

# Endogenous Incentive Contracts and Efficient Coordination

DAVID J. COOPER

CHRISTOS A. IOANNOU

SHI QI

March, 2018

## Contents:

APPENDIX A: DETAILS OF THE SORT TREATMENT

APPENDIX B: EXPERIMENTAL INSTRUCTIONS

# APPENDIX A: Details of the Sort Treatment

## A.1 Tobit Model to Predict Drop Out Time

We use a Tobit regression model to fit the time of subjects choosing to push “Contract 1” button in the Auction treatment. Let  $TIME_{i,s}^*$  be the latent dependent variable corresponding to the time at which a subject  $i$  in session  $s$  would have pushed the “Contract 1” button if the auction clock never stops. Let  $X_{i,s}$  denote a vector of observable characteristics of a subject  $i$  in session  $s$ . The notation and variables used in  $X_{i,s}$  are summarized in Table 3 of the manuscript.

We allow  $TIME_{i,s}^*$  to be linearly dependent on  $X_{i,s}$  via a vector of parameters  $\psi$ . We assume the error terms are normally distributed, with  $F(\cdot)$  being the cumulative distribution function and  $f(\cdot)$  being the probability density function of a standard normal distribution with standard deviation  $\sigma$ .

We only observe  $TIME_{i,s}^*$  for those who actually chose Contract 1 in the experiment. Let  $CUTOFF_s$  denote the cutoff time at which the last subject in session  $s$  pressed the “Contract 1” Button. We define the observable dependent variable  $TIME_{i,s}$  for a subject  $i$  participating in session  $s$  to be:

$$TIME_{i,s} = \begin{cases} TIME_{i,s}^* & \text{if } TIME_{i,s}^* > CUTOFF_s \\ CUTOFF_s & \text{otherwise .} \end{cases}$$

We can also define an indicator function  $I(TIME_{i,s})$

$$I(TIME_{i,s}) = \begin{cases} 0 & \text{if } TIME_{i,s} = CUTOFF_s \\ 1 & \text{otherwise} \end{cases}$$

Then given the number of subjects in each session  $N_s$ , we can construct and estimate the likelihood function as:

$$L(\theta) = \prod_s \prod_{i=1}^{N_s} \left( \frac{1}{\sigma} f \left( \frac{TIME_{i,s} - X_{i,s}\psi}{\sigma} \right) \right)^{I(TIME_{i,s})} \left( 1 - F \left( \frac{X_{i,s}\psi - CUTOFF_s}{\sigma} \right) \right)^{1-I(TIME_{i,s})} .$$

Estimated values and standard errors of the parameters  $\psi$  are reported in Table 4 of the manuscript.

## A.2 Alternative Design to Identify Selection Effects

Dal Bo, Foster, and Putterman (2010) are interested in a different issue than us (the effect of democratic selection of institutions), but face a similar methodological problem. They want to separate the direct effect of democracy from a selection effect. Their solution to this problem is elegant - each group holds an election over what payoff table to use (prisoners dilemma or coordination game), but it is random whether the result of the election is implemented.

We considered a similar approach for our experiment. In this alternative design, all subjects participate in Block 1 and then in the auction as in the Auction treatment. We then flip a virtual coin. In half the sessions, the outcome of the auction is ignored and groups for Block 2 are formed randomly as in the Random Assignment. The base wage for Contract 2 is drawn from the auction. In the remaining sessions, we implement the outcome of the auction as in the Auction treatment. Subjects are told whether contract assignment was random or determined by the outcome of the auction (otherwise strategic anticipation cannot be identified). To determine the effect of selection, we compare Block 2 effort levels for groups formed via the auction to groups with randomly assigned members who would all have been assigned to the same contract by the auction. In other words, we compare groups assigned to Contract 2 (Contract 1) via the auction with groups where all of the members would have been assigned to Contract 2 (Contract 1) if the outcome of the auction had been implemented.

The alternative design has one major advantage. Rather than estimating to which contract the auction would have assigned a subject, we observe this directly. Our Sort treatment imperfectly replicates the selection mechanism in the Auction treatment, but this is not an issue using the alternative design. However, because our experimental setting differs along a number of dimensions from the setting of Dal Bo et al., adapting their method of group assignment to our experiment has a number of disadvantages. In descending order of importance, these are the following:

1. The relevant unit of observation in our experiment is a group of four subjects. In our Auction treatment, all groups contain four subjects that the auction assigned to the same contract. Given the nature of a weak link game, the composition of a group should matter in a non-linear fashion. To get clean identification of the selection effect, we need to compare groups in the auction treatment with groups in the random assignment treatment that contain four subjects who would have been assigned to the same contract in the auction. This implies that

only 1/16 of the data from the random assignment treatment can be used for comparisons. Without an unrealistically large sample, the experiment has little explanatory power.

To see this point, consider the following example. Suppose we have 320 groups (1280 subjects!). 160 groups have contracts assigned via the auction, 80 for each contract. The other 160 groups are assigned randomly, 80 per contract. The comparison of random assignment and endogenous assignment via the auction uses all of the groups and has no shortage of power. But to separate the selection effect from the effect of strategic anticipation, we can only use groups where all four members are randomly assigned to the same contract they would receive if the outcome of the auction is implemented. Of the 80 groups randomly assigned to Contract 1, 5 groups (on average) would have all four members be individuals that would have been assigned to Contract 1 by the auction. Of the 80 groups randomly assigned to Contract 2, 5 groups (on average) would have all four members be individuals that would have been assigned to Contract 2 by the auction. The tiny fraction of usable groups yields little power to separate the selection effect from the effect of strategic anticipation in any statistically meaningful way.

To understand why we have a problem when Dal Bo et al. do not, notice that in Dal Bo et al. a group of four subjects democratically assigned to one payoff table can contain 0, 1, or 2 subjects who voted for the other payoff table. In our experiment, subjects assigned to a group of four subjects by the auction either all dropped out and were assigned Contract 1 or all did not drop out and were assigned to Contract 2. The endogenously formed groups in Dal Bo et al. are heterogeneous in a way that our endogenously formed groups are not. This difference in designs creates a power problem in our experiment that does not exist in their experiment.

2. Unlike the election, participating in the auction is informative even if the outcome is not implemented. Observing the market price carries information about the expectations of others. Casting a vote gives you no information about others preferences or beliefs.<sup>1</sup>
3. The base wage in the auctions is determined endogenously. Even if we get groups randomly assigned to Contract 1 (Contract 2) where all of the members would have been assigned to

---

<sup>1</sup>We could eliminate this problem by using a sealed bid auction. This, however, creates a different and even more severe problem since overbidding is prevalent in sealed bid Vickrey auctions, but not the equivalent English auctions (Kagel and Levin, 1993).

Contract 1 (Contract 2) by the auction, it is unlikely that the base wages will match. This exacerbates the power problem described above.

As is often the case with experimental designs, there is no perfect solution and the experimenters must pick their poison. The Dal Bo et al. approach to correcting for selection has disadvantages within our experiment than did not exist in their environment. Given that our method tends to underestimate the effect of selection, making our main conclusion somewhat conservative, we felt the benefits of our approach outweighed the benefits of the Dal Bo et al. approach.

# APPENDIX B: Experimental Instructions

## B.1. Stage 1

The purpose of this experiment is to study how people make decisions in a particular situation. The experiment consists of **three** parts to be described at the appropriate time. Your earnings will depend upon the decisions you make, as well as the decisions that other people make. Your accumulated earnings in Experimental Currency Units (ECUs) will be converted into dollars at an exchange rate of 1,000 ECUs = \$1. For your participation in the experiment, you will receive an initial payment of 10,000 ECUs. At the end of the session, you will be paid in cash your total earnings. None of the other participants will be informed of your earnings, and likewise you will not be informed of the earnings of others. The instructions are simple, yet if you have a question, please raise your hand. Aside from these questions, any communication with other participants, or looking at other participants' screens is not permitted and will lead to your immediate exclusion from the experiment.

**B.1.1. Risk Aversion Test:** In this part of the study you are asked to choose one of the five options shown below. Regardless of which option you choose, there are two possible outcomes (Outcome A and Outcome B). These outcomes are equally likely for all five options - there is a 50% chance of Outcome A and a 50% chance of Outcome B, just like the flip of a coin. The options differ only in how much each outcome pays. The table below tells you how much you will be paid for each outcome. For example, if you choose Option 2, you will earn \$0.70 from Outcome A and \$1.75 from Outcome B. If you choose Option 4, you will earn \$0.30 from Outcome A and \$2.75 from Outcome B. The computer will randomly choose between Outcome A and Outcome B at the end of the experiment. You can imagine the computer flipping a virtual coin so that the chance of each outcome is equal. You will only find out your outcome from Part 1, and how much you will be paid for Part 1 at the end of the experiment. Please choose your option by clicking on a radio button.

Option	Outcome	Payoff	Probabilities
1	A	\$1.00	50%
	B	\$1.00	50%
2	A	\$0.70	50%
	B	\$1.75	50%
3	A	\$0.50	50%
	B	\$2.25	50%
4	A	\$0.30	50%
	B	\$2.75	50%
5	A	\$0.10	50%
	B	\$3.25	50%

**B.1.2. Questionnaire:** In this part of the study you will complete a questionnaire. The questionnaire asks you to answer some questions about yourself. You will always have the option to not answer a question if you don't wish to provide some information. Failure to provide information will NOT affect your ability to participate in the remainder of the experiment. Please note that your individual data will be kept strictly confidential.

1. What is your age? (Please leave this blank if you do not wish to share your age.)
  
2. What is your gender?
  - Male    Female    Prefer not to answer
  
3. What do you consider your racial background?
  - White    Black    Hispanic    Asian    Other    Prefer not to answer
  
4. What is your major? (Please leave this blank if you do not wish to share your major.)
  
5. Have you served in a leadership position for an organization?
  - Yes    No    Prefer not to answer
  
6. If yes, can you tell us the most important position you have held?

7. Have you ever had a job that required you to supervise others?

- Yes    No    Prefer not to answer

8. Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?

- Would take advantage of me    Would try to be fair    Prefer not to answer

9. Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?

- Try to be helpful    Just look out for themselves    Prefer not to answer

10. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?

- Most people can be trusted    Can't be too careful    Prefer not to answer

11. "Personal income should be determined by work."

- Disagree strongly    Disagree somewhat    Agree somewhat    Agree strongly  
 Prefer not to answer

12. "You can't count on strangers anymore."

- More or less agree    More or less disagree    Prefer not to answer

13. "I am trustworthy."

- Disagree strongly    Disagree somewhat    Disagree slightly  
 Agree slightly    Agree somewhat    Agree strongly    Prefer not to answer

Below we ask you some questions on your performance on some standardized examinations. If you did not take one of these tests, or do not remember your score, or do not wish to share your score, please leave the gap blank. You are free to not share your score. You may continue to participate in the experiment and your earnings will not be affected.

14. What was your SAT score in Mathematics?

15. What was your SAT Composite score in all three sections; that is, Critical Reading, Writing, and Mathematics?

16. What was your ACT score in Mathematics?

17. What was your ACT Composite score; that is, the whole number average of English, Mathematics, Reading, and Science Reasoning?

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than another.

Please use the following codes: 1. Disagree strongly; 2. Disagree moderately; 3. Disagree a little; 4. Neither agree or disagree; 5. Agree a little; 6. Agree moderately; 7. Agree strongly.

I see myself as:

- a. Extroverted, enthusiastic
- b. Critical, quarrelsome
- c. Dependable, self-disciplined
- d. Anxious, easily upset
- e. Open to new experiences, complex
- f. Reserved, quiet
- g. Sympathetic, warm
- h. Disorganized, careless
- i. Calm, emotionally stable
- j. Conventional, uncreative

## B.2. Stage 2

This part of the experiment consists of blocks of 10 periods each. The conditions of the experiment are identical **within** each block. Sometimes though, there will be changes **between** blocks; in these cases, we will promptly inform you of any changes. In each period you will be part of a group of 4 participants (called *employees* from now on). The group is called *the firm*. So, there are 4 employees within a firm. Given that nobody will know the identity of the employees of a firm, all the decisions you make during the experimental session will be anonymous.

As an employee in this firm, you will be asked to decide how to split your week of 40 working hours between Activity A and Activity B. Since the hours that you do not assign to one activity are automatically assigned to the other activity, you will only be asked to decide how many hours you devote on Activity A. Given that the available choices are to devote 0, 10, 20, 30 or 40 hours on Activity A, this implies devoting 40, 30, 20, 10 or 0 hours on Activity B, respectively.

Your payoff will depend on (1) the base wage, (2) the cost of the effort, and (3) on a bonus. The base wage is a fixed amount of ECUs that you will receive regardless of your choice and the choices of others. The *bonus* is a function of the minimum (lowest) number of hours devoted on Activity A by any employee of the firm and a bonus factor. The *cost of the effort* is a function of the number of hours you devote on Activity A and the effort-cost per hour. The effort-cost per hour is **fixed** throughout the entire experimental session at 5 ECUs per hour. On the other hand, the base wage and the bonus factor are chosen by the central server of the lab, which simulates the decisions of the firm's management. Before making any decision, you will receive information about the value of the base wage and the value of the bonus factor. More specifically, the payoff of the  $i^{th}$  employee in each period is given by the following formula:

$$\text{Payoff of Employee } i = \text{Base Wage} - (5 \times H_i) + (\text{Bonus Factor} \times \min_{\text{Activity A}}),$$

where  $H_i$  is the number of hours devoted by the  $i^{th}$  employee of the firm on Activity A, and  $\min_{\text{Activity A}}$  is the lowest number of hours that the employees of the firm devoted on Activity A.

**You do not need to memorize this formula. The computer program will provide the payoff tables whenever you need to make a decision.**

Please note that your firm of 4 employees will be **the same** for the entire duration of the block. At the time when you make your decision you will not know what the other three employees in your firm have chosen, but after each period, the number of hours that the employees of your firm have devoted on Activity A will be shown from low to high. In addition, please note that at no point in time the identity of the other employees in your firm will be identified. In other words, the actions you take in this experiment will remain confidential just like those of the other employees.

Examples

(i) Using the payoff table below, let us assume that you choose to devote 20 hours on Activity A, and that the other three employees of your firm decide to devote on Activity A 30, 30, and 40 hours, respectively. What is the minimum number of hours devoted on Activity A by the employees of the firm? What is your payoff?

		Minimum Effort by Employees of the Firm				
		0	10	20	30	40
Effort by Employee <i>i</i>	0	300	-	-	-	-
	10	250	310	-	-	-
	20	200	260	320	-	-
	30	150	210	270	330	-
	40	100	160	220	280	340

**Answer:** The minimum number of hours that an employee of the firm devotes to Activity A is 20 hours. Thus, your payoff is 320 ECUs.

(ii) Now, assume that you choose to devote 30 hours on Activity A, and that the other three employees of your firm decide to devote on Activity A 30, 20, and 40 hours, respectively. What is the minimum number of hours devoted on Activity A by the employees of the firm? What is your payoff?

**Answer:** The minimum number of hours that an employee of the firm devotes on Activity A is 20 hours. Your effort is 30 hours. Thus, your payoff is 270 ECUs.

We will now take a short quiz to make certain you understand the rules for this block of the experiment.

Quiz

**Question 1:** Suppose that the base wage is set at 300 ECUs, and the bonus factor at 6.

		Minimum Effort by Employees of the Firm				
		0	10	20	30	40
	0	300	-	-	-	-
Effort	10	250	310	-	-	-
by	20	200	260	320	-	-
Employee $i$	30	150	210	270	330	-
	40	100	160	220	280	340

Using the payoff table provided, assume that you decide to devote 40 hours on Activity A. The other three employees of your firm choose to devote on Activity A 30, 30, and 40 hours, respectively. What is the minimum number of hours devoted on Activity A by the employees of the firm? What is your payoff?

**Answer:** The minimum number of hours that an employee of the firm devotes on Activity A is 30. My payoff in ECUs is 280.

**Question 2:** Suppose that the base wage is set at 300 ECUs, and the bonus factor is set at 6. Using the payoff table provided, assume that you decide to devote 30 hours on Activity A. The other three employees of your firm choose to devote on Activity A 30, 0, and 40 hours, respectively. What is the minimum number of hours devoted on Activity A by the employees of the firm? What is your payoff?

**Answer:** The minimum number of hours that an employee of the firm devotes on Activity A is 0. My payoff in ECUs is 150.

**Question 3:** I am grouped with the same individuals for the entire duration of the block.

**Answer:** True.

**Question 4:** My actions and payoffs will remain confidential.

**Answer:** True.

**B.2.1. Block 1:** From this period on until the end of the block, the management has decided to set the base wage at 300 ECUs and the bonus factor at 6. In each period, your computer screen will indicate the payoff table for the base wage of 300 ECUs and the bonus factor of 6. The payoff table is the following.

		Minimum Effort by Employees of the Firm				
		0	10	20	30	40
Effort by Employee $i$	0	300	-	-	-	-
	10	250	310	-	-	-
	20	200	260	320	-	-
	30	150	210	270	330	-
	40	100	160	220	280	340

An employee chooses the number of hours devoted on Activity A using the prompts. You can change your choice, as often as you want, but once you click the “OK” button, the decision will be final.

Please recall that your firm of 4 employees will be **the same** for the entire duration of this block. At the time when you make your decision you will not know what the other three employees in your firm have chosen, but after each period, the number of hours that the employees of your firm have devoted on Activity A will be shown from low to high. In addition, you will be shown your payoff for the period and your total profit so far in the block. You will also be provided with a summary of the results of the previous periods of the block.

*Please enter your choice.*

### B.3. Stage 3

**B.3.1. Auction Treatment:** For Block 2 you will be assigned to one of two possible contracts: Contract 1 or Contract 2. You and the other participants in today’s experiment will participate in a mechanism assigning people to play with either Contract 1 or Contract 2. Recall that a contract specifies your base wage and your bonus factor. The base wage is a fixed amount of ECUs that you will receive regardless of your choice and the choices of others. The bonus is a function of

the minimum (lowest) number of hours devoted on Activity A by any employee of the firm and a bonus factor. That is, the bonus factor determines how much additional money you earn as the minimum hours spent by an employee of your firm on Activity A increases. Twelve people will play with Contract 1. This is the same contract that was used in Block 1. It has a base wage of 300 and a bonus factor of 6. Contract 2 is a different contract from Contract 1. The bonus factor for Contract 2 will always be 10. This means that the bonus increase from increasing the minimum hours spent by a group member on Activity A is always larger for Contract 2 than for Contract 1. The base wage for Contract 2 is determined at the same time as the assignment to contracts. A description of the mechanism for assigning contracts and choosing the base wage for Contract 2 follows.

On your screen, you will see a clock and a value for the base wage. Both the clock and the base wage start with a value of 400. The clock will begin counting down towards zero. Every ten seconds that pass will cause the base wage to fall by 5 ECUs (400, 395, 390, etc). Your screen will show a payoff table for Contracts 1 and 2. As the base wage falls for Contract 2, the payoff table for Contract 2 will automatically be adjusted. There will be a button on your screen labeled “Contract 1.” If you push this button, you are immediately assigned to play with Contract 1 in Block 2. The first twelve people to push this button will play with Contract 1. Once the twelfth person pushes the “Contract 1” button, the remaining twelve people who have not pushed this button are assigned to Contract 2. Their base wage is equal to the value displayed when the twelfth person pressed the “Contract 1” button. They will be using that payoff table shown for Contract 2 when the twelfth person pressed the “Contract 1” button.

Once you have been assigned a contract, you will be placed in a firm with three other people assigned to the same contract as you. This assignment is done randomly, so there is little chance that you are playing with the same people as in Block 1. You will be with your new firm for the duration of Block 2. You will be playing with your assigned contract for the entire block of 10 periods. You will be choosing hours to spend on Activity A, just like you did in Block 1.

If all of this seems a little confusing, don’t worry. We will go through a number of examples, as well as a practice round before beginning play of Block 2.

### Examples

(i) Let us suppose that the first 11 subjects press the “Contract 1” button as follows: 2 subjects press it when the base wage is at 380 ECUs (20 seconds after the start of the timer), 4 subjects press it at 370 ECUs (30 seconds after the start of the timer), 3 subjects press it at 360 ECUs (40 seconds after the start of the timer), 2 subjects press it at 350 ECUs (50 seconds after the start of the timer). The 12<sup>th</sup> subject presses the “Contract 1” button at 340 ECUs (60 seconds after the start of the timer). Thus, the first 12 subjects to press the “Contract 1” button will be sorted into the Contract 1 payoff scheme.

Minimum Effort by Employees of the Firm						
	0	10	20	30	40	
	0	300	-	-	-	-
Effort	10	250	310	-	-	-
by	20	200	260	320	-	-
Employee $i$	30	150	210	270	330	-
	40	100	160	220	280	340

On the other hand, the 12 participants that did not press the “Contract 1” button, will be sorted into the Contract 2 payoff scheme with a base wage of 340 ECUs.

Minimum Effort by Employees of the Firm						
	0	10	20	30	40	
	0	340	-	-	-	-
Effort	10	290	390	-	-	-
by	20	240	340	440	-	-
Employee $i$	30	190	290	390	490	-
	40	140	240	340	440	540

(ii) Let us suppose that the first 11 subjects press the “Contract 1” button as follows: 2 subjects press it when the base wage is at 380 ECUs (20 seconds after the start of the timer), 4 subjects press it at 370 ECUs (30 seconds after the start of the timer), 3 subjects press it at 360 ECUs (40 seconds after the start of the timer), 2 subjects press it at 350 ECUs (50 seconds after the start of the timer). The 12<sup>th</sup> subject presses the “Contract 1” button at 300 ECUs (100 seconds after the start of the timer). Thus, the first 12 subjects to press the “Contract 1” button will be sorted into the Contract 1 payoff scheme.

Minimum Effort by Employees of the Firm						
	0	10	20	30	40	
	0	300	-	-	-	-
Effort	10	250	310	-	-	-
by	20	200	260	320	-	-
Employee $i$	30	150	210	270	330	-
	40	100	160	220	280	340

On the other hand, the 12 participants that did not press the “Contract 1” button, will be sorted into the Contract 2 payoff scheme with a base wage of 300 ECUs.

Minimum Effort by Employees of the Firm						
	0	10	20	30	40	
	0	300	-	-	-	-
Effort	10	250	350	-	-	-
by	20	200	300	400	-	-
Employee $i$	30	150	250	350	450	-
	40	100	200	300	400	500

(iii) Let us suppose that the first 11 subjects press the “Contract 1” button as follows: 2 subjects press it when the base wage is at 330 ECUs (70 seconds after the start of the timer), 4 subjects press it at 320 ECUs (80 seconds after the start of the timer), 3 subjects press it at 310 ECUs (90 seconds after the start of the timer), 2 subjects press it at 300 ECUs (100 seconds after the start of the timer). The 12<sup>th</sup> subject presses the “Contract 1” button at 290 ECUs (110 seconds after the start of the timer). Thus, the first 12 subjects to press the “Contract 1” button will be sorted into the Contract 1 payoff scheme.

Minimum Effort by Employees of the Firm						
	0	10	20	30	40	
	0	300	-	-	-	-
Effort	10	250	310	-	-	-
by	20	200	260	320	-	-
Employee $i$	30	150	210	270	330	-
	40	100	160	220	280	340

On the other hand, the 12 participants that did not press the “Contract 1” button, will be sorted into the Contract 2 payoff scheme with a base wage of 290 ECUs.

Minimum Effort by Employees of the Firm						
	0	10	20	30	40	
	0	290	-	-	-	-
Effort	10	240	340	-	-	-
by	20	190	290	390	-	-
Employee $i$	30	140	240	340	440	-
	40	90	190	290	390	490

[Video is shown.]

### Quiz

Suppose that the first 11 subjects press the “Contract 1” button as follows: 2 subjects press it when the base wage is at 320 ECUs (80 seconds after the start of the timer), 4 subjects press it at 310 ECUs (90 seconds after the start of the timer), 3 subjects press it at 300 ECUs (100 seconds after the start of the timer), 2 subjects press it at 290 ECUs (110 seconds after the start of the timer). The 12<sup>th</sup> subject presses the “Contract 1” button at 280 ECUs (120 seconds after the start of the timer).

**Question 1a:** What is the base wage of Contract 1 in ECUs?

**Answer:** 300.

**Question 1b:** What is the bonus factor of the Contract 1 payoff scheme?

**Answer:** 6.

**Question 1c:** What is the base wage of Contract 2 in ECUs?

**Answer:** 280.

**Question 1d:** What is the bonus factor of the Contract 2 payoff scheme?

**Answer:** 10.

**Question 2:** How many subjects out of the 24 subjects in the session will earn payoffs with the Contract 1 payoff scheme?

**Answer:** 12.

**Question 3:** How many subjects out of the 24 subjects in the session will earn payoffs with the Contract 2 payoff scheme?

**Answer:** 12.

**Question 4:** What is the initial value of the base wage of Contract 2 in ECUs before the timer starts the countdown?

**Answer:** 400.

**Question 5:** By how many ECUs does the base wage in Contract 2 go down every 10 seconds?

**Answer:** 10.

**Question 6:** Your firm, in the next stage, will be composed of employees that chose an identical payoff contract.

**Answer:** True.

### Practice Round

Next, there will be a practice round. In this practice round, you will be playing with the computer. The computer will be clicking the button at random times. Please note that clicking the button early will NOT expedite the entire procedure given that you will still have to wait for the computer to complete the necessary number of clicks. The base wage determined in the practice round will have NO consequence on your payoffs or choices in the next block.

[Practice Round.]

**B.3.2. Other Treatments:** You will be assigned to a new contract for Block 2. This may be a different contract than the one you had in Block 1, or it may be the same. The base wage and the bonus factor, along with the payoff table of your new contract will be shown next.

## **B.4. Stage 4**

Your contract in Block 2 will have a base wage of ( $W$ ) ECUs and a bonus factor of ( $B$ ). Your contract is shown above. You will be asked next to indicate the number of hours you would like to devote on Activity A for a block of 10 periods, just like you did in Block 1.

The members of your firm have been randomly re-shuffled, so it is very unlikely you are playing with the same three people as in Block 1. However, the members of your firm will have the SAME contract as yours. In other words, they will have the same base wage and the same bonus factor as you have. In addition, please note that your firm of 4 employees will be retained for the entire duration of Block 2.