Sensitivity of Computable General Equilibrium Models to Macroeconomic Closure Rules: Evidence from the IFPRI Standard Model

David Laborde
Fousseini Traoré

About the Authors

David Laborde is a Senior Research Fellow in the Markets, Trade and Institutions Division at the International Food Policy Research Institute in Washington, DC, USA.

Fousseini Traoré is a Research Fellow in the Markets, Trade and Institutions Division at the International Food Policy Research Institute in Dakar, Senegal.

Table of Contents

Abstract

In this paper, we study the sensitivity of computable general equilibrium (CGE) models to the choice of macroeconomic closure rule using the case of the standard IFPRI model for Nigeria and Tanzania. Two sets of simulations are performed: a 50 percent decrease in import taxes and a 10 percent increase in agricultural productivity. For each simulated scenario, we study around 10 closure rules related to the government, the rest of the world, the investment-savings equilibrium, and the factors market. We find that the model's solutions are sensitive to the choice of the macroeconomic closure rule.

1. Introduction

Over the last 30 years, Computable General Equilibrium (CGE) models have become a favored tool for economic policy analysis. Led by the World Bank and driven by the increasing sophistication of computers and software, these models began to be used with significant success in the 1980s (Piggott and Whalley, 1985; De Melo, 1988; Decaluwé, 1988); this success continues today, in particular for the evaluation of the impact of multilateral trade negotiations such as the WTO's Uruguay Round and Doha Round. Consequently, numerous articles and studies have been conducted on the subject of CGEs, and a number of handbooks, guides, and symposia are also regularly published (Bergman, Jorgenson and Zalai, 1990; Shoven and Whalley, 1992; Kehoe, Srinivasan and Whalley, 2005; Ginsburgh and Keyzer, 2002, etc.); another handbook by Dixon and Jorgenson (2012) emphasizes the growing importance of the trend.

Since the original paper by Sen (1963) showed the over-determination of macroeconomic models close to the general equilibrium, the role of closure rules has aroused interest in the literature, and many authors have studied this issue under various points of view (Taylor, 1979; Taylor and Lysy, 1979; Ratso, 1982; Dewatripont and Michel, 1983; Decaluwé, Martens, and Monette, 1988; Kilkenny and Robinson, 1990). All of these papers highlight one common point: the solutions of the CGE model depend on the adopted closure rule.

In his paper, Ratso (1982) studies a simplified version of the original models of Johansen (1960) and Taylor and Lysy (1979), considering, respectively, a neoclassical closure (endogenous investment and full employment of factors), a Keynesian closure (exogenous investment and unemployment), and a closure à la Johansen (exogenous investment, full employment, and endogenous tax rate). Ratso then analyzes the effect of a 10 percent increase in government expenditure according to each type of closure rule. The results are mixed but consistent. With the neoclassical and Johansen closures, he observes less of a variation in production level and more of a variation in the composition of production. In particular, there is a crowding-out effect between private investment and government expenditure in the neoclassical case. On the other hand, the Keynesian closure rule leads to an increase of output, incomes, and private consumption.

Decaluwé, Martens, and Monette (1988) study the impact of supply and demand shocks under four macroeconomic closure rules (neoclassical, Keynesian, à la Johansen, and Kaldorian[a]) through a relatively standard model. The authors simulate, respectively, an increase of 1 percent in the initial endowment of capital (supply shock) and an increase of 10 percent in the agricultural exportations[b] (demand shock). The results obtained are divergent. The increase of capital stock leads to an increase of 0.30 percent in real GDP according to the neoclassical, Kaldorian, and Johansen specifications, as opposed to a decrease of 0.05

---

[a] In this case, factors are no longer necessarily remunerated at their marginal productivity
[b] For the autonomous part

percent in real GDP and an increase in unemployment under the Keynesian closure rule. The same effect is observed with the increase of exportations (the initial level of GDP is maintained under the neoclassical, Kaldorian, and Johansen specifications, as opposed to a decrease of 0.03 percent in the case of the Keynesian rule).

In line with these previous works, Kilkenny and Robinson (1990) study the effect of commercial liberalization in the US agricultural sector, with an emphasis on the role of factor mobility in the process[c]. They show that gains depend substantially on factor mobility, especially labor. Indeed, they observe a decrease in real GNP when the factors are specific and an increase in real GNP of 3-4 percent when mobility is perfect.

In this paper, we focus on the question of the macroeconomic closure using the IFPRI standard model (Lofgren ant al., 2002). This Walrasian-inspired general equilibrium model is rather flexible and has become widely used by the macroeconomic modelling community. The model is applied to two examples of African economies with different structures: Nigeria (an oil exporter with a positive current account balance) and Tanzania (an agricultural commodities exporter with a negative current account balance). We study around 10 cases of closure related to the government account, the rest of the world, the investment-savings equilibrium, and the market of factors. Finally, we consider two types of simulations: commercial liberalization through a 50 percent cut in import taxes and a 10 percent increase in agricultural productivity.

The rest of the paper is organized as follows. The second section presents our methodology. In this section, we describe the IFPRI standard model; we also describe the various scenarios we simulate by providing a detailed exposé of the various closure rules we chose to adopt. Data used for the simulations are analyzed in the third section. Results are then presented and discussed in the fourth section. A synthesis is proposed in the fifth section. The sixth section concludes.

2. Methodology

In this section, we focus on our chosen methodology, i.e. the complete presentation of the model upon which we base our simulations, the various closure rules, and the simulated scenarios. We concentrate in particular on the implications of the choice of closure rule and on the mathematical formulation of the model so that the reader may repeat a similar exercise.

2.1 The IFPRI Standard Model

To assess the general equilibrium model's sensitivity to the closure rule, and for all of the simulations, we use the standard IFPRI model. This model is rather flexible and is undoubtedly the most used by economists

---

[c] The authors also study the model's sensitivity to various scenarios of budget allocation saved after the shutdown of internal support programs. Those allocation schemes have an impact on the results as well.

and analysts, along with the 1-1 model of the PEP network. IFPRI's model, of Walrasian inspiration, consists of four blocks: production, price, institutions, and equilibrium[d].

The production block includes the various stages of the production process, as well as trade. For each activity, the model uses nested functions. At the second level (superior scale), the output is a combination of an aggregated input and the value added through a Leontief technology. The set of intermediate consumptions of the considered activity goes into the composition of the aggregated input in fixed proportions. At the first level, the value added is calculated from the primary factors (capital, labor, land) using a constant elasticity of substitution (CES) technology.

A sector can produce several products, and a single product can be produced by several sectors. Production is distributed between local sales and exports through a constant elasticity of transformation (CET) function. Demand for investment is given for each product by its initial level multiplied by an adjustment factor common to all the products.

The price block includes the setting of the various prices, as well as their interrelations. Domestic prices in local currency stem from world prices, taking into account the exchange rate, taxes, and transaction costs. Consumer prices are given by the producer prices added to the consumption taxes. Regarding world prices, we adopt the "small country price-taker"[e] hypothesis for the rest of the exercise. Consequently, all world prices, in foreign currency, are considered to be exogenous.

The institutions block includes the households, the government, the firms, and the rest of the world. Households receive their income from factors and from transfers from various institutions, including the government and the rest of the world. They maximize a Stone and Geary utility function; hence, the demand for the goods corresponds to a linear expenditure system (LES). Savings are given by a fixed share of disposable income.

In addition, the model adopts the hypothesis of Armington (1969): households consume a composite of goods, consisting of the local variety and the imported variety, through a constant elasticity of substitution (CES) function.

Governments collect revenue through indirect taxes on products and activities, as well as through direct taxes on factors, households, and firms. Governments can also receive transfers from the rest of the world. Government expenditures include transfers to households (indexed on the consumer price index) and expenditures on products. Demand for products is given by the initial level multiplied by an adjustment factor common to all products. Government savings corresponds to the difference between government revenue and government expenditures.

---

[d] A complete description of the model, including all the equations, is available in the Annex.
[e] The country under consideration cannot influence world prices.

Firms can perceive incomes from factors of production and from transfers from other institutions. They allocate their income between transfers, taxes, and savings.

The rest of the world receives its revenues from imports, factors of production, and transfers from domestic agents. Its "expenditures" correspond to exports and eventual transfers to resident institutions. Foreign savings are given by the difference between revenues and expenditures of the rest of the world.

Finally, the last block describes the equilibrium of the various markets (goods, factors, and investment-savings). These equilibriums are attained through the reactions of the several agents to signal prices.

Since the model is homogeneous of degree 0 in prices, only relative prices matter. Consequently, a numéraire is required. We will use the consumer price index[f].

2.2 Closure Rules and Simulated Scenarios

For each country, we perform two series of simulations, each consisting of 10 or so different closure rules. First, we simulate commercial liberalization through a 50 percent reduction of imports tariffs; then we study the effect of a 10 percent increase in agricultural productivity. For each simulation series, 10 various modes of closures (cf. Table 2) related to the government, the rest of the world, and the investment-savings equilibrium are considered. This exercise is relatively complete, as only the equilibrium of the market of goods and services is not subject to any alternative specification. The various closure rules are presented in Table 1.

---

[f] Other choices are of course possible, including the domestic price index or any other pertinent price.

Table 1: Closure Rules

Investment-savings	Government	Rest of the world	Capital and land
SISCLOS1: Exogenous Investment Endogenous propensities to save	**GOVCLOS1:** Flexible Government savings Fixed tax rates	**ROWCLOS1:** Fixed foreign savings Flexible real exchange rate	**CAPCLOS1** Specific Capital Specific Land
Implication-model IADJ → fixed DMPS → fixed MPSADJ → flexible	**Implication-model** GSAV → flexible TINSADJ → fixed DTINS → fixed	**Implication-model** FSAV → fixed EXR → flexible	**Implication-model** WFDIST → flexible WF → fixed QF → fixed QFS → flexible
SISCLOS2: Endogenous investment Fixed propensities to save	**GOVCLOS2:** Fixed Government savings Endogenous tax rates	**ROWCLOS2:** Flexible foreign savings Fixed real exchange rate	**CAPCLOS2** Mobile Capital « Mobile » Land
Implication-model IADJ → flexible DMPS → fixed MPSADJ → fixed	**Implication-model** GSAV → fixed DTINS → fixed TINSADJ → flexible	**Implication-model** FSAV → flexible EXR → fixed	**Implication-model** WFDIST → fixed WF → flexible QF → flexible QFS → fixed

The first relationship we study is the investment-savings equilibrium. The first specification (SISCLOS1) refers to what is regularly called "investment-driven savings," for which the level of investment is fixed; propensities to save become endogenous in order to provide enough savings to finance the exogenous investment. In the second specification, marginal propensities to save are fixed and investment adjusts to the global savings level (savings-driven investment). Regarding the government, in the first case, (GOVCLOS1), government savings are free and tax rates are fixed at their initial level, whereas in the latter case (GOVCLOS2), government savings are exogenous and tax rates vary in order to reach the fixed equilibrium level. Regarding the rest of the world, foreign savings are first kept fixed (ROWCLOS1). In that situation, after a shock, the current account remains invariant to the real exchange rate fluctuations. In the second case (ROWCLOS2), the situation is inverted: the real exchange rate remains fixed and the current account is variable to shocks. Finally, for the factors market, all factors except labor are first considered to be specific (CAPCLOS1). The demand for factors is then given and remunerations are specific to sectors. This is ensured by the distortion factor (WFDIST), which becomes flexible. Then all the factors are mobile (CAPCLOS1) and there is a unique remuneration for each factor (WF). The demand for factors becomes endogenous, while the total supply remains fixed.

Theoretically, there are 16 (2x2x2x2) possibilities of closure given by the set in Table 1. We chose to keep the 10 possibilities that seemed more interesting to us (the most likely ones). Those cases are presented in Table 2.

Table 2: Closure Rules Chosen

Sim1	Sim2	Sim3	Sim4	Sim5
SISCLOS1	SISCLOS1	SISCLOS2	SISCLOS2	SISCLOS1
GOVCLOS1	GOVCLOS2	GOVCLOS1	GOVCLOS2	GOVCLOS1
ROWCLOS1	ROWCLOS1	ROWCLOS1	ROWCLOS1	ROWCLOS2
CAPCLOS1	CAPCLOS1	CAPCLOS1	CAPCLOS1	CAPCLOS1
Sim6	**Sim7**	**Sim8**	**Sim9**	**Sim10**
SISCLOS1	SISCLOS2	SISCLOS2	SISCLOS1	SISCLOS2
GOVCLOS2	GOVCLOS1	GOVCLOS2	GOVCLOS1	GOVCLOS2
ROWCLOS2	ROWCLOS2	ROWCLOS2	ROWCLOS1	ROWCLOS2
CAPCLOS1	CAPCLOS1	CAPCLOS1	CAPCLOS2	CAPCLOS2

Some closure rules clearly refer to a specific paradigm. For instance, the Sim4 combination, which includes fixed current account and government savings and an endogenous level of investment adjusting to global savings, takes a neoclassical approach, with land and capital being specific factors. However, we do not study the case in which unemployment is assorted with a fixed salary, which would refer more to the Keynesian approach[g].

3. Data

The Social Accounting Matrixes (SAMs) used for both countries come from the IFPRI database. For Nigeria, we use the 2006 SAM built by Nwafor, Diao, and Alpuerto (2010). For Tanzania, we use the 2003 SAM built by Thurlow and Wobst (2003). The matrixes have been aggregated for this article.

The original Nigerian SAM, which included 61 sectors and products, has been aggregated into 24 sectors and products[h]. To facilitate the interpretation of the results and to keep the pedagogic nature of the exercise, we also divided the factors into three categories: capital, land, and labor. The various tax accounts and the geographic distribution of the 12 household categories were kept unchanged.

Looking at the SAM data, it becomes clear that the Nigerian economy is driven by the oil sector (accounting for 35 percent of GDP and 94 percent of exports). The substantial oil exports explain Nigeria's external position, which is characterized by a largely positive current account balance. At the economic agent's level, government resources mainly come from capital incomes (accounting for more than 87 percent) and from direct taxes (including taxes on oil companies' profits). Imports taxes represent only 5 percent of total resources (Table 3). Household incomes mostly come from the factors of production (labor, capital,[i] and land). In most cases, labor incomes account for more than half of the total resources (Table 5). The other sources of income (government transfers and transfers from the rest of the world) are marginal.

---

[g] In addition to an exogenously fixed investment level.
[h] See an exhaustive list in Annex.
[i] Firms use capital incomes to remunerate households (capital income first transits through firms).

For Tanzania, the original matrix consists of 43 sectors and products, which we have aggregated into 29 sectors. As in the Nigerian case, Tanzania's various tax accounts and the 12 household categories, distributed by poverty level, geographic location, and alphabetization level, have been maintained.

Unlike Nigeria, the Tanzanian economy is driven by agriculture. Agricultural value added represents 46 percent of Tanzania's GDP and agricultural exportations account for more than 33 percent of total exports. The country's current account balance is negative; a breakdown of the government's revenues shows that they essentially come from direct and indirect domestic taxes, as well as from imports taxes, which account for around 15 percent of total resources (Table 6). Household incomes essentially come from factors of production (Table 8). Incomes coming from firms (dividends) correspond to the residual income of those firms net of taxes and government dividends payments.

Finally, the other data we use in the model (i.e. data related to the value of the various parameters) are provided by the Global Trade Analysis Project (GTAP7) for the elasticities of substitution and transformation[j]. It is almost impossible to find, or even estimate, those parameters for these countries due to the evident lack of statistics on the subject. As our paper has a pedagogic purpose, GTAP data constitutes a transparent basis that will be accessible to every researcher. The values of the Frisch parameter are taken from Annabi, Cockburn, and Decaluwé (2003).

[j] See details in Annex.

Table 3: Decomposition of Government Resources (in %)

Capital Income	Direct taxes	Taxes on sales	Imports taxes	Taxes on production	Transfers (Rest of the world)	Total
47.87	40.89	0.90	4.25	2.51	3.58	100

Source: SAM (Nwafor, Diao and Alpuerto, 2010)

Table 4: Share of Households in Factors Incomes' Distribution (in %)

	Labor	Capital (firms)	Land
H-RUR-SS	6.72	0.11	12.66
H-RUR-SE	7.49	0.08	16.04
H-RUR-SW	2.51	0.08	8.67
H-RUR-NC	5.64	0.29	19.09
H-RUR-NE	5.44	0.42	18.38
H-RUR-NW	8.66	0.39	25.16
H-URB-SS	11.71	6.84	-
H-URB-SE	5.95	2.39	-
H-URB-SW	17.05	9.99	-
H-URB-NC	5.92	2.68	-
H-URB-NE	5.75	2.49	-
H-URB-NW	17.15	4.76	-
Total	-	-	-

Source: SAM (Nwafor, Diao, and Alpuerto, 2010)

Table 5: Sources of Household Income (in % of total household income)

	Labor	Capital	Land	Government	Rest of the world	Total
H-RUR-SS	60.87	0.95	27.61	-	10.57	100
H-RUR-SE	58.59	0.61	30.20	-	10.59	100
H-RUR-SW	48.10	1.43	39.91	-	10.55	100
H-RUR-NC	48.01	2.37	39.11	-	10.50	100
H-RUR-NE	47.46	3.48	38.62	-	10.44	100
H-RUR-NW	51.36	2.23	35.90	-	10.50	100
H-URB-SS	59.53	32.95	-	2.26	5.27	100
H-URB-SE	66.31	25.27	-	2.53	5.89	100
H-URB-SW	57.87	32.09	-	0.94	9.10	100
H-URB-NC	61.93	26.53	-	0.91	10.63	100
H-URB-NE	63.85	26.19	-	2.29	7.67	100
H-URB-NW	71.40	18.79	-	2.68	7.12	100

Source: SAM (Nwafor, Diao, and Alpuerto, 2010)

Tanzania

Table 6: Decomposition of Government Resources (in %)

Firms	Direct taxes	Taxes on sales	Import taxes	Taxes on value added	Taxes on factors	Total
0.21	28.31	50.30	14.87	3.63	2.67	100

Source: SAM (Thurlow and Wobst, 2003).

Table 7: Share of Households in the Factors Incomes' Distribution (in %)

	Labor	Capital	Land
HRBFPL	3.61	5.33	0.55
HRFBPL	4.73	7.44	1.6
HRNOED	4.57	10.85	2.1
HRNFPS	10.29	10.24	1.48
HRNFSS	24.44	14.1	35.14
HRSECP	7.02	0.78	7.67
HUBFPL	1.07	0.24	2.32
HUFBPL	1.77	0.24	6.01
HUNOED	1.31	0.34	5.28
HUNFPS	4.2	0.55	5.48
HUNFSS	18.34	2.03	25.99
HUSECP	17.86	1.64	2.12
Total	-	-	-

Source: SAM (Thurlow and Wobst, 2003).

Table 8: Sources of Household Income (in % of total household income)

	Labor	Capital	Land	Firms	Government	Rest of the world	Total
HRBFPL	20.74	65.67	9.45	3.09	1.04	-	100
HRFBPL	19.28	65.16	8.42	6.4	0.75	-	100
HRNOED	13.46	68.59	6.97	6.08	1.24	3.66	100
HRNFPS	27.26	58.18	6.6	3.84	1.09	3.03	100
HRNFSS	25.19	31.2	3.78	35.55	0.77	3.5	100
HRSECP	37.17	8.86	0.96	39.84	0.69	12.47	100
HUBFPL	26.55	12.91	3.47	56.36	0.71	-	100
HUFBPL	21.32	6.34	0.96	71.1	0.28	-	100
HUNOED	16.42	9.13	0.92	64.84	0.84	7.85	100
HUNFPS	36.07	10.05	1.11	46.16	0.6	6.01	100
HUNFSS	35.32	8.41	0.71	49.11	0.51	5.95	100
HUSECP	62.18	12.23	0.74	7.26	0.42	17.17	100

Source: SAM (Thurlow and Wobst, 2003).

4. Results

We will first present results for each country. Due to the great number of variables studied, a grouped analysis would not be relevant. Thus, we will present a synthesis of the main results, highlighting similarities and differences observed.

4.1 Nigeria

4.1.1 50 Percent Reduction in Tariffs

4.1.1.1 Production and Prices

In the first four simulations, the 50 percent reduction in tariffs in Nigeria, corresponding to a relative decrease in import prices compared to domestic prices, is reflected by an increase in imported volumes and a diminution of the domestic variety in each of the considered sectors. These results are particularly apparent for cereals, which represent the main product subject to import taxation. We consistently observe a reorientation of production toward other economic sectors which are not protected by any tariff barriers. The fixed current account, coupled with the increase in import volumes, carries an increase in exports, due to the depreciation of the real exchange rate[k]. Since the tariff revenues represent a small part of the government revenues, the closure rule of the government account has little influence on the results.

We find relative homogeneity in growth rates, which vary very little regardless of the adopted closure rule. In particular, the government account closure rule has a very limited influence on the GDP growth rate. As mentioned previously, this result is essentially explained by the insignificant share of tariff incomes in the total government revenue. We also observe similar results according to the endogenous or exogenous nature of the investment. It is, however, worth mentioning that we do see a slight difference according to the adopted closure rule. Indeed, growth rates slightly increase when investment is exogenously determined. In alternative specifications, when government savings are exogenous, total savings increase less, dragging the investment.

When foreign savings are free and the real exchange rate is fixed, we observe a greater diminution of imports prices and a greater increase in domestic prices, the depreciation effect having disappeared. We also notice a greater increase in imports and a substantial fall in exports. So the current account surplus lessens and foreign savings (here, the net transfers of capital) decrease. An increase in total savings and investment is observed. The strong augmentation of the demand for investment (simulation 10) stems from the fact that when factors are mobile, production diminishes substantially in importing sectors subject to tariffs, while imports increase. Given that the real exchange rate is fixed, exports scarcely increase and the

---

[k] The relation is, however, not one-to-one. In that case, the domestic price index should be used as a numéraire.

commercial deficit deepens. The deficit created is financed by a drastic fall in capital exports (-57 percent), which significantly increases total savings, inducing a strong variation in the demand for investment.

In general, when previously fixed factors are released, supply becomes more elastic and stronger variations of production should be observed, requiring adjustments of the quantities to be made. We notice rather contrasting results in simulations 9 and 10, compared to simulations 1 and 8. In terms of production and imports, we find less emphasis on prices in favor of an adjustment by quantity (especially for importing sectors subject to the decrease in tariffs). Perfect mobility of the factors of production also consistently leads to more pronounced reallocation effects across sectors (greater GDP growth).

4.1.1.2 Factor Remuneration

In terms of factor remuneration, wages increase in all scenarios after an increase in the marginal productivity in the value of labor (especially the price of the value added). Wages increase even more when the real exchange rate is fixed because the price of the value added increases more in this scenario; the most favorable scenario is the one in which all factors are mobile and the real exchange rate is fixed. The fall in import price, which is sharper in the case of a fixed exchange rate and the limited progression of domestic prices, leads to a greater increase in the value-added price. As for capital and land, remunerations increase in almost every sector, except the cereal sector (the most taxed importing sector) which suffers the most from the negative price shock. Following the decrease in tariffs, the specific nature of the factors complicates the adjustment, creating an important price effect. Both factors' remuneration decreases by 31.56 percent in the cereal sector. Capital and land suffer in this case from their specific nature, compared to labor, which can migrate from one sector to another.

4.1.1.3 Households' Incomes

Globally, households' incomes essentially stem from factor remuneration and follow a contrasting evolution: urban households see their incomes grow, whereas rural households' incomes decrease. In particular, rural households whose incomes mainly come from land and labor suffer from the important diminution of the fixed factor remuneration (capital and land) and from the weak progression of wages. The result is inverted for urban households. This mixed result is robust to foreign savings and investment specifications.

We note that in the scenario in which government savings is exogenous, aggregated households' incomes follow the same evolution. For simulations 1 to 4, in which we observe an increase in government savings, when they are endogenous, households' incomes grow even more if savings are fixed. These results are inverted in simulations 4 to 8. In these cases, due to the increase in direct taxes weighing on households, in order to maintain the initial level of government savings, the growth of households' incomes is reduced.

Finally, we find that factor mobility leads to a fall in the global level of land remuneration in favor of labor and capital remuneration. This puts rural households at a particular disadvantage.

4.1.1.4 Government

Government revenue and government savings are relatively sensitive to the choice of closure rule. However, while tariff revenues are subject to strong variations, these variations do not explain the observed movements at the aggregated level. Resources deriving from custom duties represent barely 4 percent of government revenue. The strong fall in tariff revenues (-20 percent on average) is always compensated for by other sources of revenue. Actually, government revenue, which essentially comes from direct taxes and capital incomes, follows the evolution of the economic activity (GDP growth) rather accurately. Comparison of the evolution of the two indicators gives particularly striking results.

4.1.2 10 Percent Increase in Agricultural Productivity

4.1.2.1 Production and Prices

The 10 percent rise in agricultural productivity in all agricultural sectors leads to an increase of the same level of production in all of those sectors, as well in the other sectors of the economy. Outcomes, in terms of growth, are particularly reinforced by the weight of the agricultural sector, which represents one-third of total GDP. The increase in productivity stems from a fall in the effective cost of the factors and of the marginal cost, which tends to push agents to produce more in order to maximize their profits.

The adopted closure rule for investment and government account does not significantly influence the results in terms of growth. On the other hand, the exogenous or endogenous nature of foreign savings does play an important role. Observed growth rates are always weak when foreign savings are flexible and the real exchange rate is fixed. In this case, we note an inversion of the results for some sectors (specifically, oil, telecommunications, and wood).

When foreign savings are fixed, the strong fall in the domestic price of agricultural products, which is due to an excess supply, leads to a reorientation of the demand toward the domestic variety of the product. This domestic variety then itself becomes relatively less expensive than the imported good. We observe an inverted effect for non-agricultural goods whose imports increase and exports decrease. As non-agricultural imports represent the majority of imports, the exchange rate must depreciate in order to maintain a fixed current account balance. When foreign savings are flexible and the real exchange rate is fixed, the effect induced by the depreciation disappears: imports decrease less in agricultural sectors and more in the other sectors. Exports increase less (or often decrease) in agricultural sectors and decrease more in the other sectors whose domestic prices remain at the same level compared to exports prices. The main beneficiary of an increase in productivity is still the export crop sector, which is resolutely turned toward the foreign market and whose domestic price escapes the general fall observed in the other sectors.

Demand for investment is particularly sensitive to the closure rule. It increases even less when foreign savings are fixed and government savings are flexible. When foreign savings are fixed (simulations 3 and 4), it is the variations in domestic savings (government savings and households savings) which explain the variations in investment. The strong increase observed with simulations 6 and 8 is essentially explained by the fall of net capital transfers from 10 to 19 percent. When factors are perfectly mobile, imports decrease less in agricultural sectors and tend to rise in the other sectors. Regarding exports, we find a less emphasized increase in agricultural goods and a fall in the oil sector, the main exported product. The current account imbalance is absorbed owing to a decrease in net capital transfers of 35 percent. Consequently, total savings and investment both increase substantially.

Factor mobility does not lead to significant changes in terms of growth at the global level. At the sector level, we note an amplification of results for the export crop sector as well as the cereal sector, whose demand for factors and production increases sensibly (SIM1 vs SIM9). For the other agricultural sectors, the production increase comes through a reduction of the demand for factors whose productivity increased.

4.1.2.2 Factor Remuneration

Generally, labor remuneration increases regardless of the considered scenario; this is because of the increase in productivity, especially as foreign savings are flexible. At the fixed factors level, capital and land remuneration increase in non-agricultural sectors and decrease in agricultural sectors, except in the cereal and export crop sectors, whose prices are kept unchanged. The fall in agricultural prices has a negative effect on these sectors' fixed factors; the exception here is labor, which is free to migrate toward other sectors.

Moreover, we observe that the demand for labor decreases in agricultural sectors other than cereals and export crops. Indeed, the net effect of the increase in a factor's productivity on the demand for that factor is ambiguous. On the one hand, the increase in a factor's productivity corresponds to a fall in its effective cost, which leads producers to use more of that factor. On the other hand, the increase in productivity allows producers to generate the same amount of output with fewer factors. The net effect is a combination of both effects.

Capital and land being specific factors, the adjustment relies on labor, which sees its demand falling in simulations 1 through 4, except for the two above-mentioned sectors. It is therefore the second effect which rules here in this case. Additionally, the output effect (increase in demand following a fall in prices) is not involved here since the demand is particularly inelastic. When foreign savings are flexible and the exchange rate is fixed, production increases less in the agricultural sectors and the demand for labor diminishes; this is true for cereals and export crops as well. Regarding these two latter sectors, the reduction in their domestic

prices is accentuated, hence leading to a less important increase in fixed factor remunerations for cereals and a more important decrease for export crops.

The possibility of migration from one sector to another (from the less remunerative to the most remunerative) attenuates the fall in earnings from land. For the agricultural sectors, while we still see a decrease in land earnings, we see an increase in capital remuneration of 5.68 percent (SIM9). Simulation 10 is especially negative for land and capital and beneficial for labor. In that configuration, we observe a strong reallocation of capital from agricultural sectors toward other branches of the economy, where it becomes relatively abundant (this effect is emphasized by the fall in the demand for capital in the oil sector). Land reallocates essentially from the other sectors (including export crops) toward the cereal sector, which did not face any fall in its earnings previously. Compared to simulation 9, earnings from land suffer most from the reduction in the demand for factors in the export crop sector in scenario 10. We find a less important fall when we compare simulations 8 and 10: land mobility in the latter case dampens the fall in earnings from land.

4.1.2.3 Households' Incomes

Households benefit from the increase in factors remuneration in all scenarios. Paradoxically, we observe that the increase in income is more favorable to urban households than to rural households, whose incomes improve modestly. Compared to urban households, rural households suffer particularly from the reduction of land and agricultural capital remuneration. We also notice that when foreign savings and government savings are kept fixed, households' incomes increase even more. Indeed, fixing government savings leads in this case to a decrease in the direct taxes weighing on households. The adverse effect happens for simulations 5 to 8, where foreign savings are flexible. Urban households, who are the main taxed categories, are the most sensitive to the closure rule of the government account.

Changes observed in factor remunerations when they are perfectly mobile are also remarkable. For rural households, the slightest fall in earnings from land under perfect mobility yields an increase in income (SIM1 vs SIM9; SIM8 vs SIM10). The most favorable scenario for these households remains simulation 10, in which the sharp augmentation of wages (+13 percent) compensates for the 12 percent fall in earnings from land.

4.1.2.4 Government

Government revenues particularly increase as foreign savings are fixed and government savings are flexible. All the revenue entries increase, with the exception of tariff incomes, which lessen following a strong fall in agricultural imports. The evolution of government revenues generally tends to follow the economic activity's progression. Low-growth scenarios corresponding to flexible foreign savings

(simulations 1 to 4) are globally more harmful: revenue increases are weak and foreign savings decrease under these scenarios.

The main lesson we learn from these simulations is the fact that, paradoxically, the increase in agricultural productivity is most favorable to urban households, followed by exporting rural households. This result is especially accentuated when factors of production are fixed, government savings are flexible, and foreign savings are fixed.

4.2 Tanzania

4.2.1 50 Percent Decrease in Tariffs

4.2.1.1 Production and Prices

The tariff decrease does not lead to significantly different results in terms of growth according to the adopted closure rule. GDP growth rates always vary between 0.24 and 1.24 percent; we also consistently find few variations in terms of GDP growth, given that the model always assumes full employment of the factors of production. The discrepancies observed correspond to relatively poor reallocation effects.

Consistently, when foreign savings are fixed, the increase in imports goes along with the increase in exports through the real exchange rate depreciation. Imports rise proportionally to the initial level of the specific tariff on the sector (CTEAGR, COTHCRO, CLOTH). Under the scenario of flexible foreign savings and fixed real exchange rate, we observe a more substantial increase in imports and a fall in exports, the deficit being filled by the entry of external capital. This effect is emphasized by factor mobility. Besides, variations of foreign savings largely determine investment variations. Indeed, the substantial increase in foreign savings counters the fall in government savings behind the fall of investment in the first scenarios.

The reduction in tariffs yields a fall in imported prices on the domestic market. When foreign savings are fixed, exchange rate depreciation restrains the fall of the imported variety price. We then observe a greater fall in the latter scenarios, in which foreign savings are flexible and the exchange rate is fixed.

4.2.1.2 Factor Remuneration

Labor remuneration increases between 0.66 and 1.89 percent in all scenarios, owing to an improvement of the value-added price. Capital and land remunerations, sector-specific, follow an ambiguous evolution. The most favorable scenario for labor is the one in which all the factors are mobile; this scenario is also the most negative for land specific to the agricultural sector, the remuneration of which decreases. We observe the opposite result for the return to capital.

4.2.1.3 Households' Incomes

Households' incomes rise due to the increase in factor remuneration. Incomes increase more (or decreases less) when the exchange rate is fixed and foreign savings are flexible. In addition, the government account closure rule significantly affects income variations. At the aggregate level, following a decrease in government revenues, maintaining a fixed level of savings leads to a supplementary taxation of households whose revenues do not progress much. A detailed analysis shows that this mostly negatively affects urban households, whose incomes decrease (SIM2, SIM4, and SIM6). In these three scenarios, direct taxation weighing on households increases to compensate for the fall in government revenue; this then puts a strain on households' incomes.

21

4.2.1.4 Government

Government account's evolution is particularly sensitive to the macroeconomic closure rule. Whether government savings are exogenous or not, government revenues decrease or increase regardless of the rest of the world's closure rule. The decrease is essentially due to a strong fall in customs revenues, which are cut approximately by half. The progression of the various sources of government revenue shows that when government savings are fixed, a growth in revenues is essentially due to direct taxation (25 percent increase on average).

4.2.2 10 Percent Growth in Agricultural productivity
4.2.2.1 Production and Prices

The growth in agricultural productivity leads to a growth in GDP of 4-5 percent. This result must be linked to agriculture's dominance in the Tanzanian GDP (agriculture accounted for 46 percent of GDP in 2001).

As previously observed, full employment of all factors of production implies rather similar results in terms of GDP growth. As expected, it is the agricultural sectors that face the most important growth in production. We note that a fall in agricultural production and a rise in non-agricultural imports occur; this effect is inverted for exports. Indeed, under an inelastic demand, the growth in agricultural production leads to a fall in domestic prices, rendering exports more profitable for producers; as a result, imports decrease due to the substitution of the domestic variety and exports increase.

If foreign savings are flexible and the real exchange rate is fixed, imports decrease less in the agricultural sectors and more in the non-agricultural sectors. At the same time, exports increase less in the agricultural sectors and decrease more in the other sectors, hence the growth in foreign savings observed in simulations 4 to 8.

Demand for investment is still largely determined by foreign savings variations. Investment rises when foreign savings increase and falls when foreign savings are fixed, regardless of the government and households' savings evolutions. The last simulation (SIM10) in particular illustrates this effect.

4.2.2.2 Factor remuneration

The growth in factors' productivity leads to a fall in their effective remuneration and an increase in their real remuneration. As highlighted above[1], the effect of the increase in productivity on the demand for factors is ambiguous. As in the Nigerian case, we observe a reduction in the demand for labor in the agricultural sectors after a productivity shock; the exception is the sector of "other agricultural products" (COTHCRO), which is not much affected by the fall in domestic prices, given that more than 80 percent of its production is exported.

---

[1] Cf. subsection 4.1.2.2 dedicated to Nigeria.

The general fall in agricultural prices leads to a diminution of the fixed factor remunerations in the agricultural sectors. On the other hand, non-agricultural capital's remuneration is augmented, as are wages. The negative results we found for the fixed factor remuneration in agriculture are lessened and reversed with the ability of the factors to migrate from one sector to another (essentially from the agricultural sectors toward the other sectors).

4.2.2.3 Households' Incomes

Households' incomes increase from 4 to 5 percent. The increase is more important when the current account is flexible, government saving are fixed, and factors of production are mobile. Keeping government savings exogenous supposes here a diminution of the direct taxation on households and thus a more important increase in their income (SIM1 vs SIM2; SIM3 vs SIM4…).

Urban households' incomes grow more than rural households', which suffer from the diminution of the fixed factor remuneration (capital and land). Most rural households collect more than two-thirds of their income from capital and land. The situation is reversed in favor of rural households in simulation 9, in which land remuneration increases by 22 percent. However, the most advantageous scenario for all households remains the last simulation, in which wages and capital remuneration grow the most.

4.2.2.4 Government

Unlike previous results obtained with a fall in tariffs, we do not observe significant differences regarding variations of government revenue, in terms of either signs or amplitude. Revenues increase from 4 to 5 percent, depending on the simulation under consideration All the entries increase and government savings improve from 2 to 4 percent. As observed for households, maintaining government savings at their initial level leads to a diminution of direct taxation and thus a less significant increase in government revenue (SIM1 vs SIM2; SIM3 vs SIM4…).

5. Compared Analysis of Results

The results for both countries show a number of common points, as well as some differences related to characteristics inherent to each economy.

Regarding the similarities, we can note the common nature of the main mechanisms considered in the determination of the results. When we look into the fall in imports tariffs, in both cases, traditional mechanisms fully operate: the real exchange rate depreciates when foreign savings are exogenous in order to finance the surplus of imports, while foreign savings increase (diminution of net capital transfers for Nigeria) when the real exchange rate is fixed. We also observe a sharp fall in tariff incomes in government savings. Along with the increase in agricultural productivity, domestic prices and fixed factor remuneration decrease in the agricultural sectors. Similarly, in both countries, urban households benefit more from the

technical progress in agriculture than do rural households. This paradoxical evolution is, however, lessened through factor mobility.

One of the main differences between the two countries lies in the effects of the government and households' accounts liberalization. Tanzania, which sees a significant share of its government revenues coming from customs duties, faces a sharp fall in its resources and government savings, unlike Nigeria, whose other entries feed the government's budget, thus counterbalancing the same fall. Distributive effects of liberalization are different across the countries as well. The most disadvantaged category in Nigeria is rural households, whereas in Tanzania, it is the urban households who see their incomes reduced when government maintains its initial level of public savings. Finally, we can note that incomes are better allocated between rural and urban households with the growth of agricultural productivity in Tanzania, contrary to what we observe in Nigeria. Indeed, in Nigeria, the share of rural households' income coming from land is on average five times greater than in Tanzania, hence the greater sensitivity of rural incomes (decreasing) to land remuneration.

6. Conclusion

Macroeconomic closure plays a key role in the way the various impacts of economic policies are rendered in general equilibrium models. Through the examples of two countries with different characteristics, this paper contributes to the debate by showing the fragility of some conclusions about the adopted closure rule. However, we observe that although the simulated policies' global effects are subject to the underlying assumptions, it is the distribution of these effects between the various agents which is the most sensitive. Some agents may thus lose or win if a shock occurs, according to the analyst's choice of closure.

In this case, which specific model should then be chosen? This question cannot be answered categorically. The decision falls to the analyst to select the combination which best matches the studied subject and the considered economy. For instance, when studying the effects of liberalization on welfare, it is now recognized that the neoclassical closure rule is the most pertinent (assuming in particular that foreign and government savings are exogenous); this model helps to avoid artificial welfare increases due to an inflow of foreign savings, whose long-term negative effects are hardly conveyed by statistical models.

Finally, we note that this paper did not study the sensitivity of our results to the choices of the analyst, i.e. the aspect linked to parameters. To the extent that this aspect also applies, a combination of approaches could provide interesting outcomes. Some results would probably be attenuated, while others could be emphasized. Again, the choice falls to the analyst to identify a closure rule and perform a similar analysis.

References

Armington, P. S. 1969. "A theory of demand for products distinguished by place of production." *IMF Staff Papers* 16: 159-178. Washington DC: IMF.

Bergman, L., D. Jorgenson and E. Zalai. 1990. *General Equilibrium Modeling and Economic Policy Analysis*. Cambridge: Basil Blackwell.

Decaluwé, B., A. Martens and M. Monette. 1988. "Macroclosures in Open Economy CGE Models: A Numerical Reappraisal." *International Journal of Development Planning Literature* 3 (2): 69-90.

Decaluwé, B. and A. Martens. 1988. "CGE modeling and Developing Economies: A Concise Empirical Survey of 73 Applications to 26 Countries." *Journal of Policy Modeling* 10(4): 529-568.

De Melo, J. 1988. "Computable General Equilibrium Models for Trade Policy Analysis in Developing Countries: A Survey." *Journal of Policy Modeling* 10(4): 469-503.

Dewatripont, M. and G. Michel. 1987. "On Closure Rules, Homogeneity, and Dynamics in Applied General Equilibrium Models." *Journal of Development Economics* 26(1): 65-76.

Dixon, P. and D. Jorgenson. 2012. *Handbook of Computable General Equilibrium Modeling*, Vols. 1A and 1B., North-Holland.

Ginsburgh, V. and M. Keyzer. 2002. *The Structure of Applied General Equilibrium Models*. Cambridge: The MIT Press.

Johansen, L. 1960. *A Multi-Sectoral Study of Economic Growth*. Amsterdam: North-Holland.

Kehoe, T. J., T. N. Srinivasan and J. Whalley (Eds). 2005. *Frontiers in Applied General Equilibrium Modeling*. Cambridge: Cambridge University Press.

Kilkenny, M. and S. Robinson. 1990. "Computable General Equilibrium Analysis of Agricultural Liberalization: Factor mobility and Macro Closure." *Journal of Policy Modeling*, 12(3): 527-556.

Nwafor, M., X. Diao, and V. Alpuerto. 2010. "A 2006 Social Accounting Matrix for Nigeria: Methodology and Results." Nigeria Strategy Support Program (NSSP) Report No. NSSP007. Washington DC: IFPRI.

Piggot, J. and J. Whalley (Eds). 1985. *New Developments in applied General Equilibrium Analysis*. Cambridge: Cambridge University Press.

Rattso, J. 1982. "Different Macroclosures of the Original Johansen Model and Their Importance on Policy Evaluation." *Journal of Policy Modeling* 4: 85-98.

Robinson, S. 2006. "Macro Models and Multipliers: Leontief, Stone, Keynes, and CGE Models." In *Poverty, Inequality and Development: Essays in Honor of Erik Thorbecke*, edited by Alain de Janvry and Ravi Kanbur, 205-232. New York: Springer Science.

Sen, A. K. 1963. "Neo-Classical and Neo-Keynesian Theories of Distribution." *Economic Record* 39: 54-64.

Shoven, J. B and J. Whalley. 1992. *Applying General Equilibrium*. Cambridge: Cambridge University Press.

Taylor, L. 1979. *Macro Models for Developing Countries*. New York: McGraw-Hill Book Co.

Taylor, L. and F. Lysy. 1979. "Vanishing Income Redistribution. Keynesian Clues About Model Surprises in the Short Run." *Journal of Development Economics* 6: 11-29.

Thurlow, J. and P. Wobst. 2003. "Poverty-Focused Social Accounting Matrices for Tanzania." TMD Discussion Paper No. 112. Washington DC: IFPRI.

Whalley, J. and B. Yeung. 1984. "External Sector Closing Rules in Applied General Equilibrium Models." *Journal of International Economics* 16: 123-138.

Annex 1: Main parameters

	Elasticities of Armington	Elasticities of transformation (CET)	Elasticities of substitution capital/labor	Parameter of Frisch
CER	5.05	5.05	0.24	-5.85
ROOTS	2.45	2.45	0.24	-5.85
SEEDS	2.45	2.45	0.24	-5.85
FRTVEG	1.85	1.85	0.24	-5.85
EXP	2.50	2.50	0.24	-5.85
OTHE	1.85	1.85	0.24	-5.85
LIV	2.00	2.00	0.24	-5.85
FISH	1.25	1.25	0.20	-5.85
FORE	2.50	2.50	0.20	-5.85
FOOD	2.00	2.00	1.12	-5.85
TEXT	3.75	3.75	1.26	-5.85
WOOD	3.40	3.40	1.26	-5.85
COMP	3.75	3.75	1.26	-5.85
COIL	2.10	2.10	1.26	-5.85
OMIN	2.90	2.90	1.26	-5.85
IMO	1.90	1.90	1.68	-5.85
UTIL	2.80	2.80	1.26	-5.85
TRSTEL	1.90	1.90	1.26	-5.85
TRAD	1.90	1.90	1.68	-5.85
HOTL	1.90	1.90	1.26	-5.85
BSER	1.90	1.90	1.26	-5.85
EDUC	1.90	1.90	1.26	-5.85
HEAL	1.90	1.90	1.26	-5.85
PSER	1.90	1.90	1.26	-5.85
OSER	1.90	1.90	1.26	-5.85

Source: GTAP 7 for the elasticities; Annabi, Cockburn, and Decaluwé (2003) for the parameter of Frisch

Annex 2: Results for Nigeria

Definition of the abbreviations used for the sectors/products

CER : cereals	**COIL**: brut oil
ROOTS : roots and tubers	**OMIN:** other mining products
SEEDS : oleaginous	**OTHMN:** other manufactured products
FRTVEG : fruits and vegetables	**IMO:** real estate
EXP : exportation cultures	**UTIL:** water-electricity
OTHE : other agricultural products	**TRSTEL:** transports-telecommunications
LIV : livestock	**TRAD:** trade
FISH : products of fishing	**HOTL:** hotel – catering
FORE : forestry	**ABSER:** financial services
FOOD : food-processing industry	**AEDUC:** education
TEXT : textile industry	**ASANT:** health
WOOD : wood industry	**AOSER :** other services

Groups of Households

H-RUR-SS :	Rurals in the South-South zone
H-RUR-SE :	Rurals in the South-East zone
H-RUR-SW :	Rurals in the South-West zone
H-RUR-NC :	Rurals in the North-Center zone
H-RUR-NE :	Rurals in the North-East zone
H-RUR-NW :	Rurals in the North-West zone
H-URB-SS :	Urbans in the South-South zone
H-URB-SE :	Urbans in the South-East zone
H-URB-SW :	Urbans in the South-West zone
H-URB-NC :	Urbans in the North-Center zone
H-URB-NE :	Urbans in the North-East zone
H-URB-NW :	Urbans in the North-West zone

Annex 2.1: 50% Reduction in Import Tariffs

Sectorial Aggregates

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
Prodtn										
Agrc.	-1.46	-1.44	-1.38	-1.05	-1.05	-1.05	-2.56	-2.98	-2.35	-5.72
Indus.	0.41	0.41	0.43	0.48	0.27	0.27	-0.17	-0.29	1.03	-3.15
Serv.	1.03	1.01	0.96	0.70	0.53	0.53	1.59	1.87	1.31	7.53
Impts.										
Agrc.	29.84	30.14	30.75	34.51	52.59	52.51	47.77	46.37	47.41	90.59
Indus.	-0.65	-0.67	-0.83	-1.53	2.84	2.86	9.09	10.73	-1.00	28.64
Serv.	-3.44	-3.47	-3.30	-2.79	3.75	3.78	5.75	6.30	-3.05	14.80
Expts.										
Agrc.	3.76	3.76	3.44	2.23	-3.40	-3.41	-2.08	-1.78	54.05	9.71
Indus.	3.76	3.76	3.44	2.23	-3.40	-3.41	-2.08	-1.78	54.05	9.71
Serv.	12.52	12.48	12.23	11.14	-3.33	-3.35	-8.61	-9.96	13.77	-16.18
V.Dom.										
Agrc.	-1.49	-1.47	-1.41	-1.07	-1.03	-1.04	-2.56	-2.99	-2.66	-5.80
Indus.	1.34	1.33	1.39	1.56	0.97	0.97	-0.42	-0.79	2.54	3.65
Serv.	0.60	0.58	0.54	0.31	0.67	0.68	1.96	2.30	0.85	8.39

Note:

Prodtn: Production	Agrc.: Agriculture
Impts.: Imports	Indus.: Industry
Expts: Exports	Serv.: Services
V.Dom.: Domestic Sales	

Production

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-5.84	-5.80	-5.82	-5.71	-7.45	-7.46	-9.12	-9.61	-14.68	-26.39
AROOTS	-0.19	-0.15	-0.07	0.38	1.11	1.09	-0.36	-0.78	1.30	1.41
ASEEDS	0.02	0.04	0.15	0.63	1.50	1.50	-0.08	-0.52	1.35	1.36
AFRTVEG	-0.15	-0.15	-0.03	0.42	1.21	1.21	-0.37	-0.81	1.33	1.14
AEXP	1.66	1.65	1.64	1.58	-0.42	-0.43	-1.70	-2.05	27.78	1.17
AOTHE	-0.02	-0.02	0.01	0.13	-0.67	-0.67	-1.90	-2.24	4.03	1.18
ALIV	0.95	0.95	1.01	1.23	1.97	1.98	1.38	1.24	0.59	5.10
AFISH	0.39	0.39	0.47	0.77	0.34	0.35	-1.51	-2.01	0.15	-5.40
AFORE	-0.34	-0.41	-0.16	0.44	1.85	1.88	-0.35	-0.89	0.05	-0.12
AFOOD	1.02	1.01	1.17	1.74	2.04	2.04	-0.57	-1.24	0.63	-2.34
ATEXT	3.87	3.83	3.88	3.90	0.15	0.15	-2.85	-3.62	8.94	-5.82
AWOOD	3.22	3.18	2.92	1.75	0.15	0.15	4.03	5.00	3.93	24.85
ACOIL	0.02	0.02	0.02	0.02	-0.01	-0.01	-0.02	-0.02	0.36	-5.57
AOMIN	0.51	0.51	0.50	0.44	-0.35	-0.36	-0.64	-0.72	1.68	-10.92
AOTHMN	1.58	1.57	1.50	1.21	-0.50	-0.50	-0.46	-0.47	5.02	12.77
AIMO	0.45	0.41	-0.21	-2.75	2.02	2.03	17.56	21.63	0.89	66.90
AUTIL	0.21	0.18	0.34	0.83	1.90	1.92	0.10	-0.35	0.47	0.27
ATRSTEL	3.39	3.37	3.36	3.24	-0.32	-0.32	-2.41	-2.94	3.73	-4.71
ATRAD	-0.09	-0.08	-0.19	-0.60	-0.02	-0.02	2.34	2.94	0.00	11.64
AHOTL	0.56	0.51	0.77	1.51	3.39	3.42	0.87	0.25	1.49	1.02
ABSER	8.89	8.84	8.70	7.96	-0.95	-0.95	-4.11	-4.90	10.36	-5.58
AEDUC	0.12	0.10	0.18	0.40	0.99	1.00	0.26	0.08	0.38	0.30
AHEAL	0.10	0.08	0.15	0.33	0.85	0.86	0.23	0.08	0.31	0.29
AOSER	0.71	0.62	0.97	1.93	4.33	4.36	0.98	0.17	1.88	0.85
GDP . F.C	**2.25**	**2.24**	**2.19**	**1.95**	**1.14**	**1.14**	**1.66**	**1.81**	**2.84**	**2.78**

Imports

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	49.71	50.22	50.95	56.16	81.96	81.82	76.19	74.42	82.23	147.50
CSEEDS	26.66	26.91	28.35	35.21	70.67	70.64	58.59	55.47	7.73	30.17
CFRTVEG	-9.66	-9.60	-8.68	-4.82	13.78	13.79	6.45	4.60	-19.67	-8.12
CEXP	1.20	1.19	1.46	2.40	3.83	3.84	0.06	-0.89	-16.90	-6.08
COTHE	2.87	2.87	3.33	5.09	12.24	12.27	8.45	7.50	-5.79	5.76
CLIV	-6.26	-6.27	-5.80	-4.05	12.80	12.86	15.87	16.78	-7.02	25.12
CFISH	-0.45	-0.45	-0.03	1.54	8.55	8.57	5.54	4.78	-0.13	9.74
CFORE	29.39	29.03	30.71	35.55	68.11	68.36	62.39	61.42	34.09	82.09
CFOOD	-7.36	-7.36	-6.88	-5.02	8.75	8.79	9.02	9.15	-8.23	13.25
CTEXT	-6.19	-6.24	-5.77	-4.16	7.42	7.46	7.24	7.26	-12.09	13.64
CWOOD	-8.57	-8.63	-8.75	-9.50	7.95	8.01	26.34	31.55	-7.17	59.69
COMP	-0.01	-0.03	-0.27	-1.28	2.26	2.28	9.44	11.32	-0.23	31.01
CCOIL	2.74	2.73	2.60	2.06	-0.81	-0.81	-0.54	-0.50	9.31	34.68
COMIN	2.76	2.74	2.69	2.40	0.77	0.78	0.82	0.84	4.92	11.77
CTRSTEL	-3.28	-3.30	-3.12	-2.53	3.08	3.10	4.07	4.35	-2.83	8.54
CBSER	-3.61	-3.65	-3.49	-3.06	4.46	4.49	7.54	8.39	-3.28	21.47
	-3.44	-3.47	-3.30	-2.79	3.75	3.78	5.75	6.30	-3.05	14.80

Exports

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CSEEDS	12.40	12.22	11.14	6.35	-14.60	-14.59	-10.45	-9.34	36.87	14.31
CFRTVEG	10.27	10.21	9.34	5.83	-10.08	-10.09	-6.64	-5.77	28.01	12.28
CEXP	1.40	1.41	1.23	0.60	-2.44	-2.45	-1.66	-1.50	63.78	8.66
COTHE	9.27	9.28	8.85	7.23	-0.45	-0.47	1.30	1.70	30.68	12.81
CFISH	5.62	5.62	5.32	4.19	-3.31	-3.32	-3.68	-3.85	4.71	-14.67
CFORE	13.18	13.37	12.36	9.39	-9.89	-9.98	-9.91	-10.16	9.64	-19.01
CFOOD	10.10	10.09	9.86	8.93	-4.27	-4.29	-9.30	-10.61	10.30	-15.67
CTEXT	13.61	13.60	13.16	11.48	-6.10	-6.13	-10.99	-12.28	32.84	-20.00
CWOOD	16.20	16.20	15.78	14.18	-7.08	-7.12	-14.45	-16.34	16.00	-1.69
COMP	3.27	3.28	3.42	4.03	-0.21	-0.22	-5.51	-6.82	10.44	4.05
CCOIL	-0.01	-0.01	-0.01	0.00	0.00	0.00	-0.01	-0.01	0.28	-5.86
COMIN	2.80	2.81	2.80	2.79	2.17	2.17	1.80	1.70	3.78	-13.19
CTRSTEL	8.52	8.50	8.34	7.64	-2.77	-2.78	-6.95	-8.03	8.77	-13.58
CBSER	16.22	16.16	15.84	14.37	-3.85	-3.87	-10.16	-11.74	18.39	-18.59

Domestic variety price

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	-10.07	-10.04	-10.11	-10.24	-11.83	-11.84	-12.07	-12.15	-3.38	-1.94
CROOTS	0.90	0.97	1.10	1.93	5.23	5.21	3.91	3.53	-3.57	-2.36
CSEEDS	1.45	1.49	1.74	2.89	7.06	7.06	4.57	3.92	-4.29	-4.09
CFRTVEG	0.82	0.82	1.13	2.33	6.50	6.50	3.62	2.90	-4.83	-5.03
CEXP	5.95	5.91	5.82	5.32	1.21	1.22	0.52	0.35	-5.39	-2.11
COTHE	1.35	1.32	1.37	1.40	0.14	0.15	-1.01	-1.29	-3.99	-3.89
CLIV	2.51	2.47	2.52	2.54	5.18	5.20	6.91	7.40	3.64	9.11
CFISH	2.10	2.07	2.17	2.39	2.90	2.91	2.12	1.95	3.92	8.82
CFORE	1.17	1.06	1.31	1.73	4.69	4.74	4.16	4.13	3.83	8.94
CFOOD	1.88	1.86	1.86	1.77	3.23	3.25	4.70	5.12	2.95	7.67
CTEXT	3.64	3.60	3.54	3.16	1.82	1.83	2.58	2.79	2.06	4.97
CWOOD	2.67	2.63	2.49	1.77	2.22	2.24	5.86	6.83	4.29	7.48
COMP	5.38	5.34	5.12	4.10	0.17	0.18	1.87	2.30	5.86	3.31
CCOIL	6.96	6.93	6.72	5.74	-0.15	-0.15	-0.04	-0.01	9.90	8.93
COMIN	4.18	4.14	3.96	3.08	-2.29	-2.29	-2.22	-2.20	5.77	2.31
CIMO	1.60	1.57	1.36	0.36	2.67	2.68	8.75	10.30	4.15	7.85
CUTIL	1.88	1.83	1.84	1.69	2.73	2.74	4.12	4.52	4.82	5.93
CTRSTEL	3.21	3.17	3.09	2.60	1.55	1.56	2.99	3.38	4.64	6.18
CTRAD	1.76	1.74	1.67	1.28	2.06	2.07	4.48	5.14	3.12	10.43
CHOTL	1.91	1.88	1.85	1.60	2.43	2.44	4.22	4.71	3.08	8.52
CBSER	1.27	1.24	1.18	0.83	2.21	2.22	4.84	5.56	2.21	11.11
CEDUC	2.46	2.43	2.35	1.91	1.74	1.75	3.70	4.23	3.77	8.57
CHEAL	2.70	2.67	2.59	2.16	1.68	1.69	3.35	3.81	4.13	7.44
CPSER	2.73	2.70	2.61	2.13	1.69	1.70	3.61	4.13	4.09	7.68
COSER	1.49	1.47	1.41	1.09	2.25	2.26	4.70	5.37	2.68	11.57

Imports price

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	-17.96	-17.98	-18.12	-18.77	-22.88	-22.88	-22.88	-22.88	-16.86	-22.88
CSEEDS	-7.87	-7.90	-8.06	-8.79	-13.40	-13.40	-13.40	-13.40	-6.65	-13.40
CFRTVEG	6.38	6.35	6.16	5.32	-0.19	-0.19	-0.19	-0.19	7.80	-0.19
CEXP	6.17	6.14	5.96	5.11	-6.26	-6.26	-6.26	-6.26	7.59	-6.26
COTHE	-0.29	-0.32	-0.49	-1.28	-3.37	-3.37	-3.37	-3.37	1.04	-3.37
CLIV	6.38	6.35	6.16	5.32	-14.32	-14.32	-14.32	-14.32	7.80	-14.32
CFISH	2.79	2.76	2.58	1.76	-0.56	-0.56	-0.56	-0.56	4.16	-0.56
CFORE	-8.86	-8.89	-9.04	-9.77	-4.08	-4.08	-4.08	-4.08	-7.65	-4.08
CFOOD	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-
CTEXT	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-
CWOOD	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-
COMP	5.78	5.75	5.57	4.73	-	-	-	-	7.19	-
CCOIL	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-
COMIN	2.04	2.01	1.83	1.02	-	-	-	-	3.40	-
CTRSTEL	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-
CBSER	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-

Composite good price

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	-11.80	-11.79	-11.87	-12.15	-14.47	-14.48	-14.64	-14.70	-6.71	-8.09
CROOTS	0.90	0.97	1.10	1.93	5.23	5.21	3.91	3.53	-3.57	-2.36
CSEEDS	1.45	1.49	1.74	2.89	7.06	7.05	4.57	3.92	-4.29	-4.09
CFRTVEG	0.85	0.85	1.16	2.34	6.45	6.46	3.60	2.88	-4.76	-5.00
CEXP	6.01	5.98	5.86	5.26	0.79	0.80	0.31	0.19	-2.00	-1.55
COTHE	1.00	0.97	0.97	0.82	-1.29	-1.28	-2.17	-2.39	-2.96	-4.40
CLIV	2.51	2.47	2.52	2.54	5.18	5.20	6.90	7.40	3.64	9.11
CFISH	2.37	2.34	2.33	2.14	0.38	0.39	-0.08	-0.18	4.01	3.83
CFORE	1.16	1.05	1.30	1.71	4.67	4.72	4.13	4.11	3.82	8.91
CFOOD	2.39	2.36	2.35	2.18	2.84	2.85	4.13	4.49	3.50	6.71
CTEXT	4.56	4.53	4.43	3.89	1.17	1.18	1.65	1.78	3.93	3.13
CWOOD	3.19	3.15	3.01	2.27	1.88	1.89	4.91	5.71	4.78	6.24
COMP	5.68	5.64	5.45	4.57	-0.38	-0.38	0.04	0.14	6.85	0.37
CCOIL	6.96	6.92	6.71	5.74	-0.15	-0.15	-0.04	-0.01	9.87	8.82
COMIN	2.27	2.24	2.06	1.24	-3.89	-3.89	-3.88	-3.88	3.65	-3.43
CIMO	1.60	1.57	1.36	0.36	2.67	2.68	8.75	10.30	4.15	7.85
CUTIL	1.88	1.83	1.84	1.69	2.73	2.74	4.12	4.52	4.82	5.93
CTRSTEL	4.37	4.34	4.22	3.60	0.96	0.97	1.85	2.09	5.80	3.79
CTRAD	1.76	1.74	1.67	1.28	2.06	2.07	4.48	5.14	3.12	10.43
CHOTL	1.91	1.88	1.85	1.60	2.43	2.44	4.22	4.71	3.08	8.52
CBSER	3.96	3.93	3.80	3.20	1.01	1.01	2.19	2.50	5.14	4.86
CEDUC	2.46	2.43	2.35	1.91	1.74	1.75	3.70	4.23	3.77	8.57
CHEAL	2.70	2.67	2.59	2.16	1.68	1.69	3.35	3.81	4.13	7.44
CPSER	2.73	2.70	2.61	2.13	1.69	1.70	3.61	4.13	4.09	7.68
COSER	1.49	1.47	1.41	1.09	2.25	2.26	4.70	5.37	2.68	11.57

Domestic sales

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	-5.84	-5.80	-5.82	-5.71	-7.45	-7.46	-9.12	-9.61	-14.68	-26.39
CROOTS	-0.19	-0.15	-0.07	0.38	1.11	1.09	-0.36	-0.78	1.30	1.41
CSEEDS	0.02	0.04	0.15	0.63	1.50	1.50	-0.08	-0.52	1.35	1.36
CFRTVEG	-0.22	-0.21	-0.09	0.39	1.27	1.27	-0.34	-0.78	1.16	1.08
CEXP	1.74	1.74	1.78	1.91	0.26	0.26	-1.71	-2.24	14.59	-1.43
COTHE	-0.18	-0.19	-0.14	0.01	-0.67	-0.67	-1.96	-2.31	3.54	0.97
CLIV	0.95	0.95	1.01	1.23	1.97	1.98	1.38	1.24	0.59	5.10
CFISH	0.39	0.39	0.47	0.77	0.34	0.35	-1.51	-2.01	0.15	-5.40
CFORE	-0.34	-0.41	-0.16	0.44	1.85	1.88	-0.35	-0.89	0.05	-0.12
CFOOD	1.00	0.99	1.15	1.72	2.05	2.06	-0.56	-1.22	0.60	-2.31
CTEXT	3.46	3.43	3.49	3.59	0.40	0.41	-2.51	-3.27	7.93	-5.25
CWOOD	3.17	3.13	2.87	1.70	0.17	0.18	4.10	5.08	3.89	24.94
COMP	1.43	1.42	1.34	0.97	-0.52	-0.52	-0.04	0.07	4.55	13.51
CCOIL	1.56	1.56	1.49	1.20	-0.50	-0.50	-0.46	-0.47	4.97	12.53
COMIN	-3.24	-3.24	-3.27	-3.41	-4.49	-4.49	-4.64	-4.68	-1.76	-7.29
CIMO	0.45	0.41	-0.21	-2.75	2.02	2.03	17.56	21.63	0.89	66.90
CUTIL	0.21	0.18	0.34	0.83	1.90	1.92	0.10	-0.35	0.47	0.27
CTRSTEL	2.45	2.43	2.45	2.43	0.12	0.12	-1.59	-2.04	2.81	-3.15
CTRAD	-0.09	-0.08	-0.19	-0.60	-0.02	-0.02	2.34	2.94	0.00	11.64
CHOTL	0.56	0.51	0.77	1.51	3.39	3.42	0.87	0.25	1.49	1.02
CBSER	5.84	5.79	5.73	5.29	0.22	0.23	-1.71	-2.19	7.01	-0.56
CEDUC	0.12	0.10	0.18	0.40	0.99	1.00	0.26	0.08	0.38	0.30
CHEAL	0.10	0.08	0.15	0.33	0.85	0.86	0.23	0.08	0.31	0.29
COSER	0.71	0.62	0.97	1.93	4.33	4.36	0.98	0.17	1.88	0.85
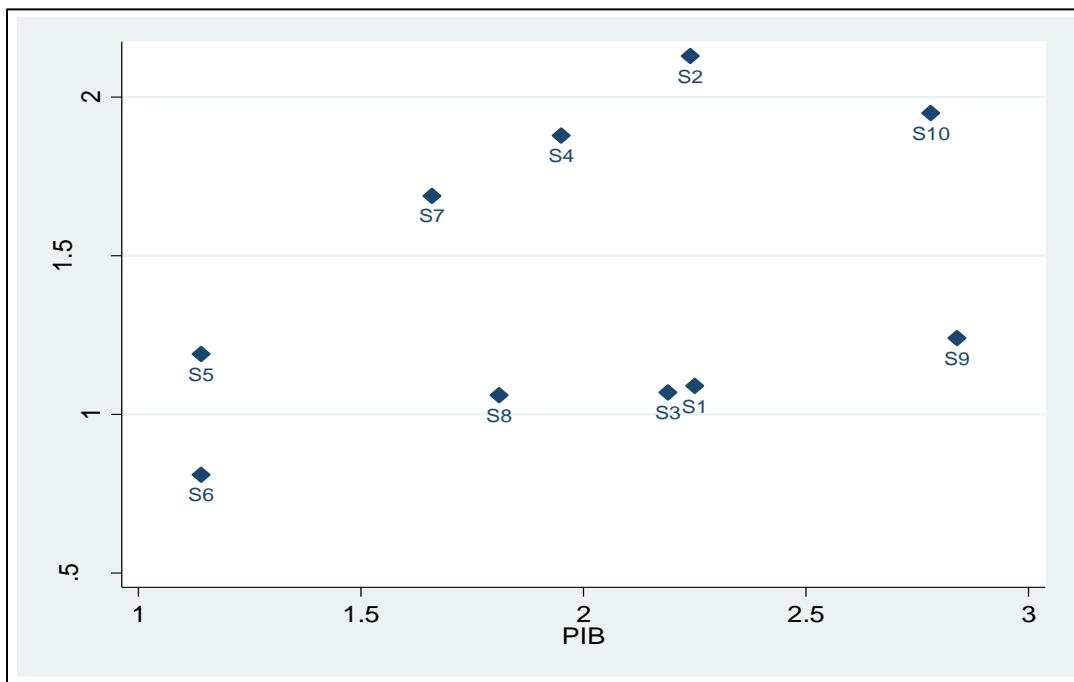
Demand for investment

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CLIV	-	-	-2.43	-11.73	-	-	-2.43	-11.73	-	-13.31
CWOOD	-	-	-2.43	-11.73	-	-	-2.43	-11.73	-	-13.31
COMP	-	-	-2.43	-11.73	-	-	-2.43	-11.73	-	-13.31
CIMO	-	-	-2.43	-11.73	-	-	-2.43	-11.73	-	-13.31
CTRAD	-	-	-2.43	-11.73	-	-	-2.43	-11.73	-	-13.31
CBSER	-	-	-2.43	-11.73	-	-	-2.43	-11.73	-	-13.31

Households' disposable income

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
H-RUR-SS	-0.84	-0.76	-0.76	-0.38	0.77	0.74	0.19	0.00	-1.83	0.08
H-RUR-SE	-1.10	-1.03	-1.00	-0.58	0.65	0.63	-0.20	-0.45	-2.30	-0.90
H-RUR-SW	-1.98	-1.85	-1.82	-1.12	0.16	0.12	-1.74	-2.30	-3.91	-4.96
H-RUR-NC	-1.86	-1.68	-1.71	-0.99	0.19	0.13	-1.65	-2.24	-3.73	-4.84
H-RUR-NE	-1.76	-1.52	-1.62	-0.86	0.20	0.11	-1.61	-2.24	-3.58	-4.87
H-RUR-NW	-1.56	-1.40	-1.43	-0.80	0.35	0.29	-1.14	-1.63	-3.18	-3.52
H-URB-SS	3.02	5.05	2.90	4.15	1.69	0.96	3.43	2.37	4.38	4.39
H-URB-SE	2.68	4.23	2.57	3.45	1.79	1.23	3.67	3.01	3.97	5.98
H-URB-SW	3.20	5.13	3.07	4.21	1.65	0.94	3.34	2.34	4.57	4.33
H-URB-NC	3.01	4.59	2.88	3.76	1.70	1.12	3.47	2.75	4.34	5.37
H-URB-NE	2.82	4.41	2.70	3.60	1.74	1.16	3.56	2.85	4.13	5.62
H-URB-NW	2.43	3.57	2.32	2.88	1.86	1.44	3.84	3.51	3.66	7.26
Rurals	-1.48	-1.33	-1.35	-0.76	0.40	0.35	-0.96	-1.41	-3.02	-3.02
Urbans	2.88	4.54	2.76	3.72	1.73	1.13	3.54	2.77	4.20	5.41
Aggregate	1.09	2.13	1.07	1.88	1.19	0.81	1.69	1.06	1.24	1.95

Graphic 1: Households' Income/GDP

Note: S=SIM

Demand for labor

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-8.95	-8.91	-8.93	-8.78	-11.23	-11.25	-13.51	-14.16	-16.07	-29.09
AROOTS	-0.32	-0.25	-0.13	0.66	1.93	1.91	-0.61	-1.32	-0.45	-2.53
ASEEDS	0.04	0.08	0.26	1.15	2.77	2.76	-0.14	-0.93	-0.52	-2.83
AFRTVEG	-0.28	-0.27	-0.06	0.79	2.28	2.27	-0.68	-1.47	-0.60	-3.19
AEXP	3.15	3.15	3.12	3.00	-0.78	-0.78	-3.05	-3.65	25.39	-3.13
AOTHE	-0.04	-0.04	0.02	0.25	-1.27	-1.27	-3.54	-4.13	2.02	-3.31
ALIV	1.32	1.31	1.41	1.71	2.76	2.77	1.93	1.72	0.96	4.30
AFISH	0.57	0.56	0.68	1.11	0.50	0.50	-2.14	-2.84	0.49	-6.07
AFORE	-0.46	-0.56	-0.22	0.60	2.56	2.60	-0.47	-1.20	0.35	-0.73
AFOOD	1.41	1.40	1.62	2.42	2.83	2.84	-0.79	-1.72	2.34	-5.92
ATEXT	6.24	6.19	6.26	6.30	0.24	0.24	-4.52	-5.74	11.76	-11.05
AWOOD	5.12	5.07	4.64	2.78	0.23	0.24	6.43	7.99	6.57	18.05
ACOIL	6.69	6.68	6.51	5.83	-2.94	-2.96	-6.09	-6.92	7.46	-18.76
AOMIN	6.62	6.61	6.41	5.61	-4.40	-4.41	-7.87	-8.78	8.30	-22.48
AOTHMN	9.40	9.37	8.94	7.18	-2.86	-2.87	-2.66	-2.69	11.14	-0.49
AIMO	0.66	0.60	-0.31	-4.03	2.98	3.00	26.44	32.73	3.86	56.20
AUTIL	0.36	0.31	0.60	1.46	3.34	3.37	0.17	-0.60	3.45	-6.06
ATRSTEL	5.41	5.38	5.36	5.16	-0.51	-0.51	-3.78	-4.62	6.37	-9.90
ATRAD	-0.09	-0.09	-0.20	-0.63	-0.02	-0.02	2.48	3.11	0.49	10.37
AHOTL	0.62	0.56	0.84	1.66	3.73	3.76	0.96	0.27	2.11	-0.35
ABSER	9.93	9.87	9.72	8.88	-1.06	-1.06	-4.56	-5.44	11.13	-7.03
AEDUC	0.12	0.10	0.18	0.40	1.00	1.00	0.26	0.08	0.39	0.28
AHEAL	0.10	0.08	0.15	0.33	0.85	0.86	0.23	0.08	0.32	0.27
AOSER	0.71	0.63	0.98	1.94	4.35	4.39	0.99	0.17	0.01	-0.02

Demand for land

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-	-	-	-	-	-	-	-	-12.30	-21.19
AROOTS	-	-	-	-	-	-	-	-	4.02	8.32
ASEEDS	-	-	-	-	-	-	-	-	3.95	7.99
AFRTVEG	-	-	-	-	-	-	-	-	3.87	7.60
AEXP	-	-	-	-	-	-	-	-	31.03	7.66
AOTHE	-	-	-	-	-	-	-	-	6.60	7.46

Demand for capital

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-	-	-	-	-	-	-	-	-17.16	-27.02
AROOTS	-	-	-	-	-	-	-	-	-1.74	0.31
ASEEDS	-	-	-	-	-	-	-	-	-1.81	0.00
AFRTVEG	-	-	-	-	-	-	-	-	-1.89	-0.36
AEXP	-	-	-	-	-	-	-	-	23.76	-0.30
AOTHE	-	-	-	-	-	-	-	-	0.69	-0.49
ALIV	-	-	-	-	-	-	-	-	-0.35	7.34
AFISH	-	-	-	-	-	-	-	-	-0.60	-3.80
AFORE	-	-	-	-	-	-	-	-	-0.74	1.68
AFOOD	-	-	-	-	-	-	-	-	-3.71	7.57
ATEXT	-	-	-	-	-	-	-	-	4.36	3.43
AWOOD	-	-	-	-	-	-	-	-	-0.49	37.27
ACOIL	-	-	-	-	-	-	-	-	0.34	-5.53
AOMIN	-	-	-	-	-	-	-	-	1.12	-9.87
AOTHMN	-	-	-	-	-	-	-	-	3.77	15.71
AIMO	-	-	-	-	-	-	-	-	-5.22	90.99
AUTIL	-	-	-	-	-	-	-	-	-3.41	9.24
ATRSTEL	-	-	-	-	-	-	-	-	-0.68	4.77
ATRAD	-	-	-	-	-	-	-	-	-8.29	34.96
AHOTL	-	-	-	-	-	-	-	-	-4.66	15.87
ABSER	-	-	-	-	-	-	-	-	3.76	8.11
AEDUC	-	-	-	-	-	-	-	-	-6.27	16.60
AHEAL	-	-	-	-	-	-	-	-	-6.33	16.59
APSER	-	-	-	-	-	-	-	-	-6.62	16.26
AOSER	-	-	-	-	-	-	-	-	-4.83	17.15

Labor remuneration

SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
1.18	1.15	1.10	0.80	2.37	2.39	5.03	5.75	2.25	12.70

Land remuneration

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-31.56	-31.44	-31.52	-31.27	-37.67	-37.72	-42.64	-44.02	-14.86	-27.41
AROOTS	-0.15	0.11	0.57	3.58	10.85	10.76	2.39	0.05	-14.86	-27.41
ASEEDS	1.35	1.49	2.22	5.71	14.70	14.67	4.42	1.72	-14.86	-27.41
AFRTVEG	-0.01	0.02	0.84	4.15	12.44	12.44	2.07	-0.59	-14.86	-27.41
AEXP	15.15	15.09	14.92	14.00	-0.90	-0.91	-7.67	-9.44	-14.86	-27.41
AOTHE	1.02	0.98	1.20	1.85	-2.92	-2.91	-9.60	-11.31	-14.86	-27.41

Capital Remuneration

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-31.56	-31.44	-31.52	-31.27	-37.67	-37.72	-42.64	-44.02	7.97	-0.02
AROOTS	-0.15	0.11	0.57	3.58	10.85	10.76	2.39	0.05	7.97	-0.02
ASEEDS	1.35	1.49	2.22	5.71	14.70	14.67	4.42	1.72	7.97	-0.02
AFRTVEG	-0.01	0.02	0.84	4.15	12.44	12.44	2.07	-0.59	7.97	-0.02
AEXP	15.15	15.09	14.92	14.00	-0.90	-0.91	-7.67	-9.44	7.97	-0.02
AOTHE	1.02	0.98	1.20	1.85	-2.92	-2.91	-9.60	-11.31	7.97	-0.02
ALIV	6.88	6.80	7.17	8.20	14.67	14.72	13.71	13.55	7.97	-0.02
AFISH	4.10	4.04	4.61	6.54	4.95	4.97	-5.72	-8.42	7.97	-0.02
AFORE	-1.13	-1.64	-0.01	3.88	16.19	16.42	2.56	-0.44	7.97	-0.02
AFOOD	2.45	2.42	2.57	2.97	4.96	4.98	4.28	4.13	7.97	-0.02
ATEXT	6.16	6.09	6.10	5.81	2.57	2.58	1.24	0.91	7.97	-0.02
AWOOD	5.27	5.20	4.81	3.01	2.56	2.58	10.35	12.41	7.97	-0.02
ACOIL	6.51	6.48	6.29	5.44	-0.02	-0.02	-0.08	-0.10	7.97	-0.02
AOMIN	6.46	6.42	6.21	5.26	-1.22	-1.22	-1.58	-1.68	7.97	-0.02
AOTHMN	8.65	8.60	8.21	6.50	0.04	0.04	2.80	3.49	7.97	-0.02
AIMO	1.57	1.52	0.92	-1.64	4.18	4.20	20.77	25.17	7.97	-0.02
AUTIL	1.47	1.40	1.59	1.97	5.08	5.11	5.17	5.25	7.97	-0.02
ATRSTEL	5.50	5.45	5.38	4.91	1.96	1.97	1.86	1.85	7.97	-0.02
ATRAD	1.12	1.10	0.98	0.42	2.36	2.37	6.57	7.70	7.97	-0.02
AHOTL	1.67	1.61	1.78	2.12	5.40	5.43	5.83	5.98	7.97	-0.02
ABSER	9.07	9.00	8.83	7.84	1.52	1.53	1.21	1.16	7.97	-0.02
AEDUC	1.28	1.24	1.25	1.12	3.18	3.20	5.24	5.82	7.97	-0.02
AHEAL	1.26	1.22	1.22	1.07	3.06	3.08	5.22	5.82	7.97	-0.02
APSER	1.18	1.15	1.10	0.80	2.37	2.39	5.03	5.75	7.97	-0.02
AOSER	1.75	1.66	1.89	2.35	5.90	5.94	5.85	5.90	7.97	-0.02

Other institutions

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
Government										
Revenue	4.53	1.72	4.36	1.36	0.09	1.10	0.48	2.66	6.95	5.00
Capital revenues	6.02	5.99	5.82	5.04	0.85	0.86	1.33	1.47	7.99	-0.02
Direct taxes	5.86	-0.96	5.67	-0.80	0.90	3.37	1.45	6.67	7.79	10.81
Taxes on sales	2.47	2.44	2.63	3.24	3.76	3.77	1.03	0.34	3.16	2.99
Tariffs revenues	-27.10	-26.92	-26.76	-25.31	-19.01	-19.06	-20.79	-21.36	-13.28	7.36
Taxes on production	5.87	5.80	5.73	5.14	3.41	3.43	4.77	5.19	7.78	9.77
Transfers ROW	6.38	6.35	6.16	5.32	0.00	0.00	0.00	0.00	7.80	0.00
Savings	8.55	0.00	8.26	0.00	-3.08	0.00	-5.66	0.00	13.30	0.00
SAVINGS ROW	-	-	-	-	-10.16	-10.18	-17.12	-18.95	-	-57.04
Exchange rate	6.38	6.35	6.16	5.32	-	-	-	-	7.80	-

Annex 2.2: 10% growth in agricultural productivity

Sectorial aggregates

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
Prodtn										
Agrc.	7.43	7.44	7.64	7.78	8.04	8.02	6.56	5.70	7.94	5.90
Indus.	0.63	0.63	0.66	0.68	0.43	0.43	0.02	-0.19	0.47	-2.37
Serv.	1.34	1.34	1.20	1.11	0.86	0.88	1.80	2.31	1.36	5.25
Impts.										
Agrc.	-17.71	-17.62	-16.24	-15.25	-0.55	-0.68	-4.13	-6.19	-22.95	-7.17
Indus.	1.60	1.59	1.24	1.01	5.60	5.65	10.99	13.89	1.37	20.33
Serv.	2.20	2.20	2.58	2.80	10.41	10.48	11.99	12.90	2.19	13.86
Expts.										
Agrc.	28.58	28.57	27.69	27.13	18.75	18.71	20.01	20.58	52.18	17.96
Indus.	-0.01	-0.01	-0.01	0.00	-0.07	-0.07	-0.13	-0.16	-0.47	-4.54
Serv.	0.03	0.00	-0.62	-1.03	-15.15	-15.19	-18.91	-20.88	-0.46	-18.56
V.Dom.										
Agrc.	7.31	7.32	7.53	7.67	7.98	7.96	6.49	5.62	7.69	5.84
Indus.	2.27	2.27	2.37	2.43	1.71	1.72	0.42	-0.26	2.88	3.20
Serv.	1.39	1.39	1.27	1.18	1.44	1.45	2.55	3.14	1.42	6.11

Note:

Prodtn: Production	Agrc.: Agriculture
Impts.: Imports	Indus.: Industry
Expts: Exports	Serv.: Services
V.Dom.: Domestic sales	

Production

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	10.05	10.07	10.13	10.18	8.89	8.85	7.56	6.76	13.95	8.18
AROOTS	6.57	6.59	6.86	7.04	8.03	7.99	6.48	5.57	5.53	5.25
ASEEDS	6.35	6.36	6.67	6.87	8.04	8.03	6.37	5.40	5.29	4.97
AFRTVEG	6.74	6.74	7.04	7.23	8.25	8.25	6.58	5.64	5.59	5.16
AEXP	10.98	10.98	10.92	10.88	8.23	8.22	7.00	6.30	26.03	6.06
AOTHE	8.58	8.58	8.66	8.70	7.77	7.77	6.50	5.80	8.75	6.20
ALIV	3.42	3.42	3.55	3.63	4.34	4.36	3.70	3.38	3.16	5.69
AFISH	8.54	8.54	8.74	8.86	8.39	8.40	6.51	5.46	7.08	2.93
AFORE	5.01	4.98	5.45	5.70	7.51	7.59	5.22	4.07	3.78	3.50
AFOOD	3.49	3.48	3.82	4.03	4.39	4.41	1.98	0.73	3.25	1.04
ATEXT	2.56	2.54	2.54	2.52	-1.87	-1.86	-4.45	-5.80	5.62	-4.71
AWOOD	1.15	1.13	0.49	0.06	-2.34	-2.33	0.92	2.58	1.17	14.08
ACOIL	0.00	0.00	0.00	0.00	-0.03	-0.03	-0.04	-0.04	-0.48	-4.36
AOMIN	-0.04	-0.04	-0.08	-0.11	-0.99	-0.99	-1.22	-1.34	0.55	-7.55
AOTHMN	0.33	0.33	0.16	0.05	-1.94	-1.95	-1.88	-1.88	2.07	6.65
AIMO	1.42	1.41	-0.01	-0.92	3.00	3.05	16.58	23.85	1.33	43.01
AUTIL	1.61	1.60	1.91	2.08	3.31	3.35	1.69	0.87	1.68	1.48
ATRSTEL	0.74	0.73	0.65	0.59	-3.22	-3.22	-4.92	-5.82	0.77	-4.79
ATRAD	3.48	3.48	3.25	3.12	3.58	3.58	5.59	6.62	3.83	11.14
AHOTL	2.42	2.40	2.88	3.16	5.35	5.41	3.01	1.83	2.18	1.65
ABSER	1.00	0.97	0.58	0.30	-8.44	-8.44	-10.72	-11.90	0.33	-9.28
AEDUC	0.68	0.68	0.82	0.90	1.59	1.61	0.91	0.57	0.63	0.52
AHEAL	0.58	0.58	0.70	0.77	1.37	1.39	0.80	0.51	0.54	0.48
AOSER	3.08	3.05	3.68	4.02	6.74	6.84	3.67	2.16	2.76	1.79
GDP. F.c.	**5.32**	**5.32**	**5.20**	**5.12**	**4.26**	**4.27**	**4.70**	**4.96**	**5.02**	**4.72**

Imports

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	-25.25	-25.10	-23.40	-22.12	-2.49	-2.74	-6.51	-8.97	-34.21	-12.59
CSEEDS	-29.75	-29.68	-27.73	-26.40	-4.81	-4.84	-10.56	-13.56	-21.03	-8.94
CFRTVEG	-22.57	-22.53	-20.75	-19.57	-1.98	-1.94	-7.53	-10.38	-16.14	-7.08
CEXP	-5.42	-5.43	-4.90	-4.58	-2.65	-2.62	-5.74	-7.31	-14.39	-5.96
COTHE	-12.06	-12.05	-11.12	-10.53	-2.83	-2.77	-5.87	-7.40	-11.48	-3.43
CLIV	-24.42	-24.42	-23.60	-23.09	-8.67	-8.55	-6.69	-5.47	-11.83	7.14
CFISH	-3.66	-3.66	-2.75	-2.17	5.81	5.87	3.10	1.72	-1.88	4.45
CFORE	-20.26	-20.33	-18.51	-17.45	4.33	4.69	1.45	0.46	-10.19	10.08
CFOOD	-4.78	-4.77	-3.64	-2.91	12.94	13.04	12.91	13.00	-1.86	12.94
CTEXT	1.24	1.23	2.33	3.00	17.21	17.35	16.69	16.54	-3.01	15.12
CWOOD	1.91	1.90	1.57	1.35	22.03	22.19	39.48	49.59	2.16	46.32
COMP	2.17	2.16	1.62	1.27	4.79	4.83	11.01	14.34	1.78	21.61
CCOIL	0.69	0.68	0.37	0.17	-3.12	-3.13	-2.84	-2.74	4.65	19.34
COMIN	0.86	0.85	0.70	0.59	-1.19	-1.18	-1.08	-1.02	1.73	5.89
CTRSTEL	2.02	2.02	2.43	2.69	9.39	9.45	10.09	10.52	1.84	9.44
CBSER	2.40	2.39	2.73	2.93	11.50	11.59	14.01	15.44	2.55	18.58

Exports

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CSEEDS	64.67	64.55	60.86	58.44	24.64	24.65	29.25	31.71	42.62	23.56
CFRTVEG	48.08	48.03	45.48	43.84	20.37	20.32	23.98	25.82	33.62	20.12
CEXP	22.91	22.91	22.45	22.17	17.65	17.62	18.28	18.52	58.93	16.97
COTHE	36.93	36.92	35.66	34.87	23.18	23.11	25.15	26.07	36.54	21.18
CFISH	24.48	24.47	23.67	23.17	12.94	12.89	12.47	12.06	18.45	3.10
CFORE	43.71	43.75	41.60	40.33	14.10	13.84	13.25	12.28	22.53	-0.11
CFOOD	12.58	12.56	11.96	11.56	-3.38	-3.43	-7.73	-10.05	8.71	-9.45
CTEXT	3.97	3.95	2.92	2.26	-16.23	-16.31	-19.85	-21.81	15.00	-19.06
CWOOD	0.44	0.43	-0.49	-1.08	-21.53	-21.62	-26.80	-29.55	0.31	-10.35
COMP	-1.21	-1.20	-0.91	-0.72	-4.80	-4.84	-9.12	-11.28	2.73	-1.61
CCOIL	-0.01	-0.01	-0.01	0.00	0.00	0.00	-0.01	-0.01	-0.52	-4.53
COMIN	-0.25	-0.25	-0.26	-0.27	-0.93	-0.94	-1.24	-1.41	0.28	-10.59
CTRSTEL	-0.19	-0.21	-0.64	-0.92	-11.71	-11.75	-14.85	-16.52	-0.01	-14.24
CBSER	0.23	0.19	-0.60	-1.13	-18.34	-18.38	-22.67	-24.91	-0.88	-22.56

Domestic variety price

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	-1.13	-1.11	-1.11	-1.08	-2.16	-2.21	-2.74	-3.11	-5.22	-4.13
CROOTS	-7.88	-7.85	-7.49	-7.23	-3.89	-3.94	-4.91	-5.49	-5.17	-4.20
CSEEDS	-9.88	-9.86	-9.35	-9.01	-5.04	-5.04	-6.83	-7.77	-6.03	-5.64
CFRTVEG	-10.13	-10.13	-9.56	-9.20	-5.19	-5.17	-7.34	-8.44	-6.62	-6.43
CEXP	1.68	1.66	1.41	1.23	-2.96	-2.95	-3.50	-3.76	-5.78	-3.29
COTHE	-4.50	-4.51	-4.44	-4.41	-5.31	-5.28	-6.30	-6.78	-5.21	-4.88
CLIV	-8.75	-8.76	-8.73	-8.73	-6.44	-6.39	-5.14	-4.38	-2.31	0.69
CFISH	-2.97	-2.98	-2.82	-2.73	-1.91	-1.87	-2.57	-2.85	-1.46	1.18
CFORE	-4.39	-4.42	-4.15	-4.03	-1.19	-1.09	-1.45	-1.40	-0.27	2.50
CFOOD	2.40	2.39	2.38	2.36	4.01	4.04	5.21	5.91	3.03	5.72
CTEXT	6.39	6.38	6.21	6.08	4.69	4.72	5.29	5.65	3.40	5.00
CWOOD	6.98	6.96	6.60	6.35	6.75	6.79	9.95	11.70	5.97	7.57
COMP	7.22	7.20	6.65	6.28	1.72	1.73	3.18	3.94	5.60	3.38
CCOIL	6.93	6.91	6.37	6.01	-0.58	-0.58	-0.47	-0.42	6.95	5.56
COMIN	6.95	6.93	6.44	6.11	-0.04	-0.04	0.03	0.07	5.93	2.96
CIMO	7.51	7.50	6.99	6.64	9.13	9.18	14.62	17.47	6.35	8.25
CUTIL	7.93	7.92	7.90	7.87	9.29	9.34	10.45	11.13	6.19	6.39
CTRSTEL	7.36	7.35	7.12	6.95	5.80	5.83	7.00	7.66	6.18	6.63
CTRAD	7.24	7.23	7.07	6.95	8.02	8.05	10.12	11.29	6.55	10.99
CHOTL	5.95	5.93	5.84	5.77	6.86	6.89	8.40	9.27	5.42	8.62
CBSER	7.35	7.34	7.19	7.08	8.54	8.58	10.76	11.98	6.62	11.86
CEDUC	7.16	7.15	6.95	6.80	6.77	6.80	8.46	9.40	6.34	9.10
CHEAL	7.20	7.19	6.99	6.85	6.47	6.49	7.90	8.71	6.19	7.94
CPSER	7.01	6.99	6.76	6.60	6.20	6.23	7.85	8.77	6.17	8.07
COSER	7.18	7.17	7.04	6.95	8.49	8.52	10.61	11.80	6.64	12.18

Imported product price

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CSEEDS	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CFRTVEG	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CEXP	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
COTHE	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CLIV	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CFISH	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CFORE	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CFOOD	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CTEXT	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CWOOD	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
COMP	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CCOIL	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
COMIN	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CTRSTEL	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-
CBSER	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-

Composite good price

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	0.10	0.11	0.05	0.03	-1.79	-1.82	-2.27	-2.58	-3.64	-3.44
CROOTS	-7.88	-7.85	-7.49	-7.23	-3.89	-3.94	-4.91	-5.49	-5.17	-4.20
CSEEDS	-9.87	-9.86	-9.35	-9.01	-5.04	-5.04	-6.83	-7.77	-6.03	-5.64
CFRTVEG	-10.05	-10.04	-9.48	-9.12	-5.16	-5.14	-7.30	-8.40	-6.55	-6.39
CEXP	3.10	3.08	2.78	2.56	-2.12	-2.11	-2.51	-2.69	-2.75	-2.35
COTHE	-2.30	-2.31	-2.33	-2.36	-4.22	-4.20	-5.02	-5.41	-3.08	-3.88
CLIV	-8.75	-8.76	-8.73	-8.73	-6.44	-6.39	-5.14	-4.38	-2.30	0.69
CFISH	0.70	0.68	0.62	0.56	-1.17	-1.14	-1.57	-1.74	1.26	0.72
CFORE	-4.38	-4.41	-4.14	-4.02	-1.19	-1.09	-1.45	-1.40	-0.26	2.49
CFOOD	2.89	2.88	2.82	2.77	3.52	3.55	4.57	5.18	3.33	5.01
CTEXT	6.52	6.50	6.23	6.03	2.96	2.98	3.33	3.54	4.17	3.15
CWOOD	6.94	6.93	6.55	6.29	5.64	5.67	8.25	9.65	5.93	6.32
COMP	6.87	6.85	6.36	6.03	0.43	0.43	0.77	0.95	5.65	0.82
CCOIL	6.92	6.90	6.37	6.01	-0.57	-0.58	-0.47	-0.42	6.93	5.50
COMIN	6.77	6.75	6.28	5.97	0.00	0.00	0.00	0.01	5.70	0.31
CIMO	7.51	7.50	6.99	6.64	9.13	9.18	14.62	17.47	6.35	8.25
CUTIL	7.93	7.92	7.90	7.87	9.29	9.34	10.45	11.13	6.19	6.39
CTRSTEL	7.13	7.11	6.79	6.57	3.56	3.57	4.27	4.67	5.99	4.05
CTRAD	7.24	7.23	7.07	6.95	8.02	8.05	10.12	11.29	6.55	10.99
CHOTL	5.95	5.93	5.84	5.77	6.86	6.89	8.40	9.27	5.42	8.62
CBSER	7.02	7.01	6.69	6.47	3.78	3.80	4.71	5.22	6.11	5.17
CEDUC	7.16	7.15	6.95	6.80	6.77	6.80	8.46	9.40	6.34	9.10
CHEAL	7.20	7.19	6.99	6.85	6.47	6.49	7.90	8.71	6.19	7.94
CPSER	7.01	6.99	6.76	6.60	6.20	6.23	7.85	8.77	6.17	8.07
COSER	7.18	7.17	7.04	6.95	8.49	8.52	10.61	11.80	6.63	12.18

Domestic sales

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CCER	10.05	10.07	10.13	10.18	8.89	8.85	7.56	6.76	13.95	8.18
CROOTS	6.57	6.59	6.86	7.04	8.03	7.99	6.48	5.57	5.53	5.25
CSEEDS	6.35	6.36	6.67	6.87	8.04	8.03	6.37	5.40	5.29	4.97
CFRTVEG	6.47	6.47	6.79	6.99	8.18	8.17	6.48	5.51	5.41	5.07
CEXP	6.81	6.80	6.88	6.93	4.95	4.95	3.05	2.01	14.04	2.24
COTHE	8.06	8.05	8.16	8.22	7.49	7.49	6.17	5.44	8.24	5.93
CLIV	3.42	3.42	3.55	3.63	4.34	4.36	3.70	3.38	3.16	5.69
CFISH	8.54	8.54	8.74	8.85	8.39	8.40	6.51	5.46	7.07	2.93
CFORE	5.01	4.98	5.45	5.70	7.51	7.59	5.22	4.06	3.78	3.50
CFOOD	3.47	3.46	3.80	4.01	4.40	4.43	2.00	0.75	3.24	1.06
CTEXT	2.50	2.48	2.52	2.53	-1.29	-1.28	-3.83	-5.16	5.23	-4.13
CWOOD	1.15	1.13	0.49	0.07	-2.27	-2.26	1.02	2.69	1.18	14.16
COMP	0.46	0.46	0.25	0.11	-1.70	-1.70	-1.27	-1.09	2.02	7.35
CCOIL	0.33	0.32	0.15	0.04	-1.93	-1.93	-1.87	-1.87	2.05	6.51
COMIN	0.30	0.30	0.21	0.16	-1.08	-1.07	-1.18	-1.24	1.00	-2.71
CIMO	1.42	1.41	-0.01	-0.92	3.00	3.05	16.58	23.85	1.33	43.01
CUTIL	1.61	1.60	1.91	2.08	3.31	3.35	1.69	0.87	1.68	1.48
CTRSTEL	0.91	0.90	0.89	0.87	-1.73	-1.72	-3.18	-3.95	0.91	-3.12
CTRAD	3.48	3.48	3.25	3.12	3.58	3.58	5.59	6.62	3.83	11.14
CHOTL	2.42	2.40	2.88	3.16	5.35	5.41	3.01	1.83	2.18	1.65
CBSER	1.31	1.28	1.05	0.88	-4.58	-4.56	-6.11	-6.90	0.82	-4.17
CEDUC	0.68	0.68	0.82	0.90	1.59	1.61	0.91	0.57	0.63	0.52
CHEAL	0.58	0.58	0.70	0.77	1.37	1.39	0.80	0.51	0.54	0.48
COSER	3.08	3.05	3.68	4.02	6.74	6.84	3.67	2.16	2.76	1.79
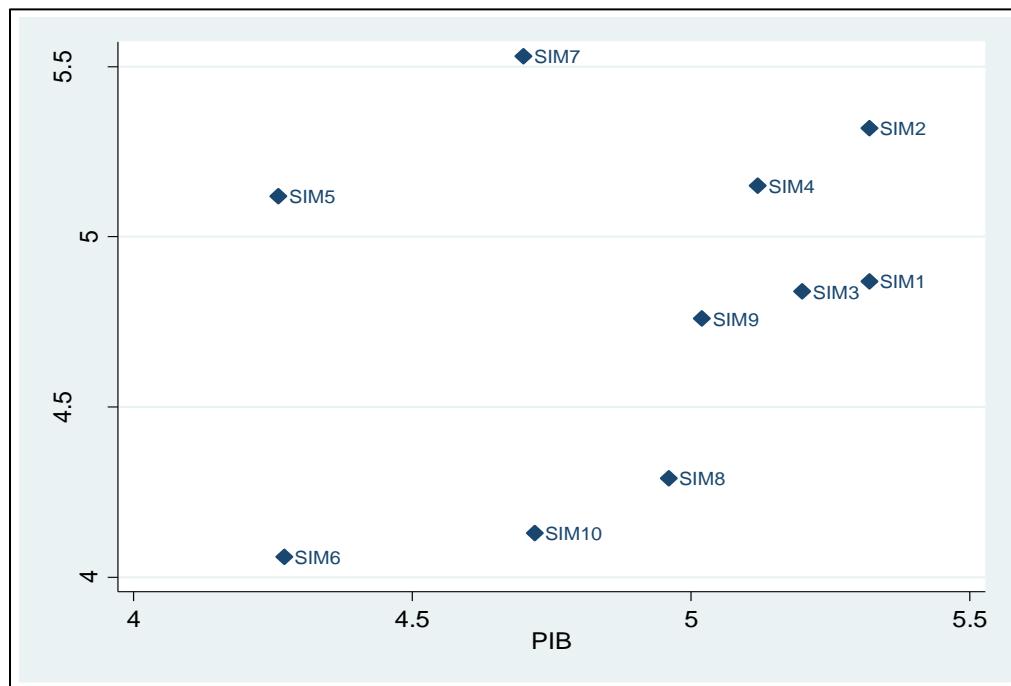
Demand for investment

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
CLIV	-	-	-5.33	-8.66	-	-	-5.33	-8.66	-	-7.44
CWOOD	-	-	-5.33	-8.66	-	-	-5.33	-8.66	-	-7.44
COMP	-	-	-5.33	-8.66	-	-	-5.33	-8.66	-	-7.44
CIMO	-	-	-5.33	-8.66	-	-	-5.33	-8.66	-	-7.44
CTRAD	-	-	-5.33	-8.66	-	-	-5.33	-8.66	-	-7.44
CBSER	-	-	-5.33	-8.66	-	-	-5.33	-8.66	-	-7.44

Households' disposable income

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
H-RUR-SS	3.08	3.12	3.26	3.40	4.78	4.71	4.23	3.86	3.46	4.69
H-RUR-SE	2.71	2.73	2.92	3.08	4.51	4.45	3.72	3.25	3.17	4.11
H-RUR-SW	1.28	1.34	1.62	1.87	3.33	3.21	1.61	0.56	2.05	1.46
H-RUR-NC	1.40	1.48	1.72	1.98	3.35	3.18	1.69	0.60	2.13	1.44
H-RUR-NE	1.46	1.57	1.77	2.05	3.33	3.09	1.70	0.52	2.18	1.30
H-RUR-NW	1.86	1.94	2.15	2.38	3.73	3.57	2.38	1.46	2.50	2.28
H-URB-SS	6.79	7.68	6.55	7.03	5.72	3.66	7.23	5.15	6.18	4.00
H-URB-SE	6.81	7.49	6.59	6.94	6.24	4.66	7.88	6.54	6.24	5.82
H-URB-SW	6.88	7.72	6.62	7.06	5.56	3.59	7.03	5.06	6.24	3.97
H-URB-NC	6.90	7.59	6.66	7.00	5.86	4.24	7.40	5.96	6.28	5.16
H-URB-NE	6.82	7.51	6.59	6.94	6.03	4.41	7.62	6.20	6.22	5.42
H-URB-NW	6.83	7.33	6.63	6.86	6.62	5.46	8.35	7.65	6.28	7.28
RURALS	2.02	2.09	2.29	2.51	3.88	3.74	2.63	1.80	2.63	2.64
URBANS	6.84	7.57	6.61	6.98	5.98	4.28	7.55	6.02	6.24	5.17
AGGREGATE	4.87	5.32	4.84	5.15	5.12	4.06	5.53	4.29	4.76	4.13

Graphic 2: Aggregate households' income/GDP

Labor remuneration

SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
7.16	7.15	7.04	6.95	8.98	9.01	11.28	12.58	6.74	13.34

Capital Remuneration

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	7.52	7.61	7.88	8.16	1.72	1.52	-4.32	-7.81	5.68	-0.12
AROOTS	-13.86	-13.75	-12.42	-11.44	-3.97	-4.17	-11.04	-15.00	5.68	-0.12
ASEEDS	-15.90	-15.84	-14.24	-13.17	-4.43	-4.50	-12.57	-16.90	5.68	-0.12
AFRTVEG	-14.22	-14.21	-12.58	-11.53	-3.41	-3.40	-11.84	-16.24	5.68	-0.12
AEXP	14.84	14.80	14.20	13.77	-3.55	-3.58	-9.40	-12.51	5.68	-0.12
AOTHE	-3.27	-3.29	-2.84	-2.59	-7.12	-7.08	-13.12	-16.24	5.68	-0.12
ALIV	-23.90	-23.93	-23.46	-23.20	-18.83	-18.71	-19.80	-20.20	5.68	-0.12
AFISH	-2.54	-2.56	-1.42	-0.74	-1.85	-1.79	-11.23	-16.03	5.68	-0.12
AFORE	-21.14	-21.30	-19.07	-17.88	-6.51	-6.03	-17.06	-21.79	5.68	-0.12
AFOOD	11.79	11.78	12.11	12.30	14.91	14.98	14.02	13.60	5.68	-0.12
ATEXT	10.64	10.61	10.49	10.38	6.39	6.44	5.02	4.32	5.68	-0.12
AWOOD	8.70	8.67	7.69	7.04	5.79	5.83	12.58	16.23	5.68	-0.12
ACOIL	6.73	6.71	6.24	5.92	-0.18	-0.18	-0.23	-0.25	5.68	-0.12
AOMIN	6.72	6.70	6.17	5.81	-1.47	-1.47	-1.76	-1.92	5.68	-0.12
AOTHMN	8.80	8.77	7.81	7.18	-0.49	-0.48	1.89	3.09	5.68	-0.12
AIMO	8.49	8.47	7.02	6.09	11.83	11.91	27.06	35.30	5.68	-0.12
AUTIL	9.55	9.53	9.87	10.05	14.00	14.09	13.89	13.94	5.68	-0.12
ATRSTEL	8.15	8.13	7.91	7.75	4.58	4.61	4.43	4.38	5.68	-0.12
ATRAD	9.49	9.48	9.22	9.04	11.42	11.45	15.16	17.22	5.68	-0.12
AHOTL	9.42	9.39	9.72	9.89	14.04	14.13	14.20	14.37	5.68	-0.12
ABSER	8.10	8.06	7.58	7.23	0.80	0.84	0.66	0.65	5.68	-0.12
AEDUC	7.74	7.72	7.73	7.72	10.35	10.40	12.09	13.09	5.68	-0.12
AHEAL	7.65	7.64	7.63	7.60	10.16	10.21	11.99	13.04	5.68	-0.12
APSER	7.16	7.15	7.04	6.95	8.98	9.01	11.28	12.58	5.68	-0.12
AOSER	9.79	9.75	10.17	10.38	14.81	14.92	14.54	14.52	5.68	-0.12

Land remuneration

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	7.52	7.61	7.88	8.16	1.72	1.52	-4.32	-7.81	-4.68	-12.03
AROOTS	-13.86	-13.75	-12.42	-11.44	-3.97	-4.17	-11.04	-15.00	-4.68	-12.03
ASEEDS	-15.90	-15.84	-14.24	-13.17	-4.43	-4.50	-12.57	-16.90	-4.68	-12.03
AFRTVEG	-14.22	-14.21	-12.58	-11.53	-3.41	-3.40	-11.84	-16.24	-4.68	-12.03
AEXP	14.84	14.80	14.20	13.77	-3.55	-3.58	-9.40	-12.51	-4.68	-12.03
AOTHE	-3.27	-3.29	-2.84	-2.59	-7.12	-7.08	-13.12	-16.24	-4.68	-12.03

Demand for labor

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	0.08	0.10	0.19	0.27	-1.64	-1.69	-3.56	-4.68	2.53	-3.85
AROOTS	-5.10	-5.08	-4.70	-4.43	-2.99	-3.04	-5.23	-6.52	-5.11	-6.57
ASEEDS	-5.65	-5.63	-5.18	-4.88	-3.10	-3.13	-5.62	-7.03	-5.39	-6.97
AFRTVEG	-5.20	-5.19	-4.74	-4.45	-2.86	-2.86	-5.44	-6.85	-5.16	-6.88
AEXP	1.68	1.67	1.57	1.49	-2.89	-2.90	-4.81	-5.87	13.21	-6.08
AOTHE	-2.43	-2.43	-2.30	-2.22	-3.76	-3.76	-5.77	-6.85	-2.35	-6.06
ALIV	-7.89	-7.89	-7.73	-7.64	-6.83	-6.80	-7.56	-7.93	-6.28	-4.69
AFISH	-1.88	-1.88	-1.63	-1.48	-2.07	-2.06	-4.42	-5.70	-2.72	-7.12
AFORE	-5.95	-5.98	-5.44	-5.15	-3.02	-2.93	-5.71	-7.03	-5.70	-6.52
AFOOD	4.86	4.85	5.32	5.61	6.12	6.15	2.75	1.01	2.93	-2.88
ATEXT	4.11	4.09	4.09	4.06	-2.98	-2.96	-7.04	-9.15	5.12	-10.29
AWOOD	1.82	1.79	0.77	0.10	-3.67	-3.66	1.46	4.10	0.71	7.53
ACOIL	-0.51	-0.52	-0.94	-1.21	-10.47	-10.50	-12.85	-14.14	-1.72	-18.40
AOMIN	-0.51	-0.52	-1.02	-1.34	-11.92	-11.96	-14.54	-15.95	-0.60	-20.18
AOTHMN	1.93	1.91	0.91	0.27	-10.82	-10.85	-10.52	-10.50	1.02	-6.55
AIMO	2.10	2.07	-0.02	-1.36	4.44	4.50	24.94	36.18	0.78	33.33
AUTIL	2.83	2.80	3.35	3.66	5.84	5.91	2.96	1.52	1.13	-5.27
ATRSTEL	1.17	1.16	1.04	0.94	-5.06	-5.06	-7.70	-9.09	0.30	-10.26
ATRAD	3.68	3.68	3.44	3.30	3.79	3.79	5.92	7.01	3.73	9.80
AHOTL	2.66	2.64	3.17	3.47	5.89	5.95	3.31	2.01	2.07	0.19
ABSER	1.11	1.08	0.64	0.33	-9.36	-9.35	-11.87	-13.17	0.20	-10.75
AEDUC	0.69	0.68	0.82	0.90	1.59	1.61	0.91	0.57	0.62	0.49
AHEAL	0.58	0.58	0.70	0.77	1.37	1.39	0.80	0.51	0.54	0.46
AOSER	3.10	3.07	3.70	4.05	6.79	6.88	3.70	2.17	0.00	-0.02

Demand for land

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-	-	-	-	-	-	-	-	5.35	2.18
AROOTS	-	-	-	-	-	-	-	-	-2.50	-0.71
ASEEDS	-	-	-	-	-	-	-	-	-2.79	-1.14
AFRTVEG	-	-	-	-	-	-	-	-	-2.55	-1.04
AEXP	-	-	-	-	-	-	-	-	16.33	-0.19
AOTHE	-	-	-	-	-	-	-	-	0.33	-0.17

Demand for capital

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
ACER	-	-	-	-	-	-	-	-	2.77	-0.89
AROOTS	-	-	-	-	-	-	-	-	-4.88	-3.69
ASEEDS	-	-	-	-	-	-	-	-	-5.17	-4.10
AFRTVEG	-	-	-	-	-	-	-	-	-4.94	-4.01
AEXP	-	-	-	-	-	-	-	-	13.48	-3.18
AOTHE	-	-	-	-	-	-	-	-	-2.12	-3.17
ALIV	-	-	-	-	-	-	-	-	-6.05	-1.75
AFISH	-	-	-	-	-	-	-	-	-2.52	-4.74
AFORE	-	-	-	-	-	-	-	-	-5.51	-4.13
AFOOD	-	-	-	-	-	-	-	-	4.08	11.89
ATEXT	-	-	-	-	-	-	-	-	6.45	5.20
AWOOD	-	-	-	-	-	-	-	-	1.98	26.09
ACOIL	-	-	-	-	-	-	-	-	-0.48	-4.32
AOMIN	-	-	-	-	-	-	-	-	0.65	-6.40
AOTHMN	-	-	-	-	-	-	-	-	2.30	9.58
AIMO	-	-	-	-	-	-	-	-	2.48	64.87
AUTIL	-	-	-	-	-	-	-	-	2.41	11.08
ATRSTEL	-	-	-	-	-	-	-	-	1.57	5.23
ATRAD	-	-	-	-	-	-	-	-	5.48	35.78
AHOTL	-	-	-	-	-	-	-	-	3.35	17.49
ABSER	-	-	-	-	-	-	-	-	1.47	4.66
AEDUC	-	-	-	-	-	-	-	-	1.89	17.84
AHEAL	-	-	-	-	-	-	-	-	1.80	17.80
APSER	-	-	-	-	-	-	-	-	1.26	17.24
AOSER	-	-	-	-	-	-	-	-	4.05	19.25

Other institutions

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
GOVERNMENT										
Revenue	5.75	4.52	5.38	4.28	1.24	4.06	1.55	5.69	4.55	5.27
Capital Revenue	6.61	6.59	6.16	5.87	1.14	1.15	1.57	1.81	5.68	-0.13
Direct taxes	6.62	3.65	6.19	3.787	1.40	8.29	1.87	11.85	5.71	13.15
Taxes on sales	3.52	3.51	3.91	4.14	5.02	5.06	2.472	1.15	3.89	3.26
Tariffs revenues	-	-	-	-	-1.08	-1.25	-3.44	-4.93	-	-6.08
Taxes on production	7.15	7.12	6.85	6.64	4.87	4.93	6.13	6.92	6.45	7.14
Transfers ROW	6.74	6.77	6.26	5.95	0.00	0.00	0.00	0.00	5.67	0.00
Savings	3.73	0.00	3.07	0.00	-8.61	0.00	-	0.00	1.71	0.00
SAVINGS ROW	-	-	-	-	-	-	-	-	-	-35.45
Exchange rate	6.74	6.73	6.26	5.95	-	-	-	-	5.67	-

52

Annex 3: Results for Tanzania

Definition of abbreviations for the sectors/products

ACER: cereals	**AWOODP:** wood industry
ACTROOTS: roots and tubers	**APETRO**: oil
AOILSE: oleaginous	**AMININ:** mining products
ACOTTO: cotton	**ABEVER:** beverages
ATOBAC: tobacco	**AMANCHE:** chemical products
AOFRVE: fruits and vegetables	**AOTHMAN:** other manufactured products
ASUGAR: sugar	**ACONST:** construction
ATEAGR: tea	**AUTILI:** water-electricity
ASISAL: sisal	**ATRANS:** transports-telecommunications
AOTHCRO: other agriculture products	**ATRADE:** trade
ALIVES: livestock	**AHOTEL:** hotel-catering
AFISHI: products of fishing	**AESTAT:** real estate
AHUFOR: forestry	**AADMIN:** administration, education, health
APRFOOD: food-processing industry	**APRIVS:** other private services
ACLOTH: textile industry	

Households groups

HRBFPL :	Rurals under the food poverty line
HRFBPL :	Rurals between the food poverty line and the basic needs
HRNOED :	Rurals not poor whose chief does not need education
HRNFPS :	Rurals not poor whose chief has not completed elementary school
HRNFSS :	Rurals not poor whose chief has not completed secondary school
HRSECP :	Rurals not poor whose chief has completed secondary school
HUBFPL :	Urbans under the food poverty line
HUFBPL :	Urbans between the food poverty line and the basic needs
HUNOED :	Urbans not poor whose chief does not need education
HUNFPS :	Urbans not poor whose chief has not completed elementary school
HUNFSS :	Urbans not poor whose chief has not completed secondary school
HUSECP :	Urbans not poor whose chief has completed secondary school

Sectorial aggregates

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
Prodtn										
Agrc.	-0.02	-0.02	0.09	-0.03	0.05	0.05	-0.14	-0.35	-0.31	-1.32
Indus.	-0.44	-0.44	-0.24	-0.47	-0.38	-0.38	-0.74	-1.16	-2.00	-0.19
Serv.	0.21	0.21	0.10	0.22	0.18	0.18	0.38	0.59	0.87	1.21
Impts.										
Agrc.	5.11	5.16	7.91	4.87	13.12	13.17	11.34	9.39	14.60	17.54
Indus.	1.53	1.54	1.13	1.58	3.20	3.21	4.70	6.40	3.63	13.20
Serv.	-0.45	-0.46	-0.45	-0.46	0.44	0.43	0.82	1.25	-0.50	4.14
Expts.										
Agrc.	1.96	1.96	1.51	2.01	-0.43	-0.43	-0.72	-1.08	3.83	-4.75
Indus.	7.96	7.97	8.42	7.92	4.49	4.50	2.11	-0.53	-1.33	-0.44
Serv.	1.12	1.12	1.02	1.13	-0.17	-0.16	-0.57	-1.02	5.95	-10.27
V.Dom.										
Agrc.	-0.41	-0.43	-0.26	-0.44	-0.23	-0.24	-0.43	-0.68	-1.16	-1.45
Indus.	-0.72	-0.72	-0.52	-0.74	-0.58	-0.59	-0.89	-1.25	-2.10	-0.19
Serv.	0.11	0.11	-0.04	0.13	0.19	0.19	0.52	0.87	0.26	2.91

Note:

Prodtn: Production	Agrc.: Agriculture
Impts.: Imports	Indus.: Industry
Expts: Exports	Serv.: Services
V.Dom.: Domestic sales	

Production

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-0.10	-0.09	-0.02	-0.10	-0.03	-0.03	-0.14	-0.26	-0.97	-1.26
AOILSE	0.06	0.05	0.23	0.03	0.34	0.33	0.13	-0.12	-0.02	-0.12
ACTROOTS	0.01	0.01	0.14	0.00	0.30	0.30	0.18	0.04	0.06	0.00
ACOTTO	0.05	0.05	0.32	0.02	-0.71	-0.70	-1.63	-2.74	-3.98	-6.42
ATOBAC	0.58	0.59	0.72	0.57	-0.03	-0.03	-0.61	-1.30	2.23	-3.50
ATEAGR	0.66	0.66	0.83	0.65	0.07	0.07	-0.55	-1.30	2.74	-1.84
ASISAL	-2.25	-2.25	-1.95	-2.28	-2.57	-2.57	-3.30	-4.14	-4.78	-6.03
ASUGAR	-1.00	-1.00	-0.95	-1.01	-1.32	-1.32	-1.56	-1.85	-6.61	-7.62
AOFRVE	0.05	0.04	0.19	0.03	0.26	0.26	0.10	-0.10	0.02	-0.10
AOTHCRO	0.38	0.38	0.40	0.37	-0.03	-0.03	-0.26	-0.54	5.68	-4.85
ALIVES	-0.03	-0.02	0.18	-0.04	0.32	0.33	0.09	-0.17	-0.09	-0.57
AFISHI	0.16	0.16	0.30	0.15	0.27	0.27	0.07	-0.17	0.22	-0.08
AHUFOR	0.00	0.00	0.08	-0.01	0.16	0.16	0.08	-0.03	-0.29	0.15
AMININ	-0.01	-0.01	-0.03	-0.01	-0.06	-0.06	-0.06	-0.06	-2.86	5.03
APRFOOD	-0.06	-0.06	0.24	-0.10	0.48	0.48	0.17	-0.19	-0.45	-0.53
ABEVER	-0.54	-0.54	-0.21	-0.57	-0.06	-0.06	-0.44	-0.88	-0.89	-1.26
ACLOTH	-2.25	-2.25	-1.95	-2.28	-2.57	-2.57	-3.30	-4.14	-4.78	-6.03
AWOODP	-0.56	-0.55	-0.80	-0.52	-1.61	-1.60	-1.62	-1.65	-3.81	0.64
AMANCHE	0.13	0.14	1.00	0.06	-1.23	-1.23	-3.41	-5.83	-2.73	-6.04
APETRO	0.65	0.67	0.88	0.64	0.28	0.30	-0.32	-0.99	-0.81	-2.46
AOTHMAN	-0.16	-0.16	-0.31	-0.14	-0.83	-0.83	-0.85	-0.89	-4.05	6.96
AUTILI	-0.36	-0.37	-0.17	-0.39	-0.24	-0.24	-0.54	-0.91	-1.59	0.12
ACONST	0.00	0.00	-1.24	0.13	0.06	0.06	2.39	5.02	0.00	16.76
ATRADE	0.04	0.03	-0.33	0.07	0.09	0.09	0.79	1.56	-0.15	5.62
AHOTEL	0.07	0.06	0.34	0.04	0.60	0.59	0.34	0.03	0.79	-0.76
ATRANS	0.46	0.46	0.41	0.46	-0.06	-0.06	-0.21	-0.39	6.81	-11.52
AESTAT	0.01	0.01	0.20	-0.01	0.42	0.42	0.26	0.07	0.28	-0.14
AADMIN	0.48	0.48	0.48	0.48	0.08	0.08	-0.10	-0.31	0.38	-0.43
APRIVS	1.08	1.09	1.05	1.09	-0.02	-0.02	-0.46	-0.97	1.36	-1.87
GDP fact.C	**0.64**	**0.64**	**0.71**	**0.64**	**1.07**	**1.08**	**1.15**	**1.24**	**0.77**	**0.92**

Imports

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	5.40	5.51	10.19	5.02	19.31	19.45	16.33	13.11	17.95	22.56
COILSE	4.30	4.16	7.92	3.80	14.89	14.76	12.57	9.86	6.78	8.93
CCROOTS	2.81	2.87	7.74	2.37	18.15	18.23	15.32	12.23	6.33	8.45
CCOTTO	-1.31	-1.30	-0.52	-1.38	-1.21	-1.20	-2.52	-3.89	-1.00	0.23
CTOBAC	7.15	7.15	8.32	7.03	8.05	8.05	6.30	4.38	4.39	9.14
CTEAGR	18.54	18.55	20.37	18.36	22.33	22.34	20.60	18.71	16.25	22.47
CSUGAR	5.18	5.17	5.92	5.09	7.09	7.08	6.57	5.97	13.09	14.56
COFRVE	-0.81	-0.88	2.01	-1.16	7.05	6.99	5.15	2.95	1.13	2.73
COTHCRO	16.74	16.70	17.97	16.57	19.25	19.22	18.05	16.66	12.03	22.43
CLIVES	11.33	11.43	14.28	11.13	20.36	20.47	18.70	16.97	14.86	16.26
CFISHI	5.60	5.57	7.23	5.41	10.53	10.50	9.66	8.64	6.59	7.91
CHUFOR	7.36	7.28	12.20	6.80	21.70	21.64	18.58	15.00	11.01	14.53
CMININ	9.27	9.28	7.42	9.47	8.81	8.82	12.12	15.98	15.10	28.84
CPRFOOD	3.83	3.81	5.77	3.62	10.44	10.43	9.73	8.91	7.95	9.87
CBEVER	6.27	6.26	7.98	6.09	12.04	12.03	11.40	10.66	9.90	12.13
CCLOTH	13.90	13.89	15.00	13.77	20.42	20.41	21.30	22.34	22.71	28.40
CWOODP	2.11	2.11	1.49	2.18	3.84	3.84	5.79	8.01	6.94	16.29
CMANCHE	0.22	0.22	0.58	0.18	2.22	2.22	2.42	2.64	1.42	2.19
CPETRO	-0.27	-0.22	0.21	-0.27	0.97	1.02	0.61	0.25	-0.04	0.50
COTHMAN	0.31	0.30	-0.98	0.43	0.81	0.80	3.42	6.38	1.76	17.14
CCONST	-3.82	-3.82	-5.38	-3.67	-1.47	-1.48	2.63	7.38	-1.71	17.59
CTRANS	-0.13	-0.14	-0.21	-0.13	0.36	0.35	0.72	1.11	-0.55	4.75
CADMIN	-3.19	-3.21	-2.89	-3.24	0.44	0.43	1.54	2.82	-0.93	2.38
CPRIVS	-1.20	-1.22	-0.86	-1.25	0.81	0.79	1.08	1.37	-0.16	1.57

Exports

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	16.01	15.84	11.21	16.35	0.18	0.03	1.24	2.34	-0.22	-5.42
COILSE	3.89	3.99	1.24	4.27	-6.11	-6.03	-5.84	-5.47	0.82	-1.78
CCROOTS	4.29	4.17	-0.15	4.64	-9.65	-9.76	-8.20	-6.61	0.60	-1.77
CCOTTO	3.58	3.59	3.81	3.56	2.17	2.17	0.95	-0.58	-2.74	-7.03
CTOBAC	1.26	1.26	1.30	1.26	0.01	0.01	-0.68	-1.52	4.03	-4.76
CTEAGR	1.41	1.42	1.38	1.42	-0.36	-0.36	-1.15	-2.12	4.46	-2.80
CSUGAR	14.19	14.21	13.83	14.24	11.39	11.40	10.76	10.05	-4.42	-7.62
COFRVE	2.87	2.88	0.77	3.10	-4.79	-4.79	-4.45	-4.07	0.55	-1.53
COTHCROP	0.59	0.59	0.49	0.60	-0.35	-0.35	-0.60	-0.90	7.57	-6.50
CLIVES	4.10	4.01	2.00	4.23	-3.30	-3.39	-2.82	-2.40	0.65	-1.77
CFISHI	1.42	1.44	0.64	1.52	-1.72	-1.71	-1.69	-1.65	0.81	-0.63
CHUFOR	4.54	4.54	0.42	4.97	-7.90	-7.91	-6.22	-4.23	-0.04	-1.62
CMININ	6.87	6.86	8.41	6.71	6.89	6.88	4.04	0.87	-2.49	2.51
CPRFOOD	6.08	6.07	4.86	6.20	0.62	0.60	0.36	0.05	1.09	-0.93
CBEVER	5.18	5.20	4.51	5.27	-0.21	-0.20	-1.40	-2.75	0.35	-2.86
CCLOTH	9.76	9.79	9.66	9.80	3.21	3.23	0.48	-2.59	-2.96	-9.56
CWOODP	8.99	9.00	9.25	8.97	4.91	4.92	2.69	0.24	-2.31	-1.56
CMANCHE	8.46	8.49	10.09	8.33	3.49	3.51	-1.46	-6.79	1.30	-6.06
CPETRO	3.59	3.58	3.73	3.56	1.33	1.32	0.08	-1.35	0.23	-3.77
COTHMAN	8.79	8.80	9.93	8.68	6.69	6.70	3.74	0.53	-0.71	7.28
CTRANS	0.51	0.51	0.47	0.51	-0.10	-0.09	-0.29	-0.51	7.44	-12.84
CADMIN	3.95	3.96	3.66	3.99	-0.25	-0.24	-1.58	-3.09	1.60	-2.93
CPRIVS	2.19	2.20	1.97	2.22	-0.42	-0.41	-1.19	-2.07	2.09	-3.49

Domestic variety price

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-0.45	-0.42	-0.24	-0.44	-0.18	-0.15	-0.41	-0.65	0.71	0.64
COILSE	0.98	0.94	1.49	0.88	2.53	2.49	2.24	1.87	0.66	0.60
CCROOTS	0.77	0.80	1.93	0.68	4.09	4.13	3.40	2.65	0.78	0.68
CCOTTO	-0.37	-0.37	-0.87	-0.32	-2.27	-2.27	-2.15	-1.94	-0.03	0.49
CTOBAC	1.88	1.88	1.44	1.92	-0.06	-0.06	-0.10	-0.13	-0.51	1.07
CTEAGR	1.76	1.77	1.43	1.80	0.36	0.36	0.35	0.37	-0.55	0.86
CSISAL	-3.44	-3.44	-3.62	-3.42	-4.66	-4.66	-4.83	-4.96	0.42	0.28
CSUGAR	-3.43	-3.43	-3.84	-3.39	-4.87	-4.87	-4.76	-4.63	0.00	-0.05
COFRVE	0.97	0.96	1.58	0.89	2.64	2.62	2.24	1.78	0.70	0.70
COTHCRO	2.07	2.07	1.77	2.10	0.50	0.49	0.35	0.17	-2.14	2.90
CLIVES	0.39	0.44	0.92	0.39	1.77	1.82	1.39	1.01	0.61	0.53
CFISHI	1.22	1.20	1.51	1.17	1.90	1.88	1.65	1.36	0.44	0.52
CHUFOR	0.63	0.62	1.67	0.51	3.26	3.25	2.46	1.54	0.78	0.74
CMININ	-0.20	-0.20	-1.34	-0.08	-2.58	-2.58	-1.56	-0.39	0.84	0.94
CPRFOOD	-0.55	-0.55	-0.41	-0.56	-0.09	-0.09	-0.13	-0.17	0.21	0.17
CBEVER	-0.16	-0.16	-0.27	-0.15	0.04	0.03	0.34	0.69	0.40	0.70
CCLOTH	-0.73	-0.73	-1.19	-0.68	-1.54	-1.54	-1.03	-0.44	0.48	1.03
CWOODP	-0.35	-0.35	-1.07	-0.28	-1.89	-1.90	-1.27	-0.57	0.53	0.66
CMANCHE	0.21	0.21	-0.53	0.29	-1.26	-1.26	-0.54	0.27	-0.11	0.01
CPETRO	1.07	1.08	0.53	1.14	-0.48	-0.46	-0.19	0.15	0.51	0.62
COTHMAN	0.05	0.05	-0.85	0.14	-1.97	-1.97	-1.23	-0.40	0.06	-0.08
CUTILI	0.08	0.06	-0.09	0.08	-0.37	-0.38	-0.26	-0.17	0.66	0.75
CCONST	0.34	0.33	-0.45	0.41	-0.81	-0.81	0.12	1.18	0.08	0.37
CTRADE	1.03	1.01	-1.38	1.25	0.76	0.74	5.12	10.07	0.84	0.93
CHOTEL	0.74	0.72	0.71	0.73	1.20	1.19	1.47	1.75	0.50	0.73
CTRANS	2.24	2.24	1.64	2.30	0.12	0.12	0.27	0.43	-1.04	4.96
CESTAT	0.69	0.69	1.64	0.59	3.23	3.23	2.60	1.87	0.64	0.78
CADMIN	0.51	0.51	0.09	0.55	0.18	0.18	0.82	1.57	0.32	1.41
CPRIVS	1.51	1.50	1.07	1.55	0.32	0.32	0.60	0.91	0.40	1.35

Imports price

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-1.55	-1.55	-2.22	-1.48	-3.75	-3.76	-3.51	-3.23	-2.85	-3.75
COILSE	-0.78	-0.78	-1.53	-0.70	-2.91	-2.91	-2.48	-1.99	-2.04	-2.89
CCROOTS	-0.38	-0.38	-1.06	-0.31	-2.61	-2.61	-2.37	-2.10	-1.70	-2.60
CCOTTO	-0.84	-0.84	-1.59	-0.77	-2.97	-2.97	-2.54	-2.05	-2.10	-2.95
CTOBAC	-1.02	-1.02	-1.77	-0.94	-3.14	-3.15	-2.72	-2.23	-2.27	-3.13
CTEAGR	-5.11	-5.11	-5.82	-5.04	-7.15	-7.16	-6.76	-6.32	-6.32	-7.14
CSUGAR	-6.24	-6.24	-6.87	-6.18	-8.35	-8.35	-8.14	-7.90	-7.49	-8.34
COFRVE	1.35	1.35	0.58	1.43	-0.82	-0.82	-0.37	0.14	0.07	-0.80
COTHCRO	-6.20	-6.19	-6.83	-6.13	-8.29	-8.29	-8.06	-7.79	-7.43	-8.28
CLIVES	-4.92	-4.92	-5.54	-4.86	-7.08	-7.08	-6.91	-6.72	-6.20	-7.07
CFISHI	-3.20	-3.20	-3.83	-3.14	-5.40	-5.40	-5.23	-5.03	-4.50	-5.39
CHUFOR	-2.26	-2.26	-2.90	-2.19	-4.47	-4.47	-4.28	-4.06	-3.56	-4.46
CMININ	-3.62	-3.61	-4.25	-3.55	-5.80	-5.80	-5.62	-5.42	-4.90	-5.79
CPRFOOD	-2.47	-2.47	-3.08	-2.41	-4.72	-4.72	-4.60	-4.47	-3.80	-4.71
CBEVER	-3.45	-3.44	-4.16	-3.37	-5.54	-5.54	-5.16	-4.73	-4.68	-5.52
CCLOTH	-4.83	-4.83	-5.43	-4.76	-7.01	-7.01	-6.88	-6.73	-6.11	-7.00
CWOODP	-1.23	-1.23	-1.84	-1.17	-3.51	-3.51	-3.41	-3.29	-2.57	-3.51
CMANCHE	0.09	0.10	-0.53	0.16	-2.21	-2.21	-2.11	-1.99	-1.27	-2.21
CPETRO	1.50	1.50	0.85	1.57	-0.81	-0.81	-0.63	-0.44	0.14	-0.80
COTHMAN	-0.18	-0.18	-0.79	-0.11	-2.48	-2.49	-2.39	-2.28	-1.54	-2.48
CCONST	2.41	2.42	1.82	2.48	0.00	0.00	0.00	0.00	0.99	0.00
CTRANS	2.41	2.42	1.82	2.48	0.00	0.00	0.00	0.00	0.99	0.00
CADMIN	2.41	2.42	1.82	2.48	0.00	0.00	0.00	0.00	0.99	0.00
CPRIVS	2.41	2.42	1.82	2.48	0.00	0.00	0.00	0.00	0.99	0.00

Composite good price

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-0.52	-0.50	-0.38	-0.51	-0.44	-0.42	-0.63	-0.84	0.46	0.31
COILSE	0.97	0.93	1.48	0.88	2.51	2.47	2.22	1.86	0.65	0.59
CCROOTS	0.77	0.80	1.93	0.68	4.09	4.13	3.40	2.65	0.78	0.68
CCOTTO	-0.37	-0.37	-0.87	-0.32	-2.27	-2.27	-2.15	-1.94	-0.03	0.49
CTOBAC	1.86	1.86	1.42	1.91	-0.08	-0.08	-0.12	-0.15	-0.52	1.05
CTEAGR	1.65	1.65	1.31	1.69	0.24	0.24	0.24	0.26	-0.65	0.73
CSISAL	-3.44	-3.44	-3.62	-3.42	-4.66	-4.66	-4.83	-4.96	0.42	0.28
CSUGAR	-4.28	-4.28	-4.75	-4.23	-5.92	-5.93	-5.78	-5.61	-2.34	-2.67
COFRVE	0.98	0.97	1.56	0.91	2.55	2.54	2.18	1.73	0.69	0.66
COTHCRO	2.04	2.03	1.73	2.06	0.46	0.45	0.31	0.13	-2.16	2.85
CLIVES	0.32	0.36	0.83	0.31	1.64	1.69	1.27	0.90	0.51	0.42
CFISHI	1.21	1.20	1.51	1.17	1.89	1.88	1.65	1.35	0.43	0.51
CHUFOR	0.62	0.61	1.65	0.50	3.23	3.22	2.44	1.52	0.77	0.72
CMININ	-0.64	-0.63	-1.70	-0.52	-2.99	-2.99	-2.08	-1.04	0.09	0.05
CPRFOOD	-0.70	-0.69	-0.61	-0.70	-0.44	-0.44	-0.47	-0.50	-0.10	-0.21
CBEVER	-0.50	-0.50	-0.68	-0.49	-0.56	-0.56	-0.24	0.11	-0.14	0.04
CCLOTH	-1.53	-1.53	-2.02	-1.48	-2.63	-2.63	-2.20	-1.71	-0.86	-0.64
CWOODP	-0.65	-0.65	-1.33	-0.58	-2.45	-2.45	-2.02	-1.53	-0.57	-0.83
CMANCHE	0.14	0.14	-0.53	0.21	-1.87	-1.87	-1.55	-1.19	-0.85	-1.43
CPETRO	1.46	1.46	0.82	1.53	-0.77	-0.77	-0.59	-0.38	0.18	-0.66
COTHMAN	-0.11	-0.10	-0.81	-0.03	-2.32	-2.32	-2.02	-1.69	-1.03	-1.73
CUTILI	0.08	0.06	-0.09	0.08	-0.37	-0.38	-0.26	-0.17	0.66	0.75
CCONST	0.34	0.34	-0.44	0.42	-0.80	-0.81	0.12	1.18	0.09	0.37
CTRADE	1.03	1.01	-1.38	1.25	0.76	0.74	5.12	10.07	0.84	0.93
CHOTEL	0.74	0.72	0.71	0.73	1.20	1.19	1.47	1.75	0.50	0.73
CTRANS	2.38	2.38	1.79	2.44	0.03	0.02	0.06	0.09	0.55	1.02
CESTAT	0.69	0.69	1.64	0.59	3.23	3.23	2.60	1.87	0.64	0.78
CADMIN	0.53	0.53	0.11	0.57	0.18	0.17	0.82	1.55	0.33	1.40
CPRIVS	1.75	1.75	1.27	1.79	0.24	0.23	0.44	0.67	0.56	0.99

Domestic sales

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-0.40	-0.42	-0.44	-0.41	-0.76	-0.78	-0.85	-0.97	-1.69	-2.12
COILSE	-0.09	-0.12	0.21	-0.15	0.54	0.52	0.28	-0.06	-0.09	-0.11
CCROOTS	-0.04	-0.06	0.16	-0.08	0.36	0.34	0.18	-0.07	0.04	-0.02
CCOTTO	-2.17	-2.17	-1.86	-2.20	-2.51	-2.50	-3.24	-4.09	-4.75	-6.04
CTOBAC	-0.31	-0.31	-0.03	-0.34	-0.09	-0.09	-0.52	-1.01	-0.18	-1.85
CTEAGR	-0.47	-0.47	0.00	-0.52	0.70	0.71	0.34	-0.08	0.13	-0.40
CSISAL	-2.25	-2.25	-1.95	-2.28	-2.57	-2.57	-3.30	-4.14	-4.78	-6.03
CSUGAR	-2.31	-2.31	-2.23	-2.32	-2.44	-2.44	-2.65	-2.90	-6.90	-7.74
COFRVE	-0.13	-0.16	0.16	-0.19	0.48	0.44	0.23	-0.10	-0.05	-0.08
COTHCRO	-0.16	-0.18	0.18	-0.21	0.68	0.66	0.42	0.10	1.08	-1.03
CLIVES	-0.16	-0.15	0.11	-0.18	0.33	0.33	0.06	-0.24	-0.15	-0.67
CFISHI	-0.13	-0.14	0.22	-0.17	0.73	0.72	0.46	0.15	0.08	0.04
CHUFOR	-0.19	-0.22	0.00	-0.24	0.19	0.16	0.03	-0.21	-0.58	0.31
CMININ	-1.22	-1.22	-1.51	-1.19	-1.29	-1.28	-0.78	-0.22	-2.92	5.47
CPRFOOD	-0.15	-0.16	0.17	-0.19	0.44	0.43	0.12	-0.26	-0.51	-0.58
CBEVER	-0.61	-0.61	-0.28	-0.64	-0.10	-0.10	-0.49	-0.93	-0.95	-1.31
CCLOTH	-2.76	-2.75	-2.43	-2.79	-2.82	-2.81	-3.46	-4.20	-4.86	-5.88
CWOODP	-0.93	-0.92	-1.19	-0.89	-1.86	-1.85	-1.79	-1.72	-3.87	0.73
CMANCHE	-0.23	-0.22	0.61	-0.30	-1.44	-1.43	-3.50	-5.79	-2.90	-6.04
CPETRO	0.63	0.65	0.87	0.63	0.28	0.29	-0.32	-0.99	-0.81	-2.46
COTHMAN	-0.55	-0.55	-0.77	-0.53	-1.16	-1.16	-1.06	-0.96	-4.19	6.94
CUTILI	-0.36	-0.37	-0.17	-0.39	-0.24	-0.24	-0.54	-0.91	-1.59	0.12
CCONST	0.00	0.00	-1.24	0.13	0.06	0.06	2.39	5.02	0.00	16.76
CTRADE	0.04	0.03	-0.33	0.07	0.09	0.09	0.79	1.56	-0.15	5.62
CHOTEL	0.07	0.06	0.34	0.04	0.60	0.59	0.34	0.03	0.79	-0.76
CTRANS	0.19	0.18	0.13	0.19	0.13	0.13	0.21	0.30	3.37	-4.45
CESTAT	0.04	0.03	0.20	0.02	0.39	0.39	0.24	0.07	0.39	-0.22
CADMIN	0.31	0.31	0.33	0.31	0.10	0.09	-0.03	-0.18	0.33	-0.31
CPRIVS	0.48	0.48	0.55	0.47	0.19	0.19	-0.06	-0.37	0.96	-0.99
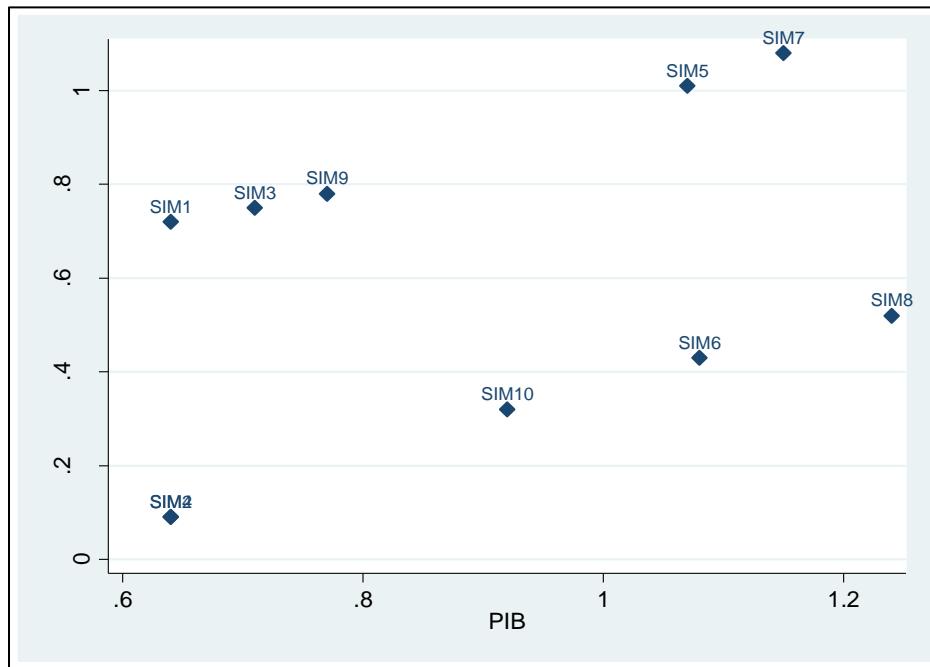
Demand for investment

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCLOTH	-	-	-1.94	0.20	-	-	3.59	7.65	-	25.33
CWOODP	-	-	-1.94	0.20	-	-	3.59	7.65	-	25.33
COTHMAN	-	-	-1.94	0.20	-	-	3.59	7.65	-	25.33
CCONST	-	-	-1.94	0.20	-	-	3.59	7.65	-	25.33
CTRADE	-	-	-1.94	0.20	-	-	3.59	7.65	-	25.33
CTRANS	-	-	-1.94	0.20	-	-	3.59	7.65	-	25.33

Households' disposable income

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
HRBFPL	0.62	0.42	0.80	0.40	1.18	1.00	1.11	0.82	0.76	0.29
HRFBPL	0.62	0.19	0.80	0.17	1.21	0.80	1.14	0.62	0.78	0.15
HRNOED	0.69	0.33	0.86	0.31	1.22	0.88	1.14	0.68	0.82	0.21
HRNFPS	0.68	0.54	0.76	0.53	1.06	0.92	1.07	0.95	0.75	0.56
HRNFSS	0.69	0.07	0.76	0.06	1.08	0.50	1.13	0.55	0.80	0.32
HRSECP	0.86	0.26	0.75	0.27	0.80	0.24	0.98	0.57	0.77	0.56
HUBFPL	0.63	-0.14	0.72	-0.16	1.12	0.39	1.18	0.45	0.79	0.25
HUFBPL	0.63	-0.38	0.73	-0.39	1.19	0.24	1.26	0.30	0.85	0.16
HUNOED	0.77	-0.07	0.83	-0.08	1.13	0.34	1.17	0.36	0.87	0.18
HUNFPS	0.74	-0.12	0.70	-0.12	0.91	0.10	1.08	0.37	0.77	0.37
HUNFSS	0.74	-0.28	0.70	-0.27	0.93	-0.03	1.09	0.23	0.78	0.26
HUSECP	0.95	-0.12	0.65	-0.09	0.43	-0.56	0.77	0.06	0.64	0.39
Rurals	0.69	0.24	0.78	0.23	1.10	0.68	1.11	0.66	0.78	0.34
Urbans	0.78	-0.21	0.70	-0.20	0.84	-0.09	1.03	0.23	0.76	0.29
Aggregate	0.72	0.09	0.75	0.09	1.01	0.43	1.08	0.52	0.78	0.32

Graphic 3: Aggregate Households' Income/ GDP

Demand for labor

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-0.41	-0.40	-0.10	-0.43	-0.13	-0.12	-0.58	-1.09	-0.90	-1.54
AOILSE	0.15	0.14	0.64	0.09	0.94	0.92	0.36	-0.31	0.04	-0.44
ACTROOTS	0.03	0.04	0.62	-0.02	1.29	1.30	0.76	0.17	0.14	-0.29
ACOTTO	0.10	0.11	0.65	0.05	-1.39	-1.38	-3.14	-5.17	-3.96	-6.74
ATOBAC	1.18	1.18	1.46	1.16	-0.07	-0.06	-1.20	-2.52	2.25	-3.84
ATEAGR	1.36	1.37	1.71	1.33	0.14	0.14	-1.11	-2.56	2.77	-2.18
ASISAL	-4.31	-4.30	-3.74	-4.36	-4.89	-4.89	-6.19	-7.65	-4.76	-6.36
ASUGAR	-1.96	-1.96	-1.86	-1.97	-2.56	-2.56	-3.02	-3.56	-6.59	-7.94
AOFRVE	0.15	0.14	0.61	0.10	0.86	0.86	0.32	-0.32	0.09	-0.40
AOTHCRO	0.90	0.90	0.96	0.90	-0.06	-0.06	-0.62	-1.26	5.72	-5.16
ALIVES	-0.07	-0.04	0.43	-0.10	0.77	0.80	0.21	-0.41	-0.05	-0.89
AFISHI	0.35	0.35	0.63	0.32	0.58	0.58	0.15	-0.36	0.24	-0.36
AHUFOR	-0.01	-0.01	0.41	-0.05	0.80	0.80	0.37	-0.13	-0.22	-0.08
AMININ	-0.71	-0.70	-1.52	-0.62	-3.60	-3.59	-3.43	-3.23	-2.23	3.73
APRFOOD	-0.35	-0.40	1.47	-0.58	2.99	2.95	1.06	-1.18	0.04	-1.47
ABEVER	-3.01	-3.01	-1.21	-3.20	-0.31	-0.31	-2.47	-4.92	-0.42	-2.18
ACLOTH	-4.26	-4.25	-3.68	-4.31	-4.86	-4.85	-6.22	-7.77	-4.49	-6.60
AWOODP	-2.37	-2.35	-3.41	-2.24	-6.75	-6.74	-6.82	-6.92	-3.33	-0.34
AMANCHE	0.17	0.18	1.25	0.07	-1.54	-1.53	-4.26	-7.26	-2.60	-6.28
APETRO	2.37	2.44	3.22	2.35	1.02	1.09	-1.16	-3.56	-0.33	-3.36
AOTHMAN	-0.88	-0.86	-1.72	-0.77	-4.51	-4.50	-4.65	-4.85	-3.53	5.85
AUTILI	-1.76	-1.80	-0.83	-1.89	-1.16	-1.19	-2.64	-4.39	-1.08	-0.89
ACONST	0.00	0.00	-1.83	0.19	0.08	0.08	3.53	7.44	0.28	16.12
ATRADE	0.45	0.41	-4.13	0.89	1.15	1.11	10.21	20.79	0.66	3.98
AHOTEL	0.31	0.27	1.46	0.15	2.57	2.53	1.44	0.11	1.29	-1.72
ATRANS	3.64	3.65	3.28	3.69	-0.47	-0.46	-1.66	-3.00	7.42	-12.49
AESTAT	0.14	0.13	3.55	-0.21	7.71	7.71	4.68	1.23	0.90	-1.33
AADMIN	0.50	0.50	0.50	0.50	0.08	0.08	-0.10	-0.32	0.41	-0.48
APRIVS	3.41	3.41	3.31	3.42	-0.07	-0.07	-1.44	-2.99	1.81	-2.72

Demand for land

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-	-	-	-	-	-	-	-	-0.76	0.27
AOILSE	-	-	-	-	-	-	-	-	0.17	1.39
ACTROOTS	-	-	-	-	-	-	-	-	0.27	1.54
ACOTTO	-	-	-	-	-	-	-	-	-3.83	-5.03
ATOBAC	-	-	-	-	-	-	-	-	2.39	-2.07
ATEAGR	-	-	-	-	-	-	-	-	2.90	-0.38
ASISAL	-	-	-	-	-	-	-	-	-4.63	-4.64
ASUGAR	-	-	-	-	-	-	-	-	-6.47	-6.24
AOFRVE	-	-	-	-	-	-	-	-	0.22	1.43
AOTHCRO	-	-	-	-	-	-	-	-	5.86	-3.42
ALIVES	-	-	-	-	-	-	-	-	0.08	0.93
AFISHI	-	-	-	-	-	-	-	-	0.35	1.16
AHUFOR	-	-	-	-	-	-	-	-	-0.11	1.45

Demand for capital

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-	-	-	-	-	-	-	-	-1.02	-1.30
AOILSE	-	-	-	-	-	-	-	-	-0.09	-0.20
ACTROOTS	-	-	-	-	-	-	-	-	0.01	-0.05
ACOTTO	-	-	-	-	-	-	-	-	-4.08	-6.52
ATOBAC	-	-	-	-	-	-	-	-	2.12	-3.61
ATEAGR	-	-	-	-	-	-	-	-	2.64	-1.94
ASISAL	-	-	-	-	-	-	-	-	-4.88	-6.13
ASUGAR	-	-	-	-	-	-	-	-	-6.71	-7.71
AOFRVE	-	-	-	-	-	-	-	-	-0.04	-0.16
AOTHCRO	-	-	-	-	-	-	-	-	5.59	-4.93
ALIVES	-	-	-	-	-	-	-	-	-0.18	-0.65
AFISHI	-	-	-	-	-	-	-	-	0.14	-0.16
AHUFOR	-	-	-	-	-	-	-	-	-0.32	0.12
AMININ	-	-	-	-	-	-	-	-	-2.87	5.06
APRFOOD	-	-	-	-	-	-	-	-	-0.54	-0.35
ABEVER	-	-	-	-	-	-	-	-	-0.99	-1.06
ACLOTH	-	-	-	-	-	-	-	-	-5.11	-5.40
AWOODP	-	-	-	-	-	-	-	-	-3.96	0.94
AMANCHE	-	-	-	-	-	-	-	-	-3.23	-5.08
APETRO	-	-	-	-	-	-	-	-	-0.98	-2.12
AOTHMAN	-	-	-	-	-	-	-	-	-4.16	7.20
AUTILI	-	-	-	-	-	-	-	-	-1.72	0.38
ACONST	-	-	-	-	-	-	-	-	-0.60	18.11
ATRADE	-	-	-	-	-	-	-	-	-0.21	5.76
AHOTEL	-	-	-	-	-	-	-	-	0.63	-0.46
ATRANS	-	-	-	-	-	-	-	-	6.72	-11.37
AESTAT	-	-	-	-	-	-	-	-	0.24	-0.07
AADMIN	-	-	-	-	-	-	-	-	-0.24	0.80
APRIVS	-	-	-	-	-	-	-	-	1.14	-1.47

Labor remuneration

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
	0.66	0.65	0.25	0.70	0.22	0.21	0.79	1.47	0.45	1.89

Land remuneration

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-1.06	-1.02	-0.17	-1.11	-0.34	-0.29	-1.62	-3.05	-0.10	-5.56
AOILSE	1.29	1.23	2.95	1.06	4.18	4.12	2.33	0.16	-0.10	-5.56
ACTROOTS	0.78	0.83	2.85	0.62	5.70	5.76	4.03	2.17	-0.10	-5.56
ACOTTO	1.06	1.10	2.98	0.90	-5.45	-5.42	-11.74	-18.66	-0.10	-5.56
ATOBAC	5.69	5.72	6.51	5.63	-0.07	-0.05	-4.16	-8.78	-0.10	-5.56
ATEAGR	6.49	6.53	7.59	6.41	0.79	0.81	-3.79	-8.94	-0.10	-5.56
ASISAL	-16.22	-16.19	-14.48	-16.37	-18.69	-18.66	-22.78	-27.16	-0.10	-5.56
ASUGAR	-7.30	-7.30	-7.29	-7.30	-10.05	-10.05	-11.30	-12.75	-0.10	-5.56
AOFRVE	1.29	1.26	2.82	1.11	3.87	3.85	2.13	0.13	-0.10	-5.56
AOTHCRO	4.50	4.50	4.31	4.52	-0.05	-0.05	-1.77	-3.74	-0.10	-5.56
ALIVES	0.37	0.47	2.07	0.29	3.49	3.58	1.68	-0.27	-0.10	-5.56
AFISHI	2.43	2.41	3.46	2.31	3.17	3.15	1.55	-0.33	-0.10	-5.56
AHUFOR	0.61	0.60	2.34	0.42	4.30	4.29	2.67	0.80	-0.10	-5.56

Capital remuneration

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-1.06	-1.02	-0.17	-1.11	-0.34	-0.29	-1.62	-3.05	0.98	0.87
AOILSE	1.29	1.23	2.95	1.06	4.18	4.12	2.33	0.16	0.98	0.87
ACTROOTS	0.78	0.83	2.85	0.62	5.70	5.76	4.03	2.17	0.98	0.87
ACOTTO	1.06	1.10	2.98	0.90	-5.45	-5.42	-11.74	-18.66	0.98	0.87
ATOBAC	5.69	5.72	6.51	5.63	-0.07	-0.05	-4.16	-8.78	0.98	0.87
ATEAGR	6.49	6.53	7.59	6.41	0.79	0.81	-3.79	-8.94	0.98	0.87
ASISAL	-16.22	-16.19	-14.48	-16.37	-18.69	-18.66	-22.78	-27.16	0.98	0.87
ASUGAR	-7.30	-7.30	-7.29	-7.30	-10.05	-10.05	-11.30	-12.75	0.98	0.87
AOFRVE	1.29	1.26	2.82	1.11	3.87	3.85	2.13	0.13	0.98	0.87
AOTHCRO	4.50	4.50	4.31	4.52	-0.05	-0.05	-1.77	-3.74	0.98	0.87
ALIVES	0.37	0.47	2.07	0.29	3.49	3.58	1.68	-0.27	0.98	0.87
AFISHI	2.43	2.41	3.46	2.31	3.17	3.15	1.55	-0.33	0.98	0.87
AHUFOR	0.61	0.60	2.34	0.42	4.30	4.29	2.67	0.80	0.98	0.87
AMININ	0.09	0.09	-0.96	0.20	-2.66	-2.66	-1.96	-1.14	0.98	0.87
APRFOOD	0.34	0.30	1.56	0.17	2.89	2.85	1.75	0.40	0.98	0.87
ABEVER	-2.05	-2.06	-0.83	-2.18	-0.06	-0.07	-1.44	-3.00	0.98	0.87
ACLOTH	-2.76	-2.76	-2.69	-2.76	-3.67	-3.67	-4.22	-4.84	0.98	0.87
AWOODP	-1.24	-1.22	-2.47	-1.10	-5.19	-5.18	-4.70	-4.15	0.98	0.87
AMANCHE	0.79	0.80	1.24	0.75	-1.01	-1.01	-2.63	-4.42	0.98	0.87
APETRO	2.54	2.60	2.80	2.57	1.03	1.07	-0.14	-1.41	0.98	0.87
AOTHMAN	-0.05	-0.03	-1.13	0.08	-3.39	-3.38	-2.94	-2.46	0.98	0.87
AUTILI	-0.75	-0.78	-0.41	-0.82	-0.71	-0.74	-1.33	-2.08	0.98	0.87
ACONST	0.66	0.65	-0.85	0.81	0.26	0.26	2.89	5.90	0.98	0.87
ATRADE	0.93	0.90	-2.24	1.23	0.90	0.87	6.80	13.54	0.98	0.87
AHOTEL	0.90	0.87	1.40	0.82	2.26	2.22	1.94	1.55	0.98	0.87
ATRANS	3.55	3.56	2.85	3.63	-0.16	-0.16	-0.54	-0.96	0.98	0.87
AESTAT	0.77	0.76	3.06	0.52	6.30	6.30	4.52	2.46	0.98	0.87
AADMIN	1.05	1.05	0.65	1.09	0.28	0.28	0.71	1.21	0.98	0.87
APRIVS	3.37	3.37	2.87	3.42	0.16	0.16	-0.36	-0.95	0.98	0.87

Other institutions

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
Government										
Income	-6.92	0.41	-6.96	0.44	-6.72	0.13	-6.57	1.20	-6.75	1.08
Direct taxes	0.70	26.59	0.79	26.68	1.18	25.39	1.22	28.09	0.86	23.08
Taxes on sales	-0.36	-0.37	-0.39	-0.36	-0.27	-0.28	-0.19	-0.11	-0.53	1.35
Tariffs revenue	-46.93	-46.92	-47.14	-46.90	-46.64	-46.64	-46.12	-45.53	-45.55	-41.86
Taxes on production	0.40	0.40	0.18	0.42	0.08	0.08	0.34	0.64	0.27	0.81
Savings	-53.08	0.00	-50.98	0.00	-49.65	0.00	-52.11	0.00	-50.75	0.00
Foreign savings	0	0	0	0	18.51	18.53	26.76	36.17	0	100.08
Exchange rate	2.41	2.42	1.82	2.48	-	-	-	-	0.99	-

Annex 3.2: 10% growth in agricultural productivity

Sectorial aggregates

	SIM1	SIM2	SIM3	SIM4	SIM5	SIM6	SIM7	SIM8	SIM9	SIM10
Prodtn										
Agrc.	8.70	8.70	8.85	8.86	8.74	8.74	8.71	8.73	11.88	9.21
Indus.	1.44	1.44	1.67	1.69	1.46	1.46	1.41	1.45	2.78	4.94
Serv.	0.55	0.55	0.43	0.42	0.53	0.53	0.56	0.54	-1.47	0.04
Impts.										
Agrc.	-23.95	-23.95	-21.84	-21.68	-20.49	-20.49	-20.65	-20.55	-7.27	-4.48
Indus.	4.03	4.03	3.62	3.59	5.14	5.14	5.33	5.21	3.90	17.14
Serv.	3.67	3.67	3.72	3.72	4.30	4.30	4.34	4.31	5.49	12.59
Expts.										
Agrc.	17.21	17.21	16.61	16.57	15.22	15.22	15.17	15.20	61.08	35.36
Indus.	-6.62	-6.62	-6.15	-6.11	-8.60	-8.60	-8.88	-8.70	-3.64	-4.73
Serv.	-3.25	-3.25	-3.36	-3.36	-4.03	-4.03	-4.07	-4.04	-24.16	-38.43
V.Dom.										
Agrc.	7.28	7.28	7.53	7.55	7.49	7.49	7.45	7.48	6.64	6.39
Indus.	1.55	1.55	1.76	1.78	1.61	1.61	1.56	1.59	2.85	5.19
Serv.	0.97	0.97	0.80	0.79	1.01	1.01	1.05	1.02	1.00	4.81

Note:

Prodtn: Production	Agrc.: Agriculture
Impts.: Imports	Indus.: Industry
Expts: Exports	Serv.: Services
V.Dom.: Domestic sales	

Production

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	8.98	8.98	9.10	9.11	9.06	9.06	9.04	9.05	7.06	6.77
AOILSE	8.20	8.20	8.43	8.45	8.37	8.37	8.34	8.36	6.13	6.27
ACTROOTS	8.72	8.72	8.90	8.91	8.93	8.93	8.91	8.92	6.09	6.15
ACOTTO	4.08	4.08	4.56	4.60	3.35	3.35	3.17	3.29	3.55	0.40
ATOBAC	8.17	8.17	8.39	8.40	7.62	7.62	7.52	7.59	11.56	5.32
ATEAGR	7.57	7.57	7.84	7.86	7.02	7.02	6.91	6.98	10.50	5.38
ASISAL	0.29	0.29	0.66	0.69	0.07	0.07	-0.03	0.04	2.68	0.96
ASUGAR	9.45	9.45	9.51	9.51	9.22	9.22	9.18	9.20	8.67	8.26
AOFRVE	8.75	8.75	8.93	8.95	8.89	8.89	8.86	8.88	6.46	6.53
AOTHCRO	10.26	10.26	10.29	10.29	9.96	9.96	9.92	9.95	93.54	53.47
ALIVES	7.18	7.18	7.44	7.46	7.40	7.40	7.36	7.39	7.83	6.75
AFISHI	9.02	9.02	9.18	9.19	9.06	9.06	9.03	9.05	6.66	6.86
AHUFOR	9.08	9.08	9.19	9.20	9.19	9.19	9.17	9.18	5.90	6.58
AMININ	-0.13	-0.13	-0.15	-0.15	-0.17	-0.17	-0.17	-0.17	-0.92	8.64
APRFOOD	3.62	3.62	3.94	3.96	3.93	3.93	3.89	3.92	5.38	5.39
ABEVER	1.69	1.69	2.04	2.07	1.97	1.97	1.92	1.96	4.23	3.90
ACLOTH	0.29	0.29	0.66	0.69	0.07	0.07	-0.03	0.04	2.68	0.96
AWOODP	-0.83	-0.83	-1.07	-1.09	-1.44	-1.44	-1.44	-1.44	-1.40	4.34
AMANCHE	-5.34	-5.34	-4.45	-4.38	-6.18	-6.18	-6.45	-6.28	0.82	-4.73
APETRO	-1.04	-1.04	-0.78	-0.76	-1.27	-1.27	-1.35	-1.30	0.64	-2.78
AOTHMAN	-2.35	-2.35	-2.53	-2.54	-2.79	-2.79	-2.79	-2.79	-3.72	9.42
AUTILI	0.96	0.96	1.18	1.20	1.03	1.03	0.99	1.01	1.75	3.86
ACONST	0.39	0.39	-0.98	-1.08	0.41	0.41	0.71	0.52	0.53	22.96
ATRADE	3.21	3.21	2.82	2.79	3.22	3.22	3.31	3.25	5.33	12.44
AHOTEL	1.59	1.59	1.89	1.92	1.92	1.92	1.89	1.91	0.08	-0.93
ATRANS	-1.28	-1.28	-1.33	-1.34	-1.62	-1.62	-1.63	-1.62	-27.43	-43.11
AESTAT	1.29	1.29	1.48	1.49	1.52	1.52	1.50	1.51	2.68	2.49
AADMIN	-0.70	-0.70	-0.69	-0.69	-0.91	-0.91	-0.94	-0.92	-1.02	-1.70
APRIVS	-2.85	-2.85	-2.89	-2.89	-3.53	-3.53	-3.58	-3.55	-4.50	-8.09
GDP fact.C	**4.78**	**4.78**	**4.86**	**4.87**	**5.07**	**5.07**	**5.08**	**5.07**	**4.98**	**5.24**

Imports

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-43.49	-43.49	-40.09	-39.83	-37.76	-37.77	-38.01	-37.86	-15.69	-10.58
COILSE	-23.90	-23.89	-21.30	-21.09	-19.60	-19.60	-19.80	-19.66	-4.48	-2.57
CCROOTS	-29.72	-29.73	-26.39	-26.13	-23.88	-23.89	-24.11	-23.96	-7.19	-4.34
CCOTTO	-11.72	-11.72	-11.19	-11.15	-11.35	-11.35	-11.43	-11.38	0.33	1.29
CTOBAC	-10.50	-10.50	-9.52	-9.44	-10.08	-10.08	-10.25	-10.14	-2.69	1.19
CTEAGR	-5.89	-5.89	-4.33	-4.20	-3.84	-3.84	-4.00	-3.90	-1.50	4.07
CSUGAR	-5.10	-5.10	-4.36	-4.30	-4.02	-4.01	-4.08	-4.04	0.42	1.04
COFRVE	-16.95	-16.94	-14.49	-14.29	-13.09	-13.08	-13.29	-13.15	-3.38	-1.31
COTHCRO	-4.59	-4.59	-3.47	-3.38	-3.25	-3.25	-3.38	-3.29	-33.15	-23.08
CLIVES	-23.19	-23.20	-21.17	-21.01	-19.57	-19.58	-19.70	-19.62	-0.10	0.05
CFISHI	-6.41	-6.41	-4.84	-4.72	-3.72	-3.71	-3.82	-3.75	0.49	1.41
CHUFOR	-32.21	-32.21	-29.17	-28.92	-27.17	-27.17	-27.40	-27.25	-8.76	-4.30
CMININ	-2.00	-2.00	-4.00	-4.15	-2.33	-2.33	-1.92	-2.18	5.50	24.98
CPRFOOD	5.86	5.86	8.14	8.32	10.24	10.24	10.13	10.20	1.94	4.97
CBEVER	10.72	10.72	12.67	12.83	14.46	14.46	14.36	14.42	4.04	7.55
CCLOTH	15.85	15.85	17.07	17.16	20.19	20.20	20.32	20.24	11.94	19.73
CWOODP	2.62	2.62	1.92	1.86	3.69	3.69	3.94	3.78	1.88	15.52
CMANCHE	7.56	7.56	8.03	8.07	8.90	8.90	8.91	8.91	9.40	10.22
CPETRO	3.65	3.65	4.24	4.28	4.50	4.50	4.45	4.48	4.95	5.68
COTHMAN	2.08	2.08	0.68	0.57	2.42	2.42	2.75	2.53	2.16	23.37
CCONST	6.97	6.97	5.09	4.94	8.67	8.67	9.24	8.87	5.31	33.51
CTRANS	2.71	2.71	2.66	2.66	3.05	3.06	3.10	3.07	5.73	13.49
CADMIN	8.72	8.72	9.10	9.14	11.32	11.32	11.47	11.37	6.77	11.55
CPRIVS	6.65	6.65	7.08	7.11	8.05	8.05	8.08	8.06	4.24	8.50

Exports

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	106.14	106.16	94.80	93.97	84.39	84.41	84.81	84.56	38.03	27.70
COILSE	45.36	45.35	41.74	41.45	37.08	37.07	37.11	37.08	17.37	14.70
CCROOTS	66.64	66.64	59.51	58.98	53.23	53.25	53.54	53.36	20.97	17.18
CCOTTO	9.85	9.85	10.49	10.54	8.35	8.35	8.06	8.25	4.90	-0.48
CTOBAC	11.80	11.80	11.93	11.94	10.78	10.78	10.65	10.74	15.68	6.12
CTEAGR	9.33	9.33	9.38	9.39	7.88	7.88	7.73	7.83	13.60	5.36
CSUGAR	21.37	21.37	20.91	20.87	19.40	19.40	19.33	19.38	16.50	14.72
COFRVE	34.66	34.66	31.85	31.64	28.55	28.55	28.61	28.57	16.32	13.67
COTHCRO	12.08	12.08	11.96	11.95	11.40	11.40	11.36	11.38	121.57	69.12
CLIVES	45.59	45.60	42.75	42.54	39.40	39.41	39.46	39.43	16.83	13.65
CFISHI	20.16	20.16	19.21	19.13	17.91	17.90	17.91	17.91	11.11	10.69
CHUFOR	68.14	68.14	61.66	61.16	56.53	56.53	56.87	56.65	21.10	18.06
CMININ	-0.90	-0.90	0.87	1.01	-0.86	-0.85	-1.23	-0.99	-5.86	-3.18
CPRFOOD	-0.12	-0.12	-1.53	-1.63	-3.68	-3.68	-3.69	-3.68	8.78	5.52
CBEVER	-12.22	-12.22	-12.88	-12.93	-15.24	-15.24	-15.36	-15.28	3.89	-0.97
CCLOTH	-15.02	-15.02	-15.07	-15.07	-18.54	-18.54	-18.84	-18.65	-5.71	-14.75
CWOODP	-5.71	-5.71	-5.38	-5.35	-7.89	-7.89	-8.15	-7.98	-4.57	-5.66
CMANCHE	-17.86	-17.86	-16.54	-16.44	-20.37	-20.37	-20.86	-20.54	-6.85	-17.37
CPETRO	-7.60	-7.60	-7.47	-7.46	-8.95	-8.95	-9.10	-9.00	-3.80	-11.15
COTHMAN	-8.14	-8.14	-7.09	-7.01	-9.34	-9.34	-9.67	-9.45	-9.12	-2.69
CTRANS	-1.61	-1.61	-1.67	-1.67	-2.00	-2.00	-2.03	-2.01	-30.04	-47.28
CADMIN	-8.63	-8.63	-8.92	-8.94	-10.98	-10.99	-11.13	-11.04	-7.67	-12.51
CPRIVS	-7.20	-7.20	-7.44	-7.46	-8.78	-8.78	-8.87	-8.81	-8.52	-15.42

Domestic variety price

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-9.75	-9.75	-9.36	-9.34	-9.27	-9.27	-9.30	-9.28	-3.21	-3.25
COILSE	-9.47	-9.47	-9.09	-9.06	-8.80	-8.80	-8.83	-8.81	-2.44	-2.94
CCROOTS	-13.65	-13.65	-12.71	-12.64	-12.12	-12.12	-12.19	-12.15	-3.67	-3.79
CCOTTO	-3.24	-3.24	-3.88	-3.93	-4.17	-4.17	-4.10	-4.15	0.34	0.60
CTOBAC	-2.04	-2.04	-2.51	-2.55	-3.18	-3.18	-3.18	-3.18	-1.80	-0.78
CTEAGR	-0.85	-0.85	-1.19	-1.22	-1.62	-1.62	-1.62	-1.62	-1.25	-0.14
CSISAL	-7.72	-7.72	-8.10	-8.13	-8.30	-8.30	-8.27	-8.29	0.65	0.13
CSUGAR	-2.76	-2.76	-3.17	-3.20	-3.64	-3.64	-3.63	-3.63	-1.41	-2.35
COFRVE	-9.37	-9.37	-8.85	-8.81	-8.56	-8.56	-8.60	-8.57	-3.19	-3.39
COTHCRO	-2.48	-2.48	-2.76	-2.79	-3.40	-3.39	-3.42	-3.40	-25.70	-18.51
CLIVES	-12.74	-12.74	-12.34	-12.31	-12.11	-12.11	-12.14	-12.12	-2.34	-2.99
CFISHI	-7.53	-7.53	-7.25	-7.22	-7.17	-7.17	-7.20	-7.18	-2.44	-3.29
CHUFOR	-14.48	-14.48	-13.66	-13.60	-13.34	-13.34	-13.42	-13.37	-3.98	-3.93
CMININ	1.71	1.71	0.42	0.32	0.19	0.19	0.34	0.24	3.43	4.47
CPRFOOD	3.22	3.22	3.48	3.50	3.67	3.67	3.65	3.66	-0.16	-0.08
CBEVER	7.98	7.98	7.90	7.89	8.16	8.16	8.20	8.18	1.53	2.12
CCLOTH	6.01	6.01	5.50	5.46	5.56	5.56	5.64	5.59	3.76	4.61
CWOODP	3.00	3.00	2.20	2.14	2.00	2.00	2.09	2.03	2.42	3.03
CMANCHE	5.42	5.42	4.60	4.54	4.49	4.49	4.58	4.52	3.62	3.91
CPETRO	4.66	4.66	4.10	4.06	3.71	3.71	3.75	3.72	3.54	4.21
COTHMAN	3.14	3.14	2.16	2.08	1.87	1.87	1.96	1.90	3.02	3.22
CUTILI	8.76	8.76	8.62	8.61	8.50	8.51	8.51	8.51	3.48	4.06
CCONST	4.94	4.94	4.08	4.02	4.25	4.25	4.37	4.29	3.94	4.43
CTRADE	24.47	24.47	21.71	21.50	24.22	24.22	24.80	24.42	3.42	4.19
CHOTEL	7.13	7.13	7.12	7.12	7.45	7.45	7.48	7.46	1.87	2.52
CTRANS	2.64	2.64	2.03	1.98	1.33	1.33	1.35	1.34	13.07	22.36
CESTAT	16.60	16.61	17.72	17.81	18.27	18.27	18.18	18.24	3.52	4.26
CADMIN	6.24	6.24	5.79	5.75	6.06	6.06	6.14	6.09	5.38	6.60
CPRIVS	5.27	5.27	4.82	4.78	4.56	4.56	4.59	4.57	4.97	6.77

Imported good price

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	2.78	2.78	2.05	1.99	1.36	1.36	1.39	1.37	1.54	0.24
COILSE	3.75	3.75	2.93	2.87	2.39	2.39	2.45	2.41	1.62	0.41
CCROOTS	2.76	2.76	2.03	1.97	1.34	1.34	1.38	1.35	1.54	0.23
CCOTTO	3.75	3.75	2.93	2.87	2.39	2.39	2.44	2.41	1.62	0.41
CTOBAC	3.74	3.74	2.92	2.86	2.38	2.38	2.44	2.40	1.62	0.41
CTEAGR	3.55	3.55	2.75	2.68	2.18	2.18	2.23	2.19	1.61	0.38
CSUGAR	2.59	2.59	1.88	1.82	1.17	1.17	1.19	1.17	1.52	0.20
COFRVE	3.85	3.85	3.02	2.96	2.50	2.50	2.55	2.52	1.63	0.43
COTHCRO	2.73	2.73	2.01	1.95	1.31	1.31	1.34	1.32	1.53	0.23
CLIVES	2.39	2.39	1.69	1.64	0.95	0.95	0.97	0.96	1.50	0.16
CFISHI	2.40	2.40	1.70	1.65	0.96	0.96	0.98	0.97	1.51	0.17
CHUFOR	2.50	2.50	1.80	1.74	1.07	1.07	1.10	1.08	1.51	0.18
CMININ	2.43	2.43	1.73	1.67	0.99	0.99	1.01	1.00	1.51	0.17
CPRFOOD	2.10	2.10	1.44	1.38	0.65	0.65	0.67	0.66	1.48	0.11
CBEVER	3.48	3.48	2.68	2.62	2.10	2.10	2.15	2.11	1.60	0.36
CCLOTH	2.18	2.18	1.50	1.45	0.73	0.73	0.75	0.73	1.49	0.13
CWOODP	2.02	2.02	1.36	1.31	0.56	0.56	0.58	0.57	1.47	0.10
CMANCHE	2.04	2.04	1.38	1.33	0.59	0.59	0.60	0.59	1.47	0.10
CPETRO	2.39	2.39	1.70	1.64	0.96	0.96	0.98	0.96	1.50	0.17
COTHMAN	1.99	1.99	1.34	1.29	0.54	0.54	0.55	0.54	1.47	0.09
CCONST	1.49	1.49	0.88	0.83	0.00	0.00	0.00	0.00	1.43	0.00
CTRANS	1.49	1.49	0.88	0.83	0.00	0.00	0.00	0.00	1.43	0.00
CADMIN	1.49	1.49	0.88	0.83	0.00	0.00	0.00	0.00	1.43	0.00
CPRIVS	1.49	1.49	0.88	0.83	0.00	0.00	0.00	0.00	1.43	0.00

Composite good price

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	-9.13	-9.13	-8.78	-8.76	-8.72	-8.72	-8.75	-8.73	-2.92	-3.04
COILSE	-9.44	-9.44	-9.06	-9.03	-8.77	-8.77	-8.80	-8.78	-2.43	-2.93
CCROOTS	-13.65	-13.65	-12.71	-12.64	-12.12	-12.12	-12.19	-12.14	-3.67	-3.79
CCOTTO	-3.24	-3.24	-3.88	-3.93	-4.17	-4.17	-4.10	-4.15	0.34	0.60
CTOBAC	-2.01	-2.01	-2.49	-2.52	-3.15	-3.15	-3.15	-3.15	-1.78	-0.77
CTEAGR	-0.79	-0.79	-1.14	-1.16	-1.57	-1.57	-1.56	-1.57	-1.21	-0.13
CSISAL	-7.72	-7.72	-8.10	-8.13	-8.30	-8.30	-8.27	-8.29	0.65	0.13
CSUGAR	-1.27	-1.27	-1.76	-1.80	-2.29	-2.29	-2.28	-2.29	-0.58	-1.62
COFRVE	-9.08	-9.08	-8.59	-8.55	-8.31	-8.31	-8.35	-8.32	-3.08	-3.29
COTHCRO	-2.46	-2.46	-2.75	-2.77	-3.38	-3.38	-3.40	-3.38	-25.62	-18.45
CLIVES	-12.57	-12.57	-12.17	-12.15	-11.95	-11.96	-11.99	-11.97	-2.29	-2.95
CFISHI	-7.53	-7.53	-7.24	-7.22	-7.17	-7.17	-7.20	-7.18	-2.44	-3.29
CHUFOR	-14.43	-14.43	-13.62	-13.55	-13.30	-13.30	-13.38	-13.33	-3.96	-3.91
CMININ	1.80	1.80	0.58	0.48	0.29	0.29	0.42	0.33	3.19	3.92
CPRFOOD	3.14	3.14	3.32	3.34	3.44	3.44	3.43	3.43	-0.04	-0.07
CBEVER	7.50	7.50	7.35	7.33	7.52	7.52	7.55	7.53	1.53	1.94
CCLOTH	5.27	5.27	4.72	4.68	4.61	4.61	4.67	4.63	3.33	3.73
CWOODP	2.66	2.66	1.91	1.85	1.50	1.50	1.56	1.52	2.09	2.00
CMANCHE	3.22	3.22	2.50	2.45	1.94	1.94	1.98	1.95	2.23	1.42
CPETRO	2.62	2.62	1.93	1.88	1.22	1.22	1.25	1.23	1.71	0.56
COTHMAN	2.36	2.36	1.60	1.54	0.96	0.96	1.00	0.97	1.96	1.06
CUTILI	8.76	8.76	8.62	8.61	8.50	8.51	8.51	8.51	3.48	4.06
CCONST	4.93	4.93	4.07	4.01	4.23	4.23	4.36	4.28	3.93	4.41
CTRADE	24.47	24.47	21.71	21.50	24.22	24.22	24.80	24.42	3.42	4.19
CHOTEL	7.13	7.13	7.12	7.12	7.45	7.45	7.48	7.46	1.87	2.52
CTRANS	1.73	1.73	1.12	1.07	0.28	0.28	0.28	0.28	3.71	4.07
CESTAT	16.60	16.61	17.72	17.81	18.27	18.27	18.18	18.24	3.52	4.26
CADMIN	6.18	6.18	5.73	5.69	5.99	5.99	6.07	6.02	5.33	6.52
CPRIVS	4.23	4.23	3.74	3.70	3.30	3.30	3.33	3.31	4.00	4.88

Domestic sales

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCER	8.96	8.96	9.03	9.04	8.88	8.88	8.85	8.87	7.35	6.94
COILSE	6.29	6.29	6.69	6.72	6.77	6.77	6.72	6.75	5.57	5.87
CCROOTS	7.62	7.62	7.90	7.92	7.93	7.93	7.90	7.92	5.59	5.77
CCOTTO	0.43	0.43	0.80	0.83	0.19	0.19	0.09	0.15	2.71	0.94
CTOBAC	3.31	3.31	3.62	3.64	3.39	3.39	3.33	3.37	6.01	4.25
CTEAGR	4.90	4.90	5.50	5.55	5.71	5.71	5.65	5.69	5.78	5.42
CSISAL	0.29	0.29	0.66	0.69	0.07	0.07	-0.03	0.04	2.68	0.96
CSUGAR	8.50	8.50	8.60	8.61	8.40	8.40	8.37	8.39	8.07	7.75
COFRVE	6.85	6.85	7.25	7.28	7.34	7.34	7.29	7.32	5.72	6.03
COTHCRO	5.06	5.06	5.48	5.51	5.65	5.65	5.61	5.64	19.14	12.80
CLIVES	5.75	5.75	6.09	6.11	6.10	6.10	6.06	6.09	7.92	6.66
CFISHI	6.32	6.32	6.77	6.80	6.94	6.94	6.90	6.93	5.60	5.96
CHUFOR	6.62	6.62	6.92	6.95	6.99	6.99	6.95	6.98	4.85	6.28
CMININ	0.00	0.00	-0.33	-0.35	-0.05	-0.05	0.02	-0.03	-0.08	10.64
CPRFOOD	3.58	3.58	3.91	3.94	3.91	3.92	3.87	3.90	5.31	5.37
CBEVER	1.68	1.68	2.04	2.07	1.98	1.98	1.93	1.96	4.19	3.88
CCLOTH	0.91	0.91	1.30	1.33	0.82	0.82	0.72	0.79	3.02	1.59
CWOODP	-0.65	-0.65	-0.90	-0.93	-1.20	-1.20	-1.19	-1.19	-1.27	4.72
CMANCHE	-4.81	-4.81	-3.94	-3.87	-5.59	-5.59	-5.85	-5.68	1.15	-4.20
CPETRO	-1.01	-1.01	-0.75	-0.73	-1.24	-1.24	-1.32	-1.27	0.66	-2.75
COTHMAN	-2.10	-2.10	-2.33	-2.35	-2.50	-2.50	-2.49	-2.50	-3.49	9.94
CUTILI	0.96	0.96	1.18	1.20	1.03	1.03	0.99	1.01	1.75	3.86
CCONST	0.39	0.39	-0.98	-1.08	0.41	0.41	0.71	0.52	0.53	22.96
CTRADE	3.21	3.21	2.82	2.79	3.22	3.22	3.31	3.25	5.33	12.44
CHOTEL	1.59	1.59	1.89	1.92	1.92	1.92	1.89	1.91	0.08	-0.93
CTRANS	0.53	0.53	0.47	0.47	0.49	0.49	0.50	0.50	-13.99	-22.65
CESTAT	1.18	1.18	1.35	1.36	1.38	1.38	1.36	1.37	1.92	1.63
CADMIN	-0.33	-0.33	-0.31	-0.31	-0.45	-0.45	-0.47	-0.46	-0.72	-1.21
CPRIVS	-0.52	-0.52	-0.45	-0.44	-0.72	-0.72	-0.75	-0.73	-2.35	-4.20
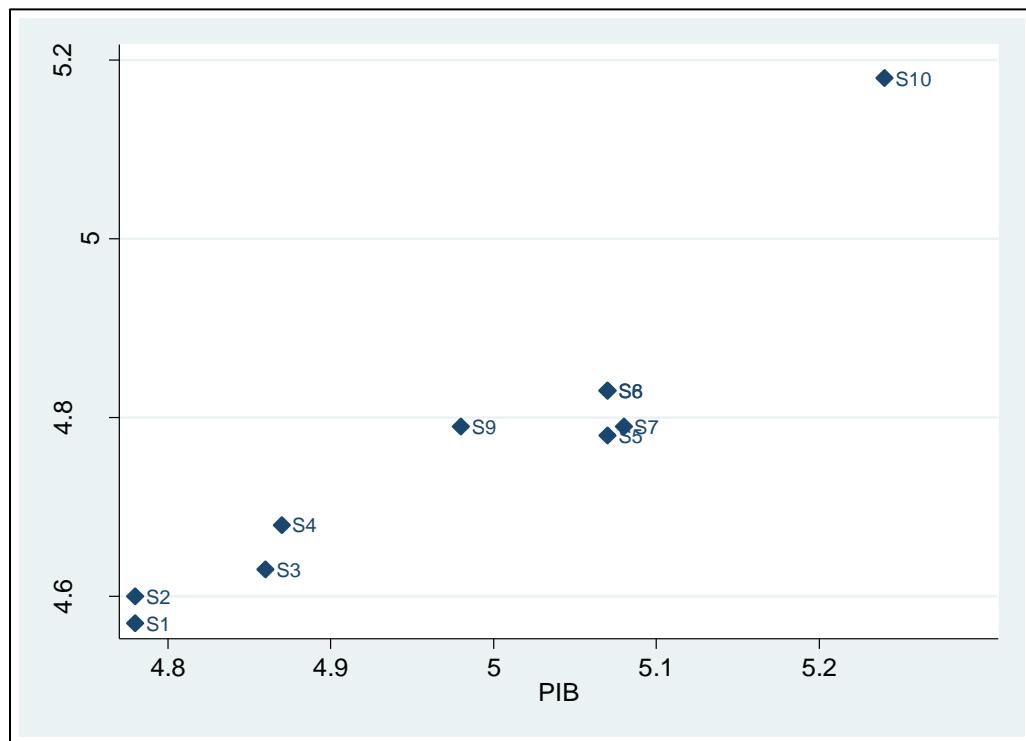
Demand for investment

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
CCLOTH	-	-	-2.12	-2.29	-	-	0.46	0.16	-	33.68
CWOODP	-	-	-2.12	-2.29	-	-	0.46	0.16	-	33.68
COTHMAN	-	-	-2.12	-2.29	-	-	0.46	0.16	-	33.68
CCONST	-	-	-2.12	-2.29	-	-	0.46	0.16	-	33.68
CTRADE	-	-	-2.12	-2.29	-	-	0.46	0.16	-	33.68
CTRANS	-	-	-2.12	-2.29	-	-	0.46	0.16	-	33.68

Households' disposable income

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
HRBFPL	3.94	3.95	4.15	4.18	4.30	4.32	4.29	4.31	5.66	3.94
HRFBPL	4.10	4.11	4.30	4.35	4.47	4.50	4.46	4.50	5.41	4.10
HRNOED	4.11	4.12	4.31	4.35	4.45	4.48	4.44	4.47	4.84	4.11
HRNFPS	4.26	4.26	4.36	4.38	4.51	4.52	4.51	4.52	5.28	4.26
HRNFSS	4.64	4.66	4.73	4.78	4.90	4.95	4.91	4.95	4.65	4.64
HRSECP	4.76	4.78	4.66	4.70	4.76	4.80	4.78	4.81	4.38	4.76
HUBFPL	4.82	4.85	4.93	5.00	5.15	5.21	5.15	5.21	4.70	4.82
HUFBPL	5.17	5.21	5.29	5.38	5.54	5.62	5.54	5.62	4.03	5.17
HUNOED	4.83	4.86	4.91	4.99	5.07	5.14	5.08	5.14	3.70	4.83
HUNFPS	4.98	5.01	4.94	5.01	5.11	5.19	5.13	5.19	4.48	4.98
HUNFSS	5.03	5.07	5.00	5.09	5.18	5.26	5.20	5.27	4.38	5.03
HUSECP	4.74	4.78	4.43	4.50	4.47	4.56	4.51	4.57	5.16	4.74
Rurals	**4.40**	**4.41**	**4.51**	**4.56**	**4.67**	**4.70**	**4.67**	**4.70**	**4.92**	**4.99**
Urbans	**4.94**	**4.98**	**4.87**	**4.94**	**5.01**	**5.09**	**5.03**	**5.10**	**4.52**	**5.56**
Aggregate	**4.57**	**4.60**	**4.63**	**4.68**	**4.78**	**4.83**	**4.79**	**4.83**	**4.79**	**5.18**

Graphic 3: Aggregate Households' Income/ GDP

Note: S=SIM; S6=S8.

Demand for labor

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-3.76	-3.76	-3.33	-3.30	-3.46	-3.46	-3.53	-3.49	-3.00	-3.61
AOILSE	-4.20	-4.20	-3.71	-3.67	-3.83	-3.83	-3.91	-3.86	-3.56	-3.91
ACTROOTS	-4.59	-4.59	-4.00	-3.95	-3.91	-3.91	-3.97	-3.93	-3.86	-4.17
ACOTTO	-9.68	-9.68	-8.96	-8.91	-10.77	-10.77	-11.02	-10.85	-5.63	-9.08
ATOBAC	-3.19	-3.19	-2.84	-2.81	-4.12	-4.12	-4.28	-4.18	1.67	-4.63
ATEAGR	-4.28	-4.28	-3.83	-3.79	-5.21	-5.21	-5.39	-5.27	0.69	-4.58
ASISAL	-15.10	-15.10	-14.60	-14.56	-15.40	-15.40	-15.54	-15.45	-6.42	-8.57
ASUGAR	-0.99	-0.99	-0.88	-0.87	-1.40	-1.40	-1.46	-1.42	-0.98	-1.97
AOFRVE	-3.49	-3.49	-3.01	-2.97	-3.13	-3.13	-3.20	-3.15	-3.39	-3.75
AOTHCRO	0.56	0.56	0.63	0.63	-0.09	-0.09	-0.16	-0.12	76.09	38.85
ALIVES	-5.76	-5.76	-5.26	-5.23	-5.34	-5.34	-5.41	-5.37	-1.92	-3.43
AFISHI	-1.85	-1.85	-1.54	-1.52	-1.76	-1.76	-1.82	-1.78	-2.89	-3.19
AHUFOR	-3.75	-3.75	-3.34	-3.31	-3.35	-3.35	-3.41	-3.37	-4.04	-3.69
AMININ	-7.36	-7.36	-8.30	-8.37	-9.18	-9.18	-9.14	-9.17	-5.04	3.34
APRFOOD	24.10	24.11	26.41	26.59	26.34	26.34	26.03	26.24	2.04	1.47
ABEVER	9.95	9.95	12.10	12.26	11.69	11.69	11.37	11.58	0.98	0.09
ACLOTH	0.56	0.56	1.27	1.32	0.13	0.13	-0.06	0.07	0.59	-1.46
AWOODP	-3.53	-3.53	-4.53	-4.61	-6.08	-6.08	-6.09	-6.08	-4.61	0.34
AMANCHE	-6.65	-6.65	-5.55	-5.46	-7.70	-7.70	-8.03	-7.81	-0.05	-5.71
APETRO	-3.74	-3.74	-2.81	-2.74	-4.56	-4.57	-4.84	-4.66	-2.47	-6.30
AOTHMAN	-12.44	-12.44	-13.33	-13.40	-14.62	-14.62	-14.62	-14.62	-7.07	4.95
AUTILI	4.80	4.81	5.90	5.99	5.14	5.14	4.93	5.07	-1.69	-0.27
ACONST	0.57	0.57	-1.44	-1.59	0.61	0.61	1.05	0.76	-1.33	20.29
ATRADE	45.06	45.06	39.15	38.69	45.26	45.27	46.57	45.72	-0.11	5.63
AHOTEL	6.90	6.91	8.24	8.35	8.38	8.38	8.22	8.33	-3.17	-4.71
ATRANS	-9.70	-9.70	-10.09	-10.12	-12.13	-12.13	-12.26	-12.18	-30.12	-45.58
AESTAT	24.76	24.76	28.76	29.07	29.62	29.62	29.18	29.47	-1.42	-2.31
AADMIN	-0.73	-0.73	-0.72	-0.72	-0.95	-0.95	-0.98	-0.96	-1.20	-1.91
APRIVS	-8.68	-8.68	-8.79	-8.79	-10.67	-10.67	-10.82	-10.72	-7.27	-11.21

Demand for land

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-	-	-	-	-	-	-	-	-6.23	-3.27
AOILSE	-	-	-	-	-	-	-	-	-6.77	-3.57
ACTROOTS	-	-	-	-	-	-	-	-	-7.06	-3.83
ACOTTO	-	-	-	-	-	-	-	-	-8.77	-8.76
ATOBAC	-	-	-	-	-	-	-	-	-1.71	-4.29
ATEAGR	-	-	-	-	-	-	-	-	-2.66	-4.24
ASISAL	-	-	-	-	-	-	-	-	-9.54	-8.25
ASUGAR	-	-	-	-	-	-	-	-	-4.27	-1.62
AOFRVE	-	-	-	-	-	-	-	-	-6.61	-3.41
AOTHCRO	-	-	-	-	-	-	-	-	70.23	39.35
ALIVES	-	-	-	-	-	-	-	-	-5.18	-3.09
AFISHI	-	-	-	-	-	-	-	-	-5.59	-2.91
AHUFOR	-	-	-	-	-	-	-	-	-6.71	-3.41

Demand for capital

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-	-	-	-	-	-	-	-	-2.20	-2.67
AOILSE	-	-	-	-	-	-	-	-	-2.76	-2.97
ACTROOTS	-	-	-	-	-	-	-	-	-3.07	-3.24
ACOTTO	-	-	-	-	-	-	-	-	-4.85	-8.20
ATOBAC	-	-	-	-	-	-	-	-	2.51	-3.70
ATEAGR	-	-	-	-	-	-	-	-	1.52	-3.65
ASISAL	-	-	-	-	-	-	-	-	-5.65	-7.68
ASUGAR	-	-	-	-	-	-	-	-	-0.16	-1.01
AOFRVE	-	-	-	-	-	-	-	-	-2.60	-2.81
AOTHCRO	-	-	-	-	-	-	-	-	77.54	40.20
ALIVES	-	-	-	-	-	-	-	-	-1.11	-2.49
AFISHI	-	-	-	-	-	-	-	-	-2.22	-2.41
AHUFOR	-	-	-	-	-	-	-	-	-3.38	-2.91
AMININ	-	-	-	-	-	-	-	-	-0.85	8.74
APRFOOD	-	-	-	-	-	-	-	-	6.04	6.17
ABEVER	-	-	-	-	-	-	-	-	4.93	4.72
ACLOTH	-	-	-	-	-	-	-	-	5.02	3.69
AWOODP	-	-	-	-	-	-	-	-	-0.40	5.57
AMANCHE	-	-	-	-	-	-	-	-	4.35	-0.79
APETRO	-	-	-	-	-	-	-	-	1.84	-1.41
AOTHMAN	-	-	-	-	-	-	-	-	-2.97	10.43
AUTILI	-	-	-	-	-	-	-	-	2.65	4.93
ACONST	-	-	-	-	-	-	-	-	4.52	28.73
ATRADE	-	-	-	-	-	-	-	-	5.80	13.04
AHOTEL	-	-	-	-	-	-	-	-	1.10	0.26
ATRANS	-	-	-	-	-	-	-	-	-27.03	-42.74
AESTAT	-	-	-	-	-	-	-	-	2.93	2.79
AADMIN	-	-	-	-	-	-	-	-	3.16	3.21
APRIVS	-	-	-	-	-	-	-	-	-3.18	-6.58

Land remuneration

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-9.91	-9.92	-8.59	-8.49	-8.92	-8.92	-9.12	-8.99	22.81	6.52
AOILSE	-11.64	-11.64	-10.06	-9.94	-10.36	-10.36	-10.60	-10.44	22.81	6.52
ACTROOTS	-13.10	-13.10	-11.19	-11.04	-10.65	-10.65	-10.85	-10.72	22.81	6.52
ACOTTO	-30.85	-30.85	-28.82	-28.66	-34.37	-34.38	-35.11	-34.63	22.81	6.52
ATOBAC	-7.69	-7.69	-6.63	-6.55	-11.48	-11.48	-12.05	-11.68	22.81	6.52
ATEAGR	-11.94	-11.94	-10.54	-10.43	-15.59	-15.59	-16.21	-15.80	22.81	6.52
ASISAL	-46.57	-46.57	-45.47	-45.38	-47.46	-47.46	-47.77	-47.56	22.81	6.52
ASUGAR	1.39	1.39	1.45	1.45	-0.53	-0.53	-0.71	-0.59	22.81	6.52
AOFRVE	-8.86	-8.86	-7.32	-7.20	-7.59	-7.59	-7.81	-7.66	22.81	6.52
AOTHCRO	8.19	8.19	8.04	8.03	5.09	5.09	4.84	5.00	22.81	6.52
ALIVES	-17.47	-17.48	-15.97	-15.86	-16.07	-16.08	-16.28	-16.15	22.81	6.52
AFISHI	-3.73	-3.73	-2.62	-2.53	-3.49	-3.48	-3.71	-3.56	22.81	6.52
AHUFOR	-12.72	-12.72	-11.18	-11.06	-11.04	-11.04	-11.23	-11.11	22.81	6.52

Labor remuneration

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
	5.68	5.68	5.26	5.23	5.48	5.48	5.56	5.51	6.67	8.11

Capital remuneration

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
ACER	-9.91	-9.92	-8.59	-8.49	-8.92	-8.92	-9.12	-8.99	3.07	3.83
AOILSE	-11.64	-11.64	-10.06	-9.94	-10.36	-10.36	-10.60	-10.44	3.07	3.83
ACTROOTS	-13.10	-13.10	-11.19	-11.04	-10.65	-10.65	-10.85	-10.72	3.07	3.83
ACOTTO	-30.85	-30.85	-28.82	-28.66	-34.37	-34.38	-35.11	-34.63	3.07	3.83
ATOBAC	-7.69	-7.69	-6.63	-6.55	-11.48	-11.48	-12.05	-11.68	3.07	3.83
ATEAGR	-11.94	-11.94	-10.54	-10.43	-15.59	-15.59	-16.21	-15.80	3.07	3.83
ASISAL	-46.57	-46.57	-45.47	-45.38	-47.46	-47.46	-47.77	-47.56	3.07	3.83
ASUGAR	1.39	1.39	1.45	1.45	-0.53	-0.53	-0.71	-0.59	3.07	3.83
AOFRVE	-8.86	-8.86	-7.32	-7.20	-7.59	-7.59	-7.81	-7.66	3.07	3.83
AOTHCRO	8.19	8.19	8.04	8.03	5.09	5.09	4.84	5.00	3.07	3.83
ALIVES	-17.47	-17.48	-15.97	-15.86	-16.07	-16.08	-16.28	-16.15	3.07	3.83
AFISHI	-3.73	-3.73	-2.62	-2.53	-3.49	-3.48	-3.71	-3.56	3.07	3.83
AHUFOR	-12.72	-12.72	-11.18	-11.06	-11.04	-11.04	-11.23	-11.11	3.07	3.83
AMININ	-0.54	-0.54	-1.73	-1.83	-2.28	-2.28	-2.17	-2.24	3.07	3.83
APRFOOD	28.16	28.16	29.76	29.89	29.97	29.97	29.78	29.91	3.07	3.83
ABEVER	15.03	15.03	16.56	16.68	16.42	16.43	16.22	16.35	3.07	3.83
ACLOTH	6.15	6.15	6.32	6.33	5.60	5.60	5.51	5.57	3.07	3.83
AWOODP	2.71	2.71	1.46	1.36	0.36	0.36	0.42	0.38	3.07	3.83
AMANCHE	0.06	0.06	0.60	0.64	-1.01	-1.01	-1.22	-1.09	3.07	3.83
APETRO	2.53	2.53	2.91	2.94	1.65	1.64	1.49	1.59	3.07	3.83
AOTHMAN	-4.90	-4.90	-6.04	-6.13	-6.95	-6.95	-6.89	-6.93	3.07	3.83
AUTILI	9.69	9.69	10.16	10.20	9.76	9.76	9.66	9.73	3.07	3.83
ACONST	6.04	6.04	4.36	4.23	5.87	5.87	6.22	5.99	3.07	3.83
ATRADE	31.87	31.88	28.14	27.85	31.74	31.74	32.54	32.01	3.07	3.83
AHOTEL	11.43	11.43	12.09	12.14	12.44	12.44	12.39	12.42	3.07	3.83
ATRANS	-2.54	-2.54	-3.26	-3.31	-4.81	-4.81	-4.85	-4.82	3.07	3.83
AESTAT	25.96	25.96	28.64	28.85	29.60	29.60	29.34	29.51	3.07	3.83
AADMIN	5.07	5.07	4.66	4.63	4.68	4.68	4.74	4.70	3.07	3.83
APRIVS	-1.67	-1.67	-2.15	-2.19	-3.55	-3.55	-3.61	-3.57	3.07	3.83

Other institutions

	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6	Sim7	Sim8	Sim9	Sim10
Government										
Income	5.04	4.76	4.99	4.39	5.22	4.61	5.25	4.64	4.51	5.03
Direct taxes	4.94	3.95	5.05	2.94	5.25	3.11	5.26	3.16	3.95	-4.45
Taxes on sales	5.44	5.44	5.45	5.46	5.54	5.54	5.55	5.55	4.86	7.48
Tariffs revenues	3.06	3.06	2.56	2.52	3.38	3.38	3.52	3.43	4.40	14.44
Taxes on production	6.44	6.44	6.24	6.22	6.30	6.30	6.33	6.31	2.70	4.22
Savings	2.03	0	4.17	0	4.39	0	4.13	0.00	2.90	0.00
Savings ROW	0	0	0	0	11.94	11.93	12.99	12.30	0.00	138.30
Exchange rate	1.49	1.49	0.88	0.83	-	-	-	-	1.43	-

Annex 4: Aggregated Social Accounting Matrix for Nigeria (in trillions of Naira)

	Activities	Products	Transaction costs	Factors	Households	Firms	Government	Taxes	Savings and investment	Rest of the world	Total
Activities		26.87									26.87
Products	6.81		0.68		12.79		3.72		0.98	7.84	32.81
Transaction costs		0.68									0.68
Factors	19.91										19.91
Households				11.29		2.63	0.17			1.36	15.45
Firms				4.87							4.87
Government				2.76				2.8		0.21	5.77
Taxes	0.15	0.3			0.13	2.23					2.8
Savings and Investment					2.54		1.88			-3.44	0.98
Rest of the world		4.97		0.99							5.96
Total	26.87	32.81	0.68	19.91	15.45	4.87	5.77	2.8	0.98	5.96	

Source: Nwafor, Diao and Alpuerto (2010).

Annex 5: Aggregated Social Accounting Matrix for Tanzania (in billions of Tsh)

	Activities	Products	Transaction costs	Factors	Households	Firms	Government	Taxes	Savings and investment	Rest of the world	Total
Activities		12,113			1,954						14,067
Products	6,460		358		4,957		516		1,319	1,306	14,917
Transaction costs		358									358
Factors	7,582										7,582
Households				2,268							2,268
Firms				5,271		2,171	61			404	7,908
Government						1		668			670
Taxes	24	436		18	94	95					668
Savings and Investment					902		92			324	1,319
Rest of the world		2,009		26							2,035
Total	14,067	14,917	358	7,582	7,908	2,268	670	668	1,319	2,035	

Source: Thurlow and Wobst (2003).

Annex 6: IFPRI's standard model

SETS

$\alpha \in A$	Activities
$\alpha \in ACES (\subset A)$	Activities with a CES technology
$\alpha \in ALEO (\subset A)$	Activities with a Leontief technology
$c \in C$	products
$c \in CD (\subset C)$	Products with domestic sale
$c \in CDN (\subset C)$	Products not included in CD
$c \in CE (\subset C)$	Products exported
$c \in CEN (\subset C)$	Products not included in CE
$c \in CM (\subset C)$	Products imported
$c \in CMN (\subset C)$	Products not included in CM
$c \in CT (\subset C)$	Products entering in the transaction costs
$c \in CX (\subset C)$	Products with a domestic production
$f \in F$	Factors
$i \in INS$	Institutions (domestic and rest of the world)
$i \in INSD (\subset INS)$	Institutions domestic
$I \in INSDNG (\subset INSD)$	Institutions domestic non-governmental
$h \in H (\subset INSDNG)$	Households

PARAMETERS

$cwts_c$	Weight of product c in the consumer price index
$dwts_c$	Weight of product c in the domestic price index
$ica_{c\,a}$	Quantity of product c as intermediate consumption per unit of activity a
$icd_{c\,c'}$	Quantity of product c as an input (transaction cost) per unit of product c produced and sold on the domestic market
$ice_{c\,c'}$	Quantity of product c as an input (transaction cost) per unit of product c' exported
$icm_{c\,c'}$	Quantity of product c as an input (transaction cost) per unit of c' imported
$inta_a$	Quantity of aggregate input per unit of activity a
iva_a	Quantity of value added per unit of activity a
$\overline{mps}$	Marginal propensity to save of the base year for institution i
$mps01_c$	Parameter 0-1 (1 for the institutions with endogenous propensity to save)
pwe_c	World exportation price Prix (foreign currency)
pwm_c	World importation price (foreign currency)
$qdst_c$	Change in inventories
$\overline{qg}_c$	Demand of the government for the base-year
$\overline{qinv}_c$	Demand for investment for the base year
$shif_{if}$	Share of the institution i revenue in the factor f remuneration
$shii_{i\,i'}$	Share of revenue i' received by i
ta_a	Tax rate for activity a
te_c	Exportation tax rate
tf_f	Direct tax rate for factor f
$\overline{tins}$	Direct tax rate (exogenous) for domestic institution i
$tins01_i$	Parameter 0-1 (1 for institutions with endogenous tax)
tm_c	Imports tariff
tq_c	Tax on sales rate
$trnsfr_{i\,f}$	Transfer from factor f to institution i
tva_a	Tax on value added for activity a rate
α_a^a	Scale parameter of function CES describing activity a
α_a^{va}	Scale parameter of function CES describing activity value added
α_a^{ac}	Scale parameter of aggregate function of product c
α_c^q	Scale parameter of Armington function
α_c^t	Distributive parameter of function CET
β_{ach}^h	Marginal propensity to consume the auto consumed product c of activity a by household h
β_{ch}^m	Marginal propensity to consume product c (commercialized) by household h
δ_a^a	Distributive parameter of function CES describing activity a
$\delta_{a\,c}^{ac}$	Distributive parameter of aggregate function of product c
δ_c^q	Distributive parameter of Armington function
δ_c^t	CET function share parameter
δ_{fa}^{va}	Distributive parameter of factor f in value added of activity a
γ_{ch}^m	Incompressible Consumption of product c (commercialized) by household h

γ_{ach}^{h}	Incompressible consumption of auto consumed product c on activity a by household h
$\theta_{a\,c}$	Share of product c per unit of activity a
ρ_a^a	Exponent of CES production function
ρ_a^{va}	Exponent of CES function (value added)
ρ_c^{ac}	Exponent of aggregation function of product c
ρ_c^q	Exponent of Armington function
ρ_c^t	Exponent of CET function

EXOGENOUS VARIABLES

$\overline{CPI}$	Price consumer index
$\overline{DTINS}$	Variation in the tax rate of the domestic non-governmental institution (= 0 for the base year; exogenous variable)
$\overline{FSAV}$	Foreign savings in foreign currency
$\overline{GADJ}$	Adjustment factor of government expenditures
$\overline{IADJ}$	Adjustment factor of investment
$\overline{MPSADJ}$	Scale factor of propensity to save (= 0 for base year)
$\overline{QFS}_f$	Total supply of factor f
$\overline{TINSADJ}$	Adjustment factor for direct tax rate (= 0 for base year; exogenous variable)
$\overline{WFDIST}_{fa}$	Distortion factor for the remuneration of factor f used in activity a

ENDOGENOUS VARIABLES

$DMPS$	Variation of the propensity to save of domestic institution (=0 for base year; exogenous variable)
DPI	Price index for domestic production
EG	Government expenditures
EH_h	Households' private consumption
EXR	Exchange rate
$GOVSHR$	Share of government expenditures in the absorption
$GSAV$	Public savings
$INVSHR$	Share of investment in the absorption
MPS_i	Marginal propensity to save of institution i (exogenous variable)
PA_a	Price of activity a
PDD_c	Consumer price of product c and locally commercialized
PDS_c	Producer price of product c and locally commercialized
PE_c	Export price (local currency)
$PINTA_a$	Aggregate input price for activity a
PM_c	Importation price (local currency)
PQ_c	Composite product price
PVA_a	Value-added price
PX_c	Producer (aggregate) price of product c
$PXAC_{a\,c}$	Producer price of product c by activity a
QA_a	Volume (level) of activity a
QD_c	Level of domestic sales of product c

QE_c	Volume of exports
$QF_{f\,a}$	Demand for factor f for activity a
QG_c	Demand for product c of government
$QH_{c\,h}$	Quantity of product c consumed by household h
$QHA_{a\,c\,h}$	Quantity of product c produced by activity a and auto-consumed by household h
$QINTA_a$	Quantity of aggregate input used by activity a
$QINT_{c\,a}$	Quantity of product c used as an input by activity a
$QINV_c$	Demand for investment of product c
QM_c	Imports of product c
QQ_c	Supply of composite product
QT_c	Total quantity of product c demanded as input (transaction cost)
QVA_a	Value added in volume
QX_c	Total quantity of product c commercialized
$QXAC_{a\,c}$	Quantity of product c commercialized by activity a
$TABS$	Total nominal absorption
$TINS_i$	Direct tax rate for institution i (i $\square$ INSDNG)
$TRII_{i\,i'}$	Transfers received by institution i' from institution i
WF_f	Average price of factor f
YF_f	Revenue of factor f
YG	Revenue of Government
YI_i	Revenue of non-governmental domestic institution
$YIF_{i\,f}$	Revenue received by domestic institution i of factor f

EQUATIONS

Price block

$$PM_c = pwm_c \cdot (1 + tm_c) \cdot EXR + \sum_{c' \in CT} PQ_{c'} \cdot icm_{c' \, c} \qquad\qquad c \in CM$$
(1)

$$PE_c = pwe_c \cdot (1 - te_c) \cdot EXR - \sum_{c' \in CT} PQ_{c'} \cdot ice_{c' \, c} \qquad\qquad c \in CE$$
(2)

$$PDD_c = PDS_c + \sum_{c' \in CT} PQ_{c'} \cdot icd_{c' \, c} \qquad\qquad c \in CD$$
(3)

$$PQ_c \cdot (1 - tq_c) \cdot QQ_c = PDD_c \cdot QD_c + PM_c \cdot QM_c \qquad\qquad c \in (CD \cup CM)$$
(4)

$$PX_c \cdot QX_c = PDS_c \cdot QD_c + PE_c \cdot QE_c \qquad\qquad c \in CX$$
(5)

$$PA_a = \sum_{c \in C} PXAC_{a \, c} \cdot \theta_{a \, c} \qquad\qquad a \in A$$
(6)

$$PINTA_a = \sum_{c \in C} PQ_c \cdot ica_{c \, a} \qquad\qquad a \in A$$
(7)

$$PA_a \cdot (1 - ta_a) \cdot QA_a = PVA_a \cdot QVA_a + PINTA_a \cdot QINTA_a \qquad\qquad a \in A$$
(8)

$$\overline{CPI} = \sum_{c \in C} PQ_c \cdot cwts_c$$
(9)

$$DPI = \sum_{c \in C} PDS_c \cdot dwts_c$$
(10)

Production and trade block

$$QA_a = \alpha_a^a \cdot \left(\delta_a^a \cdot QVA_a^{-\rho_a^a} + (1 - \delta_a^a) \cdot QINTA_a^{-\rho_a^a} \right)^{-\frac{1}{\rho_a^a}} \qquad\qquad a \in ACES$$

(11)

$$\frac{QVA_a}{QINTA_a} = \left(\frac{PINTA_a}{PVA_a} \cdot \frac{\delta_a^a}{1-\delta_a^a} \right)^{\frac{1}{1+\rho_a^a}} \qquad\qquad a \in ACES$$

(12)

$$QVA_a = iva_a \cdot QA_a \qquad\qquad a \in ALEO$$

(13)

$$QINTA_a = inta_a \cdot QA_a \qquad\qquad a \in ALEO$$

(14)

$$QVAa = \alpha_a^{va} \cdot \left(\sum_{f \in F} \delta_{f\,a}^{va} \cdot QF_{f\,a}^{-\rho_a^{va}} \right)^{-\frac{1}{\rho_a^{va}}} \qquad\qquad a$$

$$\in A \qquad\qquad (15)$$

$$WF_f \cdot \overline{WFDIST}_{f\,a} = PVA_a \cdot (1 - tva_a) \cdot QVA_a \cdot \left(\sum_{f \in F'} \delta_{f\,a}^{va} \cdot QF_{f\,a}^{-\rho_a^{va}} \right)^{-1} \cdot \delta_{f\,a}^{va} \cdot QF_{f\,a}^{-\rho_a^{va}-1} \qquad a \in A \quad f$$

$$\in F \qquad\qquad (16)$$

$$QINT_{c\,a} = ica_{c\,a} \cdot QINTA_a \qquad\qquad a \in A \quad c \in C$$

(17)

$$QXAC_{a\,c} + \sum_{h \in H} QHA_{a\,c\,h} = \theta_{a\,c} \cdot QA_a \qquad\qquad a \in A \quad a \in CX$$

(18)

$$QX_c = \alpha_a^{ac} \cdot \left(\sum_{a \in A} \delta_{a\,c}^{ac} \cdot QXAC_{a\,c}^{-\rho_a^{ac}} \right)^{-\frac{1}{\rho_a^{ac}-1}} \qquad\qquad c$$

$$\in CX \qquad\qquad (19)$$

$$PXAC_{a\,c} = PX_c \cdot QX_c \left(\sum_{a \in A'} \delta_{a\,c}^{ac} \cdot QXAC_{a\,c}^{-\rho_a^{ac}} \right)^{-1} \cdot \delta_{a\,c}^{ac} \cdot QXAC_{a\,c}^{-\rho_a^{ac}-1} \qquad a \in A \quad c$$

$$\in CX \qquad (20)$$

$$QX_c = \alpha_c^t \cdot \left(\delta_c^t \cdot QE_c^{\rho_c^t} + (1 - \delta_c^t) \cdot QD_c^{\rho_c^t} \right)^{\frac{1}{\rho_c^t}} \qquad\qquad c \in (CE \cap CD)$$

(21)

$$\frac{QE_c}{QD_c} = \left(\frac{PE_c}{PDS_c} \cdot \frac{1-\delta_c^t}{\delta_c^t} \right)^{\frac{1}{\rho_c^t}-1} \qquad\qquad c \in (CE \cap CD)$$

(22)

$$QX_c = QD_c + QE_c \qquad\qquad c \in (CD \cap CEN) \cup (CE \cup CDN)$$

90

(23)

$$QQ_c = \alpha_c^q \cdot \left(\delta_c^q \cdot QM_c^{-\rho_c^q} + \left(1 - \delta_c^q\right) \cdot QD_c^{-\rho_c^q} \right)^{-\frac{1}{\rho_c^q}} \qquad c \in (CM \cap CD)$$

(24)

$$\frac{QM_c}{QD_c} = \left(\frac{PDD_c}{PM_c} \cdot \frac{\delta_c^q}{1 - \delta_c^q} \right)^{\frac{1}{1+\rho_c^q}} \qquad c \in (CM \cap CD)$$

(25)

$$QQ_c = QD_c + QM_c \qquad c \in (CD \cap CMN) \;\cup\; (CM \cup CDN)$$

(26)

$$QT_c = \sum_{c' \in C'} \left(icm_{c\,c'} \cdot QM_{c'} + ice_{c\,c'} \cdot QE_{c'} + icd_{c\,c'} \cdot QD_{c'} \right) \qquad c \qquad \in CT$$

(27)

Institutions block

$$YF_f = \sum_{a \in A} WF_f \cdot \overline{WFDIST}_{f\,a} \cdot QF_{f\,a} \qquad\qquad f \in F$$
(28)

$$YIF_{i\,f} = shif_{i\,f} \cdot \left[\left(1 - tf_f\right) \cdot YF_f - trnsfr_{row\,f} \cdot EXR \right] \qquad i \in INSD \qquad f \in F$$
(29)

$$YI_i = \sum_{f \in F} YIF_{i\,f} + \sum_{i' \in INSDNG} TRII_{i\,i'} + trnsfr_{i\,gov} \cdot \overline{CPI} + trnsfr_{i\,row} \cdot EXR \qquad i \in INSDNG$$
(30)

$$TRII_{i\,i'} = shii_{i\,i'} \cdot \left(1 - MPS_{i'}\right) \cdot \left(1 - TINS_{i'}\right) \cdot YI_{i'} \qquad i \in INSDNG \qquad i' \in INSDNG'$$
(31)

$$EH_h = \left(1 - \sum_{i \in INSDNG} shii_{i\,h}\right) \cdot \left(1 - MPS_h\right) \cdot \left(1 - TINS_h\right) \cdot YI_h \qquad h \in H$$
(32)

$$PQ_c \cdot QH_{c\,h} = PQ_c \cdot \gamma_{ch}^m + \beta_{ch}^m \cdot \left(EH_h - \sum_{c' \in C} PQ_{c'} \cdot \gamma_{c'h}^m - \sum_{a \in A} \sum_{c' \in C} PXAC_{a\,c'} \cdot \gamma_{ac'h}^h \right) \qquad c \in C \quad h \in H$$
(33)

$$PXAC_{a\,c} \cdot QHA_{ach} = PXAC_{ac} \cdot \gamma_{ach}^h + \beta_{ach}^h \cdot \left(EH_h - \sum PQ_{c'} \cdot \gamma_{c'h}^m - \sum_{a \in A} \sum_{c' \in C} PXAC_{ac'} \cdot \gamma_{ac'h}^h \right) \quad a \in A \quad c \in C \quad h \in H$$
(34)

$$QINV_c = \overline{IADJ} \cdot \overline{qinv}_c \qquad\qquad c \in CINV$$
(35)

$$QG_c = GADJ \cdot \overline{qg}_c \qquad\qquad c \in C$$
(36)

$$YG = \sum_{i \in INSDNG} TINS_i \cdot YI_i + \sum_{f \in F} tf_f \cdot YF_f + \sum_{a \in A} tva_a \cdot PVA_a \cdot QVA_a + \sum_{a \in A} ta_a \cdot PA_a \cdot QA_a$$

$$+ \sum_{c \in CM} tm_c \cdot pwm_c \cdot QM_c \cdot EXR + \sum_{c \in CE} te_c \cdot pwe_c \cdot QE_c \cdot EXR$$
(37)

$$+ \sum_{c \in C} tq_c \cdot PQ_c \cdot QQ_c + \sum_{f \in F} YIF_{gov\,f} + trnsfr_{gov\,row} \cdot EXR$$

$$EG = \sum_{c \in C} PQ_c \cdot QG_c + \sum_{i \in INSDNG} trnsfr_{i\,gov} \cdot \overline{CPI}$$
(38)

Equilibrium block

$$\sum_{a \in A} QF_{f\,a} = QFS_f \qquad\qquad f \in F$$
(39)

$$QQ_c = \sum_{a \in A} QINT_{c\,a} + \sum_{h \in H} QH_{c\,h} + QG_c + QINV_c + qdst_c + QT_c \qquad\qquad c \in C$$
(40)

$$\sum_{c \in CM} pwm_c \cdot QM_c \;+\; \sum_{f \in F} trnsfr_{row\,f} \;=\; \sum_{c \in CE} pwe_c \cdot QE_c \;+\; \sum_{i \in INSD} trnsfr_{row} \;+\; \overline{FSAV}$$
(41)

$$YG \qquad\qquad = \qquad\qquad EG \qquad\qquad + \qquad\qquad GSAV$$
(42)

$$TINS_i = tins_i \cdot \left(1 + TINSADJ \cdot tins01_i\right) + DTINS \cdot tins01_i \qquad\qquad i \qquad \in INSDNG$$
(43)

$$MPS_i = \overline{mps_i} \cdot \left(1 + \overline{MPSADJ} \cdot mps01_i\right) + DMPS \cdot mps01_i \qquad\qquad i \qquad \in INSDNG$$
(44)

$$\sum_{i \in INSDNG} MPS_i \cdot \left(1 - TINS_i\right) \cdot YI_i + GSAV + EXR \cdot \overline{FSAV} = \sum_{c \in C} PQ_c \cdot QINV_c + \sum_{c \in C} PQ_c \cdot qdst_c$$
(45)

$$TABS = \sum_{h \in H}\sum_{c \in C} PQ_c \cdot QH_{c\,h} + \sum_{a \in A}\sum_{c \in C}\sum_{h \in H} PXAC_{a\,c} \cdot QHA_{a\,c\,h} + \sum_{c \in C} PQ_c \cdot QG_c + \sum_{c \in C} PQ_c \cdot QINV_c + \sum_{c \in C} PQ_c \cdot qdst_c$$
(46)

$$INVSHR \cdot TABS = \sum_{c \in C} PQ_c \cdot INV_c + \sum_{c \in C} PQ_c \cdot qdst_c$$
(47)

$$GOVSHR \cdot TABS = \sum_{c \in C} Q_c \cdot QG_c$$
(48)

AGRODEP Technical Notes

01. A comparison between the PEP 1-1 model and the IFPRI standard model. Fousseini Traoré. 2012.

02. Functional Forms Commonly Used in CGE Models. Fabienne Femenia. 2012.

03. Documentation of the Export Restrictions And import Tariffs Overall impacts (ERATO) PE model. Carmen Estrades, Yuan Gao, David Laborde. 2012.

04. The Gravity Model in International Trade. Luca Salvatici. 2012.

05. Hands-on gravity estimation with STATA. Maria Cipollina, Luca Salvatici. 2012.

06. Modeling commodity markets in stochastic contexts: A practical guide using the RECS toolbox version 0.5. Christophe Gouel. 2013.

07. Trade Policy Partial Equilibrium Model in Excel: Documentation. David Laborde, Simla Tokgoz. 2013.

08. Stata Training. Manuel Barron, Pia Basurto. 2013.

09. Guide to Microsimulations Linked to CGE Models: How to Introduce Analysis of Poverty and Income Distribution in CGE-based Studies. Carmen Estrades. 2013.

10. On the Estimation of Supply and Demand Elasticities of Agricultural Commodities. Fabio Gaetano Santeramo. 2014.

11. Macro Econometric Modelling: A Practical Approach under EViews, with a Focus on Africa. Jean Louis Brillet. 2015.

12. Partial Equilibrium Trade Simulation (PETS) Model: Documentation. David Laborde, Simla Tokgoz. 2015.

13. A User Guide for the Excel Interface to Compute Optimal Tariff Aggregators. David Laborde. 2015.

14. Spatial Equilibrium Model for AGRODEP. Antoine Bouët, Jeanne Metivier. 2016.