Fairness Considerations in Joint Venture Formation

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Web Appendix

1 Additional Tables

Table 1: Subject Characteristics by Framing

Characteristics	**Partnership**	**Employment**	**Supplier**	p-value (P vs E)	p-value (P vs S)	p-value (E vs S)
Male	0.438	0.500	0.333	0.490	0.225	0.058*
	(0.063)	(0.065)	(0.058)			
Work Experience	0.750	0.650	0.636	0.227	0.163	0.875
	(0.055)	(0.062)	(0.060)			
Age	20.516	19.533	20.167	0.029**	0.442	0.057*
	(0.381)	(0.211)	(0.249)			
Year of Study	2.563	2.033	2.303	0.017**	0.206	0.224
	(0.142)	(0.166)	(0.146)			
Economics/Accounting Major	0.156	0.200	0.091	0.528	0.260	0.082*
	(0.046)	(0.052)	(0.036)			
Prior Economics Experiment	0.500	0.217	0.833	0.000***	0.000***	0.000***
Experience	(0.063	(0.054)	(0.046)			
Prior Psych Experiment	0.469	0.483	0.606	0.872	0.118	0.170
Experience	(0.063)	(0.065)	(0.071)			
Reported Perceived Level of	2.969	2.967	3.015	0.980	0.579	0.587
Difficulty of Experiment Periods	(0.054)	(0.063)	(0.063)			
Indicated Minutes for	0.688	0.750	0.500	0.444	0.030**	0.004***
Periods was About Right	(0.058)	(0.056)	(0.062)			
N	64	60	66			

Notes: Standard errors are in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%

2 Experimental Instructions

Displayed below are the chat guidelines and experimental instructions provided to subjects in the partnership, employment and supplier frame sessions. Text that differs between frames is in italics. Chat guidelines are the same for all session types.

Guidelines for the Chat Sessions

Please adhere to the following guidelines regarding appropriate ways of communication during the chat session in each period. Failure to comply with these guidelines may result in your removal from the session without any payment.

- Please do not disclose your identity, or ask your partner to disclose his or her identity.
- Please do not make any comments that may be perceived as threatening by your partner.
- Please do not discuss topics with your partner that do not relate to the experiment in the given period.
- Please do not use any swear words or slang and please keep the chat at a professional level.
- If at any point during the chat your partner has made you uncomfortable, please inform *XYZ* or the lab manager on duty.
- To use the chat time as efficiently as possible, we recommend the following sequence for your conversation with your partner:
  - Begin the chat by proposing whether or not to produce jointly.
  - If you propose to produce jointly, suggest the option (among the four options of joint production) that you think is optimal and the shares of revenue that you and your partner will receive.
  - If you receive a proposal, either accept the proposal or propose a counter proposal.
  - If you and your partner have chosen a joint production option and revenue shares, ensure that both of you are completely aware of what you have agreed upon. Write down the option you chose and the share of revenue that you will receive on the sheet provided.
  - Once you and your partner come to an agreement or you realize that you cannot come to an agreement, you can end the chat.

Experimental Instructions: Ownership Sessions

General Rules

This session is part of an experiment about the economics of organization. *Specifically, we explore how people decide whether to join in a partnership and form a company together. We also explore how people make production decisions and divide revenues between the partners.* If you follow the instructions carefully and make good decisions, you can earn a considerable amount of money.

All the participants in this session have been recruited in the same way as you and are reading the same instructions as you are. It is important that you do not communicate with any other participant outside of the chatting program we provide you with or discuss the details of the experiment with anyone during or after the session. The session will consist of 20 periods. The first five of them will be practice periods. They will help you to understand the structure of the game and will not be used in determining your earnings from this session. The following 15 periods, periods 6 to 20, will be used to determine your earnings from this session.

Description of a Period

In each period, you will randomly be assigned to be either a chair or a table maker who earns a fixed wage at your current job. You will be randomly matched with another participant who makes the other product (e.g. if you are a chair maker, your partner will be a table maker) earning a fixed wage at her current job. For simplicity, in these instructions, we will describe the experiment supposing that you are a chair maker and you are partnered with a table maker. Suppose that the wages from the current jobs for the chair and table makers are given by the following table:

Wages From the Current Job for a Chair Maker	w_C points
Wages From the Current Job for the Table Maker	w_T points

Now suppose an opportunity outside of your current jobs arises in which a client wants to buy a set of matching chairs and tables from you and your partner. The client tells you how much she is willing to pay for each of the four options: (1) fancy chair and fancy table, (2) fancy chair and plain table, (3) plain chair and fancy table, and (4) plain chair and plain table. If you and your partner want to take this opportunity and produce chairs and tables jointly, we refer to that as joint

production and the resulting revenue as joint revenue. If you and your partner produce jointly, then you two will have to leave your current jobs and form a company. Suppose the joint revenue and the production costs for chairs and tables are given by the following table:

Options:	**1 Fancy Chair, Fancy Table**	**2 Fancy Chair, Plain Table**	**3 Plain Chair, Fancy Table**	**4 Plain Chair, Plain Table**
Joint Revenue	e points	f points	g points	h points
Production Cost of Chair	c_F points	c_F points	c_P points	c_P points
Production Cost of Table	t_F points	t_P points	t_F points	t_P points

At the beginning of each period, you and your partner will be shown a chart describing the joint revenue and production costs, and a chart describing the wages from your current jobs. The net profit for the company equals the joint revenue minus the production costs of table and chair. We provide an example using the above table - if you and your partner jointly choose option 1 (fancy chairs and fancy tables), then the joint revenue will be e points. The net profit for you and your partner together will be $e - c_F - t_F$ points.

If you produce jointly, each of you will bear your own production cost and will not receive a wage. Thus, your total earnings from the company will equal your share of the joint revenue minus the production cost for chair. Suppose, for example, you and your partner jointly choose option 1, receiving a joint revenue of e points. If you two decide that the share of revenue you will receive is m points then your partner will receive $e - m$ points (the most m can be is e) as her share of revenue. Your net earnings will be $m - c_F$ points and your partners net earnings will be $e - m - t_F$ points. Note that, while the joint revenue depends on both the chair and table types, your own production cost depends only on the type for your own product (chairs in this example). If you and your partner do not to form a company together, you will continue to work in your current jobs at the fixed wages and will not bear any production cost (earning w_C and w_T points, respectively).

Decision-making in Each Period

In each period, you will be informed of the wages, joint revenue, and production costs for that period. First, you will be asked to report which option of joint production maximizes the companys net profit. This exercise gives you an opportunity to familiarize yourself with the problem which

you two will face if you form a company together to produce jointly.

Next, you will chat anonymously with your partner to discuss and decide whether you two want to leave your current jobs and form your own company to produce jointly. In the first 5 periods, you will be given three minutes to chat with your partner. In periods 6 to 20, you will be given two and a half minutes. If you want, you can end the chat earlier than that. Once you have finished chatting, you will be asked to indicate whether you two want to produce independently, jointly, or did not reach an agreement. If you choose individual production, do not reach an agreement, or if your entries do not match at any stage, then you will not form a company and both will receive the fixed wages from your current jobs. If you choose joint production, you will be asked to enter your production decision. First, you will have to choose one of the four options of joint production. *Next, you will be asked on the next screen to report how you want to divide the joint revenue. You will both be paid according to the companys production and revenue sharing decisions, as described above.*

Differences between Periods

Recall that there will be 20 periods in this experiment and you will be randomly assigned to a partner in each period. Whether you are a chair or table maker will also be randomly chosen and can differ across periods. You will participate in the decision process described above in every period. The individual and joint revenues and cost functions will be different in every period to represent differences in opportunities, clients preferences, and production processes.

Ending the Session

At the end of the session, you will see a screen displaying your point earnings from each period. You will earn an amount based on your point earnings from two randomly chosen periods between periods 6 and 20. Your earning in points will be converted into money at the rate of $1 for 10 points. That is, if you earn y points in total in these two periods, your total income from the experiment will be $y/10. You will be paid this amount in cash at the end of the session.

Experimental Instructions: Employment Sessions

General Rules

This session is part of an experiment about the economics of organization. *Specifically, we explore how people decide whether to form a new company. We also explore how they jointly make production decisions and choose the salary of the employee.* If you follow the instructions carefully and make good decisions, you can earn a considerable amount of money.

All the participants in this session have been recruited in the same way as you and are reading the same instructions as you are. It is important that you do not communicate with any other participant outside of the chatting program we provide you with or discuss the details of the experiment with anyone during or after the session. The session will consist of 20 periods. The first five of them will be practice periods. They will help you to understand the structure of the game and will not be used in determining your earnings from this session. The following 15 periods, periods 6 to 20, will be used to determine your earnings from this session.

Description of a Period

In each period, you will randomly be assigned to be either a chair or a table maker who earns a fixed wage at your current job. You will be randomly matched with another participant who makes the other product (e.g. if you are a chair maker, your partner will be a table maker) earning a fixed wage at her current job. For simplicity, in these instructions, we will describe the experiment supposing that you are a chair maker and you are partnered with a table maker. Suppose that the wages from the current jobs for the chair and table makers are given by the following table:

Wages From the Current Job for a Chair Maker	w_C points
Wages From the Current Job for the Table Maker	w_T points

Now suppose an opportunity outside of your current jobs arises in which a client contacts the chair maker wanting to buy a set of matching chairs and tables. The chair maker cannot produce chairs and tables alone, but can create a company and hire the table maker she is matched with as an employee to jointly produce chairs and tables. If you and your partner want to take this opportunity and form a company, you two will have to leave your current jobs. The chair maker is considered the owner and the table maker is an employee who is paid a salary by the company.

They can choose to produce one of the four options for the client: (1) fancy chair and fancy table, (2) fancy chair and plain table, (3) plain chair and fancy table, and (4) plain chair and plain table. The client pays the company a revenue and the company bears the production costs of chair and table based on the chosen option. Suppose the joint revenue and the production costs for chairs and tables are given by the following table:

Options:	**1 Fancy Chair, Fancy Table**	**2 Fancy Chair, Plain Table**	**3 Plain Chair, Fancy Table**	**4 Plain Chair, Plain Table**
Joint Revenue	e points	f points	g points	h points
Production Cost of Chair	c_F points	c_F points	c_P points	c_P points
Production Cost of Table	t_F points	t_P points	t_F points	t_P points

At the beginning of each period, you and your partner will be shown a chart describing the joint revenue and production costs, and a chart describing the wages from your current jobs. The net profit for the company equals the joint revenue minus the production costs of table and chair. We provide an example using the above table - if you and your partner jointly choose option 1 (fancy chairs and fancy tables), then the joint revenue will be e points. The net profit for you and your partner together will be $e - c_F - t_F$ points.

If you decide to produce jointly, neither will receive a wage from the current job and your earnings will depend on your production and salary decisions. Being the owner of the company, the chair maker will earn the revenue, bear production costs of chair and table, and pay a salary to the table maker. The table maker will earn the salary and bear no production cost. For example, if option 1 is produced and the table makers salary is s points, then the net earnings of the chair and table makers are points and s points, respectively. Note that, you and your partner (the table and chair makers) jointly decide whether to form a company, which option to produce, and the table makers salary. If you do not agree to form a company, you will continue to work in your current jobs at the fixed wages and earn w_C and w_T points, respectively.

Decision-making in Each Period

In each period, you will be informed of the wages, joint revenue, and production costs for that period. First, you will be asked to report which option of joint production maximizes the companys

net profit. This exercise gives you an opportunity to familiarize yourself with the problem which you two will face if you form a company together to produce jointly.

Next, you will chat anonymously with your partner to discuss and decide whether you two want to leave your current jobs and form your own company to produce jointly. In the first 5 periods, you will be given three minutes to chat with your partner. In periods 6 to 20, you will be given two and a half minutes. If you want, you can end the chat earlier than that. Once you have finished chatting, you will be asked to indicate whether you two want to produce independently, jointly, or did not reach an agreement. If you choose individual production, do not reach an agreement, or if your entries do not match at any stage, then you will not form a company and both will receive the fixed wages from your current jobs. If you choose joint production, you will be asked to enter your production decision. First, you will have to choose one of the four options of joint production. *Next, you will be asked to report the salary of the table maker from the company. The table maker will be paid the salary and the owner (the chair maker) will earn the joint revenue minus the table makers salary and the costs of tables and chair, as described above.*

Differences between Periods

Recall that there will be 20 periods in this experiment and you will be randomly assigned to a partner in each period. Whether you are a chair or table maker will also be randomly chosen and can differ across periods. You will participate in the decision process described above in every period. The individual and joint revenues and cost functions will be different in every period to represent differences in opportunities, clients preferences, and production processes.

Ending the Session

At the end of the session, you will see a screen displaying your point earnings from each period. You will earn an amount based on your point earnings from two randomly chosen periods between periods 6 and 20. Your earning in points will be converted into money at the rate of \$1 for 10 points. That is, if you earn y points in total in these two periods, your total income from the experiment will be \$y/10. You will be paid this amount in cash at the end of the session.

Experimental Instructions: Supplier Sessions

General Rules

This session is part of an experiment about the economics of organization. *Specifically, we explore how producers decide whether to give up their current jobs and wages to jointly supply their products to a client. We also explore how these suppliers make production decisions and share revenues between themselves.* If you follow the instructions carefully and make good decisions, you can earn a considerable amount of money.

All the participants in this session have been recruited in the same way as you and are reading the same instructions as you are. It is important that you do not communicate with any other participant outside of the chatting program we provide you with or discuss the details of the experiment with anyone during or after the session. The session will consist of 20 periods. The first five of them will be practice periods. They will help you to understand the structure of the game and will not be used in determining your earnings from this session. The following 15 periods, periods 6 to 20, will be used to determine your earnings from this session.

Description of a Period

In each period, you will randomly be assigned to be either a chair or a table maker who earns a fixed wage at your current job. You will be randomly matched with another participant who makes the other product (e.g. if you are a chair maker, your partner will be a table maker) earning a fixed wage at her current job. For simplicity, in these instructions, we will describe the experiment supposing that you are a chair maker and you are partnered with a table maker. Suppose that the wages from the current jobs for the chair and table makers are given by the following table:

Wages From the Current Job for a Chair Maker	w_C points
Wages From the Current Job for the Table Maker	w_T points

Now suppose a client approaches the chair maker asking to supply a set of chairs and tables. The chair maker cannot produce tables, but acts as the coordinator and invites the table maker to supply tables. The client tells the chair maker how much she is willing to pay for each of the four production options: (1) fancy chair and fancy table, (2) fancy chair and plain table, (3) plain chair and fancy table, and (4) plain chair and plain table. After the client pays the chair maker (the

amount will be referred to as joint revenue), the chair maker pays a part of the joint revenue to the table maker for supplying tables. You and the participant you are paired with (the chair and table makers) will jointly decide whether to supply chairs and tables to the client. If you two decide not to supply the client, both will keep your current jobs and earn the wages from Table 1. If you do supply jointly, you will give up your current jobs and the associated wages. Moreover, you will jointly decide which of the four options to supply and how you will divide the joint revenue between yourselves. Each of you will bear the production cost of the product (chair or table) you supply. Suppose the joint revenue and the production costs for chairs and tables are given by the following table:

Options:	**1 Fancy Chair, Fancy Table**	**2 Fancy Chair, Plain Table**	**3 Plain Chair, Fancy Table**	**4 Plain Chair, Plain Table**
Joint Revenue	e points	f points	g points	h points
Production Cost of Chair	c_F points	c_F points	c_P points	c_P points
Production Cost of Table	t_F points	t_P points	t_F points	t_P points

At the beginning of each period, you and your partner will be shown a chart describing the joint revenue and production costs, and a chart describing the wages from your current jobs. The net profit for the company equals the joint revenue minus the production costs of table and chair. We provide an example using the above table - if you and your partner jointly choose option 1 (fancy chairs and fancy tables), then the joint revenue will be e points. The net profit for you and your partner together will be $e - c_F - t_F$ points. *You two will jointly decide how to divide the revenue of e points. For example, if both agree that the table maker will receive m points from the joint revenue, then the chair maker will receive $e - m$ points (the most m can be is e). Each will bear the cost of the product he/she produces. Hence, the net earnings of the chair and table makers will be and points, respectively. If you two decide not to supply jointly, you will earn the wage associated with your current job (w_C and w_T points for the chair and table makers, respectively) instead.*

Decision-making in Each Period

In each period, you will be informed of the wages, joint revenue, and production costs for that period. First, you will be asked to report which option of joint production maximizes the companys net profit. This exercise gives you an opportunity to familiarize yourself with the problem which

you two will face if you form a company together to produce jointly.

Next, you will chat anonymously with your partner to discuss and decide whether you two want to leave your current jobs and form your own company to produce jointly. In the first 5 periods, you will be given three minutes to chat with your partner. In periods 6 to 20, you will be given two and a half minutes. If you want, you can end the chat earlier than that. Once you have finished chatting, you will be asked to indicate whether you two want to produce independently, jointly, or did not reach an agreement. If you choose individual production, do not reach an agreement, or if your entries do not match at any stage, then you will not form a company and both will receive the fixed wages from your current jobs. If you choose joint production, you will be asked to enter your production decision. First, you will have to choose one of the four options of joint production. *Next, each will be asked to enter the amount that she will receive from the associated joint revenue.* You will be paid according to the production costs of the option you two supply and how you decide to share the joint revenue, as described above.

Differences between Periods

Recall that there will be 20 periods in this experiment and you will be randomly assigned to a partner in each period. Whether you are a chair or table maker will also be randomly chosen and can differ across periods. You will participate in the decision process described above in every period. The individual and joint revenues and cost functions will be different in every period to represent differences in opportunities, clients preferences, and production processes.

Ending the Session

At the end of the session, you will see a screen displaying your point earnings from each period. You will earn an amount based on your point earnings from two randomly chosen periods between periods 6 and 20. Your earning in points will be converted into money at the rate of $1 for 10 points. That is, if you earn y points in total in these two periods, your total income from the experiment will be $y/10. You will be paid this amount in cash at the end of the session.