The Potato Market Game[1]

I. The Problem Context

A. Introduction

The economic environment in which contemporary social agents move is mediated, on multiple occasions, by markets in which producers and buyers meet to exchange agricultural and livestock products. In these markets, buyers pay a price to producers that come to sell their crops. Producers try to obtain a price that surpasses their production costs and buyers will try to pay a price below the real value of the good that they are buying - and that is the maximum that they are willing to pay. For example, buyers might be wholesalers who buy from producers and then resell the product in the retail market at a higher price in order to obtain a profit from their activity as intermediaries.

If this market sustains the minimum conditions of one that is fair and competitive (for example, it has a sufficiently large number of buyers and sellers, transaction costs and the ability to obtain information about possible prices and offers), we can expect that its "Invisible hand" is in charge - in a way not planned by the free play of individual interests - to produce social welfare. Social welfare is defined as a context in which the average equilibrium price and the average quantity of production are those produced at the crossroads between supply and demand for that good.

This experiment is designed to demonstrate, in a simplified manner, that the social interest of a market that generates social welfare can result from the interaction of agents that are motivated by their own individual interests.

B. Purpose of the game

The intention of this game is for the participants to recognize the concept of competitive markets and its effect within the social equilibrium, the achievement of this balance (social science), and the result of the balance. The experiment demonstrates that, within certain conditions and without the need for any intervention by a planner or regulator, it is possible to replicate the socially efficient result produced by an equilibrium market.

The participants will make decisions – some as buyers and some as producers – and they will be able to observe how the interaction through the market produces results that

[1] Translated from Juan-Camilo Cardenas and Pablos Andres Ramos (2006) Manual de juegos economicos para el analisis del uso colectivo de los recursos naturales, Centro Internacional de la Papa https://economia.uniandes.edu.co/files/profesores/juan_camilo_cardenas/docs/Archivos%20para%20descargar/MANUAL_JUEGOS_CARDENAS_RAMOS.pdf

maximize the wellbeing of the collective as a result of the fact that each player is trying to maximize their private/individual wellbeing.

C. Economic Model of Analysis

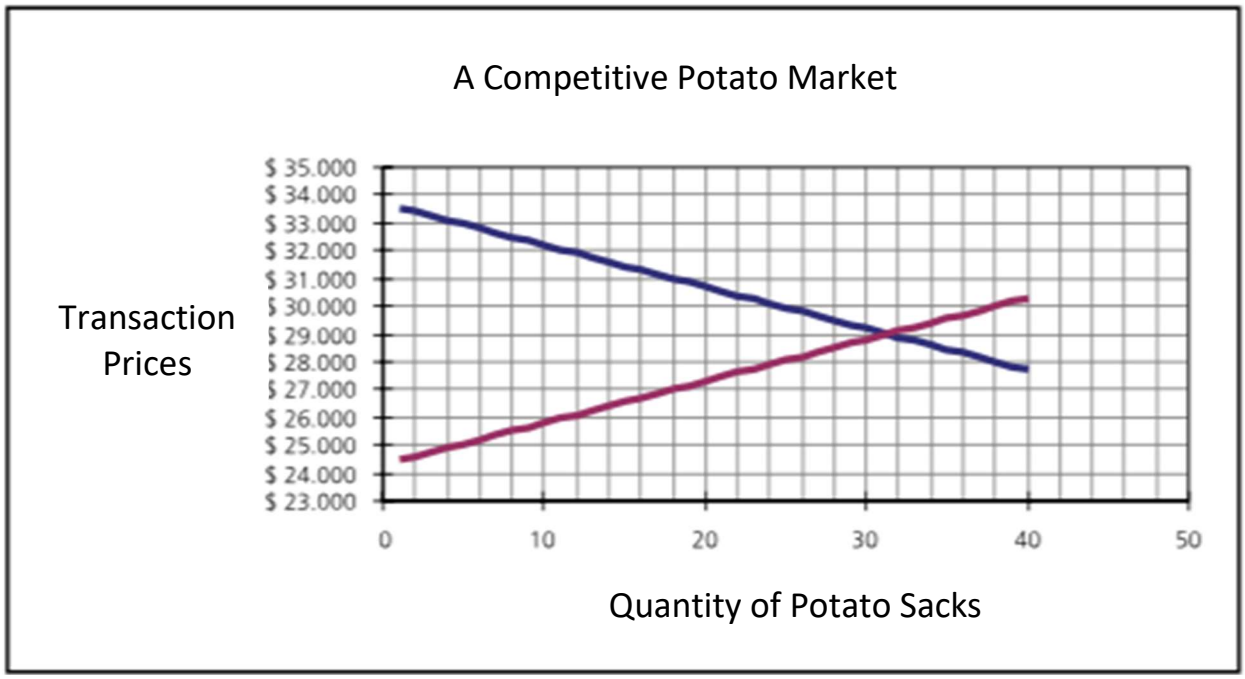
The essential theory that supports the argument of the market institution is based on the fact that a set of producers of a good -in this case, for example, an agricultural product such as potatoes or corn- have production costs that vary due to the heterogeneity of their lands, the productivity of their labor, or their working capital. Some producers can produce a sack of a particular good at a lower production cost than others. Together, these producers make up the supply, and that supply can be expressed as a curve that grows from the most efficient producers (those who produce the cheapest) to the least efficient (those who have higher production costs). In a graph in which the vertical axis represents prices and costs and the horizontal axis the quantities produced, we have, then, the classic supply curve that grows as more units of that good are produced, and in which the last units are the most expensive to produce.

On the other hand, we have a group of buyers who are interested in acquiring this product, either a) because they are going to consume it directly (and therefore value it) and are willing to pay a certain amount of money for one unit of it or b) because they are wholesalers who buy from producers and then resell at higher prices to obtain a net profit. Those who place a higher value on a single unit of that good -for example, a sack of corn- will be willing to pay more for the first unit, and as we move forward from the buyers who are more interested or who value the product more towards those who value it less, we obtain the demand curve, which is conventionally decreasing the quantity demanded. As a unit is added to the market, the value that someone is willing to pay for that additional unit is proportionally less than the value of the previous one.

These two curves, of supply (increasing) and of demand (decreasing), eventually intersect at a point that we call the equilibrium point of the market. According to the logic from which it is determined that this is the point at which that market must operate in equilibrium -that is, with no inclinations to leave it- is that any transaction attempt of a buyer or seller outside of that point may be "inefficient," in the sense that someone would be leaving money at the table. At that point, all the players are negotiating at the best price that they can, given the competition. Any buyer A who would like to purchase the product below that price to obtain a higher profit will find an additional B buyer who would offer that producer the equilibrium price, for which the producer would prefer the second offer instead of the Initial offer of A. Similarly, if a producer P wanted to sell at a price higher than the equilibrium price, it would be faced by market competition from another producer Q that could sell at the equilibrium price which is preferred by the potential buyer.

These predictions can be seen in the supply and demand curves shown in the following figure. The numerical example will be the same one that we will use in the experimental design in which 20 producers and 20 buyers interact with the ability to negotiate up to two

units each. In this example, it is predicted that with these supply and demand curves, no more than 32 units should be negotiated -although the potential supply is 40 units-. Likewise, it is predicted that the average equilibrium price should be $ 29,000 per sack, even though in this market there are buyers who would be willing to pay more than $ 33,000 and producers who could sell a sack less than $ 25,000. However, the perfect competition of this market says that when negotiating all will become $ 29,000 per unit, a balance from which no one is incentivized to deviate. And, at that point, according to economic theory, the benefits of society are maximized, by producing the maximum of what is called the surplus of the producers and the surplus of the consumers.



II. Game Assembly or Experiment

A. Experimental Design

Potato Market					
40 players = 20 producers + 20 buyers					
		Demand ($)	Offer ($)	Income ($)	Income ($)
Player	Sacks	Willingness to pay (WTP)	Production Costs (PC)	Buy	Sell
20	1	33.550	24.450	4,550	4,550
19	2	33.400	24.600	4,400	4,400
18	3	33.250	24.750	4,250	4,250
17	4	33.100	24.900	4,100	4,100
16	5	32.950	25.050	3,950	3,950
15	6	32.800	25.200	3,800	3,800
14	7	32.650	25.350	3,650	3,650
13	8	32.500	25.500	3,500	3,500
12	9	32.350	25.650	3,350	3,350
11	0	32.200	25.800	3,200	3,200
10	11	32.050	25.950	3,050	3,050
9	12	31.900	26.100	2,900	2,900
8	13	31.750	26.250	2,750	2,750
7	14	31.600	26.400	2,600	2,600
6	15	31.450	26.550	2,450	2,450
5	16	31.300	26.700	2,300	2,300
4	17	31.150	26.850	2,150	2,150
3	18	31.000	27.000	2,000	2,000
2	19	30.850	27.150	1,850	1,850
1	20	30.700	27.300	1,700	1,700
1	21	30.550	27.450	1,550	1,550
2	22	30.400	27.600	1,400	1,400
3	23	30.250	27.750	1,250	1,250
4	24	30.100	27.900	1,100	1,100
5	25	29.950	28.050	950	950
6	26	29.800	28.200	800	800
7	27	29.650	28.350	650	650
8	28	29.500	28.500	500	500
9	29	29.350	28.650	350	350
10	30	29.200	28.800	200	200

11	31	29.050	28.950	50	50
12	32	28.900	29.100	-100	-100
13	33	28.750	29.250	-250	-250
14	34	28.600	29.400	-400	-400
15	35	28.450	29.550	-550	-550
16	36	28.300	29.700	-700	-700
17	37	28.150	29.850	-850	-850
18	38	28.000	30.000	-1,000	-1,000
19	39	27.850	30.150	-1,150	-1,150
20	40	27.700	30.300	-1,300	-1,300

The values that are within the columns called Buy and Sell are the net gains expected by buyers and sellers if negotiated at the equilibrium price of the game ($ 29,000). These earnings are decreasing from top to bottom until they are negative, and it is at this point that it is expected that no further transactions will take place.

This table contains the information to be able to assign the values that each player will have at the beginning of the game. The first column contains the number of players, both for buyers (Demand column or WTOP) and for sellers (Offer or PC column). The player numbers have been assigned with the purpose of distributing equally the possible rents gained through purchase or sale between the participants, once the transactions are established around the equilibrium price.

Provided are some examples to illustrate the construction of the table and the assignment of values to the players. For example, let's take player number 17 of the buyers. According to the table, this buyer 17 will be able to resell a unit for up to $ 33,100 and the next unit for $ 28,150. If the equilibrium price is $ 29,000 according to the balance between supply and demand, it means that this buyer will be able to make a profit of $ 4,100 with the first unit but it would not be profitable to buy the second unit at $ 29,000, since they would lose money at a resell price of $ 28,150.

Now let's examine the case of vendor number 17. The first unit has a production cost of $ 24,900 and one can make a profit by selling it at the equilibrium price. But the second unit has a production cost of $ 29,850, and therefore it would be a bad strategy to produce it and sell it at a loss with that equilibrium price.

B. Sample Size (suggested minimum)

The design presented here has 40 players who must be randomly divided into two equal groups of buyers and sellers/producers. If the number of participants is smaller, the way in which the game adapts is very simple: players shown in the previous table must be eliminated from player

number 20 downwards; that is, the first and last ones will be eliminated until the number of players present is reached.

It is suggested that the game is played with at least 20 players (10 buyers and 10 producers), for which the previous table is substantially reduced. However, with fewer players, additional changes must be made to the table. Note that for 10 buyers and 10 sellers, the curves will even intersect one or two units after the potential 0 units. One option to reduce the number of players is to increase the slope of the curves, that is, to make it such that the production costs in the previous table will go up at a higher rate and that the resale prices of buyers will decrease at a higher rate.

C. Session Design (N Players, T Rounds)

It is necessary that each group consist of an even number of players (maximum 40 people), so that half (20) are buyers and the other half (20) producers. The game consists of 10 rounds, but you can play fewer or more rounds, dependent upon the time constraints.

In our example, the game consists of 10 rounds or market days, in which each player and buyer must sell or buy up to two bags of potatoes, producers with a minimum sale price according to production costs and prices and buyers with a maximum purchase price determined by the value at which they sell each potato sack to the retailers.

Time: the time for each round (each market day) must be five minutes. The moderator is in charge of announcing the round that is being played - "The first day of the market opens" - and announcing in advance the end of the round - "There is one minute to close the second day of the market" -.

D. Type of Participants

All kinds of people can participate in this game; in the case of watersheds, better results would be obtained if persons dedicated to the same type of production system were to play, but this is not a strict rule.

E. Estimation of the Pay Incentive for Participants

Table of points established on the basis of the total winnings, according to the maximum possible gain for a player.

Virtual $	Possible Payment in US Dollars
60,000-70,000	15
50,000-59,999	14
40,000-49,999	13
30,000-39,999	11
20,000-29,999	9
10,000-19,999	7
0-9,999	5

III. Tools, Logistics

A. Room Layout

The experiment must be carried out in a room that offers an environment in which the participants can move freely in order to be able to look for someone to negotiate with.

B. Field Team

For this game you need a moderator to explain the instructions of the exercise and an assistant to help answer the questions of the group in addition to coordinate the times between each round.

The roles of the moderator are:

Show and explain to the group the purpose and operation of the game and answer any questions that the players have.

The roles of the assistant are:

Help the moderator with distributing things when needed as well as moderate the time.

IV. Necessary Formats to Carry out the Game

A. For the Explanation of the Game Instructions

Once the group of participants knows the objectives of the study and it is divided between producers and buyers, the dynamics of the exercise should be explained. For this reason, it is important to have large samples of the formats that will be used later in the game. In these enlarged samples, the moderator will be able to write some examples so that the players become familiar with the formats and the explanation makes more sense.

For the facilitator's ease, we recommend that these samples be laminated (for example, adhesive contact paper) and in this way they can write on them with erasable markers, which will allow the facilitator to show multiple, different examples.

Format of the Contract

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Format for the Producers

	Round	1	2	3	4	5	6	7	8	9	10
First Sack of Potatoes	Retail price that you negotiated										
	Your cost of production										
	A) Net Gain (value – cost)										
Second Sack of Potatoes	Retail price that you negotiated										
	Your cost of production										
	B) Net Gain (value – cost)										
Earnings for round (A + B) :											
Total Earnings:											

Format for the Buyers

	Round	1	2	3	4	5	6	7	8	9	10
First Sack of Potatoes	Price of Resell (value for yourself)										
	Price paid for the potatoes (cost for yourself)										
	A) Net Gain (value – cost)										
Second Sack of Potatoes	Price of Resell (value for yourself)										
	Price paid for the potatoes (cost for yourself)										
	B) Net Gain (value – cost)										
Earnings for round (A + B) :											
Total Earnings:											

B. For those in charge of Facilitating the Game

For the Moderator

Introduction

Thank you for being here. [Greeting and presentation of the group in charge. If necessary, talk about the general objective of the research and the funding agency, the general project, the working time, the relevance of the study, etc.].

The following exercise is a different and entertaining way to actively participate in a study about people's economic decisions. In accordance with the decisions you make

today, you can earn an amount of money or prizes; thus, it is important that you pay close attention to these instructions.

You may wonder why money is used in these exercises. Money is used because the exercise requires people to make economic decisions; that is to say, that they are decisions with consequences for the wallet, as happens in the reality. At no time is money expected to be a payment for participating in the study, nor is it the only reason for participating.

Explanation of the Game

In this exercise, we will simulate 10 market days in which producers and buyers of potatoes must negotiate with each other in order to generate surpluses. In each market round (one round is one day) you can negotiate a maximum of two (2) sacks of potatoes per person. Each sack has a price of production or resale.

In the case of producers, each sack produced has a cost. The producer can sell his produce in the market to wholesalers. Profits are equal to the difference between the price at which you sell each bag and your production costs (the data explaining the production costs for each bag will be given to each producer).

In the case of buyers, each bag has a resale price (the buyers are wholesalers, so their job is to buy at a price and sell at a higher price). Your earnings are equal to the difference between your resale value (the resale value data for each bag is delivered to each buyer) and what you pay in the market for each bag.

(It may happen that in certain rounds some of you do not buy or sell potatoes. That is also allowed within the game.)

After randomly selecting who will be the sellers and who the buyers, we will open the market every week to negotiate the potato. When two people agree on a price, they will fill out a contract form and deliver it to the moderator.

Give the Game Materials to the Participants

As we said, we will play 10 rounds. Each round is equivalent to a market day, and during each market day each person can buy/sell up to two bags; At the end you must calculate your profits.

Contract cards: On each of these cards you must enter the market number that is announced by the monitor, the buyer's code, and the seller's code. Ten cards will be given to each person, and when each round ends, each pair will deliver a contract card [During the reading of this part, the moderator must indicate the boxes in the enlarged sample].

Personal account sheets: There are two types of account sheets, one for producers and another for marketers.

Producers must enter the sale price which they negotiated, the cost of production (given by the moderator) and the net profit (which is the subtraction of the sale price to which they negotiated minus the cost of production).

Marketers should note the resale price (the value at which they would sell the sack to the retailers) and the price paid to the producers. Thus, they take out the net profit, which is the value at which they will sell each bag and the price paid for it.

[The monitor should deliver one producer sheet per person to the middle of the group and one buyer sheet per person to the other half. Keep in mind that the number of players in the group must be even and not greater than 40: 20 producers and 20 buyers].

[The group of buyers will be numbered from 1 onwards, and each player will mark his account sheet; the same for the producer group].

Value Cards: Each of the players will be given the card with which they can market each sack in each round. The card for the producers indicates the cost of production and the card of the buyers indicates the sale price of each bag. It is important that the information on this card be private.

Example:
We are going to give the example of a market day for a producer and a buyer. Suppose that a producer costs the bag costing $ 27.150 and that the maximum selling price for the buyer is $ 29.650; After a long negotiation, they manage to agree a price of $ 28.458, fill a contract card and deliver it to the moderator. The account sheets were left like this [this example is presented on the enlarged samples for the whole group]:

Format for the Producers

	Round	1	2	3	4	5	6	7	8	9	10
First Sack of Potatoes	Retail price that you negotiated	28.458									
	Your cost of production	27.150									
	A) Net Gain (value – cost)	1.308									
Second Sack of Potatoes	Retail price that you negotiated										
	Your cost of production										
	B) Net Gain (value – cost)										
Earnings for round (A + B) :											
Total Earnings:											

Format for the Buyers

	Round	1	2	3	4	5	6	7	8	9	10
First Sack of Potatoes	Price of Resell (value for yourself)	29.650									
	Price paid for the potatoes (cost for yourself)	28.458									
	A) Net Gain (value – cost)	1.192									
Second Sack of Potatoes	Price of Resell (value for yourself)										
	Price paid for the potatoes (cost for yourself)										
	B) Net Gain (value – cost)										
Earnings for round (A + B) :											
Total Earnings:											

At this time the moderator will provide space for the questions that are generated within the groups and will proceed to read the informed consent.

End of instructions

Frequently asked questions:

Can I buy and/or sell the two sacks of potatoes to the same person?
Of course, you can make the transaction of each sack with any person. The important thing is that for each transacted bag you fill a contract card.

Should I buy-sell every sack of potatoes for the price the card says?
Yes, each of the sacks has a price for you. The order in which they are sold does not matter, but if you sell the two sacks, you must negotiate with the two values that are written on the card.

Can I buy-sell the two sacks of potatoes to different people?
Yes, you can make your transaction with anyone.

If I do not want to buy-sell one or both sacks, can I do it?
Yes, you can pass a round in which you do not make any transaction.

Informed Consent

It is necessary that you, as participants, review and sign the acceptance or informed consent form. In this sheet, we assure you that we will manage all the information collected in the exercises in a confidential manner; In addition, we point out that participating in these exercises does not present any risk. You signature signifies that you are aware of and have accepted the project and the exercises that will be carried out [read the informed consent form

to the whole group, aloud]. If you agree to participate, please fill in your acceptance form, and do not forget to write your player number on it.

For the Monitor

Sheet to register the decisions of players for each round

Competitive Potato Market

Sheet for the monitor (to register all of the agreed contracts for each day, noting the price)

Date:_____ Place:_____

UNITS	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

15										
16										
17										
18										
19										
20										
Total Units Traded										
Average Price										

Sequence of the Experiment

1. Introductions of the Field Team/Facilitators
2. Introductions of the Participants
3. Instructions Lecture
4. Explanation of the Experiment
5. Examples
6. Play the Game (10 Rounds of 5 minutes each)
7. Payment to the participants
8. Comments

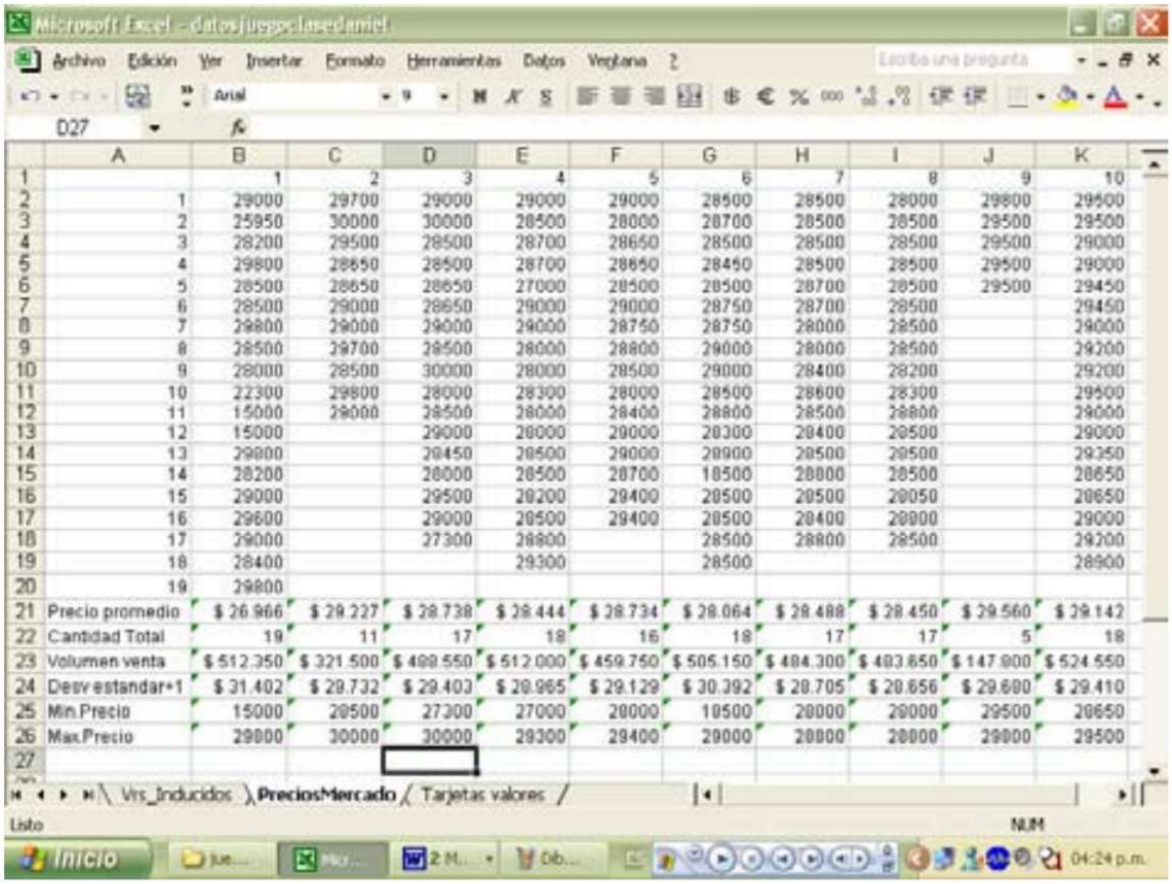
Examples

MERCADO COMPETITIVO DE LA PAPA

HOJA DEL MONITOR (Registrar TODOS los contratos acordados en cada día, anotando el precio)

Fecha: 11 / 21 / 04 Lugar: Univ Javeriana Monitor: Daniel Castillo

Unidades	Día 1	Día 2	Día 3	Día 4	Día 5	Día 6	Día 7	Día 8	Día 9	Día 10
1	29000	29700	29000	29000	29000	28500	28500	28000	29800	29500
2	25950	30000	30000	28500	28000	28700	28500	28500	29500	29500
3	28200	29500	28500	28700	28650	28500	28500	28500	29500	29000
4	29800	28650	28500	28700	28650	28450	28500	28500	29500	29000
5	28500	28650	28650	27000	28500	28500	28700	28500	29500	29450
6	28500	29000	28650	29000	29000	28750	28700	28500		29450
7	29800	29000	29000	29000	28750	8750	28000	28500		29000
8	28500	29700	28500	28000	28800	29000	28000	28500		29200
9	28000	28500	30000	28000	28500	29000	28600	28200		29200
10	22300	29800	28000	28300	28000	28500	28500	28300		29500
11	15000	29000	28500	28000	28400	28300	28400	28300		29000
12	15000		29000	28000	29000	28300	28500	28500		29350
13	29800		28450	28500	29000	28400	28800	28500		28650
14	28200		28000	28500	28700	28500	28500	28500		28650
15	29000		29500	28200	29400	28300	28400	28050		29000
16	29600		29000	28500	29400	28500	28400	28800		29200
17	29000		27300	28800		28500	28800	28500		29200
18	28400			29300		28500				28000
19	29800									
20										
Total de unidades transadas	19	11	17	18	16	18	17	17	5	18
Promedio de precios	29966	29227	28738	28444	28734	28064	28488	28450	29560	29142



	A	B	C	D	E	F	G	H	I	J	K
1		1	2	3	4	5	6	7	8	9	10
2	1	29000	29700	29000	29000	29000	28500	28500	28000	29800	29500
3	2	25950	30000	30000	28500	28000	28700	28500	28500	29500	29500
4	3	28200	29500	28500	28700	28650	28500	28500	28500	29500	29000
5	4	29800	28650	28500	28700	28650	28450	28500	28500	29500	29000
6	5	28500	28650	28650	27000	28500	28500	28700	28500	29500	29450
7	6	28500	29000	28650	29000	29000	28750	28700	28500		29450
8	7	29800	29000	29000	29000	28750	28750	28000	28500		29000
9	8	28500	29700	28500	28000	28800	29000	28000	28500		29200
10	9	28000	28500	30000	28000	28500	29000	28400	28200		29200
11	10	22300	29800	28000	28300	28000	28500	28600	28300		29500
12	11	15000	29000	28500	28000	28400	28800	28500	28800		29000
13	12	15000		29000	28000	29000	28300	28400	28500		29000
14	13	29800		28450	28500	29000	28900	28500	28500		29350
15	14	28200		28000	28500	28700	18500	28800	28500		28650
16	15	29000		29500	28200	29400	28500	28500	28050		28650
17	16	29600		29000	28500	29400	28500	28400	28800		29000
18	17	29000		27300	28800		28500	28800	28500		29200
19	18	28400			29300		28500				28900
20	19	29800									
21	Precio promedio	$ 26.966	$ 29.227	$ 28.738	$ 28.444	$ 28.734	$ 28.064	$ 28.488	$ 28.450	$ 29.560	$ 29.142
22	Cantidad Total	19	11	17	18	16	18	17	17	5	18
23	Volumen venta	$ 512.350	$ 321.500	$ 488.550	$ 512.000	$ 459.750	$ 505.150	$ 484.300	$ 483.650	$ 147.800	$ 524.550
24	Desv estandar*1	$ 31.402	$ 29.732	$ 29.403	$ 28.965	$ 29.129	$ 30.392	$ 28.705	$ 28.656	$ 29.680	$ 29.410
25	Min.Precio	15000	28500	27300	27000	28000	18500	28000	28000	29500	28650
26	Max.Precio	29800	30000	30000	29300	29400	29000	28800	28800	29800	29500
27											

V. Presentation of the Results

The data to present to the group are:

- Quantity of potato sacks negotiated each round
- Average price per round

VI. Materials to Photocopy

The material to be photocopied is:

- Account sheet for producers (on green paper)
- Account sheet for buyers (on green paper)
- Contract cards (on yellow paper)

Value cards [each card is marked with the transaction price per bag for producers and buyers; the values of these cards should only be known by each player].

Potato Market **Producer Code_____**

Personal account sheet (please return this page at the end of the exercise).

You are a potato producer. Each potato sack you produce has a cost to you, and you can sell it in the market to wholesale buyers. In each day (round) of the market you can sell up to two bags, according to the prices they offer and their costs. Your profits are equal to the difference between the price you sell each bag and your production costs. If you produce a bag at $ Z and the price you receive in the market is $ W, your net profit for that bag will be $ (W - Z). Use the following table to record what price you sold, and calculate your profits for each sack sold.

	Round	1	2	3	4	5	6	7	8	9	10
First Sack of Potatoes	Retail price that you negotiated										
	Your cost of production										
	A) Net Gain (value – cost)										
Second Sack of Potatoes	Retail price that you negotiated										
	Your cost of production										
	B) Net Gain (value – cost)										
Earnings for round (A + B) :											
Total Earnings:											

Potato Market **Buyer Code_____**

Personal account sheet (please return this page at the end of the exercise).

You are a potato buyer that purchases sacks. In each day (round) of the market, you can buy a maximum of up to two bags, according to the prices that are offered. Each sack has a resale price for you as a wholesaler, as you must sell sacks to retailers. Therefore, your earnings are equal to the difference between your resale value and what you pay in this market for each bag. If you buy a sack of $ X from a potato producer and its resale price is $ Y, your net profit for that sack will be $ (Y - X). Use the following table to record what price you bought, and calculate your profits for each bag you purchased.

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

	Round	1	2	3	4	5	6	7	8	9	10
First Sack of Potatoes	Price of Resell (value for yourself)										
	Price paid for the potatoes (cost for yourself)										
	A) Net Gain (value – cost)										
Second Sack of Potatoes	Price of Resell (value for yourself)										
	Price paid for the potatoes (cost for yourself)										
	B) Net Gain (value – cost)										
Earnings for round (A + B) :											
Total Earnings:											

Contract Cards and Value Cards for the Buyers and Producers

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:

Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Number of the day of the Market:
Buyer Code:
Producer Code:
Agreed Price: $

Buyer	Code		Cost		Producer	Code		Production Cost
Buyer	1	Sack 1	$30.700		Producer	1	Sack 1	$27.300
Buyer	1	Sack 2	$30.550		Producer	1	Sack 2	$27.450
Buyer	2	Sack 1	$30.850		Producer	2	Sack 1	$27.150
Buyer	2	Sack 2	$30.400		Producer	2	Sack 2	$27.600
Buyer	3	Sack 1	$31.000		Producer	3	Sack 1	$27.000
Buyer	3	Sack 2	$30.250		Producer	3	Sack 2	$27.750
Buyer	4	Sack 1	$31.150		Producer	4	Sack 1	$26.850
Buyer	4	Sack 2	$30.100		Producer	4	Sack 2	$27.900
Buyer	5	Sack 1	$31.300		Producer	5	Sack 1	$26.700
Buyer	5	Sack 2	$29.950		Producer	5	Sack 2	$28.050
Buyer	6	Sack 1	$31.450		Producer	6	Sack 1	$26.550
Buyer	6	Sack 2	$29.800		Producer	6	Sack 2	$28.200
Buyer	7	Sack 1	$31.600		Producer	7	Sack 1	$26.400
Buyer	7	Sack 2	$29.650		Producer	7	Sack 2	$28.350
Buyer	8	Sack 1	$31.750		Producer	8	Sack 1	$26.250

Buyer	8	Sack 2	$29.500		Producer	8	Sack 2	$28.500
Buyer	9	Sack 1	$31.900		Producer	9	Sack 1	$26.100
Buyer	9	Sack 2	$29.350		Producer	9	Sack 2	$28.650
Buyer	10	Sack 1	$32.050		Producer	10	Sack 1	$25.950
Buyer	10	Sack 2	$29.200		Producer	10	Sack 2	$28.800
Buyer	11	Sack 1	$32.200		Producer	11	Sack 1	$25.800
Buyer	11	Sack 2	$29.050		Producer	11	Sack 2	$28.950
Buyer	12	Sack 1	$32.350		Producer	12	Sack 1	$25.650
Buyer	12	Sack 2	$28.900		Producer	12	Sack 2	$29.100
Buyer	13	Sack 1	$32.500		Producer	13	Sack 1	$25.500
Buyer	13	Sack 2	$28.750		Producer	13	Sack 2	$29.250
Buyer	14	Sack 1	$32.650		Producer	14	Sack 1	$25.350
Buyer	14	Sack 2	$28.600		Producer	14	Sack 2	$29.400
Buyer	15	Sack 1	$32.800		Producer	15	Sack 1	$25.200

Buyer	15	Sack 2	$28.450		Producer	15	Sack 2	$29.550
Buyer	16	Sack 1	$32.950		Producer	16	Sack 1	$25.050
Buyer	16	Sack 2	$28.300		Producer	16	Sack 2	$29.700
Buyer	17	Sack 1	$33.100		Producer	17	Sack 1	$24.900
Buyer	17	Sack 2	$28.150		Producer	17	Sack 2	$29.850
Buyer	18	Sack 1	$33.250		Producer	18	Sack 1	$24.750
Buyer	18	Sack 2	$28.000		Producer	18	Sack 2	$30.000
Buyer	19	Sack 1	$33.400		Producer	19	Sack 1	$24.600
Buyer	19	Sack 2	$27.850		Producer	19	Sack 2	$30.150
Buyer	20	Sack 1	$33.550		Producer	20	Sack 1	$24.450
Buyer	20	Sack 2	$27.700		Producer	20	Sack 2	$30.300

Competitive Potato Market

Sheet for the monitor (to register all of the agreed contracts for each day, noting the price)

Date:_____ Place:_____

UNITS	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										

17										
18										
19										
20										
Total Units Traded										
Average Price										