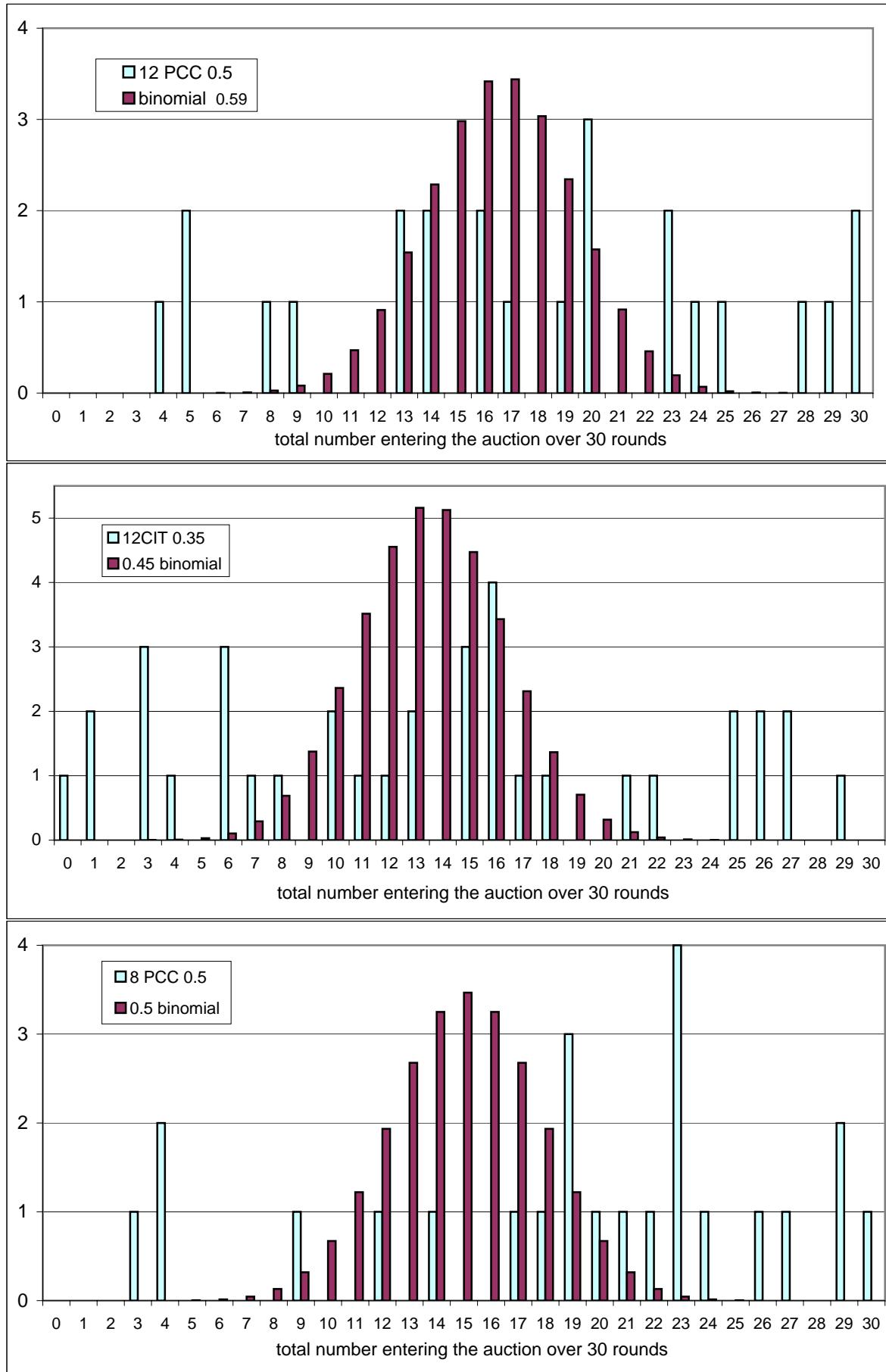


Appendix A. Number of Subjects Entering the Auction at a Given Frequency



Appendix B. Estimated bid-function slopes (OLS)

(Observations with bids exceeding value, zero bids and data for non-liner part of bidding functions are excluded)

Treatment	Number In	Slope	Std. Error	N obs	R ²
12 CIT q=0.5	2	0.680	0.047	15	0.94
	3	0.830	0.042	47	0.90
	4	0.870	0.022	102	0.94
	5	0.888	0.020	125	0.94
	6	0.949	0.048	18	0.96
12 CIT q=0.35	2	0.527	0.054	56	0.64
	3	0.714	0.025	107	0.87
	4	0.783	0.023	97	0.93
	5	0.805	0.074	27	0.82
	6	0.513	0.159	8	0.63
12 CIT q=0.5 game	2	0.664	0.038	44	0.88
	3	0.691	0.027	132	0.84
	4	0.756	0.032	120	0.83
	5	0.816	0.034	75	0.89
	6	0.946	0.121	18	0.79
12 PCC q=0.5	2	0.710	0.105	20	0.72
	3	0.833	0.038	72	0.87
	4	0.734	0.029	123	0.84
	5	0.820	0.048	51	0.86
	6	0.876	0.042	32	0.93
8 PCC q=0.5	2	0.635	0.049	64	0.73
	3	0.708	0.031	125	0.81
	4	0.693	0.043	77	0.78
Fixed-n	2	0.801	0.029	129	0.86
	3	0.866	0.018	160	0.94
	4	0.869	0.020	173	0.92
Cox, Smith, Walker	3	0.740	0.017	229	0.89
	4	0.906	0.009	1007	0.91
	5	0.949	0.015	232	0.95
	6	0.869	0.012	324	0.94

Appendix C. Pearson chi-square test of goodness of fit in discrete distributions.

Rows: Frequency of entering the auction.

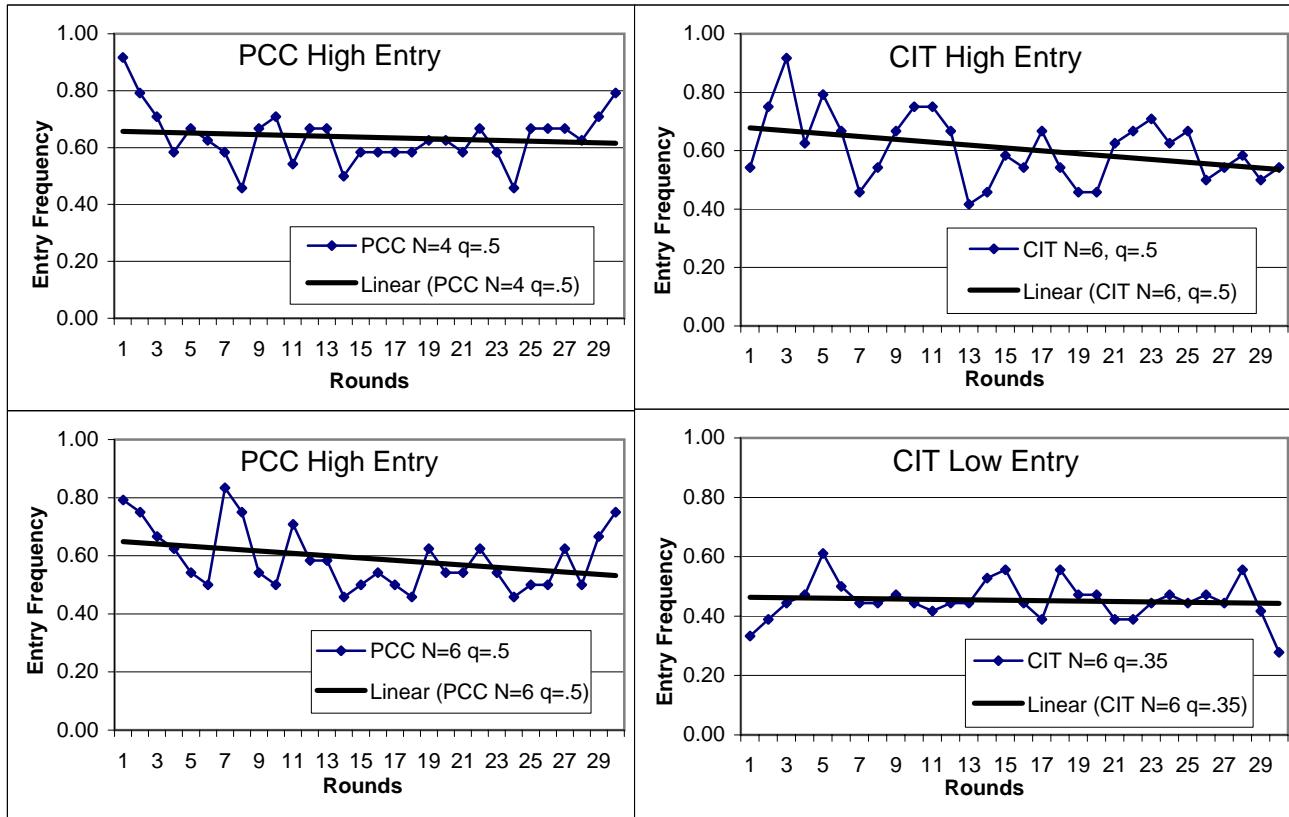
Columns: Confidence level for acceptance in each treatment

Result: the hypothesis of binomial distribution is rejected with 99% confidence level

24 subjects in each dataset

	q=0.59 (10-20) 12CIT .5	q=0.57 (10-20) 12PCC .5	q=0.59 (10-22) 8PCC .5	q=0.45 (8-20) 12CIT .35
Pearson criteria:	10.09	11.48	11.75	15.65
Confidence level for acceptance:				
Entry frequency	45%	35%	50%	25%
0	286320878.03	0.00	0.00	1709292.18
1	0.00	0.00	0.00	278547.64
2	0.00	0.00	0.00	0.00
3	0.00	0.00	1424104.79	6912.05
4	0.00	48782.26	586445.50	137.19
5	0.00	28305.35	0.00	0.03
6	0.00	0.00	0.00	80.47
7	0.02	0.00	0.00	1.71
8	0.05	71.99	0.01	0.14
9	23.30	20.87	43.53	1.38
10	0.35	0.12	0.07	0.06
11	0.72	0.29	0.17	1.80
12	0.06	0.62	0.92	2.77
13	1.99	0.67	0.79	1.93
14	0.03	0.02	0.10	5.13
15	0.50	2.58	2.12	0.49
16	3.47	0.45	2.85	0.09
17	1.53	1.78	1.68	0.74
18	1.01	3.35	1.80	0.10
19	0.41	1.16	0.01	0.71
20	0.02	0.45	0.92	0.32
21	18.31	1.29	0.31	6.20
22	1.77	0.70	0.00	22.18
23	31.60	8.73	23.85	0.01
24	25.01	6.15	2.88	0.00
25	97.68	23.26	0.07	7236.99
26	0.00	0.01	46.85	46016.53
27	0.00	0.00	227.04	379665.33
28	0.00	3545.04	0.00	0.00
29	0.00	38797.69	59869.59	19188923.45
30	31158217.59	3512388.81	312051.03	0.00

Appendix D. Entry Frequency over Time.



Entry Frequency = Number of Bidders / Number of Potential Bidders

Appendix E.

INSTRUCTIONS

Welcome to the Experiment. Please do not do anything with the computer equipment until you are instructed to. Please put all of your personal belongings away, so we can have your complete attention.

<WAIT FOR SUBJECTS TO PUT BELONGINGS AWAY>

This is an experiment in decision making, and you will be paid for your participation in cash, at the end of the experiment. Different subjects may earn different amounts.

The entire experiment will take place through computer terminals, and all interactions will take place through the computers. It is important that you not talk or in any way try to communicate with other subjects during the experiment. If you disobey the rules, we will have to ask you to leave the experiment.

We will start with a brief instruction period. During this instruction period, you will be given a complete description of the experiment and will be shown how to earn money and how to use the computers. If you have any questions during the instruction period, raise your hand and your question will be answered so everyone can hear. If any difficulties arise after the experiment has begun, raise your hand, and an experimenter will come and assist you.

We will now pass out the experiment record sheets, on which you will record all of the results from the experiment. When you receive a record sheet, please write your name and social security number on top of the sheet. Raise your hand if you need a pencil.

<EXPERIMENTER PASS OUT EXPERIMENT RECORD SHEETS AND PENCILS>

<WAIT FOR SUBJECTS TO RECORD INFORMATION>

The experiment will consist of a series of auctions that take place over ____ rounds. There are ____ participants today and in every round all subjects will be randomly divided into ____ groups of ____ person each. A separate auction will be held for each group in each round. A single object is offered in each of these auctions. In each round, before the auction begins, each of you will have the choice to participate in the bidding in your group's auction or not. If you choose not to participate in the auction, which we call the "OUT" option, you will receive a fixed payoff of ____ francs for that round. For this experiment, each franc is worth exactly one cent, so this is equivalent to a payoff of ____ cents. If you choose to participate in the auction, which we call the "IN" option, you will place a bid for the object. In each auction the object will be awarded to the highest bidder, with ties broken randomly.

To be more specific, if you choose to participate in your group's auction in a round, you will be randomly assigned a value for the object in that auction. Your value is the amount the object is worth to you. Your value will be determined by a random draw from ____ to ____ francs, with any value in between being equally likely. Therefore, different bidders will usually be assigned *different* values for the same object. You will be told your value before you make your bid, but you will not be told the value of the object to any other bidder in the auction. All you know is that each of their values is equally likely to be any number between ____ and ____ francs. You will be told at this time exactly how many members of your group have chosen to participate in the auction. This number will be between 0 and _____. If the number is 1 it means you are the only bidder, if the number is 2, there is one more bidder besides you and so on.

After each bidder finds out their own value, you will place your bid. The bid must be between ____ and ____ francs. The object goes to the highest bidder. After all bidders have entered a bid, everyone is told what the high bid was for their group's auction. In the event of a tie the computer program will randomly choose which high bidder wins the object. If you win the object, your earnings are determined by subtracting your bid from your value. If you do not win the object, you earn zero in this auction. Notice that if you bid above your value and win an auction, your earnings will be negative and will be subtracted from your total. In order to have positive earnings your bid should be less than your value.

<OVERHEAD: >

<Record Sheet Overhead>

In the record sheet provided, if you choose to enter the auction you will record information about your value, your bid and number of bidders (columns 3, 4, 5) as soon as it is given to you. If you choose not to enter the auction mark column 2 with an "X". In every round you need to record the number of bidders in the auction, the winning bid, your earnings in that round, and your cumulative earnings. You must do this even

when you did not participate in the auction. Be sure to record all this information before proceeding to the next round.

We will conduct auctions like this over a sequence of ____ rounds. At the beginning of each round, you will be randomly re-grouped by the computer, and you will not be told who is in your group in any round. If you choose the "IN" option in several different rounds, your assigned value will usually be different, since they are reassigned every time by the random procedure. Your cash earnings for the experiment will be determined by adding up the earnings for each round. In addition you will be paid a \$5.00 show up fee for coming to the experiment.

<BEGIN COMPUTER INSTRUCTION SESSION>

We will now begin the computer instruction session.

Please lower your chairs to the lowest position, and pull out the dividers as far as they will go. This ensures your privacy and the privacy of others in the experiment. During the computer instruction session, we will teach you how to use the computer by going through four practice rounds.

GET THEIR ATTENTION BEFORE READING THIS: Do not hit any keys until you are told to do so, and when you are told to enter information, please type exactly what you are told to type. You are not paid for these practice rounds.

Please click on the "Practice" icon to begin the computer program. We will now start the first practice round. For this practice round, we will have all subjects make the same choices. And we will tell you exactly what to do. In the real experiment you will all make your choices on your own.

Please enter your player number on the computer screen when prompted, and click OK. Your player number is written on the record sheet. Raise your hand if you need help getting started. Please wait for further instructions.

<WAIT FOR SUBJECTS TO ENTER NUMBER>

Please click once and wait. You now see the first experiment screen. You have a choice of entering the auction and participating in bidding (the "In" option) or not entering and getting specified payoff of ____ francs (the "Out" option). Will all subjects now select the "IN" option.

<WAIT FOR SUBJECTS TO CLICK ON THE APPROPRIATE OPTION>

After everyone has made a decision, you will see the screen that shows the number of bidders who have chosen to participate in your auction and your value for the object in francs. Please record this information in the first row labeled "Practice". Since everyone was told to choose the "IN" option in this case, the number of bidders should be _____. Does everyone see it? In the real experiment, it could be any number from ____ to ____ depending on how many members of your group in that round choose the "IN" option. There is a sliding scale below that allows you to choose a bid. Remember that your bid is subtracted from your value to determine your earnings if you win the auction. By moving it with the mouse right or left you can specify amount of the bid which is shown above the scale. You may change your bid one cent at a time by clicking on either the right or left arrows and the two ends of the scale. Please use the mouse to practice moving the scale left and right, and then choose a bid. Click to submit when you decide this is the bid you wish to make.

<WAIT FOR SUBJECTS TO SUBMIT CHOICE, CHECK THE BIDS >

You now see the screen with the outcome of the auction. It shows your value, the number of bidders, your bid, the maximum bid and whether you have won the auction. The lower part of the screen shows your profit for this auction and your cumulative earning. Your cumulative earnings include this round and all previous rounds. Please record this information on your experiment record sheet in the first row labeled "Practice". Note that you leave column 2 blank.

<WAIT FOR SUBJECTS TO RECORD OUTCOME>

You are not being paid for the practice session, but if this were real experiment, then the payoff would be money you have earned from this first round, in cents. We will now proceed to the second practice round. Please click the "Continue" button at this time.

<THE SECOND PRACTICE ROUND STARTS>

You have been randomly reassigned into new groups of ____ for this second practice round. Remember that you are regrouped after every single round. Will all subjects choose the "Out" option at this time.

<WAIT FOR SUBJECTS TO CLICK ON THE APPROPRIATEOPTION>

Since nobody chose the "IN" option, the auction is over immediately. You now see the screen that shows number of bidders in the auction (0) and the maximum bid (0). Your earnings for this round are ____

cents. Your cumulative earnings for the two practice rounds are also shown. Please record this information on your experiment record sheet in the second row labeled "PRACTICE".

<THE THIRD PRACTICE ROUND STARTS>

We will now proceed to the third practice round. Please click the "Continue" button at this time. Will all subjects with numbers 1-6 choose "In" and subjects with numbers 7-12 choose "Out". Please make your decision.

<WAIT FOR SUBJECTS TO CLICK ON THE APPROPRIATEOPTION>

If you have chosen the "In" option, record the number of bidders and your value and then go ahead and make your bid. If you have chosen the "Out" option, please wait for the end of the auction.

<WAIT FOR SUBJECTS TO SUBMIT CHOICE>

When the auction is over, record remaining information for this third round, but do not proceed to next round.

<WAIT FOR SUBJECTS TO RECORD OUTCOME>

In the next practice round you will be asked to choose the opposite option from what you have chosen in the third round. Please click "Continue" button at this time.

<THE FOURTH PRACTICE ROUND STARTS>

Subjects with numbers 1-6 please choose "Out" now. Subjects with numbers 7-12 please choose "In" now.

<WAIT FOR SUBJECTS TO CLICK ON THE APPROPRIATEOPTION>

Please record the number of bidders and your value and make your bid.

<WAIT FOR SUBJECTS TO SUBMIT CHOICE>

When the round is over please record the rest of information in the fourth row labeled "Practice".

<WAIT FOR SUBJECTS TO RECORD OUTCOME>

Please click the "Continue" button at this time. This concludes practice rounds. The computer screen now indicates your total payoff for the two practice rounds. You will not be paid for these practice rounds; this is the amount you would have earned for these rounds if they were rounds in the actual experiment.

Are there any questions?

<EXPERIMENTER TAKE QUESTIONS>

We will now pass out a short quiz that reviews the rules of this experiment. Please take a minute to fill the answers. Place the quiz face down on your monitor when you have finished.

<EXPERIMENTER PASS QUIZ,CLEAR SUBJECTS SCREEN, WAIT FOR SUBJECTS TO ANSWER>

<EXPERIMENTER GOES OVER THE QUIZ>

O.K., then we will now begin the actual experiment. If there are any problems from this point on, raise your hand and an experimenter will come and assist you in private. Is everyone ready?

Okay, we will now begin round number 1. Please click on the "Auction" icon to begin the program. Do not click on "Practice". Please enter your player number when prompted by the computer. Remember to record all the information in each round on your record sheet before continuing on to the next round.

<START EXPERIMENT >

The experiment is over. Please record your total earnings in the record sheet and wait. We will call you to be paid in the order of your subject number. Please do not use computers or talk with the other subjects while you are waiting. Thank you for your participation.