

EXPERIMENTAL INSTRUCTIONS
for
“Input Versus Output Taxation in an
Experimental International Economy”

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This document contains a sample copy of an English version (originally in Dutch) of the instructions (incl. redemption values and production schedules) for consumers and X -producers in the small country, and the trading rules used in the experiment. The instructions for subjects acting as consumers and producers in the large country are similar. A full set of the instructions including screen shots of the computer screens is available upon request from the authors.

A Instructions

General Instructions (part 1)

General Instructions

These instructions are part of an experimental study into decision-making on markets. If you follow the instructions carefully you can earn a considerable amount of money. Your earnings will be paid out to you in cash, personally and confidentially, at the end of the experiment.

During today's session, you will participate on a number of markets during a number of time periods in which trading can take place. During these trading periods, you will act as either a Type-I trader or a Type-II trader. During all the trading periods, you will be the same type of trader. You will find a REGISTRATION TABLE in the envelope on your table. Look up the type you represent at the beginning of the form. If you are a Type-I trader you will also find a REDEMPTION VALUES TABLE. If you are a Type-II trader you will find a PRODUCTION TABLE. These tables will help you to weigh up the decisions you can make. **It is not allowed to exchange the information on the tables with others.** It concerns your own personal information.

In the training session, you have already familiarized yourself with the trading rules. You will find a summary of these rules in your envelope.

On the markets, the "franc" will be used as the unit of currency. All trading will take place in francs. At the end of the experiment, you will be paid in guilders. The exchange rate - which indicates how much a franc is in guilders (or cents) - is shown on your Registration table. The more francs you earn, the more guilders you will earn.

Four different goods can be traded: V, W, X and Y. **Goods W and X will be traded on two separate markets, one for W (denoted W1) and one for X (denoted X1).** Goods V and Y will be traded on four separate markets, two for V (denoted V1 and V2) and two for Y (denoted Y1 and Y2). Your trading will be restricted to some of these markets. The markets on which you can trade are shown on your Registration table.

Each trading period consists of two phases. In phase 1, only the markets for V and W are open. On these markets, the Type-I traders are sellers and the Type-II traders are buyers. Once phase 1 is finished phase 2 begins. In phase 2, only the markets for X and Y are open. On these markets, Type II-traders are now sellers and Type-I traders are buyers. Type-I traders can earn money by consuming goods, while Type-II traders can earn money by making a profit.

The Specific Instructions for Type-I and Type-II traders that you will find below, show you precisely how your earnings will be determined. We ask you now to read these carefully. If you have a question regarding these instructions, which concern personal information, put up your hand. We will then come to your table to answer your question. If everybody has finished with the Specific Instructions we will carry on with some final instructions for both types of traders.

In the experiment the Specific Instructions were given here. (For their content, see below.)

General Instructions (part 2)

Instructions for both types of traders

HOW THE SYSTEM WORKS

Type-I traders receive an initial endowment of cash (an initial cash) and an initial endowment of V and W. They want to consume V but also X and Y. In phase 1 they can sell V and W to Type-II traders in order to increase their amount of cash to be able to buy X and Y in phase 2.

Type-II traders receive an initial endowment of cash (an initial cash). In phase 1 they can use this to buy units of V and W. They need these units to produce units of X and Y, which they can sell to Type I-traders in phase 2 to make a profit.

EARNINGS

The Specific Instructions it is explained how your earnings in a period are determined. Your earnings will be expressed in francs. At the end of today's meeting, your total earnings during all the trading periods will be exchanged into guilders using the exchange rate stated on your Registration table.

INITIAL ENDOWMENTS

At the beginning of each trading period, you will receive an initial cash with which to buy goods. In addition, Type-I traders also receive some units of V and W which they can sell. These initial endowments, which will be the same in each period, are mentioned on your Registration table.

MARKET RESTRICTIONS (*in WT-system*)

As indicated in the General Instructions, there are different markets for the goods V, W, X and Y. The markets for V and W (V1, V2 and W1) will be open for 4 minutes and 30 seconds. After a short pause of 20 seconds, the markets for X and Y (X1, Y1 and Y2) will be open for 3 minutes and 30 seconds. There is only one exception to this rule which occurs if a good is sold out. In this case, the market for this good will close. The cash which is involved with an outstanding bid on this market will then be available again for other purchases.

Your trading will be restricted to some of the markets. The markets on which you can trade are mentioned on your Registration table.

Some of you will have to pay taxes and/or receive subsidies. All the tax rates and subsidies relevant to the markets on which you can trade are mentioned on your Registration table. N.B. On each separate market, all traders of a certain type (Type-I or Type-II) will be faced with the same tax rates and/or subsidies concerning the good that is being traded on this market.

You will encounter market prices as well as inclusive prices. Market prices are of direct importance for Type-I traders. Inclusive prices are of direct importance for Type-II traders because these prices include the taxes or subsidies which apply to them.

Apart from **two training periods** (in which you cannot earn any money), there will be **16 trading periods** in total. After each period there will be a 2 minutes pause before the next period begins. For those of you who have to pay taxes it is important to note that the tax rates during the **first 8 periods (periods 1 - 8)** will remain the same. Thereafter, beginning with **period 9**, the tax rates can be different in different periods. We will warn you when this occurs.

If you have a question put up your hand. We will then come to you to answer your question.

MARKET RESTRICTIONS (*in STLS-system*)

As indicated in the General Instructions, there are different markets for the goods V, W, X and Y. The markets for V and W (V1, V2 and W1) will be open for 4 minutes and 30 seconds.

After a short pause of 20 seconds, the markets for X and Y (X1, Y1 and Y2) will be open for 3 minutes and 30 seconds. There is only one exception to this rule which occurs if a good is sold out. In this case, the market for this good will close. The cash which is involved in an outstanding bid on this market will then be available again for other purchases. Your trading will be limited to some of the markets. The markets on which you can trade are mentioned on your Registration table.

Some of you will have to pay taxes and/or receive subsidies. All the tax rates and subsidies relevant to the markets on which you can trade are mentioned on your Registration table. **N.B.** On each separate market, all traders of a certain type (Type-I or Type-II) will be faced with the same tax rates and/or subsidies concerning the good that is being traded on this market, except on market X1. On market X1, some Type-II traders will have to pay taxes on top of the market price of X, while other Type-II traders will not have to do this.

You will encounter market prices as well as inclusive prices. Market prices are of direct importance for Type-I traders. Inclusive prices are of direct importance for Type-II traders because these prices include the taxes or subsidies which apply to them. **Note that the inclusive prices for Type-II traders will differ because these traders do not all have to pay taxes on top of the market price for X. This will be indicated with an asterisk (*).**

Apart from two training periods (in which you cannot earn any money), there will be 16 trading periods in total. After each period there will be a 2 minutes pause before the next period begins. For those of you who have to pay taxes it is important to note that the tax rates during the first 8 periods (periods 1 - 8) will remain the same. Thereafter, beginning with period 9, the tax rates can be different in different periods. We will warn you when this occurs.

If you have a question put your hand up. We will then come to you and answer it.

Specific instructions for consumers (Type-I) and producers (Type-II)

Small country consumers in WT-system and STLS-system

Specific instructions for Type-I traders

Each trading period consists of 2 phases: phase 1 and phase 2.

Phase 1:

In each period, you will receive an initial endowment of cash (an initial cash) and an initial endowment of V and W at the beginning of phase 1. Your initial endowment of V and W and your initial cash, which will be the same in each period, are mentioned on your Registration table.

In phase 1, the markets for V and W are open and you are free to sell however much of your endowment of goods V and W to whoever wishes to buy these goods. The amount of francs that you receive per transaction depends on the market price at which you are selling and the amount of units that you are selling at this price.

However, note that you will receive francs for every unit of V that you do **not** sell in phase 1 on top of your sales proceeds and initial cash. For every unit of V that you do not sell you will receive a subsidy of 70 francs.

Your total cash inventory in francs at the end of phase 1 is therefore equal to:

cash inventory end of phase 1 = initial cash + sales proceeds at market prices + subsidies.

In phase 2, you will need this cash inventory to buy units of X and Y. These units of X and Y, together with the units of V that you did not sell in phase 1 will determine your earnings for the trading period, as will be explained below.

Phase 2:

In phase 2, the markets for X and Y are open. In this phase, you are free to buy units of X and Y from whoever wishes to sell these units. However, to be able to buy these units you need to have enough cash to be able to pay the market price.

Each unit that you buy will be added to your endowment of the good in question. All the units you have in inventory at the end of the period, including the units of V which you did not sell in phase 1 are considered as having been consumed by you. Your earnings in francs in a trading period are determined by the redemption value of the goods consumed by you. The Redemption value table shows the amount that you will receive. Take the table out of the envelope in front of you.

Note first that the redemption value is always 0 as long as you do not have at least one unit of **all** the goods (V, X and Y). There is a warning at the top of the table about this. For the first unit of V that you consume in a trading period you will receive the amount mentioned in the first row of the column "V unit values". If you consume a second unit of V, you will receive the amount mentioned in the second row of the column "V unit values". The total amount that you will receive through your consumption of both units of V is in the second row of the column "V total value". You can calculate the amount that you will receive through consuming X and Y in exactly the same way. Your earnings in a period are then determined by the sum of your earnings through consuming X, Y and V. Thus:

$$\text{Earnings in period} = V \text{ total value} + X \text{ total value} + Y \text{ total value}$$

You are already familiar with reading the Redemption value table. We now ask you to answer the following questions using the table that you have received.

Question 1

Suppose that in a certain period you have not sold 14 units of V during phase 1. Furthermore, suppose that you have bought 1 unit of Y and 10 units of X during phase 2. Therefore, at the end of this period you have 14 units of V, 1 unit of Y and 10 units of X. What are your total earnings for this period?

Your answer:

Question 2

What are your total earnings in this period if you have 0 units of Y instead of 1 unit at the end of the period?

Your answer:

Question 3

Suppose that in a certain period you have not sold 2 units of V during phase 1. Furthermore, suppose that you have bought 7 units of Y and 3 units of X during phase 2. Therefore, at the end of the period you have 2 units of V, 7 units of Y and 3 units of X. What are your total earnings for this period?

Your answer:

Warnings: In the first place, note that you will earn nothing if you do not consume any units of a certain good (V, X or Y), regardless of the number of other goods you consume. Also note from the first row of the Redemption value table that you will only start earning money once

you have more than 1 unit of a product.

Further note that unsold units of W and leftover cash at the end of phase 2 will not provide you with any earnings.

Finally note that you will come across market prices as well as inclusive prices. Market prices are of direct importance for Type-I traders. Inclusive prices are of direct importance for Type-II traders because these prices include the taxes or subsidies that apply to them.

REGISTRATION TABLE

Take the Registration table out of the envelope in front of you. The top of this table gives you personal information concerning: your type, the markets on which you can trade, your exchange rate, your initial endowments, the subsidies you will receive and/or the taxes you have to pay, as well as other relevant subsidies and/or taxes. In the table you should register your sales, your purchases and your earnings for each period. You are already familiar with filling in this table. We would just like to remind you that you should fill in the number of unsold units of V - in the first row under "your sales" - in the pause between phases 1 and 2. You should fill in the rest in the pause at the end of the period. You can use the example in the grey column to help you with this.

Small country producers in WT-system

Specific instructions for Type II traders

Each trading period consists of two phases: phase 1 and phase 2. In all trading periods you will either be a producer of X or a producer of Y. Your Registration table and Production table indicate whether you are an X producer or a Y producer.

Phase 1:

In each period, you will receive an initial endowment of cash (an initial cash) at the beginning of phase 1. Your initial cash, which is indicated on the Registration table, is the same in each period. In phase 1, the markets are open for V and W and you are free to buy units of these goods from whoever wishes to sell them. If you buy goods your inventory of cash decreases. In the first place, you will lose francs because of the costs, which is determined by the market price, at which you buy and the number of units that you buy; these costs determine your purchasing costs at market prices. In the second place, you have to pay taxes on top of the market price of good V. The tax rate, expressed as a percentage of the market price of V, is mentioned on your Registration table. There are no taxes on top of the market price of good W. Your purchasing costs at market prices plus the taxes you have to pay determine your total purchasing costs. These are equal to the purchasing costs at inclusive prices. If you wish to buy units of V or W you need to have sufficient cash in your inventory to pay the purchase costs at inclusive prices.

Your total cash inventory in francs at the end of phase 1 is equal to:

$$\text{Cash inventory at end of phase 1} = \text{initial cash} - \text{purchase costs at market prices} - \text{taxes} = \\ \text{initial cash} - \text{purchase costs at inclusive prices}$$

Warning: You need both V and W to be able to produce units of X or Y, which you can sell in phase 2 of the trading period in order to make a profit. Your earnings in a period are only determined by the profit you make in phase 2.

The total number of units of V and W that you have in your inventory at the end of phase 1 determines how many units of X or Y you will produce. Your Production table shows how many units of X or Y you will produce with a given quantity of V and W.

You are already familiar with reading the Production table. We ask to answer the following questions using the table you have received.

Question 1

Suppose that in a certain period you have bought 19 units of V and 12 units of W during phase 1. Therefore, at the end of this phase you have 19 units of V and 12 units of W in your inventory. What is your level of production?

Your answer:

Question 2

What is your production level if you have 0 instead of 19 units of V in your inventory at the end of phase 1?

Your answer:

Question 3

Suppose that in a certain period you have bought 5 units of V and 3 units of W during phase 1. Therefore, at the end of this phase you have 5 units of V and 3 units of W in your inventory. What is your level of production?

Your answer:

Your level of production is determined automatically by the computer at the end of phase 1.

Warnings: Note that if you do not buy any units of V **and** W (that is, you buy nothing) in phase 1, you do not produce anything and you do not make any profit or loss. If you do not buy any unit of V **or** W (that is, you only buy units of V or units of W) in phase 1, then you still do not produce anything but you do make a loss because of the total purchasing costs for the units bought.

Phase 2:

In phase 2 the markets for X and Y are open. As a seller of X or Y, your trading is restricted to one of these markets. In this phase, you are free to sell units of your production inventory of X or Y to whoever wishes to buy them. If you sell goods you receive francs. Your sales revenues depend on the market price at which you sell and the number of units you sell. This determines your sales revenues at market prices which are the same as your sales revenues at inclusive prices.

Your profits, which determine your earnings in a period, consist of your sales revenues at market prices in phase 2 **minus** your purchase costs of V and W at market prices in phase 1 **minus** the taxes you pay for V in phase 1. Your earnings in a period are therefore equal to:

$$\text{Earnings in period} = \text{sales revenues at market prices} - \text{purchase costs at market prices} - \text{taxes} = \text{sales revenues at inclusive prices} - \text{purchase costs at inclusive prices}$$

Warnings: Note that the units of X and Y that you do not sell in phase 2 will not provide you with any earnings. Furthermore, note that if you do not wish to make a loss in a period, you must try not to sell your inventory for less than the purchasing costs (including taxes). In other words, you should not spend more on the purchase of V and W in phase 1 than you expect to earn back on the sales revenues in phase 2.

REGISTRATION TABLE

Take the Registration table out of the envelope in front of you. The top of this table gives you personal information concerning: your type, the markets on which you can trade, your exchange rate, your initial endowments, the subsidies you will receive and/or the taxes you will pay, as well as other relevant subsidies and/or taxes. In the table you should register your purchases,

sales and earnings for each period. You are already familiar with filling this table. We would just like to point out again that you should fill in the required information in the break at the end of the session. You can use the example in the grey column to help you with this.

Small country producers in STLS-system

Specific instructions for Type II traders

Each trading period consists of two phases: phase 1 and phase 2. In all trading periods you will either be a producer of X or a producer of Y. Your Registration table and Production table indicates whether you are an X producer or a Y producer.

Phase 1:

In each period, you will receive an initial endowment of cash (an initial cash) at the beginning of phase 1. Your initial cash, which is mentioned on the Registration table, is the same in each period.

In phase 1, the markets are open for V and W and you are free to buy units of these goods from whoever wishes to sell them. If you buy goods your cash inventory changes. In the first place, you will lose francs because of the costs, which is determined by the market price, at which you buy the goods and the number of units that you buy; these costs determine your purchasing costs at market prices. On the other hand, your cash inventory increases if you buy units of V, as a result of a subsidy on V. You receive a subsidy for each unit of V that you buy. The amount of the subsidy is mentioned on your Registration table. There is no subsidy for units of W. Your purchasing costs at market prices minus the subsidies you receive together determine your total purchasing costs, which are equal to the purchasing costs at inclusive prices. If you wish to buy units of V or W you need to have sufficient cash in your inventory to pay the purchasing costs at inclusive prices.

Your total cash inventory in francs at the end of phase 1 is equal to:

$$\text{Cash inventory at end of phase 1} = \text{initial cash} - \text{purchasing costs at market prices} + \text{subsidies} = \text{initial cash} - \text{purchasing costs at inclusive prices}$$

Warning: You need both V and W to be able to produce units of X or Y, which you can sell in phase 2 of the trading period in order to make a profit. Your earnings in a period are only determined by the profit you make in phase 2.

The total number of units of V and W that you have in inventory at the end of phase 1 determine how many units of X or Y you will produce. Your Production table shows how many units of X or Y you will produce with a given quantity of V and W.

You are already familiar with reading the Production table. We ask you to answer the following questions using the table you have received.

Question 1

Suppose that in a certain period you have bought 19 units of V and 12 units of W during phase 1. Therefore, at the end of this phase you have 19 units of V and 12 units of W in your inventory. What is your level of production?

Your answer:

Question 2

What is your production level if you have 0 instead of 19 units of V in your inventory at the end of phase 1?

Your answer:

Question 3

Suppose that in a certain period you have bought 5 units of V and 3 units of W during phase 1. Therefore, at the end of this phase you have 5 units of V and 3 units of W in your inventory. What is your level of production?

Your answer:

Your level of production is determined automatically by the computer at the end of phase 1.

Warning: Note that if you do not buy any units of V **and** W (that is, you buy nothing) in phase 1, you do not produce anything and you do not make any profit or loss. If you do not buy any unit of V **or** W (that is, you only buy units of V or units of W) in phase 1, then you still do not produce anything but you do make a loss because of the total purchasing costs for the units bought.

Phase 2:

In phase 2 the markets for X and Y are open. As a seller of X or Y, your trading is restricted to one of these markets. In this phase, you are free to sell units of your production inventory of X or Y to whoever wishes to buy them. If you sell goods you receive francs. Your sales revenues depend on the market price at which you sell and the number of units you sell. This determines your sales revenues at market prices. However, note that you will have to pay a tax on top of the market price of the good that you sell. The tax rate, expressed as a percentage of the market price of the good, is mentioned on your Registration table. The difference between your sales revenues at market prices and the taxes you have to pay determine your sales revenues at inclusive prices.

Your profits, which determine your earnings in a period, consist of your sales revenues at market prices in phase 2 **minus** the taxes you have to pay in phase 2 **minus** your purchasing costs at market prices of V and W in phase 1 **plus** the subsidies that you receive for V in phase 1. Your earnings in a period are therefore equal to:

Earnings in a period = sales revenues at market prices - purchasing costs at market prices - taxes + subsidies = sales revenues at inclusive prices - purchasing costs at inclusive prices

Warnings: Note that the units of X and Y that you do not sell in phase 2 will not provide you with any earnings. Furthermore, note that if you do not wish to make a loss in a period, you must try not to sell your inventory for less than the purchasing costs (including taxes). In other words, you should not spend more on the purchase of V and W in phase 1 than you expect to earn back on the sales revenues in phase 2.

Finally, note that on each separate market, all traders of a certain type (Type-I or Type-II) are faced with the same tax rates and/or subsidies regarding the good that is being traded on that market, except on market X1. On market X1, some Type-II traders have to pay a tax on top of the market price of X, but others do not. The result is that their inclusive prices will differ.

REGISTRATION TABLE

Take the Registration table out of the envelope in front of you. The top of this table gives you personal information concerning: your type, the markets on which you can trade, your exchange rate, your initial endowments, the subsidies you will receive and/or the taxes you have to pay, as well as other relevant subsidies and/or taxes. In the table you should register your purchases, sales and earnings for each period. You are already familiar with filling this table. We would just like to point out again that you should fill in the required information in the break at the end of the session. You can use the example in the grey column to help you with this.

B Registration tables

Small country consumers in WT-system (selection)

Your type: Type-I

Markets on which you can trade: V1, W1, X1, Y1

Your exchange rate: 10 francs = 36 cents

Your initial endowment:	
Initial cash	181
Initial endowment V	15
Initial endowment W	10

Subsidies you receive:
for every not sold unit V: 70
Taxes you have to pay:
none

Other relevant subsidies: Type-II traders receive	
none	
Other relevant taxes: Type-II traders pay	
tax on market price V: 37.8%	N.B. Beginning with period 9 these taxes can change

	example		practice period 1		practice period 2		period 1		
	good		good		good		good		
Your sales	V	W	V	W	V	W	V	W	
not sold units V	A								
total V subsidy	B								
sold units	C	E							
average sales price (in market prices)	D	F							
total sales proceedings	G=B+C*D+E*F								
end cash phase 1	H=initial cash+G								
Your purchases	good		good		good		good		
	X	Y	X	Y	X	Y	X	Y	
bought units	I	J							
average purchase price (in market prices)	K	L							
total purchase costs	M=I*K+J*L								
end cash	N=H-M								
Your earnings	V	good X	Y	V	good X	Y	V	good X	Y
number of units	=A	=I	=J						
total value V, X, Y separately	O	P	Q						
earnings	R=O+P+Q			none		none			

Small country consumers in STLS-system (selection)

Your type: Type-I
Markets on which you can trade: V1, W1, X1, Y1
Your exchange rate: 10 francs = 37 cents

Your initial endowment:	
Initial cash	181
Initial endowment V	15
Initial endowment W	10

Subsidies you receive:
for every not sold unit V: 70
Taxes you have to pay:
none

Other relevant subsidies: Type-II traders receive	
for every bought unit V: 70	
Other relevant taxes: Type-II traders pay	
tax on market price X: 65.2%*	* Not all Type-II traders pay tax on market price X
tax on market price Y: 75.2%	N.B. Beginning with period 9 these taxes can change

	example			practice period 1			practice period 2			period 1		
	good			good			good			good		
Your sales	V		W	V		W	V		W	V		W
not sold units V	A											
total V subsidy	B											
sold units	C		E									
average sales price (in market prices)	D		F									
total sales proceedings	G=B+C*D+E*F											
end cash phase 1	H=initial cash+G											
Your purchases	good			good			good			good		
	X		Y	X		Y	X		Y	X		Y
bought units	I		J									
average purchase price (in market prices)	K		L									
total purchase costs	M=I*K+J*L											
end cash	N=H-M											
Your earnings	good			good			good			good		
	V	X	Y	V	X	Y	V	X	Y	V	X	Y
number of units	=A	=I	=J									
total value V, X, Y separately	O	P	Q									
earnings	R=O+P+Q			none			none					

Small country X-producers in WT-system (selection)

Your type: Type-II

Markets on which you can trade: V1, W1, X1

Your exchange rate: 10 francs = 28 cents

Your initial endowment:	
Initial cash	1223

Subsidies you receive:
none
Taxes you have to pay:
tax on market price V: 37.8%
N.B. Beginning with period 9 this tax can change

Other relevant subsidies: Type-I traders receive
for every not sold unit V: 70

	example		practice period 1		practice period 2		period 1	
Your purchases	good		good		good		good	
	V	W	V	W	V	W	V	W
bought units	A	B						
average purchase price (in inclusive prices)	C	D						
total purchasing costs	E=A*C+B*D							
total production	H							
average costs	I=E/H							
Your sales	good X		good X		good X		good X	
sold units	J							
average sales price (in inclusive prices)	K							
total sales proceedings	L=J*K							
Your earnings	M=I-E		none		none			

Small country X-producers in STLS-system (selection)

Your type: Type-II

Markets on which you can trade: V1, W1, X1

Your exchange rate: 10 francs = 78 cents

Your initial endowment:	
Initial cash	1223

Subsidies you receive:
for every bought unit V: 70
Taxes you have to pay:
tax on market price X: 65.2%*
*Not all Type-II traders pay a tax on market price X
N.B. Beginning with period 9 this tax can change

Other relevant subsidies: Type-I traders receive
for every not sold unit V: 70

	example		practice period 1		practice period 2		period 1	
Your purchases	good		good		good		good	
	V	W	V	W	V	W	V	W
bought units	A	B						
average purchase price (in inclusive prices)	C	D						
total purchasing costs	E=A*C+B*D							
total production	H							
average costs	I=E/H							
Your sales	good X		good X		good X		good X	
sold units	J							
average sales price (in inclusive prices)	K							
total sales proceedings	L=J*K							
Your earnings	M=l-E		none		none			

C Redemption value tables

Small country consumers in WT- and STLS-system

Redemption values table Type-I

N.B. The redemption value is 0 if you have not got at least 1 unit of all the goods (V, X and Y).						
unit	V unit value	V total value	X unit value	X total value	Y unit value	Y total value
1	0.00	0.00	0.00	0.00	0.00	0.00
2	4.33	4.33	17.33	17.33	17.33	17.33
3	2.53	6.87	10.14	27.47	10.14	27.47
4	1.80	8.66	7.19	34.66	7.19	34.66
5	1.39	10.06	5.58	40.24	5.58	40.24
6	1.14	11.20	4.56	44.79	4.56	44.79
7	0.96	12.16	3.85	48.65	3.85	48.65
8	0.83	13.00	3.34	51.99	3.34	51.99
9	0.74	13.73	2.94	54.93	2.94	54.93
10	0.66	14.39	2.63	57.56	2.63	57.56
11	0.60	14.99	2.38	59.95	2.38	59.95
12	0.54	15.53	2.18	62.12	2.18	62.12
13	0.50	16.03	2.00	64.12	2.00	64.12
14	0.46	16.49	0	64.12	0	64.12
15	0.43	16.93	.	.	.	.

D Production tables

Small country X-producer in WT- and STLS-system

Production table Type-II X

units W	units V																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	
1	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	.
2	0	2	3	4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	.
3	0	2	4	5	6	6	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	.
4	0	2	4	5	6	7	8	8	9	9	9	10	10	10	10	10	10	10	10	10	10	.
5	0	2	4	5	7	8	9	9	10	10	11	11	11	11	12	12	12	12	12	12	12	.
6	0	2	4	6	7	8	9	10	11	11	12	12	13	13	13	13	14	14	14	14	14	.
7	0	2	4	6	7	8	10	11	11	12	13	13	14	14	15	15	15	15	16	16	16	.
8	0	2	4	6	7	9	10	11	12	13	13	14	15	15	16	16	16	17	17	17	17	.
9	0	2	4	6	7	9	10	11	12	13	14	15	15	16	17	17	17	18	18	18	19	.
10	0	2	4	6	7	9	10	11	13	14	15	15	16	17	17	18	18	19	19	20	20	.
11	0	2	4	6	7	9	10	12	13	14	15	16	17	17	18	19	19	20	20	21	21	.
12	0	2	4	6	7	9	10	12	13	14	15	16	17	18	19	19	20	21	21	22	22	.
13	0	2	4	6	7	9	10	12	13	14	15	17	17	18	19	20	21	21	22	23	23	.
14	0	2	4	6	7	9	11	12	13	15	16	17	18	19	20	20	21	22	23	23	23	.
15	0	2	4	6	7	9	11	12	13	15	16	17	18	19	20	21	22	23	23	24	24	.
16	0	2	4	6	7	9	11	12	13	15	16	17	18	19	20	21	22	23	24	24	24	.
17	0	2	4	6	7	9	11	12	14	15	16	17	19	20	21	22	23	23	24	25	25	.
18	0	2	4	6	7	9	11	12	14	15	16	17	19	20	21	22	23	24	25	25	25	.
19	0	2	4	6	8	9	11	12	14	15	16	18	19	20	21	22	23	24	25	26	26	.
20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

E Trading rules

RULES FOR TRADING

1. Traders bid or ask. **Bidding** involves carrying out a **bid order (purchase proposal)**, consisting of (a) a bid price and (b) the number of units that one wishes to buy at this price. **Asking** involves carrying out an **ask order (sales proposal)**, consisting of (a) an ask price and (b) the number of units that one wishes to sell at this price.
2. Traders can also buy or sell. **Buying** involves carrying out a **buy order**, consisting of the number of units that one wishes to buy at the outstanding (current) ask price. **Selling** involves carrying out a **sell order**, consisting of the number of units that one wishes to sell at the outstanding (current) bid price.
3. Only the **highest bid price** and the **lowest ask price** are valid on the market irrespective of the number of units that one wishes to buy (demand) or sell (supply), respectively, at this price.
4. Transactions can involve either the total amount supplied or demanded on the market or part of it.
5. If the **total amount supplied on the market is bought**, then the market is open for new ask orders as well as new bid orders, and any price is permitted. If the **total amount demanded on the market is sold**, then the market is open for new ask orders as well as new bid orders, and any price is permitted.
6. If only **part of the amount demanded is sold**, then the amount left remains on the market at the current price. If only **part of the amount supplied is bought**, then the amount left remains on the market at the current price.
7. If a buy order is for **more than the amount supplied on the market**, then the buying trader receives the amount supplied on the market. The remaining units are regarded as a new purchase proposal at the current price. If a selling order is for **more than the amount demanded on the market**, then the trader selling sells the amount demanded on the market. The remaining units are regarded as a new sales proposal at the current price.
8. There is **another way to buy**. If a newly introduced bid price is higher than the current ask price, trading automatically takes place at the current ask price. If such a purchase proposal is for more than the current amount, then the amount remaining is dealt with as a new purchase proposal at the matching price.
There is **another way to sell**. If a newly introduced ask price is lower than the current bid price, trading automatically takes place at the current bid price. If such a sales proposal is for more than the current amount, then the amount remaining is dealt with as a new sales proposal at the matching price.