Supplementary Materials for the Paper: Input versus Output Taxation in an Experimental International Economy

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Abstract

This document contains supplementary materials for the paper "Input versus Output Taxation in an Experimental International Economy".

Contents

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1 Details of the Economic Environment

Figure S.1 shows a flow diagram illustrating the economic environment, where the arrows indicate the flow of factors and goods.

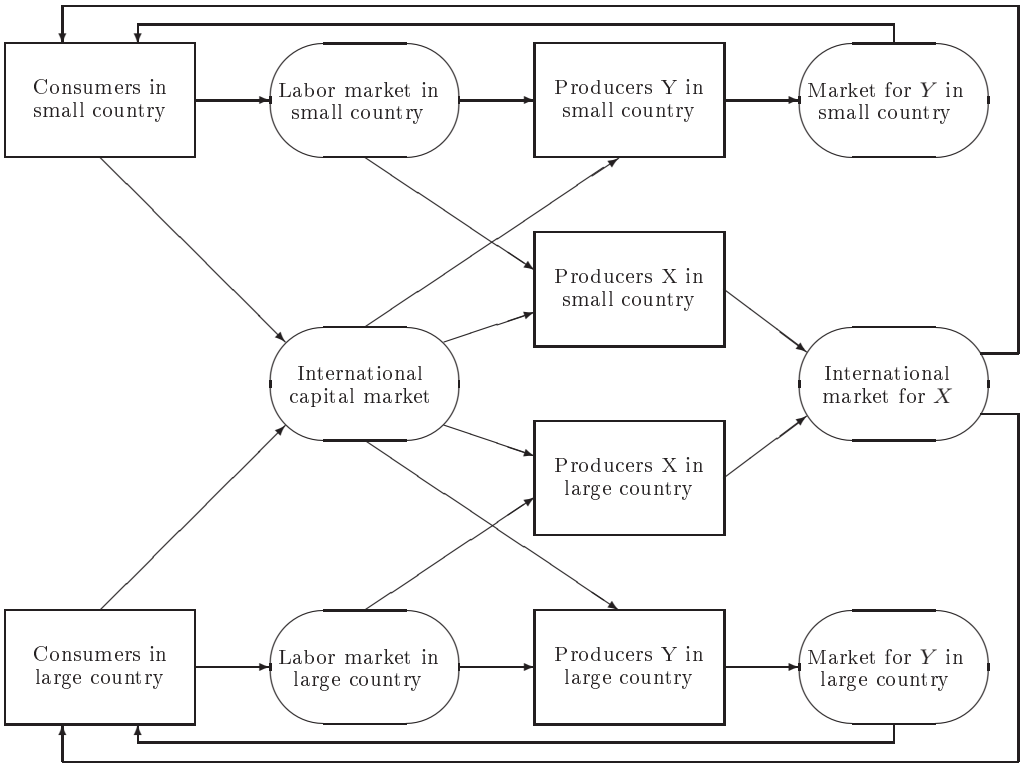

Figure S.1: Flow diagram of the economic environment

Consumers are endowed with $\bar{K}$ units of capital and $\bar{L}$ units of labor. Preferences over leisure $(\bar{L}-L)$ and the two consumption goods, X and Y, are induced by a log-linearized Cobb-Douglas type of utility function.[1] Producers are endowed with a CES production technology exhibiting slightly decreasing returns to scale and allowing for different factor intensities and elasticities of substitution in the two production sectors. In the upper part of Table S.1 the continuous approximations of the discrete utility (earnings) and output tables used in the experiments are shown.

Table S.1 shows the parameter values chosen for the endowments, utility functions, production functions, and the number of agents. To implement a large country in the laboratory the following solution was chosen. While keeping the number of consumers and producers the same for both countries, consumers in the large country are endowed with seven times as many units of labor and capital as holds for the consumers in the small country (see the different $\bar{L}$ and $\bar{K}$ for the small and the large country in the middle part of the table). Moreover, the scaling factors (A_s and A_l) in the production functions are adjusted such that, theoretically, supply and demand in the large economy are seven times as large as in the small economy, in the baseline treatment with the WT-system (see next subsection).[2] To facilitate trading, both consumers and producers are endowed with some fiat money at the beginning of the first phase of each period (see *Cash* in middle part of Table S.1).

[1] Cobb-Douglas utility functions are often assumed in theoretical and empirical macroeconomic studies. Its log-linearized form has the advantage that subjects could be provided with a simple sheet of paper showing the marginal and total payoff for each of the three arguments, even though three goods entered the utility function as variables.

[2] We also considered the alternative approach of increasing the number of agents, but this would not have been feasible. With the requirement of at least three agents on each side of a market to ensure competitiveness (see Davis and Holt, 1993; Huck, Konrad, Müller, and Normann, 2006), the minimal number of subjects per experimental session would have been 64, exceeding by far the capacity of the laboratory.

Table S.1: Experimental parameters

Preferences and production technologies

Consumers i (utility functions):

$U_{i_k} = 25\left[\ln X_{i_k} + \ln Y_{i_k} + .25\ln(\bar{L}_{i_k} - L_{i_k})\right]$,
$U_{i_k} = 0$ if either X_{i_k}, Y_{i_k}, or $\bar{L}_{i_k} - L_{i_k}$ equals zero,
} in both tax systems $(k = s, l)$

Quantities L_{i_k}, Y_{i_k} are determined 'locally' (within a country)
Quantities X_{i_k} are determined 'internationally' (one global market)

Producers j (production functions and profit functions):

Production function

$$Z_{j_{zk}} = A_k\left[\eta_z^{1-\gamma_z} L_{j_{zk}}^{\gamma_z} + (1-\eta_z)^{1-\gamma_z} K_{j_{zk}}^{\gamma_z}\right]^{\frac{0.9}{\gamma_z}},\ Z = X, Y;\ z = x, y;\ k = s, l$$

Labor intensities : $\eta_x = .5625,\ \eta_y = .675$; Substitution elasticities : $\gamma_x = -2,\ \gamma_y = -6$
Scaling factor: $A_s = 1$ (small country), $A_l = 1.21$ (large country)

Profit functions

$\Pi_{j_{xk}} = p_x X_{j_{xk}} - (1+\tau_{wk}) w_k L_{j_{xk}} - r K_{j_{xk}}$,
$\Pi_{j_{yk}} = p_{yk} Y_{j_{yk}} - (1+\tau_{wk}) w_k L_{j_{yk}} - r K_{j_{yk}},\ k = s, l$
} in WT-system

$\Pi_{j_{xs}} = (1-\tau_{xs}) p_x X_{j_{xs}} - (w_s - w_0) L_{j_{xs}} - r K_{j_{xs}}$,
$\Pi_{j_{ys}} = (1-\tau_{ys}) p_{ys} Y_{j_{ys}} - (w_s - w_0) L_{j_{ys}} - r K_{j_{ys}}$,
$\Pi_{j_{xl}} = p_x X_{j_{xl}} - (1+\tau_{wl}) w_l L_{j_{xl}} - r K_{j_{xl}}$,
$\Pi_{j_{yl}} = p_{yl} Y_{j_{yl}} - (1+\tau_{wl}) w_l L_{j_{yl}} - r K_{j_{yl}}$,
} in STLS-system

Prices p_{yk}, w_k, taxes τ_{wk}, τ_{zs}, and quantities $L_{j_{zk}}$, $Y_{j_{yk}}$ are determined 'locally' (within country $k = s, l$)
Prices p_x, r, and quantities $K_{j_{xk}}$, $X_{j_{xk}}$ are determined 'internationally' (one global market)

Endowments (both tax systems)

	Small country	Large country
Consumer	$\bar{L}_i = 15,\ \bar{K}_i = 10,\ Cash_i = 181$	$\bar{L}_i = 105,\ \bar{K}_i = 70,\ Cash_i = 1268$
X-producer	$\bar{L}_j = 0,\ \bar{K}_j = 0,\ Cash_j = 1223$	$\bar{L}_j = 0,\ \bar{K}_j = 0,\ Cash_j = 8557$
Y-producer	$\bar{L}_j = 0,\ \bar{K}_j = 0,\ Cash_j = 815$	$\bar{L}_j = 0,\ \bar{K}_j = 0,\ Cash_j = 5705$

Number of agents

Consumers	3	3
X-Producers	2	2
Y-Producers	3	3

Tax systems

	WT-system	STLS-system	
	Both countries k	Small country s	Large country l
Unemployment benefit (w_0)	70	70	70
Labor subsidy (w_0)	0	70	0
Initial wage tax rate (τ_w^0)	.3777	0	.3777
Wage tax adjustment rule (τ_w^{t+1})	$\tau_{wk}^{t+1} w_k^t L_k^t = w_0(\bar{L}_k - L_k^t)$		$\tau_{wl}^{t+1} w_k^t L_l^t = w_0(\bar{L}_l - L_l^t)$
Initial sales tax rate X (τ_x^0)	0	.6521	0
Initial sales tax rate Y (τ_y^0)	0	.7518	0
Sales taxes adjustment rule ($\tau_x^{t+1}, \tau_y^{t+1}$)		$\tau_{xs}^{t+1} p_x^t X_s^t + \tau_{ys}^{t+1} p_{ys}^t Y_s^t = w_0 \bar{L}_s$; $\tau_{xs}^{t+1}/\tau_{ys}^{t+1} = \tau_{xs}^0/\tau_{ys}^0$	

Note: In the table describing the tax systems, t denotes a trading period, the variables L_k^t, $\bar{L}_k$, X_s, and Y_s denote aggregates in a country, superscripts ^{0} refer to initial values. The tax rates are coming from a theoretical benchmark model and empirical results. The value of w_o corresponds with a replacement rate of about 65%, resembling the Dutch situation, to the theoretical benchmark prediction of the WT-system (see Section 2.2 in the main paper.

2 Experimental Procedures and Instructions

This appendix contains a description of the experimental procedures, 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. The text in blue fonts emphasize differences with the instructions for the closed economy. A full set of the instructions including screen shots of the computer screens is available upon request from the authors.

2.1 Experimental procedures

All experimental sessions were run at the CREED-laboratory of the University of Amsterdam. Subjects, recruited through announcements on bulletin boards, were undergraduates of the University and mostly coming from its Faculty of Economics and Econometrics. Because of the relative complexity of the experimental environment we implemented the following procedure. Subjects had to sign up for three meetings: a training session (where participants learned the trading rules, and how to use forms, tables, and the experiment software), a 'closed economy' session (for getting subjects experienced with trading), and the international economy session.[3] Subjects were paid out only at the end of the third meeting. They received a show-up fee of € 32,– for the training session. In the closed economy sessions they earned on average € 12,– while receiving € 18,– as a show-up fee. The show-up fee for the international economy session was € 4,50 while average earnings in this sessions amounted to € 54,–. All meetings lasted about 3.5 hours. At the training session each subject was randomly assigned the role of consumer or producer, which they kept in the subsequent meetings.

At the beginning of an experimental session subjects received instructions consisting of a general part, read aloud by the experimenter, and a role-specific part, which was quietly read by the subjects. They further received personal history forms with all the information that was relevant to them (concerning endowments, markets they were allowed to trade in, any taxes or subsidies, and the conversion rate of 'francs' to cash).[4] Similar information was provided on the computer screen. By having subjects fill in their transactions and earnings these forms were also intended to make them fully aware of the consequences of their decisions. After the instructions, quizzes were used to check the understanding of the procedures, the reading of the table with redemption values ('utility') or input-output combinations (production schedule), and the calculation of earnings. A sample copy of the instructions, trading rules, and personal forms used in the experiments can be found below.

Each experimental session started with two unpaid practice rounds, followed by 16 trading periods. During the first eight periods tax rates were kept at their initial values. From trading period 9 on, they adjusted to the budget balance of the previous period. In each period, the input markets phase lasted 4 minutes and 30 seconds. Then, after a short break of 20 seconds, the output markets phase started which lasted 3 minutes and 30 seconds. This was followed by a 2 minutes break for recording before the next period began.[5]

Two series of experimental sessions were conducted, each consisting of three sessions. One series concerned the treatment where the WT-system obtained in both countries, while the other series dealt with the treatment where the STLS-system was effective in the small country while the WT-system again prevailed in the large country.

[3] Parameter values of the closed economy were similar but not identical to the ones used in the experiment. Subjects were selected for the international economy session on the basis of their performance (earnings) in the closed economy session; they got informed about this at the first meeting.

[4] In the experiment consumers were labeled 'type-1 traders' and producers 'type-2 traders'. Moreover, labor and capital were denoted as good V and good W, respectively. Markets were labeled as V1(2), W1, X1, Y1(2). The unemployment benefit was denoted as a subsidy for unsold units of V.

[5] Standing bids and asks were presented as 'market prices' (excluding any taxes or subsidies) and as 'inclusive prices' (including taxes or subsidies). After the closing of the factor markets consumers were informed about the transfers received for unsold units of labor, while producers were informed about the number of goods produced with the inputs they bought. In addition, some market statistics were provided concerning trades, average prices, and the average price subjects received (paid) for the inputs they sold (bought). Similar market statistics were provided after the closing of the product markets.

2.2 Instructions

This section contains a sample copy of an English version (originally in Dutch) of the instructions (inclusive 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. The text in blue fonts emphasize differences with the instructions for the closed economy. A full set of the instructions including screen shots of the computer screens is available upon request from the authors.

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 todays 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 tour 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
In 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 todays 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:

Earnings in period = V total value + X total value + Y 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:

Cash inventory at end of phase 1 = initial cash - purchase costs at market prices - taxes = initial cash - 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:

Earnings in period = sales revenues at market prices - purchase costs at market prices - taxes = sales revenues at inclusive prices - 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:

Cash inventory at end of phase 1 = initial cash - purchasing costs at market prices + subsidies = initial cash - 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.

2.3 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**	
Your sales	good		good		good		good	
	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 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**	
Your sales	good		good		good		good	
	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		good		good		good	
	X		**X**		**X**		**X**	
sold units	J							
average sales price (in inclusive prices)	K							
total sales proceedings	L=J*K							
Your earnings	M=l-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		good		good		good	
	X		**X**		**X**		**X**	
sold units	J							
average sales price (in inclusive prices)	K							
total sales proceedings	L=J*K							
Your earnings	M=l-E		none		none			

2.4 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	.	.	.	.

2.5 Production tables

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

Production table Type-II X

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

2.6 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.

3 Formal Description of the Implemented Economies

3.1 General

Here we describe the implemented economy formally, derive implied supplies and demands on the different markets, describe the budget balancing conditions for the two tax systems, and the chosen parameter values.

3.1.1 Production side

We have two sectors, a capital intensive X- and a labor intensive Y-sector. Furthermore, in the international economy treatment we also have two countries, a small (home) country, s, and a large (foreign) country, l.
Let the production function of a producer be given by

$$Z_{ki} = A_{zk}\left(\eta_z^{1-\gamma_z} L_{zki}^{\gamma_z} + (1-\eta_z)^{1-\gamma_z} K_{zki}^{\gamma_z}\right)^{\mu/\gamma_z},$$

where $Z = X, Y$, $z = x, y$, and $k = s, l$. The *elasticities of substitution* are given by

$$\sigma_z = \frac{1}{1-\gamma_z}.$$

In the following superscribe S (D) and s (d) refer to aggregate and individual supply (demand), respectively. For competitive firms (i.e., marginal cost pricing) the derived product **supply function** is given by

$$\begin{aligned} Z_{ki}^s(p_{zk}, r, w_k) &= \mu^{\frac{\mu}{1-\mu}} A_{zk}^{\frac{1}{1-\mu}} (p_{zk}(1-\tau_{pzk}))^{\frac{\mu}{1-\mu}} \\ &\times \left[(1-\eta_z) r^{\frac{\gamma_z}{\gamma_z-1}} + \eta_z (w_k(1+\tau_{wk}) - T_k w_k)^{\frac{\gamma_z}{\gamma_z-1}}\right]^{\frac{(\gamma_z-1)\mu}{\gamma_z(\mu-1)}} \end{aligned} \tag{S.1}$$

and the **factor demand functions** are

$$\begin{aligned} K_{zki}^d(p_{zk}, r, w_k) &= (1-\eta_z)\mu^{\frac{1}{1-\mu}} A_{zk}^{\frac{1}{1-\mu}} (p_{zk}(1-\tau_{pzk}))^{\frac{1}{1-\mu}} r^{\frac{1}{\gamma_z-1}} \\ &\times \left[(1-\eta_z) r^{\frac{\gamma_z}{\gamma_z-1}} + \eta_z (w_k(1+\tau_{wk}) - T_k w_k)^{\frac{\gamma_z}{\gamma_z-1}}\right]^{\frac{\gamma_z-\mu}{\gamma_z(\mu-1)}}, \end{aligned} \tag{S.2}$$

and

$$\begin{aligned} L_{zki}^d(p_{zk}, r, w_k) &= \eta_z \mu^{\frac{1}{1-\mu}} A_{zk}^{\frac{1}{1-\mu}} (p_{zk}(1-\tau_{pzk}))^{\frac{1}{1-\mu}} (w_k(1+\tau_{wk}) - T_k w_k)^{\frac{1}{\gamma_z-1}} \\ &\times \left[(1-\eta_z) r^{\frac{\gamma_z}{\gamma_z-1}} + \eta_z (w_k(1+\tau_{wk}) - T_k w_k)^{\frac{\gamma_z}{\gamma_z-1}}\right]^{\frac{\gamma_z-\mu}{\gamma_z(\mu-1)}}, \end{aligned} \tag{S.3}$$

The individual firm's **profit** is given by

$$\begin{aligned} \pi_{zki}(p_{zk}, r, w_k) &= (1-\mu)\mu^{\frac{\mu}{1-\mu}} A_{zk}^{\frac{1}{1-\mu}} (p_{zk}(1-\tau_{pzk}))^{\frac{1}{1-\mu}} \\ &\times \left[(1-\eta_z) r^{\frac{\gamma_z}{\gamma_z-1}} + \eta_z (w_k(1+\tau_{wk}) - T_k w_k)^{\frac{\gamma_z}{\gamma_z-1}}\right]^{\frac{(\gamma_z-1)\mu}{\gamma_z(\mu-1)}}. \end{aligned} \tag{S.4}$$

3.1.2 Consumption side

We have homogeneous consumers with the following Cobb-Douglas (Stone-Geary) utility functions:

$$U_{kj} = X_{kj}^a Y_{kj}^b \left(\bar{L}_{kj} - L_{kj}\right)^c. \tag{S.5}$$

The budget constraint is given by

$$p_{xk} X_{kj} + p_{yk} Y_{kj} = w_k L_{kj} + t_k w_k \left(\bar{L}_{kj} - L_{kj}\right) + r\bar{K}_{kj} + \frac{\Pi_k}{n_{ck}}, \tag{S.6}$$

where Π_k is the k-economy wide profit, n_{ck} is the number of consumers in economy k, $\bar{L}_{kj}$ ($\bar{K}_{kj}$) denotes individual endowments, and L_{kj} (K_{kj}) individual supply of labor and capital of consumer j in economy k. X_{kj} (Y_{kj}) is individual consumption of X (Y) of consumer j in country k. t_k denotes the replacement rate in country k.

The individual factor supply functions are given by:

$$L^s_{kj}(p_{xk}, p_{yk}, w_k, r) = \bar{L}_{kj} - \frac{c}{a+b+c} \frac{w_k \bar{L}_{kj} + r\bar{K}_{kj} + \frac{\Pi_k(p_{xk}, p_{yk}, w_k, r)}{n_{ck}}}{w_k - t_k w_k}, \tag{S.7}$$

$$K^s_{kj} = \bar{K}_{kj}, \tag{S.8}$$

and the individual product demand functions are

$$X^d_{kj}(p_{xk}, p_{yk}, w_k, r) = \frac{a}{a+b+c} \frac{w_k \bar{L}_{kj} + r\bar{K}_{kj} + \frac{\Pi_k(p_{xk}, p_{yk}, w_k, r)}{n_{ck}}}{p_{xk}}, \tag{S.9}$$

and

$$Y^d_{kj}(p_{xk}, p_{yk}, w_k, r) = \frac{b}{a+b+c} \frac{w_k \bar{L}_{kj} + r\bar{K}_{kj} + \frac{\Pi_k(p_{xk}, p_{yk}, w_k, r)}{n_{ck}}}{p_{yk}}. \tag{S.10}$$

3.2 Closed Economy

For the closed economy (with only one country) the following aggregate functions can be derived from the individual functions in Section 3.1. For later reference we will index this closed economy country with subscribe s. Denote the economy wide profit as in (S.6) by Π_s, then

$$\Pi_s(p_{xs}, p_{ys}, r, w_s) = n_{xs}\pi_{xsi}(p_{xs}, r, w_s) + n_{ys}\pi_{ysi}(p_{ys}, r, w_s), \tag{S.11}$$

where n_{zs} $(z = x, y)$ denotes the number of producers of the good Z $(Z = X, Y)$ in country s.

3.2.1 Supply side

$$X^S_s(p_{xs}, r, w_s) = n_{xs}X^s_{si}(p_{xs}, r, w_s) \tag{S.12}$$

$$Y^S_h(p_{ys}, r, w_s) = n_{ys}Y^s_{si}(p_{ys}, r, w_s) \tag{S.13}$$

$$L^S_s(p_{xs}, p_{ys}, r, w_s) = n_{cs}L^s_{sj}(p_{xs}, p_{ys}, r, w_s) \tag{S.14}$$

$$K^S_s = n_{cs}K^s_{sj}, \tag{S.15}$$

3.2.2 Demand side

$$X^D_s(p_{xs}, p_{ys}, r, w_s) = n_{cs}X^d_{sj}(p_{xs}, p_{ys}, r, w_s), \tag{S.16}$$

$$Y^D_s(p_{xs}, p_{ys}, r, w_s) = n_{cs}Y^d_{sj}(p_{xs}, p_{ys}, r, w_s). \tag{S.17}$$

$$L^D(p_{xs}, p_{ys}, r, w_s) = n_{xs}L^d_{xsi}(p_{xs}, r, w_s) + n_{ys}L^d_{ysi}(p_{ys}, r, w_s) \tag{S.18}$$

$$K^D(p_{xs}, p_{ys}, r, w_s) = n_{xs}K^d_{xsi}(p_{xs}, r, w_s) + n_{ys}K^d_{ysi}(p_{ys}, r, w_s) \tag{S.19}$$

3.2.3 Balancing conditions for the tax systems

The budget *balancing conditions* for the constant tax regime are:

Wage Tax (WT) system

For convenience we denote this system with superscribe A.

$$\tau_{ws} w_s^A L_s^A = w_{0s}^A \left(\bar{L}_s - L_s^A \right) \tag{S.20}$$

where $w_{0s}^A = t_s w_s^A$ and $\bar{L}_s$ is the aggregate labor endowment (i.e. $\bar{L}_s = n_{cs} \bar{L}_{sj}$), L_s^A is the equilibrium employment under the WT-system and w_s^A the equilibrium wage under that system.

Sales Tax cum Labor Subsidy (STLS) system

For convenience we denote this system with superscribe B.

$$\tau_{pxs} p_{xs}^B X_s^B + \tau_{pys} p_{ys}^B Y_s^B = w_{0s}^B \bar{L}_s \tag{S.21}$$

where $w_{0s}^B = t_s w_s^B = t_s w_s^B$, X_s^B and Y_s^B are the equilibrium quantities, and p_{xs}^B and p_{ys}^B the equilibrium product prices under the STLS-system. Furthermore, it is required that

$$\frac{\tau_{pxs} p_{xs}^A X_s^A}{\tau_{pys} p_{ys}^A Y_s^A} = \frac{L_{xs}^A}{L_{ys}^A}, \tag{S.22}$$

where for the calculation of the equilibrium under the STLS-system p_{xs}^A, p_{ys}^A, X_s^A, Y_s^A, L_{xs}^A, and L_{ys}^A are the equilibrium values under the WT-system.

3.2.4 Initial and dynamic adjustment conditions for the tax systems in the experiments

In the experiments with the WT-system the equilibrium outcomes of that system are used to determine w_{0s}^A and the initial tax rate τ_{ws}^0. In the experiments with the STLS-system, $w_{0s}^B = w_{0s}^A$ and the initial tax rates are calculated with help of the data gathered in the experiments with the WT-system. Let $\hat{L}_s^A$ be the employment and $\hat{w}_s^A$ be the average wage in the last round(s) of the experiments with the WT-system. Furthermore, let τ_{ws}^0 be the tax rate which balances the budget given this employment level and wage in the WT-system. That is, τ_{ws}^0 is given by

$$\tau_{ws}^0 \hat{w}_s^A \hat{L}_s^A = w_{0s}^A \left(\bar{L}_s - \hat{L}_s^A \right). \tag{S.23}$$

Furthermore, let $\hat{p}_{xs}^A$ and $\hat{p}_{ys}^A$ stand for the average prices of the X and Y products, resp., $\hat{X}_s^A$ and $\hat{Y}_s^A$ for the amount of units sold by firms in the X- and Y-sector, $\hat{L}_{xs}^A$ and $\hat{L}_{ys}^A$ for the amount of labor units employed by firms in the X- and Y-sector, in the last round(s) in the experiments with the WT-system. In the STLS-system the initial tax rates τ_{pxs}^0 and τ_{pys}^0 on sold X- and Y-goods, resp., should be such that the the *net* burden for both industries stays the same. That is,

$$\tau_{pxs}^0 \hat{p}_{xs}^A \hat{X}_s^A - w_{0s}^A \hat{L}_{xs}^A = \tau_{ws}^0 \hat{w}_s^A \hat{L}_{xs}^A \quad \text{and} \tag{S.24}$$

$$\tau_{pys}^0 \hat{p}_{ys}^A \hat{Y}_s^A - w_{0s}^A \hat{L}_{ys}^A = \tau_{ws}^0 \hat{w}_s^A \hat{L}_{ys}^A. \tag{S.25}$$

must hold. Given the value of τ_{ws}^0 determined by (S.23) the system (S.24)-(S.25) then determines the initial values of the tax rates on sold X- and Y-goods, τ_{pxs}^0 and τ_{pys}^0, implemented in the experiments with the STLS-system.
Furthermore, for the WT-system the *dynamic adjustment conditions* for the variable tax regime are:

$$\tau_{ws}(t+1) \tilde{w}_s^A(t) L_s^A(t) = w_{0s}^A \left(\bar{L}_s - L_s^A(t) \right) \tag{S.26}$$

with $\tilde{w}_s^A(t)$ being the *average transaction wage* in period t, that is

$$\tilde{w}_s^A(t) := \frac{\sum w_{s_l}^A(t) L_{s_l}^A(t)}{L_s^A(t)}$$

where $L^A_{s_l}(t)$ is the number of transactions on the labor market at wage $w^A_{s_l}(t)$, $L^A_s(t)$ is the total number of transactions on the labor market (i.e., the total number of employed labor units), t indicates the period, and $\tau_{ws}(t+1)$ is the updated tax rate on wages for period $t+1$.

For the STLS-system the *dynamic adjustment conditions* for the variable tax regime are:

$$\tau^B_{pxs}(t+1)\tilde{p}^B_{xs}(t)X^B_s(t) + \tau^B_{pys}(t+1)\tilde{p}^B_{ys}(t)Y^B_s(t) = w^B_{0s}\bar{L}_s \tag{S.27}$$

with $w^B_{0s} = w^A_{0s}$, and $\tilde{p}^B_{zs}(t)$ $(z = x, y)$ being the *average transaction price* for good Z $(Z = X, Y)$ in period t, that is

$$\tilde{p}^B_{zs}(t) := \frac{\sum p^B_{zs_l}(t)Z^B_{s_l}(t)}{Z^B_s(t)}$$

where $Z^B_{s_l}(t)$ is the number of transactions on the Z-good market at price $p^B_{zs_l}(t)$, and $Z^B_s(t)$ is the total number of transactions on the Z-good market in period t (i.e. the total number of sold (bought) units of good Z). The second equation which has to be satisfied is

$$\frac{\tau^B_{pxs}(t+1)}{\tau^B_{pys}(t+1)} = \frac{\tau^0_{pxs}}{\tau^0_{pys}} \tag{S.28}$$

where τ^0_{pxs} and τ^0_{pys} are determined by (S.24)-(S.25) with the help of (S.23). The updated tax rates $\tau^B_{pxs}(t+1)$ and $\tau^B_{pys}(t+1)$ are then calculated according to (S.27) and (S.28).

3.3 International economy

For the international economy the following aggregate supply and demand functions can be derived from the individual functions in section 3.1. Profits are distributed such that consumers in the small country receive equal shares of the small country's producers' profits and consumers in the large country receive equal shares of the large country's producers' profits. Denote the aggregate profits in the small country with Π_s and aggregate profits in the large country with Π_l. In the international economy the capital intensive good X is internationally traded. Therefore, whenever it does not lead to ambiguities the subscripts s and l are now dropped for all variables which are related to the X-good. Economy-wide profits in the small country are then given by

$$\Pi_s(p_x, p_{ys}, r, w_h) = n_{xs}\pi_{xsi}(p_x, r, w_s) + n_{ys}\pi_{ysi}(p_{ys}, r, w_s) \tag{S.29}$$

and economy-wide profits in the large country are

$$\Pi_l(p_x, p_{yl}, r, w_l) = n_{xl}\pi_{xli}(p_x, r, w_l) + n_{yl}\pi_{yli}(p_{yl}, r, w_l) \tag{S.30}$$

3.3.1 Supply side

The $X-$product supply consists now of the sum of the aggregate supplies in both countries.

$$X^S(p_x, r, w_s, w_l) = n_{xs}X^s_{si}(p_x, r, w_s) + n_{xl}X^s_{li}(p_x, r, w_l). \tag{S.31}$$

For the $Y-$product we have now two markets, the small and the large market. For the small country the $Y-$supply is

$$Y^S_s(p_{ys}, r, w_s) = n_{ys}Y^s_{si}(p_{ys}, r, w_s), \tag{S.32}$$

and for the large country the $Y-$supply is

$$Y^S_l(p_{yl}, r, w_l) = n_{yl}Y^s_{li}(p_{yl}, r, w_l). \tag{S.33}$$

There are now also two separated labor markets. The aggregate labor supply in the small country is

$$L^S_s(p_x, p_{ys}, w_s, r) = n_{cs}L^s_{sj}(p_x, p_{ys}, r, w_s), \tag{S.34}$$

and in the large country it is given by

$$L^S_l(p_x, p_{yl}, w_l, r) = n_{cl}L^s_{lj}(p_x, p_{yl}, r, w_l). \tag{S.35}$$

Aggregate capital supply is now given by

$$K^S = n_{cs}K^s_{sj} + n_{cl}K^s_{lj}. \tag{S.36}$$

3.3.2 Demand side

The $X-$good demand is now the sum of the aggregate demands in both countries.

$$X^D(p_x, p_{ys}, p_{yl}, r, w_s, w_l) = n_{cs}X^d_{sj}(p_x, p_{ys}, r, w_s) + n_{cl}X^d_{lj}(p_x, p_{yl}, r, w_l). \tag{S.37}$$

As for the supply side there are two separated $Y-$product demand sides,

$$Y_s^D(p_x, p_{ys}, w_s, r) = n_{cs}Y^d_{sj}(p_x, p_{ys}, r, w_s), \tag{S.38}$$

and

$$Y_l^D(p_x, p_{yl}, w_l, r) = n_{cl}Y^d_{lj}(p_x, p_{yl}, r, w_l), \tag{S.39}$$

as well as two separated labor demands. For the small country it is given by

$$L_s^D(p_x, p_{ys}, r, w_s) = n_{xs}L^d_{xsi}(p_x, r, w_s) + n_{ys}L^d_{ysi}(p_{ys}, r, w_s) \tag{S.40}$$

and for the large country it is

$$L_l^D(p_x, p_{yl}, r, w_l) = n_{xl}L^d_{xli}(p_x, r, w_l) + n_{yl}L^d_{yli}(p_{yl}, r, w_l). \tag{S.41}$$

Capital demand is the sum of the demands in the small and the large country.

$$\begin{aligned} K^D(p_x, p_{ys}, p_{yl}, r, w_s, w_l) \quad = \quad & n_{xs}K^d_{xsi}(p_x, r, w_s) + n_{ys}K^d_{ysi}(p_{ys}, r, w_s) + \\ & n_{xl}K^d_{xli}(p_x, r, w_l) + n_{yl}K^d_{yli}(p_{yl}, r, w_l). \end{aligned} \tag{S.42}$$

3.3.3 Balancing conditions for tax systems in the international economy

The budget *balancing conditions* are:

Wage Tax system in both countries (A)

For the *small country*:

$$\tau_{ws}w^A_s L^A_s = w^A_{0s}\left(\bar{L}_s - L^A_s\right) \tag{S.43}$$

where $w^A_{0s} = t_s w^A_s$, $\bar{L}_s$ is the aggregate labor endowment in the small country (i.e., $\bar{L}_s = n_{cs}\bar{L}_{sj}$), and L^A_s is the equilibrium employment in the small country under the WT-system.
For the *large country*:

$$\tau_{wl}w^A_l L^A_l = w^A_{0l}\left(\bar{L}_l - L^A_l\right) \tag{S.44}$$

where $w^A_{0l} = t_l w^A_l$, $\bar{L}_l$ is the aggregate labor endowment in the large country. (i.e. $\bar{L}_l = n_{cl}\bar{L}_{lj}$), and L^A_l is the equilibrium employment in the large country under the WT-system.

Sales Tax cum Labor Subsidy system in the small country (B)

For the *small country*

$$\tau_{pxs}p^B_x X^B_s + \tau_{pys}p^B_{ys}Y^B_s = w^B_{0s}\bar{L}_s \tag{S.45}$$

where $w^B_{0s} = t_s w^B_s = T_s w^B_s$, X^B_s is the equilibrium quantity of good X *sold* by producers in the small country under the STLS-system, and Y^B_s is the equilibrium quantity of good Y_s (the good produced and sold in the small country only) under the STLS-system.

The second equation to be satisfied is

$$\frac{\tau_{pxs} p_x^A X_s^A}{\tau_{pys} p_{ys}^A Y_s^A} = \frac{L_{xs}^A}{L_{ys}^A} \tag{S.46}$$

where for the calculation of the equilibrium of the economy under the STLS-system, p_x^A is the price of good X, X_h^A is the quantity of X *sold* by producers in the small country, p_{ys}^A is the price of good Y_s (which is sold and bought solely in the small country), Y_s^A is the quantity of that good, L_{xs}^A is the amount of labor units employed by X-producers in the small country, and L_{ys}^A is the amount of labor units employed by Y_s-producers in the small country. All these values are equilibrium values of the international economy under the WT-system (in both countries). The equations (S.45) and (S.46) then determine the tax rates τ_{pxs} and τ_{pys} on sold units under the STLS-system.

For the *large country* (where always the WT-system applies) it holds that

$$\tau_{wl} w_l^B L_l^B = w_{0l}^B \left(\bar{L}_l - L_l^B \right), \tag{S.47}$$

where $w_{0l}^B = t_l w_l^B$, and L_l^B is the equilibrium employment in the large country when the STLS-system applies in the small country.

3.3.4 Initial and dynamic adjustment conditions for the tax systems in the experiments

For the WT-system the equilibrium outcomes are used to determine w_{0s}^A, w_{0l}^A, and the initial tax rates τ_{ws}^0 and τ_{wl}^0 in the experiments with the WT-system applying in both countries. In the experiments with the STLS-system applying in the small country $w_{0s}^B = w_{0s}^A$, $w_{0l}^B = w_{0l}^A$, and the initial tax rates are calculated with help of the data gathered in the experiments with the WT-system in both countries. Let $\hat{L}_s^A$ be the employment and $\hat{w}_s^A$ be average wage in the small country in the last round(s) of the experiments with the WT-system in both countries. Furthermore, let τ_{ws}^0 be the tax rate which balances the budget in the small country given this employment level and wage in with the WT-system in both countries. That is, τ_{ws}^0 is given by

$$\tau_{ws}^0 \hat{w}_s^A \hat{L}_s^A = w_{0s}^A \left(\bar{L}_s - \hat{L}_s^A \right). \tag{S.48}$$

Furthermore, let $\hat{p}_x^A$ and $\hat{p}_{ys}^A$ stand for the average prices of the X and Y_s products, resp., $\hat{X}_s^A$ for the amount of X *sold* by producers of X in the small country and $\hat{Y}_s^A$ for the amount of Y_s^A sold by producers of Y_s, $\hat{L}_{xs}^A$ for the amount of labor units employed by X-producers in the small country and $\hat{L}_{ys}^A$ for the amount of labor units employed by firms in the Y_s-sector, in the last round(s) in the experiments with WT-system in both countries.

When the STLS-system applies in the small country the initial tax rates in the small country, τ_{pxs}^0 and τ_{pys}^0 on sold X- and Y_s-goods, should be such that the *net* burden for both industries in the small country stays the same. That is,

$$\tau_{pxs}^0 \hat{p}_s^A \hat{X}_s^A - w_{0s}^A \hat{L}_{xs}^A = \tau_{ws}^0 \hat{w}_s^A \hat{L}_{xs}^A \quad \text{and} \tag{S.49}$$

$$\tau_{pys}^0 \hat{p}_{ys}^A \hat{Y}_s^A - w_{0s}^A \hat{L}_{ys}^A = \tau_{ws}^0 \hat{w}_s^A \hat{L}_{ys}^A. \tag{S.50}$$

must hold. Given the value of τ_{ws}^0 determined by (S.48) the system (S.49)-(S.50) then determines the implemented initial values of the tax rates on sold X- and Y_s-goods, τ_{pxs}^0 and τ_{pys}^0, for producers in the small country in the experiments with the STLS-system in the small country.

The initial tax rate on wages for the large country is determined by

$$\tau_{wl}^0 \hat{w}_l^A \hat{L}_l^A = w_{0l}^A \left(\bar{L}_l - \hat{L}_l^A \right), \tag{S.51}$$

where $\hat{L}_l^A$ denotes employment and $\hat{w}_l^A$ the average wage in the large country, in the last round(s) of the experiments with the WT-system in both countries.

Furthermore, when the WT-system applies in both countries the *dynamic adjustment conditions* are:

For the *small country*:

$$\tau_{ws}(t+1) \tilde{w}_s^A(t) L_s^A(t) = w_{0s}^A \left(\bar{L}_s - L_s^A(t) \right) \tag{S.52}$$

with $\tilde{w}_s^A(t)$ being the *average transaction wage* in the small country in period t, that is

$$\tilde{w}_s^A(t) := \frac{\sum w_{s_l}^A(t) L_{s_l}^A(t)}{L_s^A(t)}$$

where $L_{s_l}^A(t)$ is the number of transactions on the small country's labor market at wage $w_{s_l}^A(t)$, $L_s^A(t)$ is the total number of transactions on the labor market in the small country (i.e., the total number of labor units employed by producers in the small country), t indicates the period, and $\tau_{ws}(t+1)$ is the updated tax rate on wages in the small country for period $t+1$.
For the *large country*:

$$\tau_{wl}(t+1)\tilde{w}_l^A(t)L_l^A(t) = w_{0l}^A\left(\bar{L}_l - L_l^A(t)\right) \tag{S.53}$$

with $\tilde{w}_l^A(t)$ being the *average transaction wage* in the large country in period t, that is

$$\tilde{w}_l^A(t) := \frac{\sum w_{l_l}^A(t) L_{l_l}^A(t)}{L_l^A(t)}$$

where $L_{l_l}^A(t)$ is the number of transactions on the large country's labor market at wage $w_{l_l}^A(t)$, $L_l^A(t)$ is the total number of transactions on the labor market in the large country (i.e., the total number of labor units employed by producers in the large country), t indicates the period, and $\tau_{wl}(t+1)$ is the updated tax rate on wages in the large country for period $t+1$.
When the STLS-system applies in the small country and the WT-system in the large country the condition for the *small country* is given by

$$\tau_{pxs}^B(t+1)\tilde{p}_x^B(t)X_s^B(t) + \tau_{pys}^B(t+1)\tilde{p}_{ys}^B(t)Y_s^B(t) = w_{0s}^B\bar{L}_s \tag{S.54}$$

with $w_{0s}^B = w_{0s}^A$, $\tilde{p}_x^B(t)$ being the *average transaction price* of units of X, sold by X producers in the small country and $\tilde{p}_{ys}^B(t)$ being the *average transaction price* for good Y_s in period t. That is,

$$\tilde{p}_x^B(t) := \frac{\sum p_{x_l}^B(t) X_{s_l}^B(t)}{X_s^B(t)}$$

where $X_{s_l}^B(t)$ is the number of goods sold by small country's producers of X at a price $p_{x_l}^B(t)$, and $X_s^B(t)$ is the total number of goods sold by (any) X-producers in the small country, in period t. Furthermore,

$$\tilde{p}_{ys}^B(t) := \frac{\sum p_{ys_l}^B(t) Y_{s_l}^B(t)}{Y_s^B(t)}$$

with $Y_{s_l}^B(t)$ being the number of goods sold by Y_s-producers at a price $p_{ys_l}^B(t)$, and $Y_s^B(t)$ is the total number of transactions on the Y_s market, in period t. The second equation which has to be satisfied is

$$\frac{\tau_{pxs}^B(t+1)}{\tau_{pys}^B(t+1)} = \frac{\tau_{pxs}^0}{\tau_{pys}^0} \tag{S.55}$$

where τ_{pxs}^0 and τ_{pys}^0 are determined by (S.49)-(S.50) with the help of (S.48).
For the *large country* the adjustment is the same as in the experiments where in both countries are the WT-system is applied. That is,

$$\tau_{wl}(t+1)\tilde{w}_l^B(t)L_l^B(t) = w_{0l}^B\left(\bar{L}_l - L_l^B(t)\right) \tag{S.56}$$

with $\tilde{w}_l^B(t)$ being the *average transaction wage* in the large country in period t, that is

$$\tilde{w}_l^B(t) := \frac{\sum w_{l_l}^B(t) L_{l_l}^B(t)}{L_l^B(t)}$$

where $L_{l_l}^B(t)$ is the number of transactions on the large labor market at wage $w_{l_l}^B(t)$, $L_l^B(t)$ is the total number of transactions on the labor market in the large country (i.e., the total number of labor units employed by producers in the large country), t indicates the period, and $\tau_{wl}(t+1)$ is the updated tax rate on wages in the large country for period $t+1$.

3.4 Parameter values and treatment conditions

3.4.1 All treatments

Following the parameter values used in the applied general equilibrium model for the Dutch economy of the *Netherlands Bureau for Economic Policy Analysis (Centraal Planbureau)* we have chosen the following parameter values for the production functions in the two sectors:

substitution parameters $\gamma_x = -2$ ($\sigma_x = 1/3$) and $\gamma_y = -6$ ($\sigma_y = 1/7$).

input intensities $\eta_x = 0.5625$ and $\eta_y = 0.675$.

returns to scale $\mu = 0.9$

For the utility functions of the consumers:

intensity parameters $a = b = 1$, $c = 0.25$.

3.4.2 Closed economy

Both systems Furthermore, we use as

efficiency parameter $A_{xs} = A_{ys} = 1.15$ $(= 4^{0.1})$

Agents and endowments

X**-producers**: $n_{xs} = 4$ Y**-producers**: $n_{ys} = 6$ **Consumers**: $n_{cs} = 6$

Capital: $\bar{K}_{sj} = 40$ **Labor**: $\bar{L}_{sj} = 60$

WT-system $t_s w_s = w_{0s} = 70$, $T_s w_s = 0$, $\tau_{pxs} = \tau_{pys} = 0$, $\tau_{ws} = 0.3777$.

STLS-system $t_s w_s = T_s w_s = w_{0s} = 70$, $\tau_{ws} = 0$, the initial values of τ_{pxs} and τ_{pys} will be determined with the help of the data gathered in the experiments with the WT-system applying in both countries (see (S.24)-(S.25)).

3.4.3 International economy

Both systems

Agents and endowments

Small country: X**-producers**: $n_{xs} = 2$ Y_s**-producers**: $n_{ys} = 3$ **consumers**: $n_{cs} = 3$

Large country: X**-producers**: $n_{xl} = 2$ Y_l**-producers**: $n_{yl} = 3$ **consumers**: $n_{cl} = 3$

To make the large country M times as big as the small country we implement the following parameter values for capital and labor endowment and the efficiency parameter of the production functions:

Small country capital: $\bar{K}_{sj} = 10$ **Small country labor**: $\bar{L}_{sj} = 15$

Large country capital: $\bar{K}_{lj} = M\bar{K}_{sj}$ **Large country labor**: $\bar{L}_{lj} = M\bar{L}_{sj}$

as well as $A_{xl} = M^{1-\mu}A_{xs}$, and $A_{yl} = M^{1-\mu}A_{ys}$, with $A_{xs} = A_{ys} = 1$, and $M = 7$.

WT-system in both countries $t_s w_s = t_l w_l = w_{0s}^A = w_{0l}^A = 70$, $T_s w_s = T_l w_l = 0$, $\tau_{pxs} = \tau_{pys} = 0$, $\tau_{ws} = \tau_{wf} = 0.3777$.

To set the unemployment benefits equal for both countries is justified by the fact that if one treats the small and the large country separately, in both countries the same (relative) equilibrium prices emerge. This is easily seen from the demand- and supply functions. The only difference in the supply- and demand functions in the two countries is that those in the large country are multiplied by the factor of M. This factor cancels out in the excess supply- and demand functions.

STLS-system in small country and WT-system in large country $t_s w_s = t_l w_l = w_{0s}^B = w_{0l}^B = 70$, $T_s w_l = w_{0s}^B = 70$, $T_l w_l = 0$. The initial values of τ_{wl}, τ_{pxs} and τ_{pys} are determined with the help of the data gathered in the experiments with the WT-system in both countries (see (S.49)-(S.50) and (S.51)).

4 Additional Statistics

TABLE S.2: CONVERGENCE REGRESSIONS FOR CONSTANT WAGE TAX REGIME
COMPARISON WITH THEORETICAL BENCHMARK MODEL

Variable	a_{11}	a_{12}	a_{13}	a_2	prediction	p-value[a]	Wald's χ^2
				International			
K	231.5	209.2	230.7	236.1	240	.204	18131.7
	(8.92)	(5.99)	(4.32)	(3.04)			
X	171.9	129.0	183.6	164.7	177	.000	5561.2
	(5.97)	(8.22)	(14.59)	(3.43)			
r	.0141	.0164	.0201	.0169	.0307	.000	375.4
	(.0021)	(.0011)	(.0030)	(.0013)			
p_x	.1764	.2283	.1869	.2001	.1882	.038	5628.6
	(.0144)	(.0039)	(.0082)	(.0057)			
				Small country			
K_s	17.7	29.5	42.5	35.9	30	.000	2192.7
	(4.21)	(3.98)	(2.55)	(1.35)			
L_s	28.2	24.9	31.8	25.5	28	.084	811.7
	(2.48)	(3.51)	(4.58)	(1.43)			
X_s^c	22.7	20.7	26.1	25.5	22	.000	6512.8
	(4.32)	(1.12)	(2.79)	(.70)			
X_s^p	16.3	13.3	27.7	25.0	22	.005	1418.4
	(2.71)	(1.65)	(1.92)	(1.05)			
Y_s	15.4	14.1	18.9	14.8	19	.000	1135.4
	(2.82)	(2.98)	(1.72)	(.87)			
w_s	.1903	.2010	.1748	.1825	.1694	.001	4962.4
	(.0110)	(.0050)	(.0033)	(.0039)			
p_{ys}	.2277	.2177	.2500	.2390	.2211	.009	2016.5
	(.0171)	(.0110)	(.0120)	(.0068)			
				Large country			
K_l	212.3	178.9	187.3	202.5	210	.020	11899.6
	(11.52)	(6.92)	(5.72)	(3.2)			
L_l	167.0	175.5	204.6	186.2	197	.041	2700.0
	(12.13)	(11.26)	(14.19)	(5.27)			
X_l^c	147.9	108.3	159.1	142.2	155	.000	4360.2
	(6.24)	(9.26)	(12.37)	(3.44)			
X_l^p	157.1	114.4	159.3	143.3	155	.000	5710.5
	(3.69)	(8.98)	(10.92)	(2.97)			
Y_l	89.9	137.1	113.7	120.3	132	.000	11468.0
	(12.22)	(10.97)	(3.38)	(2.43)			
w_l	.1796	.1426	.1547	.1501	.1694	.000	5419.4
	(.0053)	(.0048)	(.0067)	(.0029)			
p_{yl}	.2107	.2059	.2446	.2211	.2211	.985	30222.6
	(.0181)	(.0102)	(.0037)	(.0024)			

Note: [a] tests the hypothesis that the asymptotic value a_2 is equal to the theoretical prediction; two-sided χ^2 tests. For X superscript c (p) indicates units consumed (produced); for Y quantities consumed are used as units of observation. Standard errors in parentheses; corrected for session specific heteroskedasticity and AR(1).

TABLE S.3: FRACTION OF CASES WHERE PRODUCERS' MARGINAL REVENUE PRODUCT EXCEEDS NET INPUT PRICE

		WT-system		STLS-system	
		Labor	Capital	Labor	Capital
		Small country			
	1 to 8	0.4583	0.6250	0.6250	0.9583
		(0.7646)	(0.0557)	(0.0557)	(0.0000)
X-sector	9 to 16	0.5000	0.6667	0.8750	0.9583
		(0.5573)	(0.0147)	(0.0000)	(0.0000)
	all	0.4792	0.6458	0.7500	0.9583
		(0.6950)	(0.0028)	(0.0000)	(0.0000)
	1 to 8	0.5694	0.6944	0.4722	0.6528
		(0.1444)	(0.0007)	(0.7220)	(0.0064)
Y-sector	9 to 16	0.5833	0.8472	0.9167	0.6944
		(0.0973)	(0.0000)	(0.0000)	(0.0007)
	all	0.5764	0.7708	0.6944	0.6736
		(0.0399)	(0.0000)	(0.0000)	(0.0000)
		Large country			
	1 to 8	0.6042	0.8333	0.9583	0.9583
		(0.0967)	(0.0000)	(0.0000)	(0.0000)
X-sector	9 to 16	0.6250	0.7708	0.7708	1.0000
		(0.0557)	(0.0001)	(0.0001)	(0.0000)
	all	0.6146	0.8021	0.8646	0.9792
		(0.0158)	(0.0000)	(0.0000)	(0.0000)
	1 to 8	0.6250	0.6528	0.7361	0.5694
		(0.0222)	(0.0064)	(0.0000)	(0.1444)
Y-sector	9 to 16	0.6111	0.5972	0.5556	0.6944
		(0.0382)	(0.0625)	(0.2048)	(0.0007)
	all	0.6181	0.6250	0.6458	0.6319
		(0.0029)	(0.0017)	(0.0003)	(0.6319)

Note: Based on average current period input and output prices; within parentheses the probability of obtaining values as least as extreme as observed when $p = 0.5$; binomial test, one-sided; $n = 48$ for periods 1 to 8 and 9 to 16, $n = 96$ for all periods.

5 Alternative Convergence Tests

In this document we report results of regression analyses and convergence tests based on the method proposed by Duffy (2008). As can be seen from a comparison with the regression and convergence analysis reported in our paper, this analysis does not significantly change the results reported there.
For the regressions reported here, following Duffy (2008), we use the following specification for each variable y and each cohort (session) j:

$$y_{jt} = \lambda_j y_{jt-1} + \mu_j + \epsilon_{jt},$$

where t indicates the trading period and ϵ_{jt} an error term.

5.1 Convergence regressions for constant wage tax regime - Comparison with theoretical benchmark model

To compare with the analysis reported in the paper please see Table S.2 in Section 4 of this Supplementary Materials.
For weak convergence of y_j, in a given cohort (session) j, $-1 < \lambda_j < 1$ must (significantly) hold. (Duffy (2008) only requires $\lambda_j < 1$, which is not sufficient.) For strong convergence of y_j for a given cohort (session) j it must hold that $\mu_j/(1-\lambda_j) = y^*$, where y^* is the theoretical (steady state) prediction. To test for strong convergence across cohorts $\mu_j/(1-\lambda_j) = y^*$ must hold for all cohorts j simultaneously.

Note: In all tables standard errors are in parentheses and * (**) indicates significance at 5% (1%).

International variables:

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
	WT 1	WT 2	WT 3
K_{jt}			
K_{jt-1}	-0.1700	0.4161	0.5981
	(0.4298)	(0.2036)	(0.2854)
Constant	270.5159*	137.5345*	96.4126
	(99.6425)	(46.9234)	(67.3724)
# of obs.	7	7	7
R^2	0.03	0.46	0.47
DW statistics	2.03	1.96	2.06
K_{j1}	239	206	229
K_{theo}	240	240	240
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0417	0.0351	0.2181
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.1114	0.0009	0.0025
Weak convergence?	Yes, but not significant	Yes	Yes, but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{theo}$	0.0727	0.3805	0.9858
Strong convergence?	Yes, but only marginally	Yes	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{theo}$	229.7	237.4	240.0
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{theo} = \mathbf{K}^{\mathbf{T}}_{\mathbf{theo}}$ p-value	0.3203		
Joint convergence?	Yes		

Summary:

Internationally, capital employment significantly converges strongly from below to K_{theo}. Joint strong convergence is not rejected.

Note: In this and the following summary statements the qualifications "from below (above)" are made if for a majority of cohorts the value of the dependent variable in $t = 1$ (see e.g. K_{j1}) above) is smaller (larger) than the predicted value as reported in the *joint convergence test*. In cases of no strong but only weak convergence the qualification "to values below (above)" are made if the predicted values as reported in the *joint convergence test* lie below (above) the theoretical value of the respective variable (see e.g. K_{theo} above).

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
	WT 1	WT 2	WT 3
X^c_{jt}			
X^c_{jt-1}	-0.5411*	0.0742	0.3067
	(0.2455)	(0.2406)	(0.3668)
Constant	253.8164**	133.9627**	143.6400
	(40.8037)	(34.0013)	(75.6136)
# of obs.	7	7	7
R^2	0.49	0.02	0.12
DW statistics	3.08	1.59	2.44
X^c_{j1}	178	126	203
X^c_{theo}	177	177	177
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0015	0.0120	0.1173
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.1206	0.0066	0.0162
Weak convergence?	Yes, but not significant	Yes	Yes, but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = X_{theo}$	0.0002	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{theo}$	158.1	147.1	197.9
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{theo} = (\mathbf{X^c_{theo}})^{\mathbf{T}}$ p-value	0.0001		
Joint convergence?	No		

Summary:

Internationally, sold X (i.e. X consumed) (insignificantly) converges weakly from above to values below X^c_{theo}.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
r_{jt}	WT 1	WT 2	WT 3
r_{jt-1}	-0.4442	0.7637	0.7250**
	(0.5689)	(0.3778)	(0.0518)
Constant	0.0234*	0.0043	0.0011*
	(0.0089)	(0.0065)	(0.0004)
# of obs.	7	7	7
R^2	0.11	0.45	0.98
DW statistics	1.53	2.27	1.59
r_{j1}	0.0138	0.0167	0.0126
r_{theo}	0.0307	0.0307	0.0307
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0520	0.5591	0.0032
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.3734	0.0055	0.0000
Weak convergence?	Yes but not significant	Yes but not significant	Yes
Strong convergence test: $\mu_j/(1-\lambda_j) = r_{theo}$	0.0000	0.0008	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} r_{theo}$	0.0097	0.0277	0.0234
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} r_{theo} = \mathbf{r}^{\mathbf{T}}_{\mathbf{theo}}$ p-value	0.0001		
Joint convergence?	No		

Summary:

Internationally, the relative price of capital (insignificantly) converges weakly from below to values below r_{theo}.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
$p_{x_{jt}}$	WT 1	WT 2	WT 3
$p_{x_{jt-1}}$	0.5288	0.4911*	0.6838
	(0.3471)	(0.1813)	(0.3813)
Constant	0.0927	0.1048*	0.0535
	(0.0680)	(0.0386)	(0.0651)
# of obs.	7	7	7
R^2	0.32	0.59	0.39
DW statistics	1.15	2.86	0.76
$p_{x_{j1}}$	0.1747	0.2285	0.1675
$p_{x_{theo}}$	0.1882	0.1882	0.1882
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.2327	0.0377	0.4447
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0070	0.0004	0.0069
Weak convergence?	Yes, but not significant	Yes	Yes, but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{x_{theo}}$	0.4853	0.0050	0.0233
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{x_{theo}}$	0.1923	0.1972	0.1822
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{x_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{x_{theo}}}$ p-value	0.2248		
Joint convergence?	Yes		

Summary:

Internationally, the relative price of X (insignificantly) converges weakly from below to values above $p_{x_{theo}}$. Joint strong convergence is not rejected.

Small country:

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$K_{s_{jt}}$			
$K_{s_{jt-1}}$	0.3891	-0.1516	0.3182
	(0.3352)	(0.4304)	(0.4527)
Constant	20.0801	37.9379*	25.7727
	(10.7529)	(14.1608)	(17.4648)
# of obs.	7	7	7
R^2	0.21	0.02	0.09
DW statistics	2.06	1.98	1.23
$K_{s_{j1}}$	19	30	38
$K_{s_{theo}}$	30	30	30
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1280	0.0440	0.1924
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0090	0.1058	0.0333
Weak convergence?	Yes, but not significant	Yes, but not significant	Yes, but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{s_{theo}}$	0.5639	0.1525	0.0196
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{s_{theo}}$	31.75	33.39	35.32
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{s_{theo}} = \mathbf{K}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.2763		
Joint convergence?	Yes		

Summary:

In the small country, capital employment converges strongly from below to $K_{s_{theo}}$. Joint strong convergence is not rejected.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$L_{s_{jt}}$			
$L_{s_{jt-1}}$	0.3333	-0.3074	-0.1118
	(0.4819)	(0.3798)	(0.5961)
Constant	17.2857	30.1025**	35.6579
	(13.0639)	(9.0314)	(18.7655)
# of obs.	7	7	7
R^2	0.09	0.12	0.01
DW statistics	1.77	2.18	1.29
$L_{s_{j1}}$	28	27	31
$L_{s_{theo}}$	28	28	28
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.2251	0.0184	0.1212
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0395	0.1278	0.1965
Weak convergence?	Yes, but not significant	Yes, but not significant	Yes, but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = L_{s_{theo}}$	0.3328	0.0031	0.0098
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{s_{theo}}$	26.62	21.50	32.53
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{s_{theo}} = \mathbf{L}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0135		
Joint convergence?	No		

Summary:

In the small country, labor employment converges (insignificantly) weakly from above to values below $L_{s_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$X^c_{s_{jt}}$			
$X^c_{s_{jt-1}}$	0.2688	-0.1517	-0.0041
	(0.4249)	(0.5256)	(0.4472)
Constant	15.7889	28.1685*	27.9713*
	(9.7417)	(12.5054)	(12.4979)
# of obs.	7	7	7
R^2	0.07	0.02	0.00
DW statistics	1.58	1.81	1.98
$X^c_{s_{j1}}$	25	22	25
$X^c_{s_{theo}}$	22	22	22
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1459	0.0800	0.0747
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0306	0.1675	0.0765
Weak convergence?	Yes, but not significant	Yes, but not significant	Yes, but only marginally
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{s_{theo}}$	0.8730	0.0464	0.0020
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{s_{theo}}$	21.70	24.83	27.88
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{s_{theo}} = (\mathbf{X^c_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0666		
Joint convergence?	Yes, but only marginally		

Summary:

In the small country, consumed X converges (insignificantly) weakly from below to values above $X_{s_{theo}}$. Joint strong convergence is only marginally rejected.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$X^p_{s_{jt}}$			
$X^p_{s_{jt-1}}$	0.1812	0.3598	0.5417
	(0.4499)	(0.2300)	(0.4651)
Constant	18.2215	14.1288**	13.0833
	(10.2712)	(4.7259)	(13.4294)
# of obs.	7	7	7
R^2	0.03	0.33	0.21
DW statistics	1.55	2.63	1.53
$X^p_{s_{j1}}$	20	14	28
$X^p_{s_{theo}}$	22	22	22
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1284	0.0387	0.3697
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0468	0.0020	0.0211
Weak convergence?	Yes but not significant	Yes	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = X^p_{s_{theo}}$	0.9181	0.9599	0.0016
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{s_{theo}}$	22.21	22.05	25.00
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{s_{theo}} = (\mathbf{X^p_{s_{theo}}})^{\mathbf{T}}$ p-value	0.8293		
Joint convergence?	Yes		

Summary:

In the small country, X produced converges strongly from below to $X^p_{s_{theo}}$. Joint strong convergence is not rejected.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$Y^c_{s_{jt}}$			
$Y^c_{s_{jt}}$	-0.4747	-0.3266	-0.3313
	(0.2317)	(0.3955)	(0.4931)
Constant	24.3165**	17.0067**	21.3494*
	(3.7804)	(5.3777)	(7.8536)
# of obs.	7	7	7
R^2	0.46	0.12	0.08
DW statistics	1.31	2.00	2.08
$Y^c_{s_{j1}}$	8	16	17
$Y^c_{s_{theo}}$	19	19	19
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0014	0.0202	0.0428
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0727	0.1494	0.2331
Weak convergence?	Yes but only marginally	Yes but not significant	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = Y^c_{s_{theo}}$	0.0159	0.0019	0.0284
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{s_{theo}}$	15.30	10.80	15.05
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{s_{theo}} = (\mathbf{Y^c_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0034		
Joint convergence?	No		

Summary:

In the small country, Y consumed converges (insignificantly) weakly from above to values below $Y^c_{s_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$w_{s_{jt}}$			
$w_{s_{jt-1}}$	0.5657	0.2046	0.3382
	(0.2689)	(0.3060)	(0.2915)
Constant	0.0738	0.1534*	0.1219*
	(0.0470)	(0.0596)	(0.0530)
# of obs.	7	7	7
R^2	0.47	0.08	0.21
DW statistics	1.47	1.50	1.94
$w_{s_{j1}}$	0.1912	0.2019	0.1755
$w_{s_{theo}}$	0.1694	0.1694	0.1694
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1672	0.0483	0.0725
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0021	0.0110	0.0059
Weak convergence?	Yes but not significant	Yes	Yes but marginally
Strong convergence test: $\mu_j/(1-\lambda_j) = w_{s_{theo}}$	0.9496	0.0000	0.0003
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{s_{theo}}$	0.1696	0.1881	0.1792
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{s_{theo}} = \mathbf{w}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0229		
Joint convergence?	No		

Summary:

In the small country, the relative wage converges (marginally significantly) weakly from above to values above $w_{s_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	WT 1	WT 2	WT 3
$p_{ys_{jt}}$			
$p_{ys_{jt-1}}$	0.2796	0.4173	0.5747
	(0.4211)	(0.2297)	(0.3902)
Constant	0.1563	0.1459*	0.1054
	(0.0917)	(0.0556)	(0.0956)
# of obs.	7	7	7
R^2	0.08	0.40	0.30
DW statistics	1.81	2.53	1.44
$p_{ys_{j1}}$	0.2262	0.2185	0.2443
$p_{ys_{theo}}$	0.2211	0.2211	0.2211
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1478	0.0521	0.3255
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0288	0.0042	0.0100
Weak convergence?	Yes but not significant	Yes but only marginally	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{ys_{theo}}$	0.5635	0.0042	0.0474
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{ys_{theo}}$	0.2181	0.2381	0.2325
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{ys_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{ys_{theo}}}$ p-value	0.0357		
Joint convergence?	No		

Summary:

In the small country, the relative price of Y converges (insignificantly) weakly from above to values above $p_{ys_{theo}}$.

Large country:

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$K_{l_{jt}}$			
$K_{l_{jt-1}}$	0.0146	0.3145	0.5436
	(0.3963)	(0.2957)	(0.3668)
Constant	196.0772*	138.1500*	92.1785
	(79.7042)	(58.5314)	(72.5322)
# of obs.	7	7	7
R^2	0.00	0.18	0.31

DW statistics	2.29	2.48	1.85
$K_{l_{j1}}$	220	176	191
$K_{l_{theo}}$	210	210	210
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0554	0.0682	0.2685
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0506	0.0067	0.0084
Weak convergence?	Yes but only marginally	Yes but only marginally	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{l_{theo}}$	0.1227	0.1954	0.3416
Strong convergence?	Yes	Yes	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{l_{theo}}$	199.14	204.20	206.33
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{l_{theo}} = \mathbf{K}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.2865		
Joint convergence?	Yes		

Summary:

In the large country, capital employment converges strongly from below to $K_{l_{theo}}$. Joint strong convergence is not rejected.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$L_{l_{jt}}$			
$L_{l_{jt-1}}$	0.1590	-0.0494	-0.6466**
	(0.4641)	(0.4424)	(0.2166)
Constant	139.5540	191.5543*	351.1441**
	(76.8246)	(80.7663)	(46.1543)
# of obs.	7	7	7
R^2	0.02	0.00	0.64
DW statistics	1.74	1.99	2.51
$L_{l_{j1}}$	169	177	205
$L_{l_{theo}}$	197	197	197
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1297	0.0638	0.0006
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0547	0.0844	0.1637
Weak convergence?	Yes but not significant	Yes but only marginally	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = L_{l_{theo}}$	0.003	0.0598	0.0000
Strong convergence?	No	Yes but only weakly	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{l_{theo}}$	170.88	181.83	223.77
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{l_{theo}} = \mathbf{L}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0000		
Joint convergence?	No		

Summary:

In the large country, labor employment converges (insignificantly) weakly from below to values below $_{l_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$X^c_{l_{jt}}$			
$X^c_{l_{jt-1}}$	-0.4066	-0.0720	-1.4000
	(0.3589)	(0.2441)	(1.5518)
Constant	200.4558**	128.3089**	428.6000
	(51.5762)	(28.7108)	(276.6599)
# of obs.	7	7	7
R^2	0.20	0.02	0.14
DW statistics	1.99	1.19	1.65
$X^c_{l_{j1}}$	153	104	178
$X^c_{l_{theo}}$	155	155	155
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0112	0.0071	0.0908
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.1592	0.0126	0.1399
Weak convergence?	Yes but not significant	Yes	No but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{l_{theo}}$	0.0026	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{l_{theo}}$	137.44	117.15	211.60
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{l_{theo}} = (\mathbf{X^c_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0007		
Joint convergence?	No		

Summary:

In the large country, consumed X converges (insignificantly) weakly from below to values below $X^c_{l_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$X^p_{l_{jt}}$			
$X^p_{l_{jt-1}}$	-0.0145	-0.2453	0.6954
	(0.1954)	(0.2420)	(0.3521)
Constant	146.5456**	155.3127**	54.9080
	(28.5965)	(29.8017)	(62.9787)
# of obs.	7	7	7
R^2	0.00	0.17	0.44
DW statistics	2.54	1.65	1.93
$X^p_{l_{j1}}$	158	112	178
$X^p_{l_{theo}}$	155	155	155
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0035	0.0036	0.4265
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0040	0.0263	0.0048
Weak convergence?	Yes	Yes	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = X^p_{l_{theo}}$	0.0002	0.0000	0.0002
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{l_{theo}}$	144.30	117.29	162.70
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{l_{theo}} = (\mathbf{X^P_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0000		
Joint convergence?	No		

Summary:

In the large country, X produced converges (significantly) weakly from above to values below $X^p_{l_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$Y^c_{l_{jt}}$			
$Y^c_{l_{jt-1}}$	0.3380	-0.2119	0.3991
	(0.4726)	(0.5170)	(0.3762)
Constant	66.7407	172.2388*	71.9911
	(46.0680)	(73.8115)	(44.7444)
# of obs.	7	7	7
R^2	0.09	0.03	0.18
DW statistics	2.03	1.52	1.86
$Y^c_{l_{j1}}$	93	140	115
$Y^c_{l_{theo}}$	132	132	132
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.2201	0.0660	0.1711
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0366	0.1879	0.0137
Weak convergence?	Yes but not significant	Yes but but not significant	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = Y^c_{l_{theo}}$	0.0045	0.0027	0.0068
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{l_{theo}}$	111.35	144.27	124.67
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{l_{theo}} = (\mathbf{Y^c_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0930		
Joint convergence?	Yes but only marginally		

Summary:

In the large country, consumed Y converges (insignificantly) weakly from below to values below $Y^c_{l_{theo}}$. Joint strong convergence is marginally not rejected.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$w_{l_{jt}}$			
$w_{l_{jt-1}}$	0.6426**	-0.7862*	0.2797
	(0.1655)	(0.3109)	(0.2789)
Constant	0.0533	0.2475**	0.1197*
	(0.0266)	(0.0431)	(0.0460)
# of obs.	7	7	7
R^2	0.75	0.56	0.17
DW statistics	2.33	1.85	1.97
$w_{l_{j1}}$	0.1802	0.1389	0.1609
$w_{l_{theo}}$	0.1694	0.1694	0.1694
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0832	0.0022	0.0493
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0002	0.5221	0.0059
Weak convergence?	Yes but only marginally	Yes but not significant	Yes
Strong convergence test: $\mu_j/(1-\lambda_j) = w_{l_{theo}}$	0.0433	0.0000	0.0198
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{l_{theo}}$	0.1621	0.1143	0.1671
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{l_{theo}} = \mathbf{w}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0001		
Joint convergence?	No		

Summary:

In the large country, the relative wage converges (marginally) weakly from above to values below $w_{l_{theo}}$.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	WT 1	WT 2	WT 3
$p_{yl_{jt}}$			
$p_{yl_{jt-1}}$	0.6671*	-0.2112	0.5063
	(0.2375)	(0.4335)	(0.3333)
Constant	0.0836	0.2356*	0.1113
	(0.0565)	(0.0844)	(0.0768)
# of obs.	7	7	7
R^2	0.61	0.05	0.32
DW statistics	1.96	2.00	2.39
$p_{yl_{j1}}$	0.2139	0.1954	0.2392
$p_{yl_{theo}}$	0.2211	0.2211	0.2211
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.2198	0.0383	0.1986
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0009	0.1285	0.0063
Weak convergence?	Yes but not significant	Yes but not significant	Yes but not significant
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{yl_{theo}}$	0.1236	0.0000	0.4729
Strong convergence?	Yes	No	Yes
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{yl_{theo}}$	0.2310	0.1889	0.2233
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{yl_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{yl_{theo}}}$ p-value	0.0359		
Joint convergence?	No		

Summary:

In the large country, the relative price of Y converges strongly from above to $p_{yl_{theo}}$. Joint strong convergence is rejected.

5.2 Convergence regressions for constant tax regime - Economic performance indicators compared between the tax systems

To compare with the analysis in the paper please see Table 3 there.
To test if the asymptotic values under the different tax regimes differ we calculate the long-run expected (asymptotic) value for each y_j, $\mu_j/(1-\lambda_j)$, from the estimated μ_j and λ_j, and test if the average across the j cohorts in the two tax systems differ from each other.

Note: In all tables standard errors are in parentheses and * (**) indicates significance at 5% (1%).
Small country:

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Unemployment rate$_{jt}$						
Unemployment rate$_{jt-1}$	0.3333	-0.3074	-0.1118	0.5392	0.1279	-0.4417
	(0.4819)	(0.3798)	(0.5961)	(0.3157)	(0.4687)	(0.4382)
Constant	0.2825	0.6384**	0.3194	0.1670	0.3484	0.4137**
	(0.1945)	(0.1828)	(0.1813)	(0.1279)	(0.2047)	(0.1254)
# of obs.	7	7	7	7	7	7
R^2	0.09	0.12	0.01	0.37	0.01	0.17
Asymptotic value	0.4238	0.4883	0.2873	0.3624	0.3995	0.2869
Average asymptotic value	0.3998			0.3496		
$F(1,30)$	2.54					
p-value	0.1214					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Budget surplus$_{jt}$						
Budget surplus$_{jt-1}$	0.2763	-0.3168	0.0399	-0.1325	0.4404**	-0.1029
	(0.4794)	(0.3790)	(0.5893)	(0.3433)	(0.1463)	(0.4045)
Constant	-0.0830	-0.2173**	0.0462	0.1699**	0.1750**	0.1730*
	(0.0573)	(0.0676)	(0.0288)	(0.0530)	(0.0381)	(0.0633)
# of obs.	7	7	7	7	7	7
R^2	0.06	0.12	0.00	0.03	0.64	0.01
Asymptotic value	−0.1146	−0.1650	0.0481	0.1500	0.3127	0.1568
Average asymptotic value	−0.0772			0.2065		
$F(1,30)$	123.84					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Real GDP$_{jt}$						
Real GDP$_{jt-1}$	0.3124	-0.5187	-0.2752	0.5681	0.5293	-0.1983
	(0.2737)	(0.3275)	(0.5001)	(0.3490)	(0.4131)	(0.4352)
Constant	13.5665*	26.1989**	27.9298*	8.7540	9.9524	26.1231*
	(5.2296)	(5.6023)	(10.8044)	(6.8162)	(7.9095)	(9.5809)
# of obs.	7	7	7	7	7	7
R^2	0.21	0.33	0.06	0.35	0.25	0.04
Asymptotic value	19.73	17.25	21.90	20.27	21.15	21.80
Average asymptotic value	19.63			21.07		
$F(1, 30)$	1.03					
p-value	0.3178					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 1$_{jt}$						
Consumer earnings 1$_{jt-1}$	-0.3183*	-0.4520	-0.3960	0.2964*	0.1775	0.4395
	(0.1178)	(0.4028)	(0.4414)	(0.1346)	(0.3437)	(0.3388)
Constant	130.8954**	130.4864**	142.1181**	64.4183**	54.9001*	53.8874
	(11.3764)	(36.7044)	(44.8403)	(11.6120)	(20.4535)	(32.7929)
# of obs.	7	7	7	7	7	7
R^2	0.59	0.20	0.14	0.49	0.05	0.25
Asymptotic value	99.29	89.86	101.81	91.56	66.75	96.14
Average asymptotic value	96.99			84.82		
$F(1, 30)$	14.22					
p-value	0.0007					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 2_{jt}						
Consumer earnings 2_{jt-1}	0.2214	-0.2800	-0.1271	-0.1014	0.5498*	-0.2301
	(0.4883)	(0.3769)	(0.6068)	(0.3563)	(0.2256)	(0.4251)
Constant	-36.6566	-159.6769*	200.8746	437.2238**	441.5387*	527.5839**
	(40.9805)	(61.6329)	(101.1254)	(143.8786)	(169.6615)	(185.1776)
# of obs.	7	7	7	7	7	7
R^2	0.04	0.10	0.01	0.02	0.54	0.06
Asymptotic value	−47.08	−124.75	178.22	396.97	980.73	428.91
Average asymptotic value	2.13			602.20		
$F(1, 30)$	41.80					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 1_{jt}						
Consumer + producer earnings 1_{jt-1}	0.2689	0.2743	0.3896	0.3922	0.7406**	0.2325
	(0.2425)	(0.1746)	(0.3269)	(0.3135)	(0.1305)	(0.3855)
Constant	197.6568*	65.8568*	-27.8518	24.9700	247.4201**	20.1938
	(83.9705)	(28.2987)	(31.7695)	(33.4029)	(68.2068)	(15.2064)
# of obs.	7	7	7	7	7	7
R^2	0.20	0.33	0.22	0.24	0.87	0.07
Asymptotic value	270.35	90.75	−45.63	41.08	953.65	26.31
Average asymptotic value	105.16			340.35		
$F(1, 30)$	4.26					
p-value	0.0478					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 2_{jt}						
Consumer + producer earnings 2_{jt-1}	0.3677	-0.2748	0.2806	-0.0196	0.6361**	-0.1940
	(0.2830)	(0.3262)	(0.4219)	(0.3232)	(0.1901)	(0.4129)
Constant	83.3706	-204.5659*	36.8423	325.0531**	649.0973**	426.8276**
	(90.5018)	(75.6889)	(43.2943)	(110.9581)	(231.4158)	(151.6812)
# of obs.	7	7	7	7	7	7
R^2	0.25	0.12	0.08	0.00	0.69	0.04
Asymptotic value	131.84	−160.45	51.22	318.79	1783.77	357.48
Average asymptotic value	7.53			820.01		
$F(1, 30)$	18.12					
p-value	0.0002					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Net capital export$_{jt}$						
Net capital export$_{jt-1}$	0.1895	0.0524	0.6673**	0.1514	-0.0344	-0.0295
	(0.3553)	(0.4308)	(0.1636)	(0.4348)	(0.4516)	(0.4214)
Constant	-5.3035	-3.4067	-1.4227	-2.3466	-8.4330	-7.7909*
	(3.9817)	(2.4694)	(1.7915)	(1.7469)	(6.2081)	(3.6037)
# of obs.	7	7	7	7	7	7
R^2	0.05	0.00	0.77	0.02	0.00	0.00
Asymptotic value	−6.54	−3.60	−4.28	−2.77	−8.15	−7.57
Average asymptotic value	−4.81			−6.16		
$F(1, 30)$	0.25					
p-value	0.6233					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Y-production intensity$_{jt}$						
Y-production intensity$_{jt-1}$	-0.6647**	0.0209	-0.2787	0.0134	0.4060	0.2231
	(0.2410)	(0.3719)	(0.5490)	(0.1968)	(0.4297)	(0.3258)
Constant	0.7149**	0.3659*	0.4718*	0.3608**	0.2748	0.2797*
	(0.1029)	(0.1524)	(0.1989)	(0.0818)	(0.2097)	(0.1244)
# of obs.	7	7	7	7	7	7
R^2	0.60	0.00	0.05	0.00	0.15	0.09
Asymptotic value	0 .4295	0.3737	0.3690	0.3657	0.4626	0.3600
Average asymptotic value	0.3907			0.3961		
$F(1,30)$	0.05					
p-value	0.8289					

Summary: In the small country, in comparison to the WT-system under the STLS-system asymptotically the unemployment rate is insignificantly smaller ($p = 0.1214$), the budget surplus significantly larger ($p < 0.0001$), the real GDP insignificantly larger ($p = 0.3178$), consumer earnings exclusive budget surplus significantly smaller ($p = 0.0007$), consumer earnings inclusive budget surplus significantly larger ($p < 0.0001$), consumer earnings + producer earnings exclusive budget surplus significantly larger ($p = 0.0478$), consumer earnings + producer earnings inclusive budget surplus significantly larger ($p = 0.0002$), net capital export insignificantly more negative ($p = 0.6233$), and Y-production intensity insignificantly stronger ($p = 0.8289$). Hence, qualitatively (that is, in terms of statistical significances) the results are almost identical with the results attained with the Prais-Winsten regression analysis reported in the paper. The only differences are that the difference in unemployment rates and real GDP are not statistically significant.

Large country:

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Unemployment rate$_{jt}$						
Unemployment rate$_{jt-1}$	0.1590	-0.0494	-0.6466**	-0.0188	-0.6315	0.5965
	(0.4641)	(0.4424)	(0.2166)	(0.2591)	(0.4320)	(1.2034)
Constant	0.3980	0.4412*	0.5318**	0.5748**	1.1856**	0.1617
	(0.2205)	(0.1879)	(0.0702)	(0.1533)	(0.3133)	(0.4353)
# of obs.	7	7	7	7	7	7
R^2	0.02	0.00	0.64	0.00	0.30	0.05
Asymptotic value	0.4732	0.4205	0.3230	0.5642	0.7267	0.4008
Average asymptotic value	0.4056			0.5639		
$F(1, 30)$	13.93					
p-value	0.0008					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Budget surplus$_{jt}$						
Budget surplus$_{jt-1}$	0.5273	-0.0590	-0.6468**	-0.0025	-0.2564	0.8034
	(0.4065)	(0.3804)	(0.2230)	(0.2066)	(0.3250)	(0.8990)
Constant	-0.0904	-0.1336*	-0.0165**	-0.2969**	-0.5475**	-0.0390
	(0.0872)	(0.0492)	(0.0039)	(0.0757)	(0.1482)	(0.0700)
# of obs.	7	7	7	7	7	7
R^2	0.25	0.00	0.63	0.00	0.11	0.14
Asymptotic value	−0.1911	−0.1261	−0.0100	−0.2962	−0.4357	−0.1981
Average asymptotic value	−0.1091			−0.3100		
$F(1, 30)$	1.05					
p-value	0.3135					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Real GDP$_{jt}$						
Real GDP$_{jt-1}$	0.3400	0.0666	-0.2253	0.0653	-0.5805	-1.0819
	(0.4758)	(0.2807)	(0.2587)	(0.2223)	(0.4327)	(0.9176)
Constant	79.4610	124.9195**	178.9995**	93.9349**	100.5164**	274.4344*
	(56.9505)	(37.3380)	(37.6948)	(21.2441)	(27.7478)	(122.0646)
# of obs.	7	7	7	7	7	7
R^2	0.09	0.01	0.13	0.02	0.26	0.22
Asymptotic value	120.39	133.83	146.09	100.49	63.60	131.81
Average asymptotic value	133.45			98.64		
$F(1, 30)$	451.58					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 1$_{jt}$						
Consumer earnings 1$_{jt-1}$	-0.3239	0.1380	0.1508	0.1279	-0.1404	-0.2078
	(0.4966)	(0.3580)	(0.4377)	(0.0813)	(0.4259)	(0.3898)
Constant	270.5813*	180.9473*	180.6669	174.7658**	200.4055*	245.0615**
	(101.1228)	(74.9272)	(93.1459)	(15.9342)	(75.0082)	(79.0241)
# of obs.	7	7	7	7	7	7
R^2	0.08	0.03	0.02	0.33	0.02	0.05
Asymptotic value	204.38	209.90	212.76	200.39	175.73	202.90
Average asymptotic value	209.01			193.01		
$F(1, 30)$	254.79					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 2_{jt}						
Consumer earnings 2_{jt-1}	0.1986	0.0010	-0.6362**	0.0251	-0.6968	0.6472
	(0.4649)	(0.3595)	(0.2097)	(0.2479)	(0.4197)	(0.8741)
Constant	-1,273.6094	-997.2885*	187.0109**	-2,347.2930**	-6,521.6435**	-337.5898
	(753.6027)	(371.7353)	(36.0400)	(685.6999)	(1,608.4538)	(448.3515)
# of obs.	7	7	7	7	7	7
R^2	0.04	0.00	0.65	0.00	0.36	0.10
Asymptotic value	−1589.25	−998.29	114.30	−2407.62	−3843.50	−956.99
Average asymptotic value	−824.42			−2402.70		
$F(1, 30)$	12.31					
p-value	0.0014					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 1_{jt}						
Consumer + producer earnings 1_{jt-1}	0.7151**	0.0571	-0.6005*	0.3555	-0.4436*	0.1639
	(0.1832)	(0.3261)	(0.2188)	(0.4386)	(0.2110)	(0.4859)
Constant	510.2757	1,333.8049*	385.6709**	1,259.2258	3,710.8585**	381.1111
	(253.5125)	(485.1867)	(63.3445)	(868.2897)	(529.0773)	(251.7209)
# of obs.	7	7	7	7	7	7
R^2	0.75	0.01	0.60	0.12	0.47	0.02
Asymptotic value	1790.97	1414.54	240.97	1953.81	2570.63	455.80
Average asymptotic value	1148.83			1660.08		
$F(1, 30)$	2.43					
p-value	0.1294					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 2_{jt}						
Consumer + producer earnings 2_{jt-1}	0.7424**	-0.3460	-0.6215	-0.1293	-0.3247	-0.1854
	(0.2069)	(0.6123)	(0.8398)	(0.2362)	(0.1850)	(0.6623)
Constant	34.3641	294.8374	231.6518	-775.7504**	-1,906.8261**	-446.0078
	(310.1787)	(160.5244)	(136.7500)	(279.2864)	(327.1648)	(222.0988)
# of obs.	7	7	7	7	7	7
R^2	0.72	0.06	0.10	0.06	0.38	0.02
Asymptotic value	133.42	219.05	142.86	−686.91	−1439.44	−376.26
Average asymptotic value	165.11			−834.20		
$F(1, 30)$	5.33					
p-value	0.0281					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Net capital export$_{jt}$						
Net capital export$_{jt-1}$	0.1895	0.0524	0.6673**	0.1514	-0.0344	-0.0295
	(0.3553)	(0.4308)	(0.1636)	(0.4348)	(0.4516)	(0.4214)
Constant	5.3035	3.4067	1.4227	2.3466	8.4330	7.7909*
	(3.9817)	(2.4694)	(1.7915)	(1.7469)	(6.2081)	(3.6037)
# of obs.	7	7	7	7	7	7
R^2	0.05	0.00	0.77	0.02	0.00	0.00
Asymptotic value	6.54	3.60	4.28	2.77	8.15	7.57
Average asymptotic value	4.81			6.16		
$F(1, 30)$	0.25					
p-value	0.6233					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Y-production intensity$_{jt}$						
Y-production intensity$_{jt-1}$	0.2875	-0.4784	-0.3891	-0.3059	-1.4604**	0.3804
	(0.4083)	(0.4442)	(0.3568)	(0.5313)	(0.4595)	(0.4800)
Constant	0.2939	0.7933**	0.5649**	0.7339*	1.7550**	0.4029
	(0.1638)	(0.2401)	(0.1450)	(0.2951)	(0.3289)	(0.3151)
# of obs.	7	7	7	7	7	7
R^2	0.09	0.19	0.19	0.06	0.67	0.11
Asymptotic value	0 .4125	0.5366	0.4067	0.5620	0.7133	0.6503
Average asymptotic value	0.4519			0.6419		
$F(1, 30)$	292.13					
p-value	0.0000					

Summary: In the large country, when the STLS-system prevails in the small country, in comparison to when in the small country the WT-system prevails, asymptotically the unemployment rate is significantly higher ($p = 0.0008$), the budget surplus significantly more negative ($p = 0.3135$), the real GDP significantly smaller ($p < 0.0001$), consumer earnings exclusive budget surplus significantly smaller ($p < 0.0001$), consumer earnings inclusive budget surplus significantly more negative ($p = 0.0014$), consumer earnings + producer earnings exclusive budget surplus insignificantly larger ($p = 0.1294$), consumer earnings + producer earnings inclusive budget surplus significantly smaller ($p = 0.0281$), net capital export insignificantly larger ($p = 0.6233$), and Y-production intensity significantly stronger ($p = 0.0001$). Hence, qualitatively (that is, in terms of statistical significances) the results are identical with the results attained with the Prais-Winsten regression analysis reported in the paper.

5.3 Convergence regressions for variable tax regime - Economic performance indicators compared between the tax systems

To compare with the analysis in the paper please see Table 4 there.
To test if the asymptotic values under the different tax regimes differ we calculate the long-run expected (asymptotic) value for each y_j, $\mu_j/(1-\lambda_j)$, from the estimated μ_j and λ_j, and test if the average across the j cohorts in the two tax systems differ from each other.

Note: Standard errors in parentheses, * significant at 5%; ** significant at 1%
Small country:

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Unemployment rate$_{jt}$						
Unemployment rate$_{jt-1}$	-0.1273	0.3148**	-0.0985	0.7115**	0.3241	-0.4677
	(0.3866)	(0.0490)	(0.3666)	(0.2119)	(0.4317)	(0.3953)
Constant	0.6772**	0.3189**	0.3259**	0.0355	0.1632	0.4194**
	(0.2351)	(0.0235)	(0.1042)	(0.0443)	(0.1092)	(0.1134)
# of obs.	7	7	7	7	7	7
R^2	0.02	0.89	0.01	0.69	0.10	0.22
Asymptotic value	0.6007	0.4655	0.2967	0.1230	0.2414	0.2857
Average asymptotic value	0.4543			0.2167		
$F(1,30)$	80.59					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Budget surplus$_{jt}$						
Budget surplus$_{jt-1}$	0.0113	-0.1692	-0.3372	-0.6179	-0.5203	-0.6377
	(0.3325)	(0.1912)	(0.4178)	(0.3826)	(0.4052)	(0.3241)
Constant	-0.1618*	0.0085	-0.0233	0.0071	-0.0184	0.0189
	(0.0709)	(0.0058)	(0.0263)	(0.0074)	(0.0185)	(0.0108)
# of obs.	7	7	7	7	7	7
R^2	0.00	0.14	0.12	0.34	0.25	0.44
Asymptotic value	-0.1636	0.0073	-0.0174	0.0044	-0.0121	0.0116
Average asymptotic value	-0.0579			0.0013		
$F(1,30)$	16.19					
p-value	0.0004					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Real GDP$_{jt}$						
Real GDP$_{jt-1}$	0.0586	0.3600**	-0.2289	0.6530**	-0.0031	-0.3471
	(0.5532)	(0.0671)	(0.3571)	(0.1883)	(0.4324)	(0.4194)
Constant	12.8706	11.9293**	28.6218**	9.3457	23.1108*	30.2810**
	(7.7216)	(1.2136)	(8.4742)	(4.8219)	(10.0210)	(9.4395)
# of obs.	7	7	7	7	7	7
R^2	0.00	0.85	0.08	0.71	0.00	0.12
Asymptotic value	13.67	18.64	23.29	26.93	23.04	22.48
Average asymptotic value	18.53			24.15		
$F(1,30)$	100.2					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 1_{jt}						
Consumer earnings 1_{jt-1}	0.1189	-0.8981	0.1785**	0.2523	-0.2984	0.1859
	(0.4480)	(0.5869)	(0.0636)	(0.1871)	(0.4345)	(0.4341)
Constant	76.1831	169.7313**	85.0196**	75.6340**	105.0236**	77.8355
	(38.6528)	(53.1684)	(6.2703)	(18.4514)	(35.5143)	(41.8967)
# of obs.	7	7	7	7	7	7
R^2	0.01	0.32	0.61	0.27	0.09	0.04
Asymptotic value	86.46	89.42	103.49	101.16	80.89	95.61
Average asymptotic value	93.12			92.55		
$F(1,30)$	0.04					
p-value	0.8383					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 2_{jt}						
Consumer earnings 2_{jt-1}	-0.0623	-0.2152	-0.2230	-0.8023*	-0.5487	-0.7513*
	(0.3484)	(0.2321)	(0.4372)	(0.3711)	(0.4029)	(0.3204)
Constant	-116.7707	121.8169**	93.7766	195.9813**	81.9450	211.7985**
	(59.8247)	(23.6034)	(53.9450)	(41.4708)	(45.5137)	(40.8746)
# of obs.	7	7	7	7	7	7
R^2	0.01	0.15	0.05	0.48	0.27	0.52
Asymptotic value	-109.92	100.24	76.68	108.74	52.91	120.94
Average asymptotic value	22.33			94.20		
$F(1, 30)$	12.82					
p-value	0.0012					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 1_{jt}						
Consumer + producer earnings 1_{jt-1}	0.1072	0.2699	0.0396	0.4131	0.7600**	0.5631
	(0.5623)	(0.4478)	(0.4617)	(0.2588)	(0.1826)	(0.3693)
Constant	147.2299	141.2591	226.8389	268.4413*	187.9781	68.9829
	(125.4023)	(84.2461)	(113.9574)	(111.0232)	(241.4497)	(64.8202)
# of obs.	7	7	7	7	7	7
R^2	0.01	0.07	0.00	0.34	0.78	0.32
Asymptotic value	164.91	193.49	236.19	457.38	783.11	157.91
Average asymptotic value	198.20			466.13		
$F(1, 30)$	2.90					
p-value	0.0988					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 2_{jt}						
Consumer + producer earnings 2_{jt}	0.6366	0.0616	-0.3366	-0.5916	0.5206	0.0915
	(0.4907)	(0.3923)	(0.4056)	(0.5064)	(0.2982)	(0.4390)
Constant	-18.9178	187.2796*	285.1703**	712.2921**	487.9270	176.5875
	(45.2062)	(77.0483)	(93.7033)	(221.2997)	(385.9785)	(87.2752)
# of obs.	7	7	7	7	7	7
R^2	0.25	0.00	0.12	0.21	0.38	0.01
Asymptotic value	−52.06	199.56	213.34	447.53	1017.69	194.37
Average asymptotic value	120.28			553.20		
$F(1, 30)$	17.84					
p-value	0.0002					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Net capital export$_{jt}$						
Net capital export$_{jt-1}$	0.8356	0.2888	-0.1879	0.2016	-0.6494	-0.4298
	(0.6535)	(0.3820)	(0.4079)	(0.3930)	(0.4145)	(0.3944)
Constant	1.3796	-2.2193	-14.6474*	-13.1782	-20.7151**	-31.8847**
	(1.9759)	(1.2419)	(5.5668)	(7.0773)	(5.4157)	(8.8210)
# of obs.	7	7	7	7	7	7
R^2	0.25	0.10	0.04	0.05	0.33	0.19
Asymptotic value	8.39	−3.12	−12.33	−16.51	−12.56	−22.30
Average asymptotic value	−2.35			−17.12		
$F(1, 30)$	1.71					
p-value	0.2013					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Y-production intensity$_{jt}$						
Y-production intensity$_{jt-1}$	0.5843	-0.1597**	0.0593	0.1613	0.4221	-0.3183
	(0.4257)	(0.0115)	(0.4475)	(0.6455)	(0.3976)	(0.1592)
Constant	0.1696	0.4700**	0.3861*	0.3735	0.3046	0.5137**
	(0.1535)	(0.0047)	(0.1843)	(0.3003)	(0.2048)	(0.0653)
# of obs.	7	7	7	7	7	7
R^2	0.27	0.97	0.00	0.01	0.18	0.44
Asymptotic value	0.4080	0.4051	0.4105	0.4453	0.5271	0.3897
Average asymptotic value	0.4079			0.4540		
$F(1, 30)$	1.88					
p-value	0.1808					

Summary: In the small country, in comparison to the WT-system under the STLS-system asymptotically the unemployment rate is significantly smaller ($p < 0.0001$), the budget surplus significantly larger ($p = 0.0004$), the real GDP significantly larger ($p < 0.0001$), consumer earnings exclusive budget surplus insignificantly smaller ($p = 0.8383$), consumer earnings inclusive budget surplus significantly larger ($p = 0.0012$), consumer earnings + producer earnings exclusive budget surplus marginally significantly larger ($p = 0.0988$), consumer earnings + producer earnings inclusive budget surplus significantly larger ($p = 0.0002$), net capital export insignificantly more negative ($p = 0.2013$), and Y-production intensity insignificantly stronger ($p = 0.1808$). Hence, qualitatively (that is, in terms of statistical significances) the results are almost identical with the results attained with the Prais-Winsten regression analysis reported in the paper. The only differences are that now the budget surplus is significantly larger, the consumer earnings inclusive budget surplus significantly larger, and the net capital export is not statistically significant.

Large country:

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Unemployment rate$_{jt}$						
Unemployment rate$_{jt-1}$	0.8359**	-0.2530	0.1064	0.2953	0.2458	-0.2975
	(0.1388)	(0.5625)	(1.1401)	(0.3479)	(0.3467)	(0.2044)
Constant	0.0792	0.6917*	0.3258	0.3893	0.5737*	0.7559**
	(0.0770)	(0.3006)	(0.4116)	(0.2056)	(0.2679)	(0.1204)
# of obs.	7	7	7	7	7	7
R^2	0.88	0.04	0.00	0.13	0.09	0.30
Asymptotic value	0.4824	0.5521	0.3646	0.5525	0.7606	0.5826
Average asymptotic value	0.4663			0.6319		
$F(1, 30)$	35.64					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Budget surplus$_{jt}$						
Budget surplus$_{jt-1}$	0.5884**	-0.8928	-0.2495	0.1097	0.0367	-0.2126
	(0.0623)	(0.6793)	(0.4249)	(0.3378)	(0.3167)	(0.1263)
Constant	-0.0061	-0.2162**	-0.0060	-0.0952	-0.3935**	-0.2064**
	(0.0073)	(0.0756)	(0.0066)	(0.0776)	(0.1426)	(0.0271)
# of obs.	7	7	7	7	7	7
R^2	0.95	0.26	0.06	0.02	0.00	0.36
Asymptotic value	−0.0149	−0.1142	−0.0048	−0.1070	−0.4085	−0.1702
Average asymptotic value	−0.0446			−0.2286		
$F(1, 30)$	45.55					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Real GDP$_{jt}$						
Real GDP$_{jt-1}$	0.8662**	-0.4077	-0.2163	0.3090	0.2478	-0.2276
	(0.1320)	(0.6499)	(0.8397)	(0.3350)	(0.3254)	(0.2041)
Constant	16.6906	152.7945*	169.3701	72.0548*	43.4180*	119.3676**
	(13.9542)	(73.3015)	(117.4018)	(32.8577)	(18.2212)	(19.5954)
# of obs.	7	7	7	7	7	7
R^2	0.90	0.07	0.01	0.15	0.10	0.20
Asymptotic value	124.72	108.54	139.25	104.28	57.72	97.24
Average asymptotic value	124.17			86.42		
$F(1, 30)$	24.91					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 1$_{jt}$						
Consumer earnings 1$_{jt}$	0.5941	0.0668	0.1707	0.0188	0.0967	-0.2688
	(0.3063)	(0.4436)	(0.9156)	(0.3054)	(0.2970)	(0.2538)
Constant	83.0522	185.2049*	176.3328	192.9774**	158.9523**	252.0811**
	(61.8130)	(88.8951)	(195.1139)	(59.6422)	(51.8295)	(50.2020)
# of obs.	7	7	7	7	7	7
R^2	0.43	0.00	0.01	0.00	0.02	0.18
Asymptotic value	204.64	198.47	212.62	196.68	175.98	198.67
Average asymptotic value	205.24			190.44		
$F(1, 30)$	82.28					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer earnings 2_{jt}						
Consumer earnings 2_{jt-1}	0.6183**	-0.7363	-0.2501	0.1454	0.0629	-0.3006
	(0.0726)	(0.5859)	(0.4216)	(0.3678)	(0.3700)	(0.1607)
Constant	26.7007	-1,351.7533**	210.6148*	-532.6979	-2,948.6963*	-1,456.6929**
	(60.5210)	(470.2592)	(90.4224)	(550.2395)	(1,224.7609)	(211.1413)
# of obs.	7	7	7	7	7	7
R^2	0.94	0.24	0.07	0.03	0.01	0.41
Asymptotic value	69.96	−778.54	168.48	−623.36	−3146.68	−1120.05
Average asymptotic value	−180.033			−1630.03		
$F(1, 30)$	48.74					
p-value	0.0000					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 1_{jt}						
Consumer + producer earnings 1_{jt-1}	0.1362	-0.4797	-0.2703	-0.1533	-0.5641	0.7868**
	(0.4345)	(0.3967)	(0.4266)	(0.4474)	(0.6098)	(0.1831)
Constant	387.1835	733.3914**	-158.3895	244.0190	3,002.0526*	194.3545
	(206.4783)	(213.0030)	(166.2855)	(275.8543)	(1,132.9478)	(95.3356)
# of obs.	7	7	7	7	7	7
R^2	0.02	0.23	0.07	0.02	0.15	0.79
Asymptotic value	448.21	495.63	−124.69	211.58	1919.40	911.72
Average asymptotic value	273.05			1014.23		
$F(1, 30)$	11.38					
p-value	0.0021					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Consumer + producer earnings 2_{jt}						
Consumer + producer consumer 2_{jt-1}	0.7526**	-0.7262	-0.3094	0.0432	0.3771	0.1973
	(0.0962)	(0.8975)	(0.4332)	(0.2830)	(0.1915)	(0.2052)
Constant	164.4340*	-835.7951*	-220.9954	-626.6978	-770.5644*	-606.3093*
	(68.9086)	(399.3533)	(161.1874)	(354.5997)	(318.7112)	(264.7910)
# of obs.	7	7	7	7	7	7
R^2	0.92	0.12	0.09	0.00	0.44	0.16
Asymptotic value	664.70	−484.17	−168.78	−655.02	−1237.13	−755.32
Average asymptotic value	3.92			−882.49		
$F(1, 30)$	17.92					
p-value	0.0002					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Net capital export$_{jt}$						
Net capital export$_{jt-1}$	0.8356	0.2888	-0.1879	0.2016	-0.6494	-0.4298
	(0.6535)	(0.3820)	(0.4079)	(0.3930)	(0.4145)	(0.3944)
Constant	-1.3796	2.2193	14.6474*	13.1782	20.7151**	31.8847**
	(1.9759)	(1.2419)	(5.5668)	(7.0773)	(5.4157)	(8.8210)
# of obs.	7	7	7	7	7	7
R^2	0.25	0.10	0.04	0.05	0.33	0.19
Asymptotic value	−8.39	3.12	12.33	16.51	12.56	22.30
Average asymptotic value	2.35			17.12		
$F(1, 30)$	1.71					
p-value	0.2013					

	WT 1	WT 2	WT 3	STLS 1	STLS 2	STLS 3
Y-production intensity$_{jt}$						
Y-production intensity$_{jt-1}$	-0.0335	0.2663	-0.5399	0.4876	0.1144	0.1477
	(0.4198)	(0.4282)	(0.4575)	(0.2443)	(0.4142)	(0.4268)
Constant	0.4682*	0.3237	0.6973**	0.2674	0.5783*	0.4272
	(0.1886)	(0.1908)	(0.2089)	(0.1338)	(0.2687)	(0.2155)
# of obs.	7	7	7	7	7	7
R^2	0.00	0.07	0.22	0.44	0.02	0.02
Asymptotic value	0.4530	0.4411	0.4529	0.5218	0.6530	0.5012
Average asymptotic value	0.4490			0.5587		
$F(1, 30)$	34.36					
p-value	0.0000					

Summary: In the large country, when in the small country the STLS-system prevails, in comparison to when in the small country the WT-system prevails, asymptotically the unemployment rate is significantly higher ($p < 0.0001$), the budget surplus significantly more negative ($p < 0.0001$), the real GDP significantly smaller ($p < 0.0001$), consumer earnings exclusive budget surplus significantly smaller ($p < 0.0001$), consumer earnings inclusive budget surplus significantly more negative ($p < 0.0001$), consumer earnings + producer earnings exclusive budget surplus significantly larger ($p = 0.0021$), consumer earnings + producer earnings inclusive budget surplus significantly smaller ($p = 0.0002$), net capital export insignificantly larger ($p = 0.2013$), and Y-production intensity significantly stronger ($p < 0.0001$). Hence, qualitatively (that is, in terms of statistical significances) the results are similar to the results attained with the Prais-Winsten regression analysis reported in the paper. The differences are that now the difference in budget surplus is significant, the difference in consumer earnings inclusive budget surplus is significant, and the difference in net capital export insignificant.

5.4 Convergence regressions for variable STLS regime - Comparison with theoretical equlibrium predictions

To compare with the analysis in the paper please see Table 6 there.
For weak convergence of y_j, in a given cohort (session) j, $-1 < \lambda_j < 1$ must (significantly) hold. (Duffy (2008) only requires $\lambda_j < 1$, which is not sufficient.) For strong convergence of y_j for a given cohort (session) j it must hold that $\mu_j/(1-\lambda_j) = y^*$, where y^* is the theoretical (steady state) prediction in the respective equilibrium. To test for strong convergence across cohorts $\mu_j/(1-\lambda_j) = y^*$ must hold for all cohorts j simultaneously.

Note: In all tables standard errors are in parentheses and * (**) indicates significance at 5% (1%).

International variables:

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
	STLS 1	STLS 2	STLS 3
K_{jt}			
K_{jt}	0.3243	0.0847	-0.1037
	(0.3573)	(0.4377)	(0.3914)
Constant	152.1328	169.8755	217.8484*
	(77.3363)	(81.8177)	(78.7691)
# of obs.	7	7	7
R^2	0.14	0.01	0.01
DW statistics	1.84	1.88	1.81
K_{j9}	147	183	216
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1172	0.0908	0.0371
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0139	0.0058	0.0706
Weak convergence?	Yes but not significant	Yes but only marginally	Yes but only marginally
Equilibrium 1=2:			
K_{theo}	240	240	240
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{theo}$	0.3415	0.0058	0.0001
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{theo}$	230.0	190.2	193.0
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{theo} = K_{theo}$ p-value	0.0212		
Joint convergence?	No		

Summary: Internationally, capital employment marginally significantly converges weakly to values below K_{theo}. Joint strong convergence is rejected.

Note: In this and the following summary statements the qualifications "from below (above)" are made if for a majority of cohorts the value of the dependent variable in $t = 9$ (see e.g. K_{j9} above) is smaller (larger) than the predicted value as reported in the "joint convergence test". In cases of no strong but only weak convergence the qualification "to values below (above)" are made if the predicted values as reported in the "joint convergence test" lie below (above) the theoretical value of the respective variable (see e.g. K_{theo} above).

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
	STLS 1	STLS 2	STLS 3
X^c_{jt}			
X^c_{jt-1}	0.2875	-0.3028	-0.0535
	(0.3374)	(0.4638)	(0.2997)
Constant	87.9986*	78.6693*	133.3275**
	(38.4518)	(28.2387)	(37.3303)
# of obs.	7	7	7
R^2	0.13	0.08	0.01
DW statistics	2.28	0.73	1.84
X^c_{j9}	58	80	93
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0884	0.0376	0.0170
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0124	0.1931	0.0252
Weak convergence?	Yes but only marginally	Yes but not significant	Yes
Equilibrium 1:			
X^c_{theo}	181	181	181
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{theo}$	0.0030	0.0000	0.0001
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{theo}$	140.0	23.9	123.6.7
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{theo} = (\mathbf{X^c_{theo}})^{\mathbf{T}}$ p-value	0.0035		
Joint convergence?	No		
Equilibrium 2:			
X^c_{theo}	182	182	182
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{theo}$	0.0027	0.0000	0.0001
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{theo}$	140.3	23.6	123.6
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{theo} = (\mathbf{X^c_{theo}})^{\mathbf{T}}$ p-value	0.0035		
Joint convergence?	No		

Summary: Internationally, sold X (i.e. X consumed) (marginally) significantly converges weakly from below to values below X^c_{theo}. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
r_{jt}	STLS 1	STLS 2	STLS 3
r_{jt-1}	0.6982**	0.9396**	-0.1115
	(0.1100)	(0.1520)	(0.8091)
Constant	0.0002	-0.0001	0.0007
	(0.0002)	(0.0001)	(0.0005)
# of obs.	7	7	7
R^2	0.89	0.88	0.00
DW statistics	1.93	2.52	1.34
r_{j9}	0.0010	0.0014	0.0032
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0406	0.7076	0.2279
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0000	0.0001	0.3222
Weak convergence?	Yes	Yes but not significant	Yes but not significant
Equilibrium 1:			
r_{theo}	0.0295	0.0295	0.0295
Strong convergence test: $\mu_j/(1-\lambda_j) = r_{theo}$	0.0000	0.0018	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} r_{theo}$	0.0208	0.0276	-0.0026
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} r_{theo} = \mathbf{r}^{\mathbf{T}}_{\mathbf{theo}}$ p-value	0.0462		
Joint convergence?	No		
Equilibrium 2:			
r_{theo}	0.0289	0.0289	0.0289
Strong convergence test: $\mu_j/(1-\lambda_j) = r_{theo}$	0.0000	0.0020	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} r_{theo}$	0.0204	0.0271	-0.0024
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} r_{theo} = \mathbf{r}^{\mathbf{T}}_{\mathbf{theo}}$ p-value	0.0460		
Joint convergence?	No		

Summary: Internationally, the relative price of capital (insignificantly) converges weakly to values below r_{theo}. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
International			
$p_{x_{jt}}$	STLS 1	STLS 2	STLS 3
$p_{x_{jt-1}}$	0.4525	-0.0016	0.0769
	(0.2888)	(0.4379)	(0.3673)
Constant	0.1317	0.3899*	0.1786*
	(0.0685)	(0.1712)	(0.0713)
# of obs.	7	7	7
R^2	0.33	0.00	0.01
DW statistics	1.43	1.23	2.11
$p_{x_{j9}}$	0.1981	0.2307	0.4049
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1165	0.0709	0.0536
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0040	0.0716	0.0325
Weak convergence?	Yes but not significant	Yes but only marginally	Yes but only marginally
Equilibrium 1=2:			
$p_{x_{theo}}$	0.1807	0.1882	0.1882
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{x_{theo}}$	0.0000	0.0000	0.0001
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{x_{theo}}$	0.2134	0.3895	0.1925
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{x_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{x_{theo}}}$ p-value	0.0149		
Joint convergence?	No		

Summary: Internationally, the relative price of X marginally significantly converges weakly from above to values above $p_{x_{theo}}$. Joint strong convergence is rejected.

Small country:

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$K_{s_{jt}}$			
$K_{s_{jt-1}}$	0.2016	-0.1406	0.1621
	(0.3930)	(0.4114)	(0.4597)
Constant	37.1314	39.0670*	42.4448
	(17.8563)	(14.0432)	(23.1035)
# of obs.	7	7	7
R^2	0.05	0.02	0.02
DW statistics	2.22	1.28	1.76
$K_{s_{j9}}$	31	32	50
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0979	0.0393	0.1279
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0282	0.0910	0.0527
Weak convergence?	Yes but only marginally	Yes but only marginally	Yes but not significant
Equilibrium 1:			
$K_{s_{theo}}$	28	28	28
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{s_{theo}}$	0.0229	0.0023	0.0001
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{s_{theo}}$	42.78	35.13	46.98
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{s_{theo}} = \mathbf{K}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0182		
Joint convergence?	No		
Equilibrium 2:			
$K_{s_{theo}}$	11	11	11
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{s_{theo}}$	0.0016	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{s_{theo}}$	39.35	37.52	44.23
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{s_{theo}} = \mathbf{K}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0122		
Joint convergence?	No		

Summary: In the small country, capital employment marginally significantly converges weakly from above to values above $K_{s_{theo}}$ of the better equilibrium 1. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$L_{s_{jt}}$			
$L_{s_{jt-1}}$	0.7115**	0.3241	-0.4677
	(0.2119)	(0.4317)	(0.3953)
Constant	11.3846	23.0741	47.1774**
	(7.6498)	(14.5700)	(12.7131)
# of obs.	7	7	7
R^2	0.69	0.10	0.22
DW statistics	2.75	1.96	2.55
$L_{s_{j9}}$	32	33	32
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.2315	0.1782	0.0138
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0005	0.0279	0.2359
Weak convergence?	Yes but not significant	Yes but not significant	Yes but not significant
Equilibrium 1:			
$L_{s_{theo}}$	33	33	33
Strong convergence test: $\mu_j/(1-\lambda_j) = L_{s_{theo}}$	0.1024	0.3010	0.0367
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{s_{theo}}$	34.87	33.77	31.74
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{s_{theo}} = \mathbf{L}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0371		
Joint convergence?	No		
Equilibrium 2:			
L_s(theo)	18	18	18
Strong convergence test: $\mu_j/(1-\lambda_j) = L_{s_{theo}}$	0.0012	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{s_{theo}}$	24.19	28.91	38.76
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{s_{theo}} = \mathbf{L}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0057		
Joint convergence?	No		

Summary: In the small country, labor employment converges strongly to $L_{s_{theo}}$ of the better equilibrium. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$X^c_{s_{jt}}$			
$X^c_{s_{jt-1}}$	0.0000	-0.2941	0.2121
	(0.3237)	(0.4467)	(0.4468)
Constant	18.8571**	11.7899*	15.6240
	(5.6075)	(4.1387)	(8.8441)
# of obs.	7	7	7
R^2	-0.00	0.08	0.04
DW statistics	1.52	2.03	1.88
$X^c_{s_{j9}}$	10	10	19
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0272	0.0339	0.1381
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0272	0.1749	0.00421
Weak convergence?	Yes	Yes but not significant	Yes but not significant
Equilibrium 1:			
$X^c_{s_{theo}}$	25	25	25
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{s_{theo}}$	0.0042	0.0000	0.0984
Strong convergence?	No	No	Yes, but marginally
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{s_{theo}}$	18.86	4.44	20.92
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{s_{theo}} = (\mathbf{X^c_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0151		
Joint convergence?	No		
Equilibrium 2:			
$X^c_{s_{theo}}$	17	17	17
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{s_{theo}}$	0.1934	0.0001	0.3175
Strong convergence?	Yes	No	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{s_{theo}}$	18.86	6.79	19.22
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{s_{theo}} = (\mathbf{X^c_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0318		
Joint convergence?	No		

Summary: In the small country, consumed X converges (insignificantly) weakly from below to the worse equilibrium level of $X^c_{s_{theo}}$. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$X^p_{s_{jt}}$			
$X^p_{s_{jt-1}}$	0.1756	0.2892	-0.2024
	(0.8841)	(0.4153)	(0.1329)
Constant	24.4198	15.8193	34.8095**
	(24.5872)	(9.6138)	(3.7492)
# of obs.	7	7	7
R^2	0.01	0.09	0.32
DW statistics	1.47	2.94	2.18
$X^p_{s_{j9}}$	28	25	20
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.3939	0.1476	0.0003
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.2411	0.0267	0.0018
Weak convergence?	Yes but not significant	Yes but not significant	Yes
Equilibrium 1:			
$X^p_{s_{theo}}$	25	25	25
Strong convergence test: $\mu_j/(1-\lambda_j) = X^p_{s_{theo}}$	0.2100	0.2633	0.0002
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{s_{theo}}$	28.81	23.05	29.75
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{s_{theo}} = (\mathbf{X^p_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0000		
Joint convergence?	No		
Equilibrium 2:			
$X^p_{s_{theo}}$	14	14	14
Strong convergence test: $\mu_j/(1-\lambda_j) = X^p_{s_{theo}}$	0.0046	0.0128	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{s_{theo}}$	26.88	19.87	31.98
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{s_{theo}} = (\mathbf{X^p_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0000		
Joint convergence?	No		

Summary: In the small country, X produced converges strongly from above to the better equilibrium level of $X^p_{s_{theo}}$. There is even some "overshooting". Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$Y^c_{s_{jt}}$			
$Y^c_{s_{jt-1}}$	0.2428	0.5083	-0.1143
	(0.4896)	(0.3851)	(0.2953)
Constant	17.7797	12.2320	19.3429**
	(11.8088)	(9.2524)	(5.3962)
# of obs.	7	7	7
R^2	0.05	0.26	0.03
DW statistics	1.65	1.78	1.93
$Y^c_{s_{j9}}$	19	22	24
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1826	0.2578	0.0130
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0520	0.0112	0.0301
Weak convergence?	Yes but not significant	Yes but not significant	Yes
Equilibrium 1:			
$Y^c_{s_{theo}}$	21	21	21
Strong convergence test: $\mu_j/(1-\lambda_j) = Y^c_{s_{theo}}$	0.3333	0.2726	0.0080
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{s_{theo}}$	22.88	22.91	16.94
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{s_{theo}} = (\mathbf{Y^c_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0300		
Joint convergence?	No		
Equilibrium 2:			
$Y^c_{s_{theo}}$	11	11	11
Strong convergence test: $\mu_j/(1-\lambda_j) = Y^c_{s_{theo}}$	0.0030	0.0069	0.0007
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{s_{theo}}$	20.45	17.82	18.09
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{s_{theo}} = (\mathbf{Y^c_{s_{theo}}})^{\mathbf{T}}$ p-value	0.0186		
Joint convergence?	No		

Summary: In the small country, Y consumed converges strongly to the better equilibrium level of $Y^c_{s_{theo}}$. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$w_{s_{jt}}$			
$w_{s_{jt-1}}$	0.8333	0.9537**	-0.2463
	(0.5917)	(0.1383)	(0.3680)
Constant	0.0338	0.0096	0.2807**
	(0.1117)	(0.0160)	(0.0828)
# of obs.	7	7	7
R^2	0.28	0.90	0.08
DW statistics	1.98	1.32	1.98
$w_{s_{j9}}$	0.1841	0.1027	0.2213
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.7895	0.7512	0.0195
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0269	0.0000	0.0959
Weak convergence?	Yes but not significant	Yes but not significant	Yes but marginally
Equilibrium 1:			
$w_{s_{theo}}$	0.1971	0.1971	0.1971
Strong convergence test: $\mu_j/(1-\lambda_j) = w_{s_{theo}}$	0.9176	0.9742	0.0000
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{s_{theo}}$	0.1980	0.1975	0.2322
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{s_{theo}} = \mathbf{w}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0304		
Joint convergence?	No		
Equilibrium 2:			
$w_{s_{theo}}$	0.1292	0.1292	0.1292
Strong convergence test: $\mu_j/(1-\lambda_j) = w_{s_{theo}}$	0.1990	0.7894	0.0000
Strong convergence?	Yes	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{s_{theo}}$	0.1414	0.1328	0.2489
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{s_{theo}} = \mathbf{w}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.0179		
Joint convergence?	No		

Summary: In the small country, the relative wage converges strongly to either of the two equilibrium wage levels $w_{s_{theo}}$. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$p_{ys_{jt}}$			
$p_{ys_{jt-1}}$	0.6795**	-0.0399	0.5108
	(0.1835)	(0.2315)	(0.3428)
Constant	0.0550	0.0735**	0.1294
	(0.0341)	(0.0159)	(0.0879)
# of obs.	7	7	7
R^2	0.73	0.01	0.31
DW statistics	2.63	1.73	2.13
$p_{ys_{j9}}$	0.2023	0.0563	0.2403
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1411	0.0065	0.2129
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0003	0.0089	0.0070
Weak convergence?	Yes but not significant	Yes	Yes but not significant
Equilibrium 1:			
$p_{ys_{theo}}$	0.2165	0.2165	0.2165
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{ys_{theo}}$	0.0052	0.0000	0.0073
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{ys_{theo}}$	0.2021	0.0649	0.2400
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{ys_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{ys_{theo}}}$ p-value	0.0010		
Joint convergence?	No		
Equilibrium 2:			
$p_{ys_{theo}}$	0.2747	0.2747	0.2747
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{ys_{theo}}$	0.0001	0.0000	0.3960
Strong convergence?	No	No	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{ys_{theo}}$	0.2416	0.0625	0.2697
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{ys_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{ys_{theo}}}$ p-value	0.0020		
Joint convergence?	No		

Summary: In the small country, the relative price of Y converges (insignificantly) weakly to values below both equilibrium values of $p_{ys_{theo}}$. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$\tau_{pxs_{jt}}$			
$\tau_{pxs_{jt-1}}$	0.1984	0.5401	0.6055
	(0.2954)	(0.3511)	(0.3598)
Constant	0.3973*	0.1984	0.1905
	(0.1478)	(0.1405)	(0.1784)
# of obs.	7	7	7
R^2	0.08	0.32	0.36
DW statistics	1.97	2.53	1.88
$\tau_{pxs_{j9}}$	0.5338	0.3430	0.5070
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0421	0.2472	0.3229
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0098	0.0071	0.0066
Weak convergence?	Yes	Yes but not significant	Yes but not significant
Equilibrium 1:			
$\tau_{pxs_{theo}}$	0.4889	0.4889	0.4889
Strong convergence test: $\mu_j/(1-\lambda_j) = \tau_{pxs_{theo}}$	0.3678	0.2625	0.8607
Strong convergence?	Yes	Yes	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{pxs_{theo}}$	0.4943	0.4625	0.4865
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{pxs_{theo}} = \tau^{\mathbf{T}}_{\mathbf{pxs_{theo}}}$ p-value	0.7303		
Joint convergence?	Yes		
Equilibrium 2:			
$\tau_{pxs_{theo}}$	0.7835	0.7835	0.7835
Strong convergence test: $\mu_j/(1-\lambda_j) = \tau_{pxs_{theo}}$	0.0000	0.0006	0.0003
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{pxs_{theo}}$	0.5227	0.6216	0.6649
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{pxs_{theo}} = \tau^{\mathbf{T}}_{\mathbf{pxs_{theo}}}$ p-value	0.0448		
Joint convergence?	No		

Summary: In the small country, the tax on sales of X converges strongly to the better equilibrium tax level $\tau_{pxs_{theo}}$. Joint strong convergence is rejected for worse equilibrium but is not rejected for the better equilibrium.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Small country			
	STLS 1	STLS 2	STLS 3
$sur_{s_{jt}}$			
$sur_{s_{jt-1}}$	-0.6179	-0.5203	-0.6377
	(0.3826)	(0.4052)	(0.3241)
Constant	0.0071	-0.0184	0.0189
	(0.0074)	(0.0185)	(0.0108)
# of obs.	7	7	7
R^2	0.34	0.25	0.44
DW statistics	2.45	2.18	1.89
$sur_{s_{j9}}$	0.0281	-0.0075	-0.0310
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0083	0.0133	0.0039
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.3637	0.2896	0.3144
Weak convergence?	Yes but not significant	Yes but not significant	Yes but not significant
Equilibrium 1=2:			
$sur_{s_{theo}}$	0	0	0
Strong convergence test: $\mu_j/(1-\lambda_j) = sur_{s_{theo}}$	0.3676	0.3411	0.1436
Strong convergence?	Yes	Yes	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} sur_{s_{theo}}$	0.0072	-0.0185	0.0189
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} sur_{s_{theo}} = \mathbf{sur}^{\mathbf{T}}_{\mathbf{s_{theo}}}$ p-value	0.2174		
Joint convergence?	Yes		

Summary: In the small country, the relative budget surplus converges strongly to the balanced equilibrium level $sur_{s_{theo}} = 0$. Joint strong convergence is not rejected.

Large country:

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$K_{l_{jt}}$			
$K_{l_{jt-1}}$	0.0014	0.1133	-0.3213
	(0.4167)	(0.4443)	(0.3855)
Constant	175.6129*	134.1435	194.8916**
	(71.7400)	(68.1835)	(58.2915)
# of obs.	7	7	7
R^2	0.00	0.01	0.12
DW statistics	1.77	1.89	2.27
$K_{l_{j9}}$	151	116	166
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0619	0.1025	0.0187
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0614	0.0541	0.1386
Weak convergence?	Yes but only marginally	Yes but not significant	Yes but not significant
Equilibrium 1:			
$K_{l_{theo}}$	212	212	212
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{l_{theo}}$	0.0084	0.0053	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{l_{theo}}$	175.92	158.17	126.79
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{l_{theo}} = \mathbf{K}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0047		
Joint convergence?	No		
Equilibrium 2:			
$K_{l_{theo}}$	229	229	229
Strong convergence test: $\mu_j/(1-\lambda_j) = K_{l_{theo}}$	0.0016	0.0018	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{l_{theo}}$	175.94	160.09	121.33
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} K_{l_{theo}} = \mathbf{K}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0040		
Joint convergence?	No		

Summary: In the large country, capital employment insignificantly converges weakly from below to values below $K_{s_{theo}}$ of either equilibrium. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$L_{l_{jt}}$			
$L_{l_{jt-1}}$	0.2953	0.2458	-0.2975
	(0.3479)	(0.3467)	(0.2044)
Constant	99.3412*	56.8774*	170.5836**
	(46.1532)	(25.4407)	(26.5639)
# of obs.	7	7	7
R^2	0.13	0.09	0.30
DW statistics	1.93	2.05	2.10
$L_{l_{j9}}$	96	51	114
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0987	0.0816	0.0014
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0137	0.0156	0.0185
Weak convergence?	Yes but only marginally	Yes but only marginally	Yes but not significant
Equilibrium 1:			
$L_{l_{theo}}$	199	199	199
Strong convergence test: $\mu_j/(1-\lambda_j) = L_{l_{theo}}$	0.0067	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{l_{theo}}$	158.11	105.78	111.39
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{l_{theo}} = \mathbf{L}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0001		
Joint convergence?	No		
Equilibrium 2:			
$L_{l_{theo}}$	213	213	213
Strong convergence test: $\mu_j/(1-\lambda_j) = L_{l_{theo}}$	0.0027	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{l_{theo}}$	162.24	109.22	107.23
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} L_{l_{theo}} = \mathbf{L}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0001		
Joint convergence?	No		

Summary: In the large country, labor employment margin ally weakly converges from below to values below $L_{l_{theo}}$ of either equilibrium. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$X^c_{l_{jt}}$			
$X^c_{l_{jt-1}}$	0.2363	-0.3549	-0.0623
	(0.3703)	(0.4768)	(0.2670)
Constant	78.9108*	69.4974*	113.5009**
	(35.9135)	(24.7646)	(28.0841)
# of obs.	7	7	7
R^2	0.08	0.10	0.01
DW statistics	2.30	0.84	1.99
$X^c_{l_{j9}}$	70	48	74
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0942	0.0362	0.0105
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0206	0.2340	0.0171
Weak convergence?	Yes but only marginally	Yes but not significant	Yes
Equilibrium 1:			
$X^c_{l_{theo}}$	156	156	156
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{l_{theo}}$	0.0027	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{l_{theo}}$	115.78	14.13	103.78
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{l_{theo}} = (\mathbf{X^c_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0019		
Joint convergence?	No		
Equilibrium 2:			
$X^c_{l_{theo}}$	165	165	165
Strong convergence test: $\mu_j/(1-\lambda_j) = X^c_{l_{theo}}$	0.0013	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{l_{theo}}$	117.90	10.94	103.22
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^c_{l_{theo}} = (\mathbf{X^c_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0017		
Joint convergence?	No		

Summary: In the large country, consumed X (marginally) significantly converges weakly from below to levels below $X^c_{l_{theo}}$ of either equilibrium. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$X^p_{l_{jt}}$			
$X^p_{l_{jt-1}}$	0.3921	-0.5745**	-0.0144
	(0.3078)	(0.0796)	(0.3580)
Constant	61.0529	61.3617**	98.8031*
	(28.7361)	(3.0672)	(34.5459)
# of obs.	7	7	7
R^2	0.25	0.91	0.00
DW statistics	2.00	2.04	1.88
$X^p_{l_{j9}}$	52	33	73
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1053	0.0000	0.0365
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0063	0.0031	0.0402
Weak convergence?	Yes but not significant	Yes	Yes
Equilibrium 1:			
$X^p_{l_{theo}}$	156	156	156
Strong convergence test: $\mu_j/(1-\lambda_j) = X^p_{l_{theo}}$	0.0103	0.0000	0.0001
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{l_{theo}}$	122.22	-28.26	96.56
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{l_{theo}} = (\mathbf{X^p_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0000		
Joint convergence?	No		
Equilibrium 2:			
$X^p_{l_{theo}}$	168	168	168
Strong convergence test: $\mu_j/(1-\lambda_j) = X^p_{l_{theo}}$	0.0046	0.0000	0.0000
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{l_{theo}}$	126.93	-35.15	96.39
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} X^p_{l_{theo}} = (\mathbf{X^p_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0000		
Joint convergence?	No		

Summary: In the large country, X produced converges weakly from below to levels below $X^p_{l_{theo}}$ of either equilibrium. Note that session STLS-2 did very badly and converges to a "negative" level of production. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$Y^c_{l_{jt}}$			
$Y^c_{l_{jt}}$	0.1019	0.2230	0.1135
	(0.4335)	(0.3750)	(0.4464)
Constant	89.8241	56.2490	86.8170
	(42.9385)	(26.4616)	(42.9775)
# of obs.	7	7	7
R^2	0.01	0.07	0.01
DW statistics	1.39	2.32	1.43
$Y^c_{l_{j9}}$	92	49	91
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0930	0.0930	0.1038
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0518	0.0224	0.0549
Weak convergence?	Yes but only marginally	Yes but only marginally	Yes but not significant
Equilibrium 1:			
$Y^c_{l_{theo}}$	133	133	133
Strong convergence test: $\mu_j/(1-\lambda_j) = Y^c_{l_{theo}}$	0.0017	0.0006	0.0002
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{l_{theo}}$	103.38	85.91	101.91
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{l_{theo}} = (\mathbf{Y^c_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0414		
Joint convergence?	No		
Equilibrium 2:			
$Y^c_{l_{theo}}$	140	140	140
Strong convergence test: $\mu_j/(1-\lambda_j) = Y^c_{l_{theo}}$	0.0007	0.0004	0.0001
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{l_{theo}}$	104.10	87.47	102.71
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} Y^c_{l_{theo}} = (\mathbf{Y^c_{l_{theo}}})^{\mathbf{T}}$ p-value	0.0377		
Joint convergence?	No		

Summary: In the large country, Y consumed marginally significantly converges weakly from below to values below $Y^c_{l_{theo}}$ of either equilibrium. Joint strong convergence is rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$w_{l_{jt}}$			
$w_{l_{jt-1}}$	0.3818	0.9298	0.8283**
	(0.3645)	(0.5492)	(0.1386)
Constant	0.0920	0.0081	0.0187
	(0.0541)	(0.0823)	(0.0174)
# of obs.	7	7	7
R^2	0.18	0.36	0.88
DW statistics	2.06	2.15	2.47
$w_{l_{j9}}$	0.1458	0.1526	0.1357
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1506	0.9032	0.2704
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0127	0.0170	0.0000
Weak convergence?	Yes but not significant	Yes but not significant	Yes but not significant
Equilibrium 1:			
$w_{l_{theo}}$	0.1640	0.1640	0.1640
Strong convergence test: $\mu_j/(1-\lambda_j) = w_{l_{theo}}$	0.0001	0.8650	0.0124
Strong convergence?	No	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{l_{theo}}$	0.1546	0.1606	0.1545
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{l_{theo}} = \mathbf{w}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.1638		
Joint convergence?	Yes		
Equilibrium 2:			
$w_{l_{theo}}$	0.1743	0.1743	0.1743
Strong convergence test: $\mu_j/(1-\lambda_j) = w_{l_{theo}}$	0.0000	0.8371	0.0062
Strong convergence?	No	Yes	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{l_{theo}}$	0.1585	0.1701	0.1631
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} w_{l_{theo}} = \mathbf{w}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.1818		
Joint convergence?	Yes		

Summary: In the large country, the relative wage insignificantly converges weakly from below to values below $w_{l_{theo}}$ of either equilibrium. Joint strong convergence is not rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$p_{yl_{jt}}$			
$p_{yl_{jt-1}}$	0.4207	0.3968	0.4306
	(0.3496)	(0.4149)	(0.3866)
Constant	0.1385	0.1632	0.1121
	(0.0834)	(0.1150)	(0.0770)
# of obs.	7	7	7
R^2	0.22	0.15	0.20
DW statistics	1.86	1.94	2.24
$p_{yl_{j9}}$	0.2339	0.2826	0.2032
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.1584	0.2058	0.2008
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0097	0.0200	0.0140
Weak convergence?	Yes but not significant	Yes but not significant	Yes but not significant
Equilibrium 1:			
$p_{yl_{theo}}$	0.2123	0.2123	0.2123
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{yl_{theo}}$	0.0001	0.0341	0.0038
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{yl_{theo}}$	0.2278	0.2475	0.2035
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{yl_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{yl_{theo}}}$ p-value	0.1141		
Joint convergence?	Yes		
Equilibrium 2:			
$p_{yl_{theo}}$	0.2121	0.2121	0.2121
Strong convergence test: $\mu_j/(1-\lambda_j) = p_{yl_{theo}}$	0.0001	0.0337	0.0040
Strong convergence?	No	No	Yes
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{yl_{theo}}$	0.2274	0.2474	0.2034
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} p_{yl_{theo}} = \mathbf{p}^{\mathbf{T}}_{\mathbf{yl_{theo}}}$ p-value	0.1139		
Joint convergence?	Yes		

Summary: In the large country, the relative price of Y insignificantly converges weakly from above to values above $p_{yl_{theo}}$ of either equilibrium. Joint strong convergence is not rejected for both equilibria.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$\tau_{wl_{jt}}$			
$\tau_{wl_{jt-1}}$	-0.1221	*no variation*	*no variation*
	(0.4511)	*constant at max. of* 0.9	*constant at max. of* 0.9
Constant	0.9846		
	(0.3953)		
# of obs.	7	7	7
R^2	0.01		
DW statistics	1.99		
$\tau_{wl_{j9}}$	0.8811	0.9000	0.7952
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0553		
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.1092		
Weak convergence?	Yes but not significant		
Equilibrium 1:			
$tau_{wl_{theo}}$	0.3655	0.3655	0.3655
Strong convergence test: $\mu_j/(1-\lambda_j) = \tau_{wl_{theo}}$	0.0000		
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{wl_{theo}}$			
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{wl_{theo}} = \tau^{\mathbf{T}}_{\mathbf{wl_{theo}}}$ p-value			
Joint convergence?	No		
Equilibrium 2:			
$\tau_{wl_{theo}}$	0.2769	0.2769	0.2769
Strong convergence test: $\mu_j/(1-\lambda_j) = \tau_{wl_{theo}}$	0.0000		
Strong convergence?	No	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}\tau_{wl_{theo}}$			
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}}tau_{wl_{theo}} = \tau^{\mathbf{T}}_{\mathbf{wl_{theo}}}$ p-value			
Joint convergence?	No		

Summary: In the large country, the tax on labor diverges to the maximally allowed level of 0.9 in two sessions. In the other session it converges to 0.8774.

	Session number (cohort)	Session number (cohort)	Session number (cohort)
Large country			
	STLS 1	STLS 2	STLS 3
$sur_{l_{jt}}$			
$sur_{l_{jt-1}}$	0.1097	0.0367	-0.2126
	(0.3378)	(0.3167)	(0.1263)
Constant	-0.0952	-0.3935*	-0.2064**
	(0.0776)	(0.1426)	(0.0271)
# of obs.	7	7	7
R^2	0.02	0.00	0.36
DW statistics	1.97	2.26	2.18
$sur_{l_{j9}}$	-0.4239	-0.6624	-0.3953
Weak convergence test: $\lambda_j < 1$, p for $\lambda_j = 1$	0.0462	0.0287	0.0002
Weak convergence test: $\lambda_j > -1$, p for $\lambda_j = -1$	0.0218	0.0221	0.0016
Weak convergence?	Yes	Yes	Yes
Equilibrium 1=2:			
$sur_{l_{theo}}$	0	0	0
Strong convergence test: $\mu_j/(1-\lambda_j) = sur_{l_{theo}}$	0.1565	0.0002	0.0000
Strong convergence?	Yes	No	No
$\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} sur_{l_{theo}}$	-0.0952	-0.3935	-0.2064
Joint convergence test: $\mathbf{I}\mu^{\mathbf{T}} + \lambda^{\mathbf{T}} sur_{l_{theo}} = \mathbf{sur}^{\mathbf{T}}_{\mathbf{l_{theo}}}$ p-value	0.0000		
Joint convergence?	No		

Summary: In the large country, the relative budget surplus converges weakly to levels below the balanced equilibrium level $sur_{l_{theo}} = 0$. Joint strong convergence is rejected.

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