; it assigns control when no subsequent vote is required.

Membership, funding, and control variants

3.1 Membership with active exit

The membership question asks whether to remain in or leave the action. An active response is always required; silence never submits an automatic choice. This changes membership framing, not a genuine default-inclusion system. Contributions, costs, coverage, and subsequent procedure remain at their basic values.

Compare membership and funding while keeping the remaining rules constant. A difference is compatible with framing, but must not be presented as an estimate of an actual opt-out regime. The design does not measure inaction against a preselected default. Be precise when relating a small interface manipulation to a broader institutional category.

3.2 Redress for the whole group

When the action obtains redress, nonmembers also receive it. The cost in this condition is 10, matching the lower-access-cost condition. Two members can therefore fund a proceeding whose benefits extend to all four people. The appropriate comparison for isolating coverage is lower cost with members-only recovery versus lower cost with group-wide recovery. Comparing directly with the basic cost of 20 changes both dimensions.

If two members fund and accept settlement, they receive 83 each while nonmembers receive 88 each: everyone suffers harm 30 and recovers 18, but only members pay 5. This creates a benefit from others' contributions while retaining a role for pivotal membership. A person whose refusal prevents the threshold from being reached cannot obtain that benefit. Analyze expectations about funding rather than assuming that broad coverage always eliminates participation.

3.3 Lower access costs

The fixed cost falls to 10 while every member pledges 5. Two people suffice. If more join, only the required cost is charged and excess pledges are returned. With four members, integer costs are allocated 3, 3, 2, and 2, with stable positional tie-breaking. The program does not consume 20 merely because 20 was pledged.

Lower costs can improve access and allow redress with partial membership. Nonmembers remain uncovered in this condition. Compare funding and effective individual expenses. Higher average

payments can arise through more funded actions or lower costs in actions that would already have been funded. The report and export permit these margins to be distinguished.

3.4 Nonrefundable initial expenditure

When the threshold is missed, members lose their pledged 5. When funding succeeds, ordinary cost allocation applies. This changes the consequence of attempting coordination unsuccessfully. With three members and insufficient funding, they receive 65 while the nonmember retains 70.

Potential loss can discourage joining when participation is expected to be low. This does not directly test the sunk-cost fallacy in later decisions, because the main change concerns the initial incentive to join. Studying irrational persistence after expenditure would require another decision after the cost is sunk. Explain the accounting treatment without claiming an unobserved behavioral mechanism.

3.5 Majority ratification

The representative proposes settlement, but members must ratify it by a strict majority. Rejection triggers trial. Four members require three favorable votes, not two. If the representative chooses trial directly, there is no vote on a nonexistent settlement. The rule adds collective control over a specific proposal rather than democratizing every stage.

Examine proposals separately from final agreements. Settlement frequency can fall because representatives propose less often or because proposals fail ratification. The report displays final settlements; the export retains representative decisions and votes. Identify the stage that changed before attributing the outcome to risk preferences or procedural legitimacy.

3.6 Unanimous ratification

Every member must approve a proposed settlement. One refusal triggers trial. With four members and three favorable votes, strict majority accepts while unanimity rejects. The example holds expressed choices constant and changes only aggregation. The vote concerns settlement versus trial, not continued membership in the action.

Unanimity protects a minority preferring litigation but can displace a majority preferring certainty. The model supplies no universal criterion making either rule superior. Ask which objective is prioritized: individual control, speed, expected value, or protection from risk. A vote reveals a choice between those alternatives, not a complete legal appraisal of the procedure.

3.7 Heterogeneous harm

Losses become 10, 20, 30, and 60, still totaling 120. Settlement pays 6, 12, 18, and 36. With all members funding, certain final payments are 91, 87, 83, and 71 after subtracting harm and fee 5. An identical compensation fraction produces different amounts and balances. Representatives are still selected uniformly among members, without weighting selection by harm.

Trial offers expected recovery of 80 percent of harm against settlement's certain 60 percent. The expected monetary gap rises with harm, but risk exposure also changes scale. Do not claim that every high-harm person must prefer trial without specifying utility assumptions. Compare

representative choices by assigned harm and remember that there are fewer observed representatives than members.

3.8 Contingent financing

An automatic financier covers cost when at least one person joins. Initial pledges are not charged. The financier deducts up to 5 from each recovery, capped by the amount recovered. Someone recovering nothing pays no fee. Nonmembers remain uncovered. Both the opposing party and financier are announced mechanisms, not hidden participants.

With harm 30 and settlement, a member receives 100 minus 30 plus 18 minus 5, or 83. Winning at trial gives 95 and losing gives 70, so expected trial payment is 90. The proceeding cost is recorded in the financier's account; it does not disappear because it is not collected upfront. Access, cost risk, and the funding source all change, so differences cannot be assigned to just one channel.

Evidence and diagnostic exercises

4.1 Relationship to scholarship

Deborah Hensler's Aggregate Litigation, a 2024 chapter in Comparative Procedural Law and Justice, examines aggregation mechanisms and problems of control, representation, and management when claims are handled together. This scholarship motivates separating who belongs, who decides, and who receives redress.

The game is an original four-person threshold-funding adaptation. It does not replicate a published collective-action experiment or represent every procedure discussed by Hensler. Variant effects are hypotheses derived from transparent rules. Active-exit framing must especially be distinguished from genuine automatic inclusion. Classroom evidence supports discussion of mechanisms, not immediate recommendations for a jurisdiction's procedural system.

4.2 Interpret zero recovery

Zero recovery has several possible paths: proceedings were not funded, trial was lost, or the person was outside coverage. Before calculating success rates, decide whether the denominator is all units, funded actions, or trial actions only. Dividing victories by all participants would combine access, representation, and adjudication chance.

Funding equals one when cost is covered or the contingent financier intervenes. Membership ranges from zero to four. Final settlement and trial concern funded proceedings and can both equal zero when access fails. Total recovery and expenses aggregate money; role payments reveal differences concealed by those totals. Every round is a new action, not an appeal in a continuing case.

4.3 Failed-funding exercise

Three people join and one does not. Under the basic rule, everyone receives 70 because pledges totaling 15 are refunded. Under nonrefundable expenditure, members receive 65 and the other person 70. Under lower access cost, the same 15 funds the required 10, leaving 5 to return. Identical initial choices have different consequences under different cost rules.

If those three members settle with equal harm, each recovers 18 and the nonmember zero. Integer cost is allocated 4, 3, and 3 across members according to position. Their payments are 84, 85, and 85; the outsider retains 70. Check that fees total 10 and recoveries total 54. One-ECU differences reflect integer allocation, not a preference of the representative.

4.4 Representation and voting exercise

Four members fund, the representative proposes settlement, and votes are yes, yes, yes, and no. Strict majority ratifies and everyone receives 83. Unanimity rejects and produces a trial lottery paying 95 upon victory or 65 upon defeat. No realized payment equals 89; that is an expectation before the draw.

Who should control exposure to risk when a decision affects everyone? Reasoned answers may favor different rules but must recognize consequences for both majority and minority. The activity does not separately elicit risk preferences, so opposition cannot automatically be labeled error. Distinguish disagreement about values from misunderstanding of probabilities.

4.5 Coverage and pivotality exercise

Under broad coverage with cost 10, two members fund and settle. Members receive 83 and nonmembers 88. If one member withdraws while the other remains, funding falls below 10 and everyone receives 70. Thus the member might prefer being a nonmember in a funded action but still prefer contributing when pivotal. This is the distinction between wanting a free benefit and possessing a profitable unilateral deviation.

With three other contributors, refusing can save the cost share while preserving coverage. With only one other contributor, refusal destroys funding. Expected participation therefore matters. Ask students to formulate the decision using the probability of being pivotal and to identify what additional beliefs would need elicitation. Observing membership alone does not identify those beliefs.

4.6 Advanced exercise: follow the financier's account

Suppose one member joins under contingent financing and settles. Their recovery is 18, the fee is 5, and the financier pays the procedure cost of 20. Net financier balance for that action is minus 15 before any outside endowment. Participant access can improve because a third party absorbs a deficit. Do not infer that the arrangement finances itself from participant payments alone.

With four members settling, total fees are 20 and exactly cover the procedure cost. With a trial defeat, fees are zero regardless of membership because there is no recovery. The financier's expected profitability therefore depends on participation, procedure choice, and recovery probability. The implementation announces an automatic financier willing to cover costs; it does not model entry, price setting, or an equilibrium market for litigation finance.

4.7 Advanced exercise: claims about representation

Suppose a high-harm representative chooses trial and the action loses. It is incorrect to conclude from that realization that representation was disloyal. Under risk neutrality, expected trial recovery exceeds settlement for every covered harm in the published parameters. Assess the decision using information and alternatives before the draw. A later loss does not identify the representative's objective.

Conversely, choosing settlement does not prove excessive caution. Participants may value certainty, understand probabilities differently, or have reasons outside the monetary benchmark. A richer experiment could elicit each member's preference before selection, then compare the representative's

choice with the distribution of member preferences. Such elicitation would be an additional design feature, not evidence already present in this game.

4.8 Conceptual closure

Collective redress combines an access problem, an allocation of decision authority, and an outcome process. Funding success, settlement frequency, and total recovery describe different stages. An institutional comparison is strongest when it states which stage changed and which remained fixed. The game supports that reasoning through transparent accounts and retained decisions rather than through labels that presume one procedure is always preferable.

4.9 Reference operating rules

The following record collects the effective basic-condition instructions. Use it to check that demonstration accounts match the worked examples. The preceding extensions explain condition-specific changes.

Four people start from 100 ECU each and suffer losses of [30, 30, 30, 30] ECU by position. ECU means Experimental Currency Units. Balance after harm equals endowment minus harm.

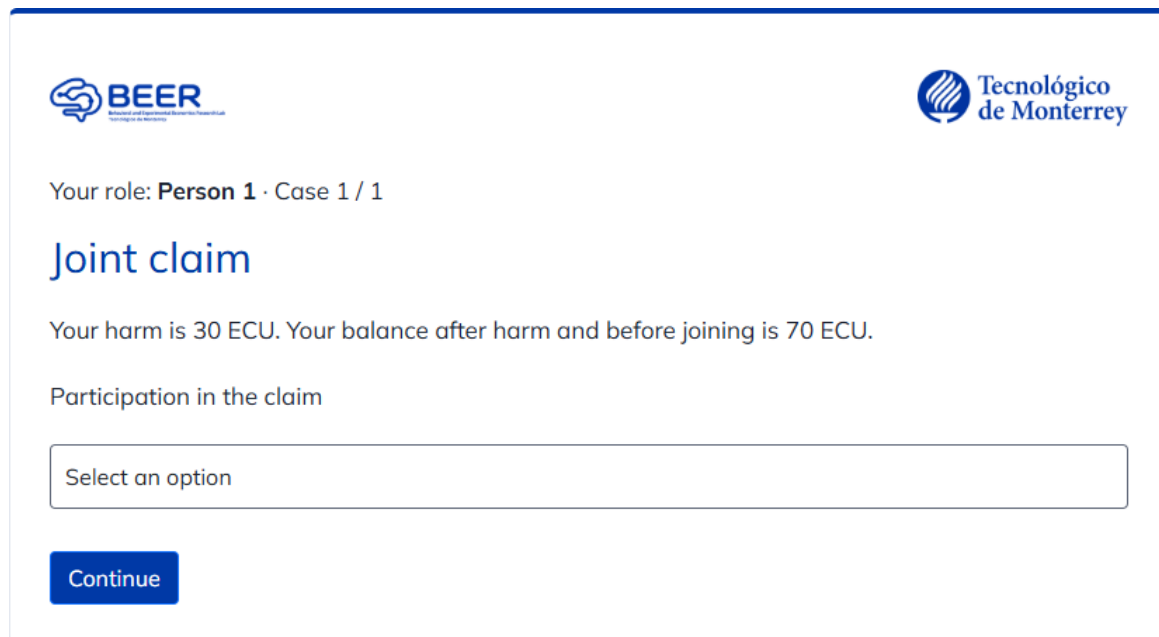
Each member pledges 5 ECU. The claim needs 20 ECU. If funded, only that cost is charged and allocated among members; excess is returned. If not funded, everything is refunded except under the sunk-cost condition.

With contingent fees, an automatic financier covers the cost if at least one person joins and charges up to 5 ECU from each recovery.

A randomly chosen member represents the group. They may propose settlement paying 60% of covered harm or proceed to trial. Trial pays full harm with probability 80% and zero otherwise. One draw determines the entire action's result.

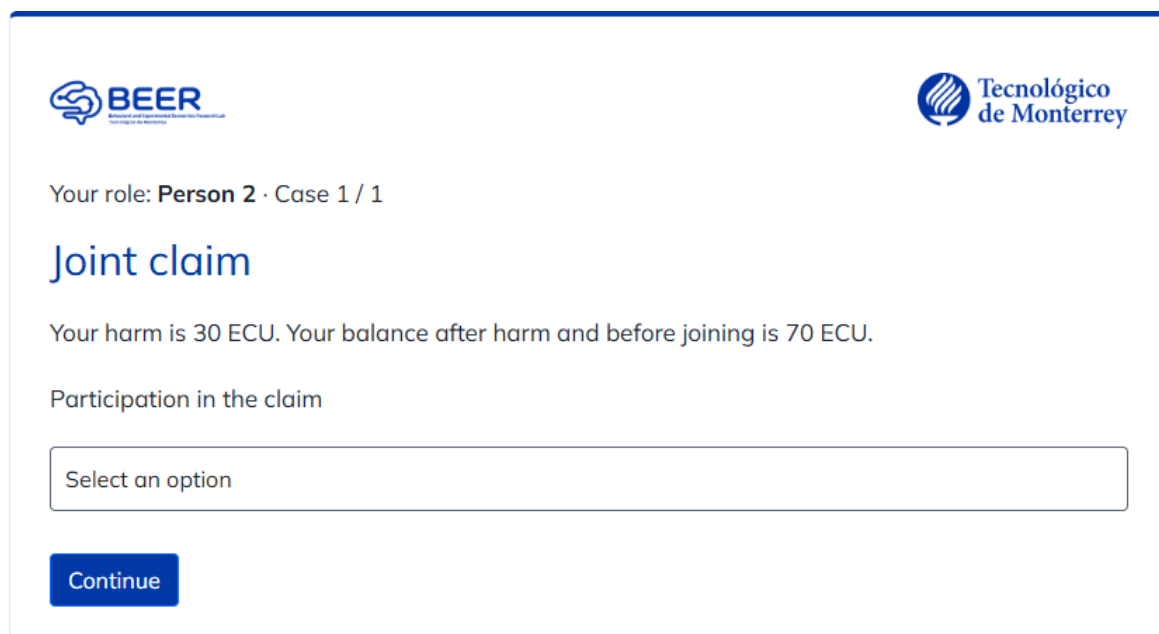
The representative's settlement is binding unless majority voting or unanimity is announced. A rejected proposal proceeds to trial. Normally only members recover; under broad coverage everyone recovers.

Joining or leaving requires an active response on screen. Membership wording changes in the opt-out condition; silence is never recorded as a response. The opposing party and financier are announced automatic mechanisms.



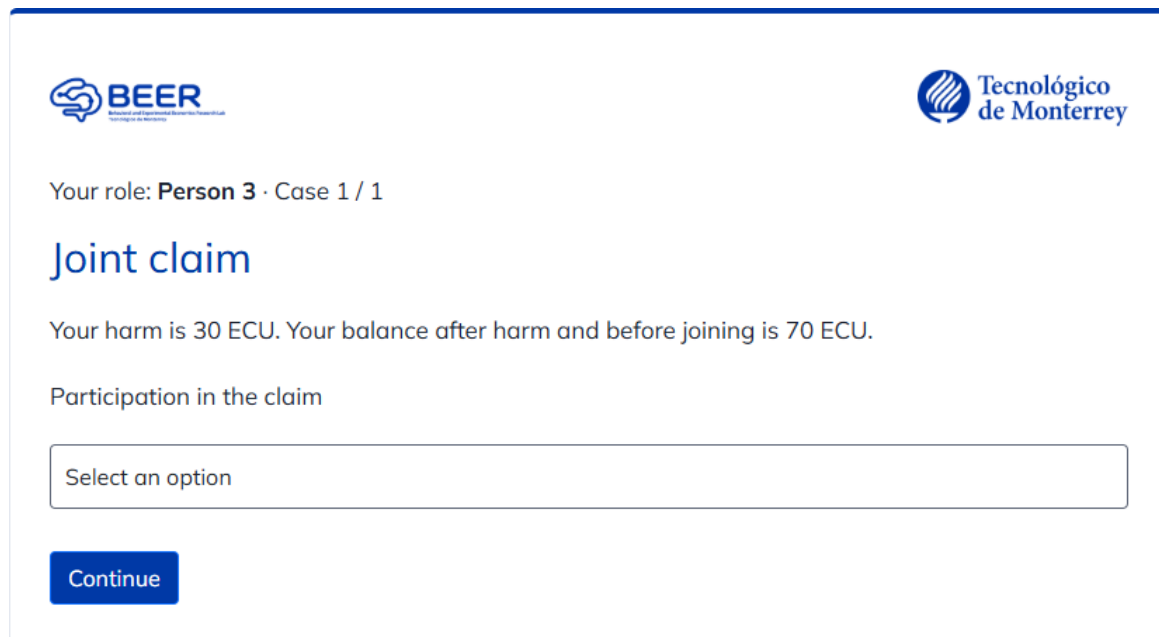
The screenshot shows the BEER Lab interface for Person 1. At the top left is the BEER logo, and at the top right is the Tecnológico de Monterrey logo. Below the logos, the text "Your role: **Person 1** · Case 1 / 1" is displayed. The main heading is "Joint claim". Below this, the text states "Your harm is 30 ECU. Your balance after harm and before joining is 70 ECU." followed by "Participation in the claim". There is a text input field with the placeholder "Select an option". At the bottom left is a blue "Continue" button.

Figure 4.1: Decision for Person 1. Check the information and options available to this position.



The screenshot shows the BEER Lab interface for Person 2. At the top left is the BEER logo, and at the top right is the Tecnológico de Monterrey logo. Below the logos, the text "Your role: **Person 2** · Case 1 / 1" is displayed. The main heading is "Joint claim". Below this, the text states "Your harm is 30 ECU. Your balance after harm and before joining is 70 ECU." followed by "Participation in the claim". There is a text input field with the placeholder "Select an option". At the bottom left is a blue "Continue" button.

Figure 4.2: Decision for Person 2. Check the information and options available to this position.



Your role: **Person 3** · Case 1 / 1

Joint claim

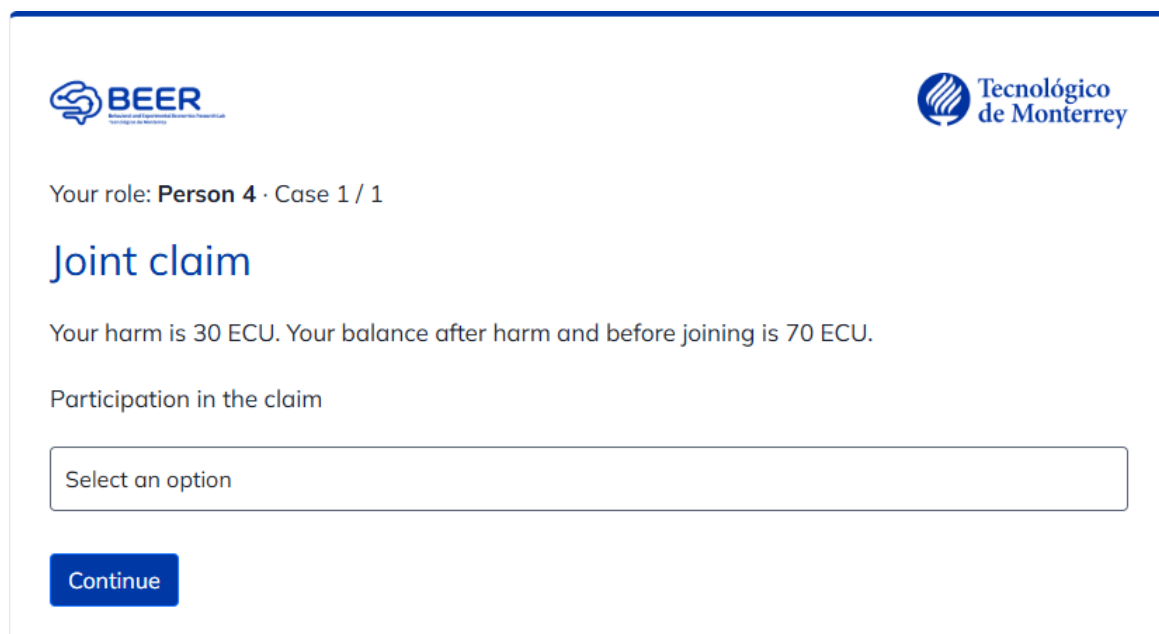
Your harm is 30 ECU. Your balance after harm and before joining is 70 ECU.

Participation in the claim

Select an option

Continue

Figure 4.3: Decision for Person 3. Check the information and options available to this position.



Your role: **Person 4** · Case 1 / 1

Joint claim

Your harm is 30 ECU. Your balance after harm and before joining is 70 ECU.

Participation in the claim

Select an option

Continue

Figure 4.4: Decision for Person 4. Check the information and options available to this position.

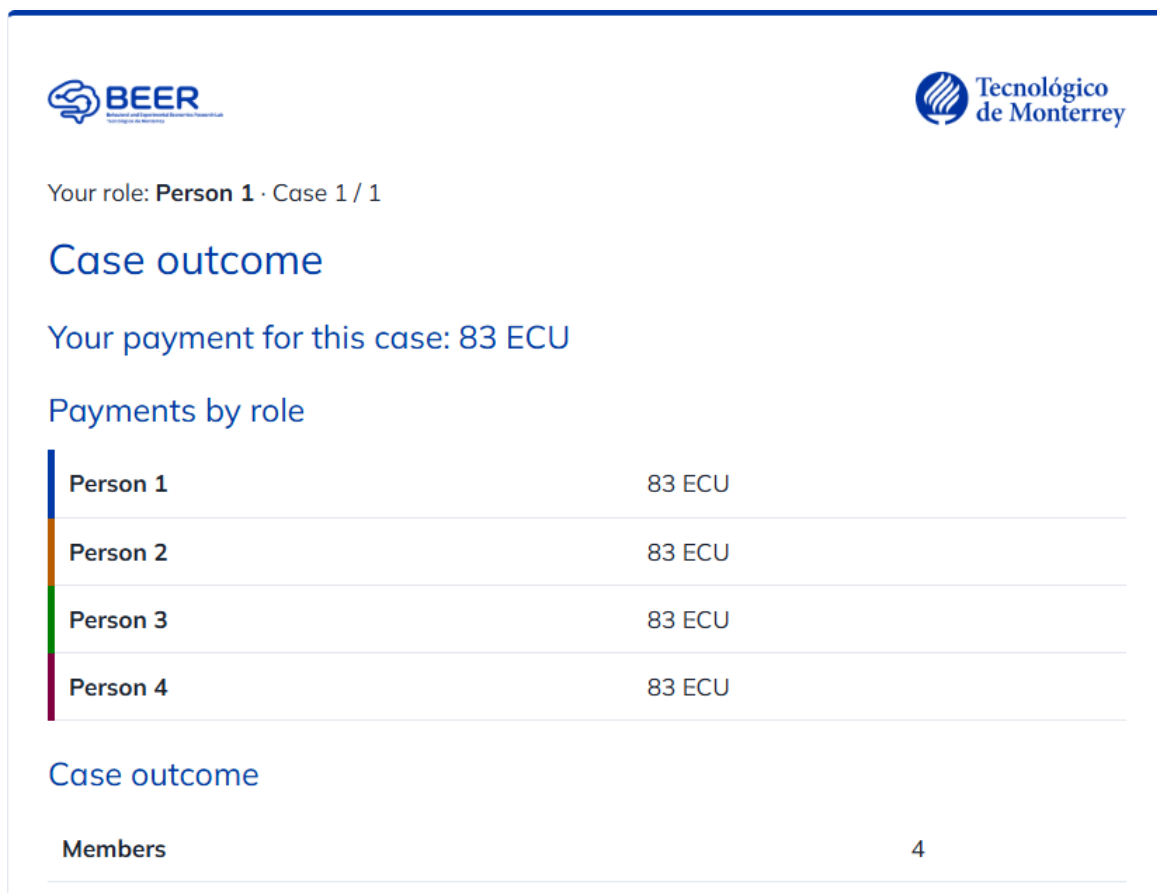


Figure 4.5: Case result: reconstruct the payoff before moving to the next file. (1/2)

Funded action	1
Final settlement	1
Trial	0
Total recovery	72
Paid fees	20
Accounts and components	
Harm	120 ECU
Total recovery	72 ECU
Paid fees	20 ECU
Financier cost	0 ECU
External funding of redress	72 ECU
Continue	

Figure 4.6: Case result: reconstruct the payoff before moving to the next file. (2/2)

Reading outcomes and designing discussion

5.1 Begin with the unit and denominator

Open the report for the session that was actually used. Before revealing results, check completed cases, the possible total, and pending cases. The report observation is one case of the experimental unit, not every individual row in the participant file. When several people share a group outcome, recording that outcome for each member does not create independent realizations. This distinction matters for percentages, graphs, and any subsequent analysis.

The report starts hidden. Reveal aggregates after the decisions you intend to compare are complete, and hide them again when reviewing administrative information. Hiding controls the instructor's projection; it does not replace private access to the panel. First ask for a literal description of what happened: number of units, frequency of an outcome, and dispersion. Introduce the economic explanation afterward. This order discourages students from selecting only observations that fit an announced prediction.

Means summarize outcomes but do not describe the entire distribution. Two groups can have the same average payoff and very different inequality. A histogram reveals concentrations, extremes, or absence of variation. Each bar reports the count and share of completed cases taking that value. If everyone chose the same option, the distribution is concentrated; the chart is not broken. With few cases, large differences between bars can arise from chance or one decision.

Role tables show the mean, median, and number of completed payments. The median is the middle ordered payoff; the mean is their sum divided by the number of observations. A large difference between the two is a reason to examine extremes before describing a typical participant. Colors identify positions in the activity, not types of people. Do not use a color or label to attribute moral dispositions to particular students.

Evolution by case shows changes during the session. A slope does not establish learning: it can also reflect different realizations, adaptation to counterparts, fatigue, or presentation order. Repeated observations with fixed groups share people and history. Under rematching, people continue accumulating experience even when group membership changes. To compare formats, retain period and configuration, and avoid treating every row as an independent observation.

Feedback script

First describe a number and its denominator. Then reconstruct a rule that could produce it. Finally propose an alternative explanation and a comparison that could distinguish the two. A convincing explanation connects information, choice, and outcome; naming a bias is insufficient.

5.2 Move from observation to a defensible claim

A reference prediction states what particular assumptions would produce. It may require knowledge of the rules, accurate calculation, exclusive concern for personal earnings, and a specified attitude toward risk. If behavior differs, do not immediately conclude that students are irrational. First check whether the prediction uses the actual parameters, whether decisions depended on private information, and whether several responses were compatible with the same criterion.

Separate three levels of claim. An observation summarizes the session: for example, a certain share selected an option. A compatible mechanism explains how incentives or information could produce that choice. A causal conclusion needs a comparison that attributes the change to a rule while excluding relevant alternatives. Classroom sessions often support the first two levels well. The third requires planning assignment, sample size, and incident handling before seeing outcomes.

Do not exclude a unit because it contradicts the theory. Record technical problems or documented departures from instructions and apply criteria established beforehand. Keep a table of excluded cases and reasons. An unexpected decision remains a valid observation when the person understood the task and acted within available options. Comprehension questions improve the activity but do not exhaustively measure understanding, attention, or effort.

5.3 A sixty-minute lesson

Use the first eight minutes to introduce the institutional question without announcing a desirable answer. Allow ten minutes for reading, questions, and comprehension. Reserve fifteen minutes for the basic activity; actual duration depends on its turns and the class's experience. Spend ten minutes reconstructing an outcome with the accounting rules, twelve contrasting an extension, and five on an individual closing response. If the sequence takes longer, reduce the number of conditions rather than the time needed to understand them.

In a ninety-minute lesson, you can run two comparable sessions and reserve twenty minutes for joint discussion. If the same people complete both, alternate condition order across groups when feasible. If that is impossible, explicitly state that the second condition occurs after learning the first. Do not call the difference a pure institutional effect. Repetition offers an opportunity to teach why order matters in an experiment.

A short assessment can request three products: a correct calculation, a prediction with assumptions, and a limitation of inference. Award credit for identifying a condition under which the prediction would change. Do not grade earnings or agreement with the instructor's opinion. For advanced work, request a small alternative design that changes one rule and specifies an outcome capable of distinguishing two explanations.

5.4 A workshop for reconstructing the export

Begin with a verifiable task: reconstruct one completed case from decisions without looking at the computed payment. In the custom export, locate session, participant, round, and group. Completion indicates whether an outcome exists; phase identifies the last transition reached. Choices are stored in fields numbered by stage. Their meaning depends on role and condition, so the same technical field does not necessarily represent the same question for everyone.

The state field retains a structured record of information, aggregate choices, payments, and accounts. These components trace the program's causal sequence: initial situation, action, institutional rule, and outcome. For spreadsheet analysis, convert components into columns while retaining the untouched original. Avoid text replacements that remove commas or minus signs without distinguishing values from structure. Conversion must preserve numbers, missing values, and position-specific payment lists.

Select a second unit with a different outcome and repeat the reconstruction. The contrast helps locate whether differences arise from choices, a random draw, or an institutional rule. In a programming exercise, a useful check independently verifies a resource identity. A test copying the same payment formula under a different name can reproduce the same mistake and is not an independent accounting check.

5.5 What synthetic data contribute

The analysis folder includes synthetic cases generated under each condition's rules. They support practice importing records, making tables, and verifying accounts. Preserve the synthetic-data label in every derived chart or file. Simulated choices do not represent a student population and are not calibrated to reproduce an empirical frequency. A condition generating more agreements or votes in this file is not an experimentally validated behavioral prediction.

Use synthetic data to examine operation: possible values, balanced accounts, fields changing across conditions, and observation structure. Use classroom data to describe behavior actually observed, subject to assignment and sample-size limitations. Keeping these sources separate prevents a software example from accidentally becoming evidence about human preferences. Students should be able to explain which parts of a synthetic outcome were generated by choices and which follow mechanically from the institution.

5.6 Plan a comparison before seeing results

Write a hypothesis identifying the reference condition, extension, primary outcome, and expected direction under explicit assumptions. Add a secondary outcome capable of revealing an intervention's cost. An institution can improve the metric it rewards while worsening one it ignores. Specifying both in advance makes discussion less dependent on whichever number looked most striking afterward.

Also record assignment. If one classroom group receives one condition and another group receives another, experience or understanding can vary alongside treatment. With random assignment, preserve the unit assigned and do not artificially multiply sample size through rounds or group members. With a before-and-after design using the same people, recognize learning and order as alternative explanations. These choices matter even when teaching is the main objective.

5.7 A short analysis deliverable

Request one page containing a question, a small table, a distribution plot, and an interpretation paragraph. The table should state the unit and number of complete cases; plots should preserve a common scale across conditions. Separate observed outcomes, a compatible mechanism, and a limitation in the paragraph. An excellent answer can find little difference and explain why the design or sample does not establish equivalence.

Keep a minimal implementation record containing configuration, language, horizon, participant count, and incidents. A screenshot of a plot without these rules is insufficient for reproduction. There is no need to present infrastructure or commands during feedback. The purpose is for students to explain how decisions become outcomes and which comparison supports each claim. Encourage them to report one observation that would weaken their preferred explanation, making the analysis open to disagreement rather than a search for confirmation.

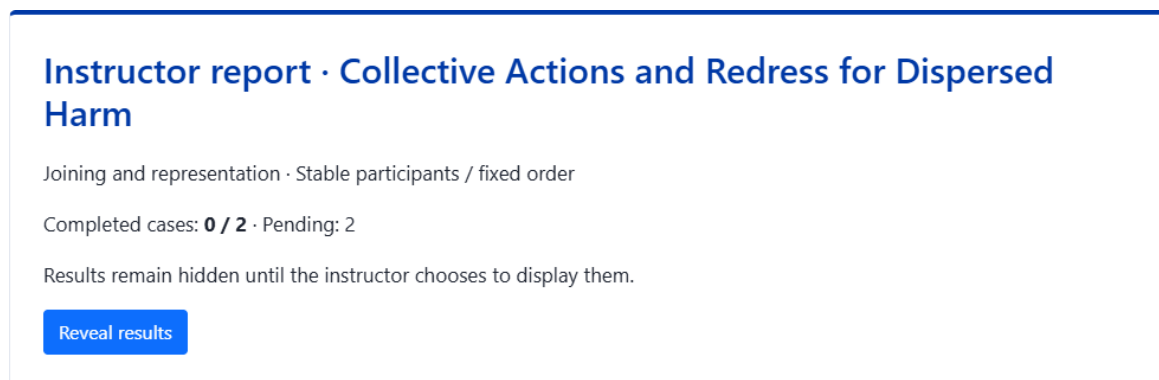


Figure 5.1: Monitoring view: unrevealed report and case count.

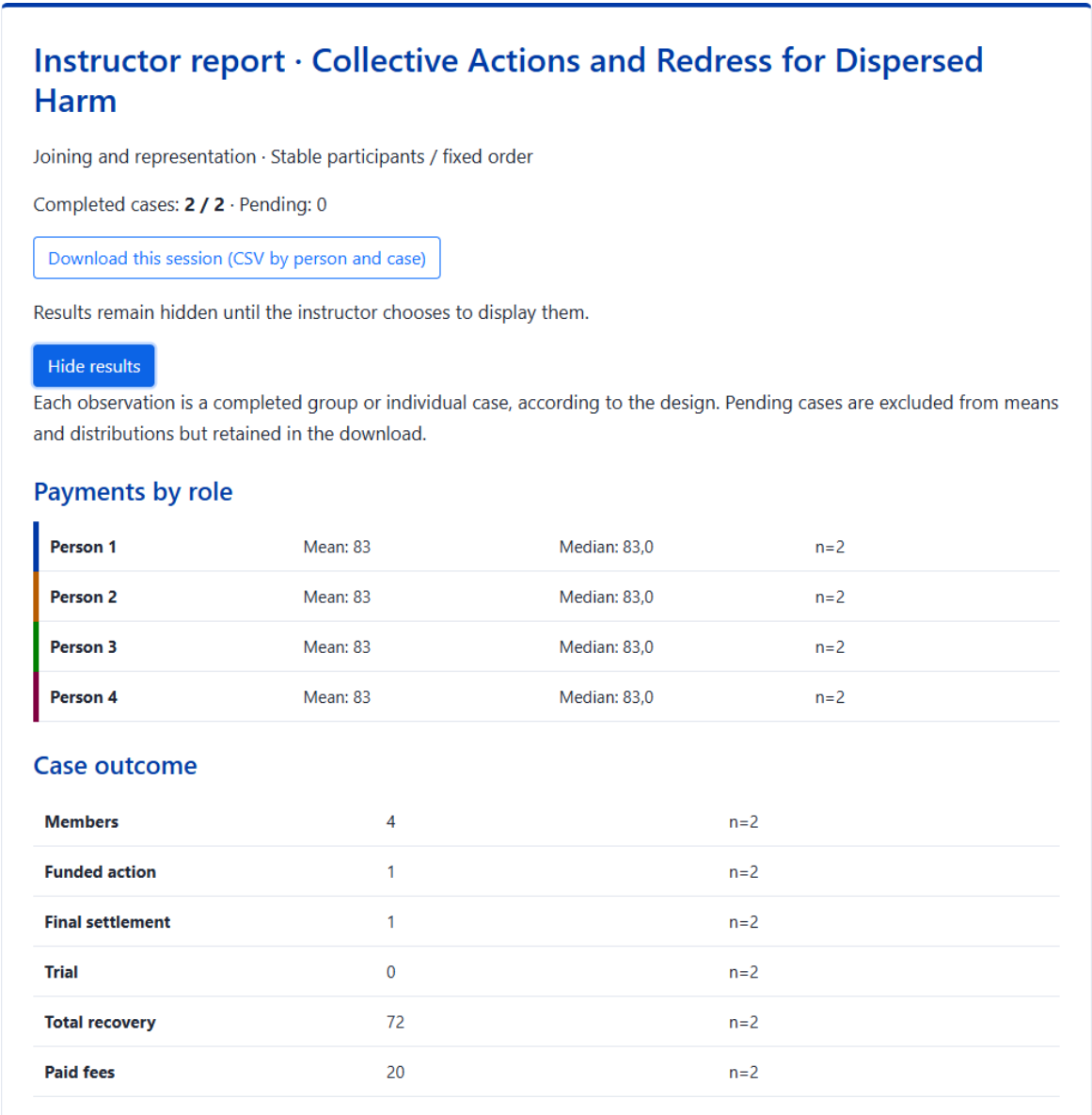


Figure 5.2: Monitoring view: revealed results; read every figure with its denominator.

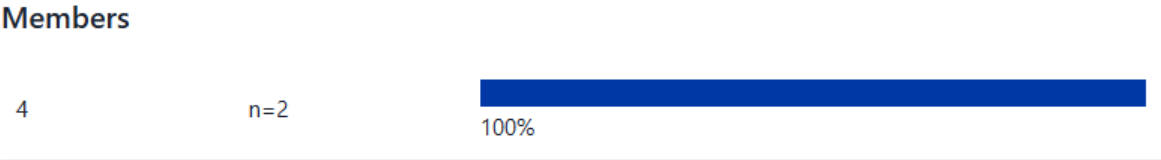


Figure 5.3: Monitoring view: the distribution shows concentration and dispersion.



Figure 5.4: Monitoring view: evolution separates cases and available observations.

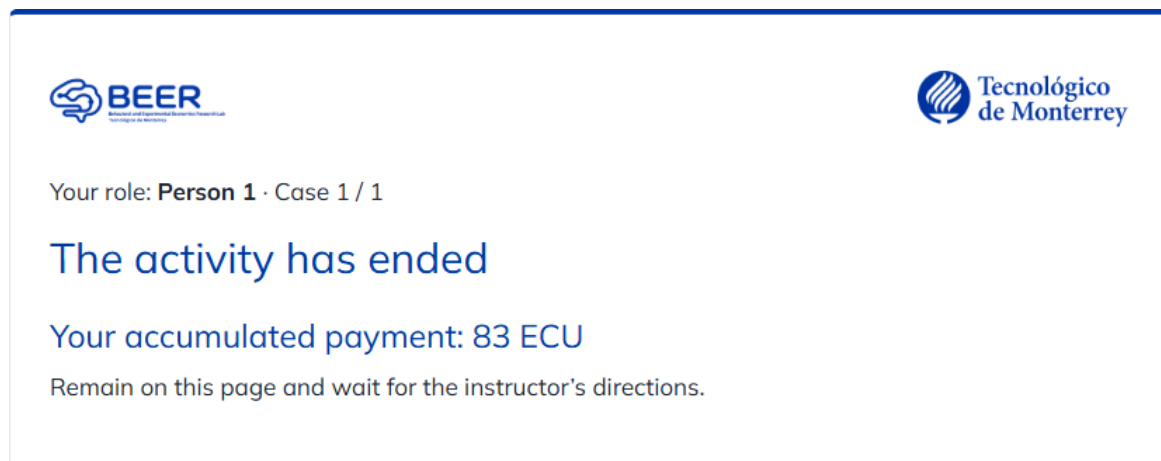


Figure 5.5: Monitoring view: closure confirms there are no further decisions for this person.

Data, retention, and incident recovery

6.1 Download the right session

From the session panel, open Data and use its own download link. The general oTree file is wide: one participant row contains columns for different rounds. This family's custom export is long and retains participant, round, group, role, language, edition, treatment, matching, phase, decisions, completion, payoff, and case state. Pending cases are retained. A blank field may indicate a decision that was unnecessary or has not yet been made; it must not automatically become zero.

Save the original file unchanged with the configuration and date. Use a copy to construct tables. Identify the session by its code and check that the last active round is present. Unused technical rounds do not belong to the experimental horizon. In a one-case version, the report must summarize that case even if the administrator opens the last technical period. Completed and pending counts provide a cross-check between the download and the visible session.

The private report also includes Download this session, which directly delivers the person-by-case CSV for the open session. This option requires no API-key configuration. It preserves all active rounds, including those still pending. The general Data download and this long download represent the same session in different layouts; their organization differs, not the active horizon that must be retained.

Collective outcomes repeat in members' state records. To construct a unit-level file, retain one observation per session, group, and round, or per participant and round for the individual activity. For payments by role, retain individual rows. Do not mix these levels in one average without specifying its weights. The analysis folder includes clearly marked synthetic data for practicing calculations. They are not evidence collected from students.

6.2 Protect interpretation and privacy

Do not collect names, student identification numbers, or demographic variables for this activity. Session and participant identifiers support operational tracking but should not be projected or published with results. Restrict access to the original file. When sharing a classroom table, remove individual codes and use aggregates that do not make a particular decision easy to recognize. A file's fictional status does not describe the real conduct, merit, or responsibility of the person assigned to it.

Classroom data do not automatically constitute a research sample. Before using them in a study, separately define the protocol, consent, data management, and relevant authorizations. You can discuss limitations pedagogically without turning every class into a research procedure. This guide teaches how to read outcomes, recognize observational units, and formulate hypotheses. It does

not promise representative estimates for actual judges, creditors, or data users.

6.3 Recover a session without changing its rules

If someone is waiting, examine the other positions in that unit. Locate the pending slot and check whether its participant is reading, has not submitted, or lost connectivity. Do not decide for them. If two people opened the same individual link, stop interpreting that unit and record the incident. If faithful recovery is impossible, retain partial data and create a new session for a later demonstration.

Correct a language error before choices begin. Do not informally translate for one participant while everyone else receives different instructions. If an incorrect configuration already produced decisions, identify those data separately. Restarting a server while preserving its database does not erase a session. Deleting or recreating the database invalidates previous individual links, requires a new session, and must never be used merely to refresh the interface.

Checkpoint

At closure, confirm that all planned cases are either complete or accompanied by a recorded incident, that the download belongs to the selected session, and that pending outcomes have not become zeros. Save the configuration alongside the data. Reproducibility begins with preserving the rules actually used.

Attention

Reveal the report after the decisions you wish to compare. Showing averages from other groups during play introduces social information. When that information is not part of the treatment, it changes the activity and must be recorded as an implementation incident.

6.4 Available rooms and conditions

Stable room: https://collectiveclaims.beer-lab.org/room/acciones_colectivas_es

Stable room: https://collectiveclaims.beer-lab.org/room/collective_claims_en

Stable room: https://collectiveclaims.beer-lab.org/room/acciones_colectivas_extendido

Stable room: https://collectiveclaims.beer-lab.org/room/collective_claims_extended

Joining and representation	Each person chooses whether to join; a randomly selected representative decides on settlement.
Membership with active exit	The question asks whether to remain or leave. An active response is always required; silence is not an automatic answer.
Redress for the whole group	Cost is 10 ECU, as under lower access costs. If the action obtains redress, nonmembers also receive it.
Lower access cost	The fixed cost of initiating the action falls to 10 ECU.
Nonrefundable initial expenditure	If the action is not funded, joining members lose their pledged amounts.

Majority ratification	Proposed settlement requires a strict majority of members; rejection leads to trial.
Unanimous ratification	Proposed settlement requires every member's affirmative vote.
Heterogeneous harm	Losses are 10, 20, 30 and 60 ECU; settlement preserves each loss's proportional share.
Contingent financing	An automatic financier covers the cost and collects up to 5 ECU from each recovery.

6.5 References and provenance

Hensler, Deborah (2024). Aggregate Litigation. Comparative Procedural Law and Justice, Part X, Chapter 4. Editors: Burkhard Hess, Margaret Woo, Loïc Cadiet, Séverine Menétrey, Enrique Vallines García. September 2024.

<https://www.cplj.org/publications/10-4-aggregate-litigation>

JEL classification verified with the American Economic Association: <https://www.aeaweb.org/econlit/jelCodes.php?view=jel>

Original BEER Lab teaching design. Additional predictions follow from the rules documented here. Sources and navigation checked in October 2026.