



Instructor's Guide to Acquisitions and Corporate Control

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 prepares instructors to teach tender offers, shareholder coordination and corporate control through choices by one or two bidders and four shareholders. It assumes no prior experience with classroom experiments and follows the English interface.

Begin with the session summary and worked ownership example. Then choose one institutional comparison. The condition chapter and report definitions support a debrief that distinguishes observed choices, accounting implications and strategic explanations. The Spanish guide covers the same family.

Screenshots show genuine interfaces. The prepared public routes identify the product; the delivery receipt distinguishes local validation from publication. The existing hidden-value acquisition activity remains a separate catalogue item with a different mechanism.

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For the instructor

Start by counting ownership and following transfers. Record a prediction before revealing aggregates. Compare one rule at a time and identify the observation unit of every report statistic.

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The game and the economics of control

1.1 Individual decisions with collective consequences

A tender offer can improve a company and still fail to attract enough shares. Owners decide separately. Each compares the money received by selling with the value of keeping a stake after other owners enable the change of control. The decision therefore has both a distributional and a coordination dimension: it determines who receives the benefit and may determine whether that benefit exists. This activity makes both dimensions visible through twelve shares, an explicit ownership ledger and decisions by actual participants.

The teaching objective is for students to reconstruct an acquisition from its rules. They identify the offer price, the quantities shareholders are willing to sell, the threshold activating control, and the contract's consequences if that threshold is missed. They can then explain why a productive acquisition might face resistance, why a large shareholder may be pivotal, and why an initial stake changes the buyer's incentives. The guide assumes no previous experience with stock exchanges, classroom experiments or formal corporate finance models.

The laboratory catalogue already includes a hidden-value object acquisition activity inspired by the acquiring-a-company problem. There, one informed seller decides whether to accept a buyer's price. Adverse selection is central because acceptance conveys information about value. This family studies a different mechanism: four owners choose simultaneously and a control threshold changes the asset's payoff. The basic condition makes the relevant value public. Comparing the two activities can be useful, but a coordination failure here should not be presented as evidence of the buyer's curse in the hidden-value activity.

For the instructor

Before introducing free riding, ask three accounting questions: how many shares exist, who owns them, and what rule converts individual tenders into control? Save theoretical labels for the debrief. During decisions, explain only the rules needed to act. Avoid suggesting that selling or holding is the answer the instructor expects.

1.2 Session preparation summary

Purpose	Explain tender offers, shareholder coordination and transfers of corporate control.
Experimental unit	One bidder and four shareholders; two bidders and four shareholders under competition.
Basic edition	One market; ten with a fixed group or role-preserving reassignment.
Extended edition	Fourteen ownership, purchase-rule, competition, cost and information conditions.
Decision	Bidder price; shareholder tender quantity and destination; optional second offer.
Payoff	Mean final personal wealth, credited once. Bidders receive 2500 ECU; shareholders 100 ECU plus announced initial shares.
Topics	tender offers; corporate control; share ownership; toeholds; pivotal shareholders; free-rider problem
JEL	C92; D82; G32; G34
Participants	Multiples of five, or six with two bidders; reassignment requires at least ten.
Suggested duration	About 75 minutes with discussion for one market; 90–120 for repeated comparisons.

The experimental unit is an interactive market. The reference has one bidder and four shareholders; competition has two bidders and four shareholders. Each bidder receives 2500 personal ECU and each shareholder receives 100 ECU plus the announced initial shares. ECU means Experimental Currency Units. They are the activity's unit of account; the guide does not assume a conversion to real money. A session may contain several independent markets. It must contain complete groups of five, or groups of six when two bidders compete.

The basic edition offers one market, ten markets with a fixed group, and ten markets with role-preserving reassignment. Reassignment requires at least ten participants because one group cannot change counterparties. Cash and ownership renew between markets. Bidders remain bidders and shareholders remain shareholders. Each market represents a separate acquisition rather than another date in the life of one company. Changes across markets can consequently be discussed as learning or adaptation without treating earlier balances as financing for the next offer.

Each of the fourteen extended conditions runs one market. Successive offers permits up to two announcements within that market; it does not create two independently paid markets. The languages share parameters and rules. There are 34 configurations and four rooms. A lesson usually needs one carefully selected comparison: reference versus an initial stake, conditional versus unconditional purchase, or private versus public value information. Running every condition in one class would leave too little time to understand the observed decisions.

1.3 Ownership, cash and a worked acquisition

The reference has twelve shares, three owned by each shareholder. The bidder begins without shares. If control does not change, each share pays 100 ECU. If one bidder obtains at least seven shares, every share pays 150, including shares that shareholders retain. Announcing a positive price costs 10 ECU whether the acquisition succeeds or fails. This cost represents resources consumed in preparing or presenting the offer. Purchase payments instead reach the owners who sell.

Suppose the bidder offers 130 and shareholders tender three, two, two and zero shares. Seven shares are offered and the control condition is met. The bidder pays $7(130) = 910$ to shareholders and incurs the cost of 10. Remaining cash is 1580; the seven acquired claims pay 150 each. Final wealth is $1580 + 1050 = 2630$, a gain of 130 relative to the initial 2500. Purchase expenditure is not added again to wealth: it has already reduced the bidder's cash account.

The first shareholder sells all three shares and ends with $100 + 390 = 490$. The second and third sell two, keep one, and each end with $100 + 260 + 150 = 510$. The fourth sells nothing and ends with $100 + 3(150) = 550$. Each initially held reference wealth of $100 + 3(100) = 400$. Their gains are respectively 90, 110, 110 and 150. Holding was profitable in this realized profile because other owners sold enough to enable control. That observation alone does not establish that holding was optimal before their decisions were known.

Initial joint wealth was $2500 + 4(100) + 12(100) = 4100$. Final wealth is $2630 + 490 + 510 + 510 + 550 = 4690$. The gain of 590 equals the 600 created by raising the payoff of twelve shares by 50, less the cost of 10. The purchase price of 910 enters as the bidder's expenditure and the sellers' receipts, cancelling when people are added together. The acquisition redistributes wealth; control changes the productive asset's payoff; the offer cost consumes resources. Keep all three operations separate when explaining the result.

Now change only the tenders to three, three, zero and zero. Six shares are insufficient under the conditional offer. All purchases are cancelled, owners retain the twelve shares, and the bidder ends with 2490. Each shareholder retains reference wealth of 400. The joint loss is 10. Six shares are not provisionally acquired and there is no purchase money awaiting repayment: the condition prevents those transfers from executing. Under unconditional purchases the six shares do change hands, as explained in the institutional comparisons.

Checkpoint

Check four identities in every example: total ownership remains twelve shares; the buyer's purchase payments equal sellers' receipts; aggregate cash falls only by announced costs; and joint gains equal the change in value of all twelve shares minus those costs. A change of owner never creates new shares.

1.4 Free riding, pivotal decisions and finite owners

Free riding occurs when a person benefits from an improvement financed or enabled by others. Here a shareholder who holds keeps the improved payoff if the bidder gains control through other owners' sales. If the shareholder believes their own tender cannot change success, the comparison is between the offer price and 150. At 130, holding appears attractive under that assumption. If everyone holds, however, the improvement disappears and every share pays 100. The collective consequence depends on how individual decisions combine.

This intuition does not establish that every price below 150 must fail in the activity. The four shareholders hold visible blocks. Each may affect whether seven shares become available. The atomistic reference associated with [Grossman and Hart \(1980\)](#) treats an individual owner's contribution as negligible. With finitely many owners a decision may alter the outcome; [Bagnoli and Lipman \(1988\)](#) show why that difference matters for takeover analysis. The implementation teaches this distinction without claiming to reproduce either published model literally.

Let S denote total tenders to the bidder, t the initial stake and K the control threshold. Control occurs when $t + S \geq K$. Shareholder i 's observed decision to tender q_i is pivotal if control occurred but $t + S - q_i < K$. The calculation withdraws that shareholder's whole quantity, keeps every other decision fixed and evaluates the rule again. It does not measure whether the person expected

to be pivotal, or whether withdrawing one marginal share would suffice. With tenders of three, two, two and zero, the first three shareholders are pivotal: removing any of their blocks leaves fewer than seven shares.

Compare two hypothetical situations to explain the incentive. If other owners offer four shares and a person owns three, selling all three enables control. At 130 those shares generate 390 in sale receipts, while retaining them when control fails pays 300. If other owners already offer seven, the same person receives 450 by keeping three shares, compared with 390 by selling. The preference between selling and holding depends on others' actions. This comparison uses explicit profiles and known payments rather than invented probabilities about the class.

A pivotal decision is also different from a valuable position in a negotiation. A shareholder might own a large block and be potentially essential without actually tendering it. If the offer fails, the report does not mark that shareholder as an observed pivotal contributor to a successful acquisition. The instructor can discuss the counterfactual separately. Keeping observation and hypothetical influence distinct prevents the report's simple indicator from becoming an unsupported claim about bargaining power or personal motives.

Theoretical foundation

The reference prediction depends on the ability to affect success. A nonpivotal owner may prefer holding when the price is below the control value. An owner whose sale enables the improvement may prefer selling at a price between the no-control and improved values. The finite game permits coordination and strategic responses that the atomistic intuition alone does not resolve.

1.5 Payment, repetition and interpretation

For each person, terminal wealth is remaining cash plus final shares multiplied by the terminal share payoff. Formally, $W_i = c_i + n_i V_f$, where c_i is cash, n_i is ownership and V_f equals 100 without control or the announced value under successful control. Gain is $W_i - W_i^0$, where $W_i^0 = c_i^0 + n_i^0(100)$. This initial benchmark includes shares endowed to the bidder in the toehold conditions. Comparing raw wealth alone across those conditions would mix strategic incentives with different starting assets.

With ten markets, session payment is mean terminal wealth across the ten markets. The program credits it once, after the final active market. Intermediate wealth is displayed for learning and retained in the data, but it is not added a second time to the mean. Cash does not carry into the next market. If participants ask why they again receive 2500 or 100, explain that a new company and budget are beginning; it is neither a loan nor a refund of an earlier offer.

Fixed groups allow adaptation to the same counterparties, although the instructor report does not reveal identities. Reassignment preserves the general role and changes the shareholders grouped around bidders. A time trend may reflect learning the rule, experience with aggregate tenders or strategic adaptation. Ten observations from one group are not ten independent groups. For institutional comparisons, record the number of independent markets and groups as well as the number of stored individual decisions.

Access and classroom operation

2.1 Laboratory, room and session routes

Start at <https://beer-lab.org/>. CLASSROOM opens the teaching catalogue at <https://teaching.beer-lab.org/>. Search for Acquisitions and Corporate Control or terms such as tender offers, pivotal shareholders and toeholds. JEL classifications also support search. The card identifies the mechanism and provides links by language and edition. The hidden-value acquisition activity retains a separate card. Selecting it leads to a different economic problem and a different participant requirement.

The family address is <https://corporatecontrol.beer-lab.org/>. The English basic room is https://corporatecontrol.beer-lab.org/room/corporate_control_en; the Spanish basic room is https://corporatecontrol.beer-lab.org/room/control_corporativo_es. Extended rooms use https://corporatecontrol.beer-lab.org/room/corporate_control_extended and https://corporatecontrol.beer-lab.org/room/control_corporativo_extendido. These routes describe the prepared product. The delivery receipt distinguishes locally verified access from routes that still need deployment and DNS configuration on the laboratory server.

The instructor uses Demo to choose a configuration and create a session, or Rooms to begin through a room. Demo should show the family's 34 configurations and Rooms only its four rooms. A basic room should initially select a basic mode in the correct language. Extended options have a separate selector. If another activity appears, consult the laboratory before distributing links: a mixed list could lead to a session with incompatible rules or group size.

A room, a session and an individual link serve different purposes. A room organizes access; a session stores a particular set of parameters and decisions; an individual link identifies one position inside that session. The instructor panel provides participant links and progress monitoring. Give each person a different link and keep administrative access on your own computer. Sharing one individual link does not create two positions: both students would attempt to operate the same account.

2.2 Preparation and comprehension before offers

Choose the teaching question and institutional comparison before opening the session. Confirm language, mode, number of markets and actual group requirement. Use multiples of five in the reference and six with two bidders. Basic reassignment needs at least two groups, hence a minimum of ten people. The form validates these restrictions. Resolve an incompatible count by adjusting the planned session or recruiting the missing participant. Do not silently fill an absent role yourself while describing the activity as interaction entirely among students.

Distribute links, wait until participants see the welcome page, and read the silence and privacy rules. The program assigns roles. Instructions display initial cash and ownership by role, using the chosen condition's actual quantities. A blockholder receives six shares rather than three; a toehold belongs to the bidder from the beginning. These are announced endowments. There is no simulated preliminary purchase whose price must later be deducted from the bidder's cash.

Comprehension asks about bidder cash, the control threshold and transfers when only three shares are tendered without control. The last answer depends on the contract: zero under a conditional offer and three under unconditional purchases. An incorrect answer receives an explanation beside its question while other fields are retained. Allow correction without recommending offer prices or tender quantities. Passing the check establishes understanding of rules rather than knowledge of the strategy other participants will choose.

What participants will see

Participants see their role, announced resources and the information they are entitled to receive. Bidders choose prices; shareholders choose quantities and, under competition, a destination. Neutral waiting pages advance when the required roles finish. In private information, shareholders see the value range and probabilities while the bidder knows the particular realization.

2.3 Offers, responses and completion

A bidder can announce zero to 200 ECU per share. Zero withdraws the offer and avoids its cost. A positive price incurs the announced cost even if tenders fail to provide control. Shareholders then submit integer quantities within their ownership. With two bidders, each directs the whole quantity to one bidder. Decisions are simultaneous and individual quantities are hidden while others decide. Once all required responses are recorded, the contract determines which transfers execute.

Successive offers opens an aggregate review after first-offer failure. It reports the price and total shares tendered, leaves ownership unchanged and recognizes the consumed announcement cost. The bidder can withdraw or revise. A positive second price cannot be below the first. New responses determine the second offer; earlier tenders do not bind later decisions. First-offer success skips the second offer and leads directly to settlement. This sequence reveals reactions to aggregate information while keeping a failed conditional attempt distinct from a partial acquisition.

At completion each person sees control, terminal share payoff, cash, shares, sales, costs, wealth and change relative to initial endowment. The final screen confirms completion and the credited mean. Tell participants to wait for the instructor's directions. Keep the administrative window open so results can be revealed after the class has recorded its predictions. Explicit completion prevents students from interpreting a blank page as evidence that another decision is required.

Attention

If a participant link becomes obsolete after a database was recreated, create a new session and distribute current links. Restarting a server to load an updated template does not require deleting sessions. For a long wait, inspect the monitor to identify the pending role and confirm that the person uses the correct link. Waiting does not justify inventing that person's decision or recording it as zero.

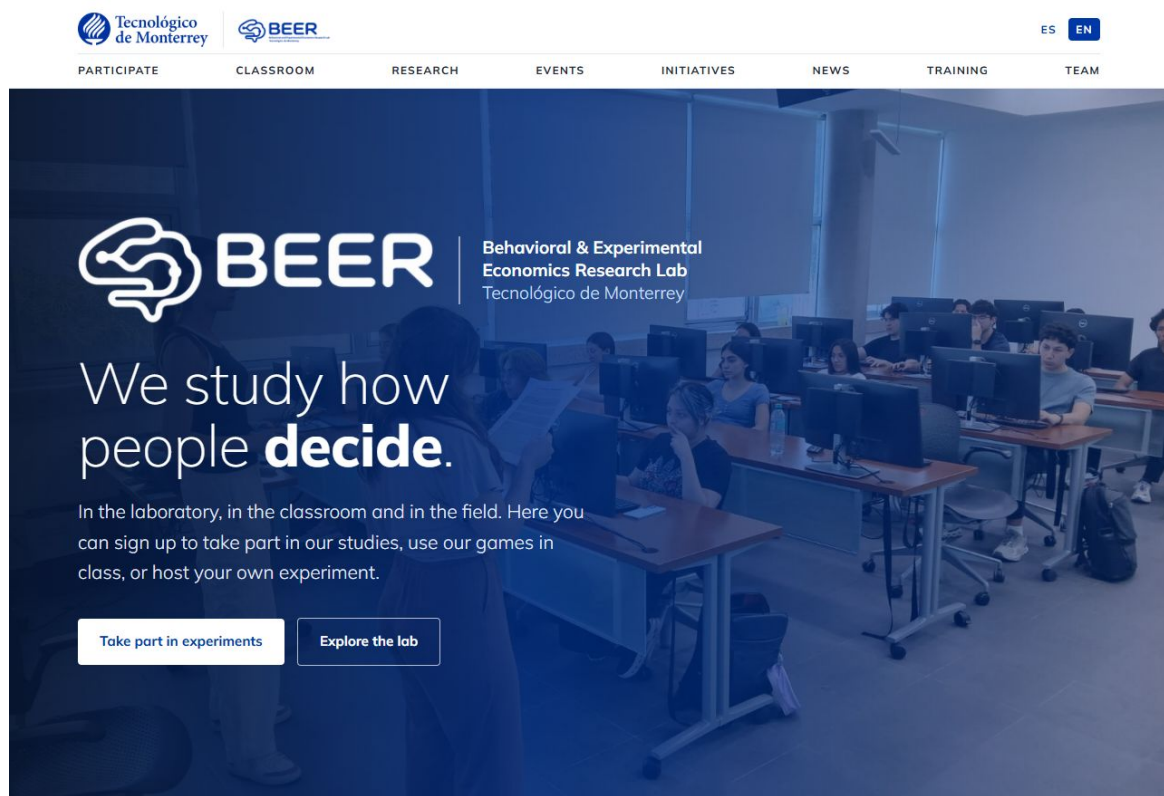


Figure 2.1: Institutional website: CLASSROOM opens the teaching catalogue.

The screenshot displays the BEER Lab website interface. At the top, there are logos for 'Tecnológico de Monterrey' and 'BEER'. A navigation bar includes links for PARTICIPATE, CLASSROOM, RESEARCH, EVENTS, INITIATIVES, NEWS, TRAINING, and TEAM. The 'CLASSROOM' link is highlighted.

The main banner features the text 'INSTRUCTORS AND STUDENTS' and 'Classroom experiments'. Below this, it states: 'Experimental economics games for classroom activities and discussion. Open the game your instructor tells you.' It also provides instructions for instructors and a link to the lab research page.

Below the banner is a search bar with the placeholder text 'Search by title, topic, keyword or JEL code...'. To the right of the search bar, it indicates '169 games'.

The search results are displayed in two columns. The left column shows the title 'Electoral Accountability and Political Selection' with a description of the game, tags for 'electoral discipline', 'political accountability', 'political selection', 'corruption', 'information', and 'political economy', and JEL codes 'A22 · C92 · D72 · D73'. The right column shows the title 'Aggregate Demand and Aggregate Supply' with a description, tags for 'aggregate demand', 'aggregate supply', 'price level', 'potential output', and 'macroeconomic expectations', and JEL codes 'A22 · C92 · E12 · E31 · E32'.

Figure 2.2: Catalogue: select the multi-shareholder control mechanism.

oTree
Demo
Sessions
Rooms
Data
Server Check
Logout

Demo

Control corporativo: Un mercado
Control corporativo: Diez mercados: grupo fijo
Control corporativo: Diez mercados: reasignación
Control corporativo — Extendido: Oferta condicional
Control corporativo — Extendido: Compra sin condición de control
Control corporativo — Extendido: Una acción inicial del oferente
Control corporativo — Extendido: Dos acciones iniciales del oferente
Control corporativo — Extendido: Propiedad concentrada
Control corporativo — Extendido: Dos oferentes
Control corporativo — Extendido: Segunda oferta tras rechazo
Control corporativo — Extendido: Compra limitada al umbral
Control corporativo — Extendido: Compra total al mismo precio
Control corporativo — Extendido: Dos precios de adquisición
Control corporativo — Extendido: Umbral de diez acciones
Control corporativo — Extendido: Costo de oferta elevado
Control corporativo — Extendido: Información del oferente
Control corporativo — Extendido: Información pública del valor
Corporate control: One market
Corporate control: Ten markets: fixed group
Corporate control: Ten markets: reassignment
Corporate control — Extended: Conditional offer
Corporate control — Extended: Unconditional purchases
Corporate control — Extended: One-share toehold
Corporate control — Extended: Two-share toehold
Corporate control — Extended: Concentrated ownership
Corporate control — Extended: Two bidders
Corporate control — Extended: Second offer after rejection
Corporate control — Extended: Purchase limited to control threshold
Corporate control — Extended: Full buyout at the same price
Corporate control — Extended: Two-tier acquisition prices
Corporate control — Extended: Ten-share control threshold
Corporate control — Extended: Higher offer cost
Corporate control — Extended: Bidder information
Corporate control — Extended: Public value information

Adquisiciones y control corporativo / Acquisitions and Corporate Control — BEER Lab

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

Figure 2.3: Family Demo with 34 configurations; choose language and mode.

Rooms

Current rooms:

Control corporativo — Español
Corporate control — English
Control corporativo — Extendido
Corporate control — Extended

Figure 2.4: Four rooms separated by language and edition.

oTree
Demo
Sessions
Rooms
Data
Server Check
Logout

Room: Corporate control — English

Create a new session

Session Config

Corporate control: One market

Number of participants

Complete groups of 5 participants. Use a multiple of 5; minimum 5.

Create

[Configure session](#) ⚙️

App sequence

corporate_control_game (10 rounds) Finite-shareholder tender offers, ownership and corporate control.

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://127.0.0.1:8109/room/corporate_control_en

Figure 2.5: The basic room form starts in the correct language and edition.



Welcome to the BEER Lab

The Behavioral and Experimental Economics Research Lab in the Economics Department at Tecnológico de Monterrey is a space for learning through decisions under announced rules.

General laboratory rules

Remain silent and decide privately and independently. Do not communicate with others. Use only your link and keep the page open while waiting; do not refresh or close it. Raise your hand or contact the instructor privately if a problem occurs.

I confirm that I read and will follow the rules.

☐ Yes

☐ No

Start

Figure 2.6: Institutional welcome and rules before decisions.

There are 1 bidder(s) and four shareholders. Each bidder receives 2500 personal ECU; each shareholder receives 100 ECU and the shares in the table. Exactly twelve shares exist. Resources renew in every market. ECU stands for Experimental Currency Units.

Initial ownership of the twelve shares

Role	Initial cash	Initial shares
Bidder A	2500 ECU	0
Shareholder A	100 ECU	3
Shareholder B	100 ECU	3
Shareholder C	100 ECU	3
Shareholder D	100 ECU	3

Figure 2.7: Check initial cash and ownership by role.

Market 1 / 1 · Bidder A

Comprehension check

Second offer after rejection

Resources and unit of account

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

This session does not convert ECU into real money.

How many personal ECU does each bidder receive at the start of a market?

Your answer: 100. The correct answer is 2500. Each bidder receives 2500 personal ECU at the start, in addition to any announced initial shares.

How many shares are needed for control in this condition?

If only three shares are tendered to a positive offer and control is not reached, how many shares are purchased under this condition?

[Continue](#)

Figure 2.8: An incorrect answer receives feedback and retains the other fields.

Market 1 / 1 · Bidder A

Announce your price

Second offer after rejection

Available information

Value per share if control is obtained: 150 ECU.

The offer is conditional: shares are purchased only if that bidder reaches the threshold. Failure leaves ownership unchanged and the purchase price is not charged; the cost of announcing a positive offer is still paid.

Cash before this offer	Owned shares	Cost per positive offer
2500.00 ECU	0	10 ECU

Offer 1 · Previous price: —

Price per share (0–200 ECU; 0 withdraws the offer)

Continue

Figure 2.9: The bidder announces a price and sees resources and cost.

Market 1 / 1 · Shareholder A

Choose how many shares to tender

Second offer after rejection

Available information

Value per share if control is obtained: 150 ECU.

Bidder	Announced price
Bidder A	130.00 ECU

The offer is conditional: shares are purchased only if that bidder reaches the threshold. Failure leaves ownership unchanged and the purchase price is not charged; the cost of announcing a positive offer is still paid.

Personal cash
100.00 ECU

Owned shares
3

How many shares are needed for control in this condition?
7

Shares offered for sale (0–3)

Continue

Figure 2.10: The shareholder chooses a quantity with the contract rule visible.

Market 1 / 1 · Shareholder A

Wait for the other market participants

Second offer after rejection

This phase advances once the required decisions have been recorded. No extra submission is needed.

Figure 2.11: Waiting identifies the role and advances after required decisions are recorded.

Market 1 / 1 · Shareholder B

Market settlement

Second offer after rejection

Control obtained Yes	Final payment per share 150.00 ECU	Potential value under control 150.00 ECU	Personal cash 520.00 ECU
Owned shares 0	Shares transferred 3	Sale receipts 420.00 ECU	Offer costs paid 0.00 ECU
Final personal wealth 520.00 ECU	Change from initial endowment 120.00 ECU		

Final wealth = remaining personal cash + retained or acquired shares × terminal value per share. Session payment is mean wealth across your active markets, credited once. Costs consume resources; purchase prices are transfers between people.

[Continue](#)

Figure 2.12: Settlement separates cash, ownership, sale receipts and wealth.



Activity completed

You completed every active market. The following mean was credited once; sale proceeds, cash and shares are not added again. Wait for the instructor's directions.

Final mean credited: 2600.00 ECU

Figure 2.13: Completion confirms the mean credited once.

Institutions and information

3.1 Choosing a comparison and reading evidence

The conditions share twelve shares and the same cash and ownership ledger. Interpret each change as a particular rule. Conditionality defines what happens after failure; an initial stake changes how many shares the bidder must buy; a full-buyout provision changes the destination of shares not voluntarily tendered. These differences support predictions before play. They also expose comparisons that change more than one dimension, such as adding a second buyer or another opportunity to make an offer.

Published research supplies reference points rather than guaranteed classroom outcomes. [Kale and Noe \(1997\)](#) compare conditional and unconditional offers and show that the fit of finite-owner predictions depends on design and group size. [Dodonova and Khoroshilov \(2021\)](#) find effects of toeholds on bids in their auction experiment, with departures from theoretical predictions. Their institutions differ from this activity. Distinguish the published evidence, the classroom adaptation and the observations generated by the current session.

Record a directional prediction together with its assumption. For instance, an initial stake can support a profitable bid even if newly acquired shares produce no margin, provided the improvement on the initial stake covers the cost. The game's accounts resolve that claim. Predicting that students will always bid more would additionally require assumptions about expected tenders and an empirical test. The report helps describe behavior; it does not supply those missing assumptions.

3.2 Purchase contracts and control thresholds

Reference conditional offer

The bidder announces a price and buys all tendered shares only when the control threshold is reached, including any initial stake in the applicable condition. The reference has zero initial shares, four owners with three shares each and a control value of 150. Failure cancels share and purchase-price transfers while the positive-announcement cost is consumed. The rule separates the risk of failing to obtain control from the distribution of surplus after success.

Observe the success rate and quantity distribution alongside price. A high announcement that nobody receives is not a large transfer. A successful price below 150 does not alone contradict free riding: finite owners may be pivotal. During the debrief, withdraw each seller's tender while holding the others fixed. The report's definition answers this question using observed decisions without assigning unobserved motives.

Unconditional purchases

The bidder purchases tenders even without seven shares. With three shares at 130, the buyer pays 390 plus the cost of 10 and owns three shares still worth 100. Final wealth is $2500 - 390 - 10 + 300 = 2400$. The selling shareholder receives 390 for claims with a reference value of 300. The buyer has acquired a noncontrolling position and lost 100, while joint wealth falls only by the cost of 10.

The accounting prediction is unambiguous: control failure and absence of exchange no longer coincide. A behavioral prediction must consider the shareholder's ability to sell even without improvement. [Kale and Noe \(1997\)](#) motivate studying contractual design while their experimental institutions and group sizes remain distinct. Read control success together with transferred shares and identify purchases without control in the experiment. Ask which party bears the risk of buying an insufficient stake.

Purchase limited to necessary shares

The partial-purchase condition keeps a conditional contract but buys only seven shares when sufficient quantities are tendered. Excess supply is rationed proportionally, allocating integer quantities first and then the largest remainders with random tie breaking. A tender is binding subject to that rule. A tendered share not purchased stays with its owner and receives the improved payoff if control succeeds.

If all four owners tender three at 130, seven shares rather than twelve are bought. Three owners sell two and one sells one, with ties reproducible within the market. The buyer saves purchase expenditure relative to accepting all tenders. Owners face both the probability of success and the possibility that some tendered shares remain theirs. Observe declared and transferred quantities separately. Ask whether twelve tendered shares imply twelve purchases, and whether the rationing rule changes the control threshold. This is an institutional classroom comparison rather than a literal regulated partial offer.

Full buyout at one price

Once voluntary tenders reach the threshold, the bidder also purchases every remaining share at the announced price. A person who chose to hold no longer remains an owner after control. The rule is public before decisions and activates only when voluntary tenders supply sufficient support. Failure means no purchases. The activity uses a stylized drag-along rule and does not describe the corporate law of a particular jurisdiction.

With seven shares tendered at 130, all twelve are bought for 1560. The bidder ends with $2500 - 1560 - 10 + 1800 = 2730$. Each shareholder receives 390 for three shares, regardless of the quantity tendered, and ends with 490. Joint wealth remains 4690. The rule changes distribution rather than the size of the improvement. In the market record distinguish voluntary and compulsory transfers. Ask which benefit a holdout expected and how the buyout provision changes that outside alternative.

Two-tier acquisition prices

The two-tier rule purchases voluntarily tendered shares at the announcement price and, after control is achieved, buys all remaining shares at 110 ECU each. Both purchases belong to one settlement. Threshold failure cancels them. Different prices can alter the comparison faced by a shareholder who expects other owners to enable success. At an announced 130, a tendered share receives more than a retained share subsequently purchased at 110.

With seven shares tendered at 130 and five bought at 110, expenditure is $7(130) + 5(110) = 1460$. The buyer ends with 2830 and joint gains remain 590. The announcement of 130 describes the front end rather than the average price of twelve transfers. [Comment and Jarrell \(1987\)](#) analyze two-tier and other tender structures in acquisition data; their empirical findings do not establish universal shareholder harm from every such offer. Reconstruct who received each price and ask what changes when the second-tier price is known before decisions.

Ten-share threshold

The higher threshold requires ten of twelve shares. The control value remains 150, the cost remains 10 and the contract remains conditional. A profile supplying nine shares would succeed with a threshold of seven but fails here; ten can succeed. The change represents an institutional requirement for support rather than a change in productivity or price. A bare majority does not activate improvement when the announced rule requires more.

First predict the mechanical effect while holding tenders fixed, then ask how participants might respond. A stricter threshold can make more contributions potentially important while also making coordination harder. It produces no unique behavioral conclusion without additional assumptions. Compare success with completed-market denominators and use exported profiles to recalculate outcomes under both thresholds. This counterfactual separates a rule's direct effect from the changes in decisions it may induce.

3.3 Initial stakes and ownership concentration

One-share toehold

The bidder is endowed with one share; the four owners hold two, three, three and three. Total ownership remains twelve. The initial share counts toward control, so six purchases now reach seven. It also receives the improvement if control succeeds. No preliminary acquisition price is charged: the share is an endowment and enters the bidder's reference wealth at the initial value.

With t initial shares, q acquired at price p , improvement from 100 to V and cost F , a successful bidder's gain is

$$\Delta W_B = t(V - 100) + q(V - p) - F.$$

The first term can finance costs even when the margin on new purchases is zero. With one initial share, a price and control value of 150 produce an initial gain of 50; after the cost of 10 the bidder gains 40. Observe gains relative to endowment and quantities purchased. A raw wealth comparison with a bidder initially holding nothing would be misleading. Ask which component of gain arises from claims already owned before the offer.

Two-share toehold

With two initial bidder shares, shareholders hold two, two, three and three, so every owner retains an active role. Five purchases reach control. The improvement of the initial stake is 100 when value rises from 100 to 150. At a purchase price of 150 and cost of 10, bidder gain is 90 if control succeeds. Failure leaves initial shares paying 100 and consumes only the cost of the positive offer.

A larger toehold does not make every price profitable. With two initial shares, ten acquired at 160 and a terminal value of 150, the initial gain of 100 is offset by a loss of 100 on purchases before the cost of 10. The example prevents turning the toehold intuition into a mechanical recommendation to bid aggressively. [Dodonova and Khoroshilov \(2021\)](#) motivate observing bids, but their auction

institution differs from this contract with active shareholders. Compare prices, success and net gains, and identify the assumptions under which an initial stake helps.

Large shareholder

Ownership becomes six, two, two and two, while the bidder still starts without shares. Without the owner of six, other owners can supply only six shares, insufficient for control. That owner is potentially essential. The person is not required to sell the entire block: if others offered six, one additional share could enable success while the blockholder retained five shares at the improved payoff.

Concentration reduces the number of owners whose cooperation may be required and changes how much each can contribute. It does not automatically give the large owner the price-setting role; the form still assigns that choice to the bidder. Observe the block's tender and the pivotal indicator when control succeeds. A failed offer with the block retained creates no observed pivotal contribution to success under the report's definition, although it supports a separate discussion of potential influence. Ask what changes if the same block is divided among several people without altering total ownership.

3.4 Competition, repeated opportunities and costs

Two bidders

Competition uses six people: two buyers and four owners with three shares each. Buyers announce simultaneously and each shareholder directs the whole tender to one buyer. Twelve shares prevent two buyers from simultaneously reaching a threshold of seven. Only an offer reaching control executes purchases. Shares tendered to the other buyer remain with their owners and also receive the improvement when one bidder succeeds.

The higher price does not win automatically. If three owners each tender three to a bidder offering 130 while the fourth tenders three to one offering 140, the lower bidder reaches nine and the higher bidder only three. This distinguishes shareholder coordination from an auction for one indivisible object. Each positive offer incurs its cost, including a losing one. With two announcements, successful joint gains are 580: improvement of 600 less two costs of 10. Compare gains rather than gross wealth sums for groups of five and six. The result's control card describes the market; a losing bidder may therefore see successful control alongside zero acquired shares and a loss of 10. Ask why a higher price alone cannot secure control.

A second offer following failure

The first offer is conditional. Failure leaves ownership unchanged while the announcement cost is consumed. The price and aggregate tender are revealed; the buyer may then withdraw or make a second positive offer at least as high as the first. Shareholders decide again. First-offer success skips the second. Revision is an extra opportunity within one market with a single final settlement, not a second independently paid acquisition.

Two positive announcements mechanically incur a total cost of 20. With final success and value 150, joint gains are 580. Responses in price and quantity may combine learning, coordination attempts and the rule prohibiting a positive price decrease. Do not attribute every change to one cause. The histogram counts two decisions per shareholder when both stages occur; market success

still counts one observation. Ask what information the first attempt supplied and whether an already paid cost changes the economic value of the next purchase.

Higher announcement cost

The positive-offer cost rises from 10 to 100 ECU with other reference rules unchanged. The permitted price range and twelve shares remain affordable within the bidder's budget. Buying seven shares at 130 now yields bidder gain of 40 instead of 130. Successful joint gains are 500 instead of 590. A zero announcement avoids the cost and all purchases.

The cost changes entry profitability without transferring the amount to another participant. It may affect willingness to bid, offered price and exposure to failure. Treat this condition as a transparent cost sensitivity exercise rather than an estimate of professional fees. Observe withdrawn offers, positive prices and net gains separately: the mean price excludes zeros and can rise while fewer bidders announce. Ask what is lost when analysis is restricted to positive announcements and how an entry margin could change the composition of that sample.

3.5 Private information and public disclosure

Bidder information

Potential value under control is 130 or 170 with equal probabilities. Bidders know the realization; shareholders know the distribution. Without control, shares still pay 100. A price may convey information, but no rule forces it to reveal the state. An announcement of 140 could reflect high value, an effort to coordinate or another expectation about tenders. The activity does not elicit beliefs and its report cannot measure them.

The condition asks how asymmetric information interacts with collective responses. Separate potential value from the realized terminal payoff: failure pays 100 even when the possible improvement was large. The instructor record reveals the state at settlement and supports descriptions by potential value. [Hirshleifer and Titman \(1990\)](#) provide a theoretical reference for informed bids and tendering; the current finite classroom mechanism is an adaptation. Ask what assumptions support comparing bids across states and what additional elicitation would be needed to identify expectations rather than observed choices alone.

Public value information

Value is still drawn as 130 or 170, but the realization is announced to everyone before bidding. Uncertainty across markets remains while the within-market information difference disappears. Compare this condition with private information by realized value and with enough independent groups. Two small sessions can have different value compositions by chance; their price difference should not automatically be attributed to disclosure.

The reference comparison becomes easier for an owner to reconstruct: the payoff from retaining shares if others create control is known, as is the payment from selling. Other owners' quantities remain uncertain even with public values. Removing asymmetric information does not remove coordination. Combine success, prices and gains in the report and retain both the potential state and information rule in exported analysis. To close the comparison, ask for one failure explanation compatible with perfect value information and another requiring private information. This forces students to name the uncertainty disclosure actually removed.

There are 1 bidder(s) and four shareholders. Each bidder receives 2500 personal ECU; each shareholder receives 100 ECU and the shares in the table. Exactly twelve shares exist. Resources renew in every market. ECU stands for Experimental Currency Units.

Initial ownership of the twelve shares

Role	Initial cash	Initial shares
Bidder A	2500 ECU	0
Shareholder A	100 ECU	6
Shareholder B	100 ECU	2
Shareholder C	100 ECU	2
Shareholder D	100 ECU	2

Figure 3.1: Concentration changes announced ownership without creating shares.

Available information

The value per share under control is 130 or 170 ECU with equal probabilities. Bidders know it; you do not observe it before deciding. It is revealed at settlement.

Figure 3.2: A shareholder sees the value distribution and information restriction.

Market 1 / 1 · Bidder B

Announce your price

Two bidders

Available information

Value per share if control is obtained: 150 ECU.

The offer is conditional: shares are purchased only if that bidder reaches the threshold. Failure leaves ownership unchanged and the purchase price is not charged; the cost of announcing a positive offer is still paid.

Cash before this offer	Owned shares	Cost per positive offer
2500.00 ECU	0	10 ECU

Offer 1 · Previous price: —

Price per share (0–200 ECU; 0 withdraws the offer)

Continue

Figure 3.3: The second bidder makes a real choice with a separate budget.

Market 1 / 1 · Shareholder A

Choose how many shares to tender

Two bidders

Available information

Value per share if control is obtained: 150 ECU.

Bidder	Announced price
Bidder A	130.00 ECU
Bidder B	140.00 ECU

The offer is conditional: shares are purchased only if that bidder reaches the threshold. Failure leaves ownership unchanged and the purchase price is not charged; the cost of announcing a positive offer is still paid.

Personal cash

100.00 ECU

Owned shares

3

How many shares are needed for control in this condition?

7

Shares offered for sale (0–3)

Bidder receiving your tender

Bidder A ▼

Continue

Figure 3.4: With two bidders, choose a quantity and one destination.

Market 1 / 1 · Bidder A

The first offer did not obtain control

Second offer after rejection

Shares were not transferred. The positive-offer cost was paid. The bidder can announce a second offer; earlier decisions do not require a later sale.

Bidder	Announced price	Shares tendered
Bidder A	130.00 ECU	4

Continue

Figure 3.5: Initial failure reveals aggregate tenders before a revised offer.

Market 1 / 1 · Bidder A

Announce your price

Second offer after rejection

Available information

Value per share if control is obtained: 150 ECU.

The offer is conditional: shares are purchased only if that bidder reaches the threshold. Failure leaves ownership unchanged and the purchase price is not charged; the cost of announcing a positive offer is still paid.

Cash before this offer

2490.00 ECU

Owned shares

0

Cost per positive offer

10 ECU

Offer 2 · Previous price: 130.00

Price per share (0–200 ECU; 0 withdraws the offer)

140

Continue

Figure 3.6: The second offer recognizes the paid cost and previous price.

Reports, discussion and working with data

4.1 Controlled disclosure and observation units

The report belongs to the instructor. On entry it shows progress and offers downloads while aggregates remain hidden until Reveal is pressed. They can subsequently be hidden again. Project results after decisions are complete and predictions have been recorded. Individual participant links do not provide administrative access. Privacy during decision making and later disclosure of aggregates serve different purposes: one protects the procedure, while the other supports collective discussion.

The header distinguishes participants, settled accounts, pending active accounts and completed markets. Five people across ten markets create fifty person-market accounts, although there are still only five individuals. A one-interaction condition has one active round and additional inactive technical rounds in the file. Those rows preserve the export structure; they are not missing students. The report explicitly aggregates the selected session's active markets even if an administrator opens it from the final technical period.

Name the observation unit before interpreting a number. An offer is a buyer's announcement. A shareholder decision is a quantity and, where relevant, a destination in a particular offer. A market can contain one or two successive announcements and ends with one control outcome. A settled account records one person's wealth in that market. Different sample sizes reflect these different units. They are neither an arithmetic error nor a reason to treat correlated decisions as independent groups.

The report does not pool unrelated sessions. For an institutional comparison, prepare matched summaries from the relevant sessions and retain their labels. Combining their individual files without a session identifier would make it impossible to separate groups, languages or information conditions. A classroom projector should show anonymous aggregates, while the underlying file retains technical identifiers needed for reconstruction. Explain to students that anonymity in the discussion is compatible with a consistent record of the experiment.

4.2 What the indicators and graphs mean

Mean price adds positive announcements and divides by their count. It excludes zero prices because those withdraw the offer. It can include announcements recorded before all shareholders respond, so a price may appear while completed markets remain zero. Both positive announcements count under successive offers. A price of 130 followed by 140 gives a mean announcement of 135. This is

not the effective price paid for purchased shares and does not assign a price to an announcement that never occurred.

The control rate divides completed markets with a controller by all completed markets. Initial failure followed by final success counts as one successful market. Transfers are added within each market and then averaged over completed markets. Failed conditional offers contribute zero transfers; unconditional purchases without control can contribute a positive quantity. Total costs add the positive announcements actually made, including losing bids and earlier attempts, and are averaged over completed markets.

Bidder and shareholder gains are measured relative to initial endowments, valuing initial shares at 100. Each role mean uses its settled accounts and displays the denominator. Competition has two buyer accounts per market. Gains support comparisons across different starting assets; raw wealth can rise merely because the bidder was endowed with shares. Reported surplus first adds everyone's gains within a market and then averages markets. With success and a value of 150, it must equal 600 less the costs actually consumed.

The pivotal-shareholder indicator uses decisions in offers that achieved control. Its numerator counts shareholders whose entire tender, withdrawn from the observed profile, would have prevented the threshold. Its denominator includes the four shareholders in each successful offer, including an owner tendering zero. The reference profile of three, two, two and zero has three pivotal decisions among four. Without a successful offer, the indicator is unavailable rather than zero percent. Zero with a positive denominator and absence of a denominator have different interpretations.

The histogram displays shares tendered per recorded decision in categories zero, one, two, three and four to six. Its sample size appears beside the graph. It includes submitted decisions even when another response remains pending. Successive offers may therefore produce eight decisions from four shareholders while control uses one market and pivotality uses four decisions from the successful offer. Displayed observation counts make these denominators recoverable without mixing stages. A large shareholder can enter the four-to-six category; that does not imply every shareholder could tender six.

Market evolution shows completed-market counts, mean positive announcements, the control rate and aggregate wealth change. The matching mode is identified in the header. Read prices alongside success: rising prices with failure do not imply larger payments to sellers. In repeated play, examine coordination in quantities and adaptation in announcements. Avoid automatically labelling a trend as reputation. Identities are not displayed and expectations about counterparties are not elicited.

Feedback script

“First identify what each number counts: announcements, shareholder decisions or markets. Reconstruct ownership and cash. Then withdraw one seller's entire quantity while keeping other decisions fixed. Would control still occur? Finally explain why the person might have expected a different outcome before others' choices were known. The record calculates consequences; claims about expectations require additional information.”

4.3 A 75-minute lesson

Use the first ten minutes for access, link assignment and a motivating question: can a purchase that makes a company more valuable fail? Request a brief prediction before introducing the term free riding. Use the next ten minutes for resources, ownership, the contract and comprehension. Read the distinction between announcement cost and purchase price. Confirm that students do not mistake the twelve existing shares for shares the bidder can create during the activity.

Reserve fifteen minutes for decisions and completion. Reference shareholders respond after the announcement; competing offers require both prices; successive offers may add review and another response. During waiting, answer procedural questions only. A private explanation should be consistent with what anyone could ask about a rule. Avoid commenting on whether a tender seems sufficient or a price seems attractive: that would change the information and incentives of the participant receiving assistance.

Spend fifteen minutes reconstructing a completed market. Write initial ownership, price, submitted quantities and threshold on the board. Calculate transfers and terminal share value before showing gains. Compare the reconstruction with the report. A failed market is equally useful because it distinguishes purchase cancellation from payment of announcement costs. Showing only success would omit the contract feature that makes a conditional offer economically relevant.

Use another fifteen minutes for an institutional comparison or counterfactual. Hold choices fixed and change the threshold, partial-purchase rule or full-buyout provision. Then discuss why the same choices might not be submitted under that alternative rule. If independent groups played different conditions, compare observations with predictions and identify differences in values or group composition. Do not turn an accounting simulation into a causal estimate of a behavioral response.

Close with ten minutes of individual writing. Ask for one economic explanation of the result, an alternative explanation and an observation that could distinguish them. A short rubric can assess correct accounting, an identified mechanism and a recognized limit to inference. Students do not have to predict the realized direction of classroom noise to demonstrate understanding. Retain initial predictions to discuss which assumption was useful and which part of the explanation needs revision.

For a longer lesson, repeated modes can precede this final discussion. Do not explain the mechanism anew between every market or announce a preferred outcome. Keep resources, matching rules and disclosure timing consistent. A concise log of pauses and procedural interventions is more useful for interpretation than attempts to repair an inconvenient behavioral result. If time becomes short, close the active market and use a worked counterfactual rather than beginning a comparison that cannot reach settlement.

4.4 Exercises with answer guidance

Failure with and without purchases

An offer of 130 costs 10 and receives three shares from one owner. With a conditional contract and threshold seven, no share is purchased: the bidder ends with 2490 and the owner retains wealth of 400. Under unconditional purchases, the bidder pays 390, holds three claims paying 100 and ends with 2400. The seller ends with 490. Other accounts do not change. Both contracts reduce joint wealth by 10, but transfers and loss distribution differ. An answer creating the improvement with only three shares confuses a purchase with control.

Initial ownership and a break-even price

A buyer owns two initial shares and anticipates buying five to reach seven. Control value is 150 and cost is 10. Bidder gain is $2(50) + 5(150 - p) - 10$. Setting it equal to zero gives $p = 168$. This accounting break-even price assumes five purchases and successful control. Buying ten at that same price changes the calculation. The number also does not prove shareholders would supply enough at 168 or that it is an equilibrium strategy. Require students to state the assumed quantity

and success before interpreting the price.

A block and its minimum contribution

One owner holds six shares and the other three hold two each. If every small owner tenders two, one share from the block reaches seven. At 130, selling one and retaining five gives the blockholder $100 + 130 + 5(150) = 980$, relative to initial wealth of $100 + 6(100) = 700$. Selling all six instead gives $100 + 780 = 880$. This comparison fixes all other sales and assumes success in both profiles. It illustrates the value of retained improved claims and a minimum contribution, without assuming the blockholder actually knew the smaller owners' decisions beforehand.

Two attempts and one market

The initial price of 130 attracts one share from each owner and fails. A second price of 140 attracts all twelve shares and succeeds. The buyer pays two costs of 10 and purchase expenditure of 1680. Final wealth is $2500 - 20 - 1680 + 1800 = 2600$. Each shareholder ends with $100 + 3(140) = 520$. Joint gains are 580. The report counts two positive announcements, eight tender decisions and one successful market. Mean announced price is 135 while purchases occurred at 140. No shareholder is pivotal in the second profile: withdrawing three still leaves nine against a threshold of seven.

Full buyout and two tiers

Use tenders of three, two, two and zero at 130. With full purchase at one price, every shareholder ends with 490 and the bidder with 2730. With the second tier at 110, shareholder wealth is 490, 470, 470 and 430; bidder wealth is 2830. Total wealth remains 4690. The average price of every transferred share in the second case is $1460/12 \approx 121.67$, while the announcement remains 130. Explain why surplus did not change even though the owner who initially held everything received a different payment.

Potential value and information

Compare successful markets with potential values of 130 and 170, each with an offer cost of 10. Joint gains are $12(30) - 10 = 350$ and $12(70) - 10 = 830$. A difference in gains between information sessions could arise from their composition of states. Before attributing it to disclosure, compare markets with the same value or state a common weighting scheme. If a market fails, terminal value is 100 and its joint loss depends on costs even when potential value was 170. Separating productive opportunity from realized outcome is essential to interpretation.

A higher bid without control

Two bidders offer 130 and 140. Three shareholders direct three shares each to the first and the fourth directs three to the second. The first bidder acquires nine, pays 1170 and a cost of 10, and ends with $2500 - 1170 - 10 + 1350 = 2670$. The second acquires none and ends with 2490 after the announcement cost. Three selling owners gain 90 each and the remaining owner gains 150 by retaining three shares. Buyer gains of 170 and negative 10 plus shareholder gains of 420 add to 580. The higher bid failed because it did not attract the required quantity, not because the software selected the wrong auction winner.

4.5 Export, privacy and reproducible analysis

The instructor can download a native wide file, with one row per participant and rounds in columns, and a custom file containing person-round records plus market records. Both buttons belong to the selected session. The custom file retains ten technical rounds with active and completed indicators. Five participants therefore produce fifty person rows and ten market rows. The wide file has five data rows plus its header. An identifier repeated across rounds is not another person.

Person rows store role, condition, prices, quantities and destinations for the applicable stages, followed by cash, shares, wealth, gain and observed pivotality at settlement. Pending fields remain blank. Market records retain initial and final ownership, costs, the information state and each offer's resolution, allowing transfers to be reconstructed. First filter record type and activity. Adding person and market records together would duplicate outcomes represented at two different levels.

For descriptive analysis, build a market table with control, value, positive prices, transferred shares, costs and joint gains. Build a separate shareholder-decision table for quantities, destinations and pivotal contributions. For fixed versus reassigned comparisons, preserve session, market and group. Technical identifiers support joining records and checking consistency; they should not be projected to the class. Use anonymous aggregates in teaching materials and retain individual files under laboratory access rules.

4.6 Common problems and final checklist

A mean price without purchases can be correct: it describes positive announcements before responses or after failure. High control rates alongside bidder losses can also be correct when buyers overpay, incur costs or lose the acquisition to a competitor. A shareholder retains tendered shares when a conditional offer cancels or a partial purchase does not select the entire quantity. Consult the rule and ledger before treating these patterns as errors.

If a quantity is rejected, check owned shares and destination. With competition, positive quantities need a bidder with a positive price and cannot be split across both buyers. If the second price is rejected, check that it is not below the first unless zero withdraws the offer. For waiting, find the pending role in the monitor. Comprehension feedback retains other answers and permits correction; it is not a penalty or a deduction from wealth.

Checkpoint

Before class: teaching question, language, contract, complete group, distinct links and comprehension. Before revealing: checked accounts and recorded predictions. Before analysis: correct session, separated record types, active rounds, pending distinguished from zero, and explicit denominators. At completion: mean credited once and teaching files retained with appropriate access.

Instructor report: acquisitions and control

Second offer after rejection · One interaction

Participants: 5 · Settled accounts: 0 · Pending active accounts: 5 · Completed markets: 0

Pending does not mean zero. Prices exclude withdrawn offers. Success uses completed markets, gains use settled accounts, and quantities include every recorded decision in each offer. Pivotal means withdrawing that whole quantity would have prevented reaching the threshold, holding other decisions fixed; it does not identify beliefs.

Reveal aggregates

[Download this session by participant, round and offer](#) · [Download native participant data](#)

Figure 4.1: The instructor controls aggregate disclosure.

Instructor report: acquisitions and control

Second offer after rejection · One interaction

Participants: 5 · Settled accounts: 5 · Pending active accounts: 0 · Completed markets: 1

Pending does not mean zero. Prices exclude withdrawn offers. Success uses completed markets, gains use settled accounts, and quantities include every recorded decision in each offer. Pivotal means withdrawing that whole quantity would have prevented reaching the threshold, holding other decisions fixed; it does not identify beliefs.

Hide aggregates

[Download this session by participant, round and offer](#) · [Download native participant data](#)

Aggregates and observed denominators

Aggregates and observed denominators	Statistic value	Observations
Mean positive offer price / announcements	135.00	2
Control obtained / completed markets	100.0%	1
Shares transferred / completed markets	12.00	1
Total cost / completed markets	20.00	1
Mean bidder gain / bidder accounts	100.00	1
Mean shareholder gain / shareholder accounts	120.00	4
Total wealth change / completed markets	580.00	1
Pivotal shareholders / shareholder decisions in successful offers	0.0%	4

Distribution of shares tendered per decision

Observations: 8

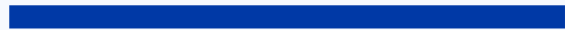
0: 0

1: 4



2: 0

3: 4



4-6: 0

Evolution by market

Market	Completed markets	Mean positive offer price / announcements	Control obtained	Total wealth change / completed markets
1	1	135.00	100.0%	580.00

Figure 4.2: Read each statistic with its denominator and observation unit.

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