

# Online Appendix (not for publication)

## Appendix A: Additional Table

<i>GSP Treatment Status:</i> <i>Subject in Lab Experiment?</i>	GSP TREATMENT GROUP			GSP CONTROL GROUP		
	YES	No	DIFF.	YES	No	DIFF.
Age (in 2008, based on date of birth)	20.156 (1.522)	20.113 (1.466)	0.043 (0.228)	19.696 (1.387)	20.204 (1.388)	-0.508*** (0.196)
First KCPE score	274.422 (45.882)	262.726 (45.579)	11.696* (7.066)	247.696 (39.937)	253.052 (42.734)	-5.355 (6.004)
Highest grade completed (as of 2005)	8.556 (1.407)	8.630 (0.920)	-0.074 (0.149)	8.321 (1.162)	8.568 (0.861)	-0.246* (0.127)
Ravens matrices score	22.081 (5.599)	20.853 (5.328)	1.228 (0.909)	21.070 (5.548)	20.574 (5.183)	0.496 (0.834)
English vocabulary score	10.222 (2.610)	10.020 (2.628)	0.203 (0.407)	9.982 (2.363)	9.862 (2.446)	0.120 (0.345)
Swahili vocabulary score	9.511 (2.873)	9.531 (2.715)	-0.020 (0.423)	10.054 (2.268)	9.434 (2.405)	0.619* (0.338)
Respondent held job in last 12 months	0.111 (0.318)	0.109 (0.312)	0.002 (0.048)	0.143 (0.353)	0.131 (0.338)	0.012 (0.048)
Father's education	10.366 (4.182)	9.863 (3.969)	0.503 (0.648)	10.468 (3.289)	9.701 (4.021)	0.767 (0.609)
Mother's education	7.045 (4.291)	7.370 (4.169)	-0.325 (0.657)	7.451 (3.844)	7.214 (3.858)	0.237 (0.572)
Household size	7.289 (2.252)	7.125 (2.894)	0.163 (0.442)	6.429 (3.218)	6.729 (2.728)	-0.300 (0.394)
Household Assets (1000s of KSh)	28.948 (15.876)	28.858 (18.127)	0.090 (2.785)	31.017 (18.389)	26.321 (16.507)	4.696** (2.364)
Scholarship recipient	0.333 (0.477)	0.263 (0.441)	0.070 (0.069)			

Standard deviations in parentheses in columns 1, 2, 4, and 5; standard errors in parentheses in columns 3 and 6.

\*\*\* indicates significance at the 99 percent level; \*\* indicates significance at the 95 percent level; and \* indicates significance at the 90 percent level. The table is based on data from the GSP follow-up survey described in Friedman et al. (2011); the data set includes information on our 101 experimental subjects plus 1,024 girls in the GSP treatment and control groups who took the KCPE exam and did not participate in our experiments. The number of observations contributing to each number may differ from the subject pool sizes shown when particular variables are unavailable for some people.

## Appendix B: Experimental Instructions

*Text in italics is not read aloud. Instructions are read by two research assistants: the narrator and the demonstration player.*

NARRATOR:

We will start by giving you an overview of this game. Each person in this room has been matched with a partner in the other room. Everyone in this game will earn money which will be divided between you and your partner. Each person will earn money by clicking a device like this «*demonstrate*» – and each of you will decide how you want to divide the money that your partner earns between you and your partner. At the end of the game, one of the two rooms will be randomly selected, and only the decisions made in the room that we select will determine actual payouts.

First, we will explain one part of this game that might be a little confusing. Please listen carefully, and if there is anything you don't understand, you are free to ask questions at any time. In this game, your partner in the next room will earn money and you will decide how you want to divide that money between the two of you. However, you may or may not get to keep this money at the end of the game. While we are playing the game in this room, your partner in the next room will also be making decisions about how she would divide money – money that you will earn in the game. After we finish playing the game, we are going to pick one of the two rooms – this one or the other one. Only the decisions made in the room that we pick will count. So, if this room is picked, we will pay both you and partner based only on the decisions that you made in the game – you will decide how to divide the money that your partner earns. However, if we pick the other room, we will pay both you and your partner based only on the decisions that your partner made – your partner will decide how to divide the money that you earn.

So, if we choose this room, the total amount of money you take home is determined by your decisions and how much your partner earns. If we choose the other room, the amount of money you take home is determined by your partner's decisions and how much you earn. *Repeat this paragraph once to confirm understanding.*

How will we choose which room and whose decisions determine how much you and your partner take home from the game? After we have finished playing the game, we will place these two round plastic disks into a cup like this «*demonstrate using the yellow and red disks*». Without looking, we will pull one of the two disks out of the cup «*demonstrate using the yellow and red disks*». We are in Room A. So, if we pull out the **yellow** disk labeled “A” we will divide the money your partner earned and your decisions will determine how much everyone takes home today; if we pull out the **red** disk labeled “B” we'll divide the money that you earned and the decisions made in the other room will determine how much everyone takes home. So, if we choose “A” we'll pay you and your partner based on your decisions; if we choose “B” we'll pay you and your partner based on the decisions that your partner makes in the next room.

So, either your decisions or your partners' decisions – but not both – will determine how much both you and your partner take home at the end of the game. In this game, your partner will earn money and you will decide how to divide it between yourself and your partner. Later on in the

game, you will also earn money. Your partner will decide how to divide that money between the two of you. However, you'll only get to keep the share of your partner's earnings that you allocate yourself – and your partner will only get the rest of the money that they earn – if we pull the **yellow** disk out of the cup at the end of the game. Otherwise, how much you take home today will be determined by how much you earn and the decisions your partner makes.

Are there any questions so far?

Everything we've said so far doesn't effect you until after the game – it doesn't effect the choices you will make, or what you need to understand to play the game. Now, we will explain in more detail how your partner earn money in this game. This will also be the way that you will earn money later in the game.

How much money your partner earns in this game is determined by how much your partner works. In this game, your partner will earn money by clicking this machine. It is called a clicker. Each time you squeeze the clicker, the number on the front increases by one. *Walk around and show players the front face of the clicker as you click.* Every time you squeeze the clicker, the number goes up by one – it never decreases. So, the number on the front of the clicker shows the number of times you've clicked. In this game, your partner will be paid money based on the number of times she clicks. We'll ask your partner to hold the clicker in one hand, and we'll give her ten minutes in which she can click as much as she wants. Your partner has to keep the clicker in one hand – she can't switch hands, or click with two hands, or click on the table. *Demonstrate each of these.* The more times she clicks the clicker during the ten minutes, the more money she will be paid.

How much your partner is paid depends on how much she clicks. For each number of times she might click, the poster on the wall shows you how much she will be paid. So, she'll be paid 30 shillings if she clicks 200 times or less. If she clicks between 201 and 400 times, she will be paid 60 shillings. *Point out these examples on the wall poster.* The more times she click, the more money she earns.

The poster on the wall show you all the possible amounts of money that your partner might earn in the game. The left side indicates all the possible numbers of times your partner might click, and the right side indicates all the possible amounts she might be paid. For example, if she clicks 1,900 times, the number of times that she clicks is between 1,801 and 2,000, so she will be paid 300 shillings. *Point out this row on the poster.* On the other hand, if she clicks 2,100 times, she will be paid 330 shillings – because 2,100 is between 2,001 and 2,400. *Point out this row on the poster.* So, the more times she clicks, the more money she'll be paid. You can look at the poster to see how much your partner will be paid for any number of times that she might click.

Here are two examples of earning money in this game. This is «*name of demonstration player*». *Indicate the demonstration player. The demonstration player should click the demonstration clicker very slowly while the next sentence is being read, then stop and hand it to the Narrator as he or she says this.* «*Name of demonstration player*» did not click very much – only 650 times in ten minutes. How much will she be paid? *Point to the correct row on the poster.* The number of times she clicked is between 601 and 800, so «*name of demonstration player*» will be paid 90

shillings. *The Narrator hands the clicker back to the demonstration player.*

What if «name of demonstration player» had clicked many times? *Demonstration player clicks very rapidly for ten seconds, stops, and hands the clicker back to the Narrator.* If «name of demonstration player» clicked 3100 times in ten minutes, how much would she be paid? *Point to the correct row on the poster.* The number of times she clicked is between 3001 and 3250, so «name of demonstration player» will be paid 450 shillings.

So, your partner will be paid money in this game for squeezing a tally counter. *Hold up the clicker.* The more times she clicks, the more she'll be paid.

Before we explain the rest of the game, we are going to let you try clicking the counters. We are going to give each of you a counter. Don't start clicking yet! We'll give you one minute to try clicking. You will not be paid any money for your work during this trial period – it is just to give you a sense of what clicking the counters will be like. Your partner will be given ten minutes to click the counter – the amount that you would be able to click in that time might be about ten times as much as you can in one minute. Remember, you have to hold the clicker in one hand – you can't switch back and forth. Leave your other hand on the desk or at your side.

*Research assistants should hand each person a clicker, making sure that they do not start clicking immediately. Once everyone has a clicker in their hand, set a cell phone timer to time one minute. Tell the players when to begin, and then count down the last five seconds before they have to stop. When time is called, make sure that everyone stops. They should not touch their clickers after time is called. As the Narrator continues with the instructions, the other research assistant should collect all the clickers, remove the tape, reset them to zero, and re-cover them with tape so that they cannot be manipulated.*

We've explained how your partner will earn money in this game by clicking a tally counter. Now we will explain about your partners. This is the last thing you need to understand about this game.

We've divided you into two groups. We randomly assigned half of the seat numbers to each room. Everyone in this room is in Group **A**, and everyone in the other room is in Group **B**. Every player in Group **A** has been matched with a player in Group **B**. That person is your partner. You will never learn your partner's identity, nor will your partner ever learn who you are.

In this game, your partner will earn money by clicking a tally counter and you will decide how you want to divide the money that you earn between yourself and your partner in the next room. You can divide it any way you like – the choice is yours. You can give yourself all of your partner's earnings, give your partner all of her earnings, or do anything in between. The only way your partner can receive any money in this game is for you to give it to her. The money that you give to your partner will be the only money that your partner receives if we draw the **yellow disk** out of the bowl at the end of the game. *Hold up the yellow disk to remind the audience about the disks.*

Before you earn money by clicking, we'll ask you to indicate how much of your partner's earnings you would like to give yourself and how much you want to give to your partner. You are allowed to give as much or as little to your partner as you want – it is your decision. How much you want to give to your partner might depend on how much you earn. You have tried clicking the counters – you know what it is like. For each possible amount that your partner might end up earning, we'll ask you to indicate how you would divide that money between yourself and your partner. Later, when we find out how much your partner has actually earned, we'll divide the money that she's earned between you and your partner however you told us to.

Before we give your partner the opportunity click the counters, we will give each of you a set of forms like this. *Hold up a decision packet.* The packet lists all the possible amounts of money that your partner might earn: on each page of the form, there is one possible amount of money that your partner might earn by clicking. *Indicate sample decision sheet on the wall of the room.* So, the first page is 30 shillings, the second page is 60 shillings, all the way up to 600 shillings. You can see that one each page, you can actually see the coins that your partner will earn.

On each page, you'll indicate how you want to divide the money that your partner earns between you and your partner by circling the coins that you want to give to yourself, and not circling the bills and coins that you want to give to your partner.

Let's look at a couple of examples. «*Name of demonstration player*» is about to make her decisions about how she'd like to divide the money that her partner earns between herself and her partner. *The demonstration player stands in front of the first sample decision sheet.* Remember, she'll circle any coins she wants to give to herself, and she'll leave unmarked any coins that she wants to give to her partner. «*Name of demonstration player*», are you ready to start?

DEMONSTRATION PLAYER: Yes, but I have a question. After the game, can I find out who my partner is, so that I know whether I gave her enough money?

NARRATOR: No. You'll never know who your partner is.

DEMONSTRATION PLAYER: OK. *Demonstration player turns to face the first decision sheet. She mimes thinking for a few seconds before speaking.* I will give myself twenty shillings and give my partner ten shillings. *Demonstration player circles twenty shillings on the sample decision sheet.*

NARRATOR: We'll go through the sheets in your packet one at a time. Next, «*name of demonstration player*» will decide how she wants to divide the money if her partner earns 60 shillings.

DEMONSTRATION PLAYER: *Demonstration player again thinks for a few seconds.* I will give myself all of the money. *Demonstration player circles each of the rows of coins.*

NARRATOR: Remember, you can divide the money that your partner earned any way you want – the decision is yours. You can give your partner all of her earnings, or none of it. You can do

whatever you want to do. Each possible amount that your partner might earn is represented on one of the pages of your packet. As the amounts get higher, you will have to divide more coins between yourself and your partner.

**DEMONSTRATION PLAYER:** *Demonstration player moves over to the sample page with three hundred shillings on it. I will give myself 150 shillings and give my partner 150 shillings. She circles 150 shillings worth of coins on the sheet.*

**NARRATOR:** We will ask you how you want to divide all of the possible amounts your partner might earn: 30 shillings, 60 shillings, all the way up to 600 shillings. Then, if the **yellow** disk is picked at the end of the game, we'll find out how much your partner actually earned and divide your partner's earnings exactly how you told us to.

Are there any questions? *Answer any questions.* OK, we are finished explaining the game. Now, let's review.

First, we are going to ask you to indicate in a decision packet how you want to divide your partner's earnings between yourself and your partner. You'll tell us how you would divide all of the possible amounts that your partner might end up earning by clicking.

After all of you have made your decisions about how you want to divide your partner's earnings, each person will be given ten minutes to click the tally counter. The more times you click, the more money you earn; the poster on the wall tells you how much you will earn for each possible number of times you might click. After we determine how much your partner has earned, we will divide that money between you and your partner however you told us to.

At the end of the game, we'll place these two plastic disks into a cup. We'll pull one of the disks out without looking. If we pull out the **yellow disk** with a letter "A" on it, you'll take home the money your partner earned minus whatever amount you allocate to your partner. Your partner will take home only the money that you allocate them.

Are we ready to begin?

*Answer any questions, and then pass out the decision packets and pens. It is very important that there is **no talking at all** while the subjects make their decisions.*

*After all the players have made their decisions, collect the packets and all of the pens. Then read the following. You've all decided how you want to divide the money that you earn. Now we are going to let you click the counters to determine how much you are paid. We'll place a counter on the desk in front of you. Please do not pick it up until we tell you to. Pass out the re-taped clickers, making sure that each is set at zero. Then set a mobile phone timer for ten minutes and tell the players to start. Inform them when they have one minute left, and then count down the last five seconds.*