A STRATEGY FOR AGRICULTURAL DEVELOPMENT AND POVERTY ALLEVIATION

Constructing a 1998 Social Accounting Matrix (SAM) for Tanzania

Peter Wobst¹ and Robert Mhamba²

1.1 Introduction

Poverty alleviation became a key issue in the development agenda not only in Tanzania but also in most other developing countries in the second half of the 1990s. In 1967, Tanzania adopted an egalitarian development strategy based on socialist principles, emphasizing economic growth with equal income distribution. After nearly two decades of government efforts to stimulate economic development and alleviate poverty, problems of lagging income growth persisted. Under the pressure of the donor community, Tanzania adopted economic reforms in the mid 1980s, which sought to transform the country into a market economy. The role of the government in this environment is that of managing the market economy through the use of various macro and microeconomic policy instruments at its disposal. This makes the issue of forecasting and monitoring changes on poverty and income distribution in the economy as the government adopts various policies a crucial matter. A database that assists analysts and policy makers to study the impact of different policies on income distribution and poverty in the country is therefore necessary. The 1998 Tanzanian Social Accounting Matrix (SAM) is constructed with this challenge in mind.

A SAM is a square matrix representing all transactions or current monetary flows in an economy. The generic form of a SAM originates from the work of Pyatt and Thorbecke (1976), who integrated some detailed accounts for factors of production and institutions within a macroeconomic framework, so as to focus on the living standards of different groups in society. The SAM provides a general equilibrium framework incorporating explicitly a mapping of the circular flow of income from production activities to the factorial income distribution, to the income accruing to the different socioeconomic groups and, ultimately, to the expenditure patterns of these groups (Morrisson and Thorbecke 1990: 1082). The receipts (incomes) are listed in rows and the payments (expenditures) in columns. The corresponding row and column totals have to be equal since accounts must balance.

The first task in the construction of the 1998 Tanzanian SAM was to identify the important activities and institutions in the economy with respect to the policy issues under consideration in this period, i.e. poverty alleviation. The aggregation scheme in this database makes it possible to trace the major flows in the economy and to distinguish both positive and negative policy influences on poverty, when utilized in an appropriate

¹ Trade and Macroeconomics Division, International Food Policy Research Institute, Washington D.C.

² Institute for Development Studies, University of Dar es Salaam.

analytical framework.³ Therefore, we paid particular attention to the construction of the production, factor, and household accounts in a way that policy influences on poverty can be traced.

The second task was to get the required data for the SAM. A methodical look at the existing SAMs for Tanzania points to data availability problems for compiling SAMs for developing countries (Wobst 1998). Central to this problem in the case of Tanzania is the paucity of harmonized data sets in the country. Apart from the data obtained from the national accounts, balance of payment statistics, foreign trade statistics, labor force statistics, and the 1991/92 Household Budget Survey (HBS), some information were obtained from various government reports. Data manipulations had to be undertaken to reconcile data from these various sources, as well as to fit the requirements of our intended SAM. The data manipulations are discussed in the documentation of the SAM accounts below.

1.2 The SAM Framework

modeling.

Based on a double entry accounting system, a SAM represents the flow of all expenditures and incomes in the economy, by using accounts. It thus contains detailed information on outlays or expenditures and incomes of institutions in the economy. The column entries represent expenditures and the row entries represent incomes in the accounting period, i.e. households, enterprises, and government transactions and the production and distribution structure of all the goods and services domestically produced and imported. In this section we elaborate on the most basic SAM accounts (Figure 2.1).

³ Social Accounting Matrices create the benchmark database for Computable General Equilibrium (CGE)

Table 1: A Macroeconomic Social Accounting Matrix

			P	A	Y	M E	N T	S	
		Activities	Commod	ities	Factors	Hlds & Firms	Govern- ment	Savings Investment	Rest of the World
R	Activities		D domestic su	ıpply					E exports
E	C I''					C	G	I	
C	Commodities					private consumption	government consumption	investment demand	
E	Factors	Y value-added							
I	Hlds & Firms				Y HH income				
P	Government	T _X indirect tax				T _H income tax			
T	Savings Investment					S _H private savings	S _G government savings		S _F foreign savings
S	Rest of the World		M imports	S		go			

Note:

Y = Value-added (GDP at factor costs) $S_H = Domestic private savings <math>T_X = Indirect production tax <math>G = Government consumption$ $S_G = Government savings$

 $\begin{aligned} M &= \text{Imports (c.i.f.)} & I &= \text{Investment demand} \\ C &= \text{Final private consumption} & E &= \text{Exports (f.o.b.)} \\ T_H &= \text{Income taxes} & S_F &= \text{Foreign savings} \end{aligned}$

The following macroeconomic accounting balances can be derived from the SAM entries:

1. $GDP = X = Y + T_X = D + E$ activity supply-demand balance [GDP at market prices = value-added + production tax = domestic supply + exports]

- 2. D + M = C + G + I commodity supply-demand balance [absorption = total final demand]
- 3. X + (M E) = C + G + I activity-commodity balance [gross output + trade deficit = total final demand]
- 4. $Y = C + T_H + S_H$ national income-expenditure balance [national income = private consumption + income taxes + private savings]
- 5. $T_X + T_H = G + S_G$ government balance [tax receipts = government consumption + government savings]
- 6. $I = S_H + S_G + S_F$ saving-investment balance [investment demand = total domestic and foreign savings]
- 7. $M = E + S_F$ current account balance [imports = exports + foreign savings]

I Activity accounts

Activity or production accounts represent production of goods and services at their point of origin. In the Macro SAM this account is represented by only one account. In the Micro SAM the account is disaggregated into several activity accounts, depending on the purposes of the SAM and on the information that could be used to make the disaggregation. Activities that make similar, but not necessarily identical goods are grouped together into one account. The activity accounts purchase intermediate inputs from the commodity accounts, pay to the factor accounts for the factors of production used in the production process, and pay indirect taxes to the government account. The total of all these payments is equal to the current year gross output in the economy. These accounts receive income by supplying/delivering the produced goods and services. The gross output produced in the activity accounts is supplied to the commodity accounts.

II. Commodity accounts

The commodity accounts represent the domestic product markets. They are, however, defined separately from activities and hence need not have the same sectoral disaggregation. They include the transport and marketing margins of final sales. Commodity accounts buy goods and services from the domestic producers (activities) and imports from the rest of the world. They also pay indirect taxes, including tariffs levied on imported commodities net of import subsidies, excise duties, and sales taxes. The column sum of commodities equals total absorption in the economy plus exports and they sell these goods and services to all domestic purchasers and the rest of the world. Therefore, their income consists of receipts from sales of intermediate inputs to activities, sales of final consumption goods and services to households and government, sales of investments goods to the savings-investment account, and sales of exports to the rest of the world.

III. Factor accounts

Factor accounts represent payments from producing sectors (activities) to factors of production, including labor, land, and capital, which receive incomes from sales of their services to activities in the form of wages and rents. The factor accounts distribute total value-added to enterprises and households net of factor taxes and factor payments abroad.

IV Institutions accounts

This account represent the various economic actors in the economy, including households, firms, and the government. In the Macro SAM each specific institution is represented by one account. In the Micro SAM each institution account is disaggregated into different accounts depending on the purpose of the SAM and data availability. The households receive factor incomes and various transfers from other households, the government, firms, and from abroad and spend total income on consumption, income tax, and savings (payments to the capital account). Firms receive profits and their

expenditures consist of transfers to households, corporate taxes, and savings. The government account receives tax revenues and current transfers (e.g. aid and loans) from abroad. Expenditures of the government account consist of direct purchases of services provided by the activity accounts, transfers to households and firms, as well as savings (positive savings indicating a government budget surplus, while negative savings indicate a government budget deficit).

V. The rest of the world (ROW) accounts

This account depicts transactions between the domestic economy and the rest of the world. The economy receives income from the rest of the world as payment for exports and through capital payments from abroad. The national economy pays to the rest of the world for imported goods and services and capital payments such as interest and principal on financial commitments.

1.3 The 1998 Tanzania Macro SAM

The first step in construction of a SAM is to create an aggregated macroeconomic (Macro) SAM, which serves as a pool of control totals for the disaggregated Micro SAM. In the next section we present the 1998 Tanzania Macro SAM and discuss how it was constructed.

The highly aggregated Macro SAM for Tanzania consists of eight accounts, namely the activities, commodities, and factor (combining labor and capital) accounts; the accounts of the domestic institutions, divided into households, firms, and the government; as well as the savings-investment account and the rest of the world account.

The Macro SAM in Table 2.1 represents Tanzania's economic features in 1998. The Tanzania Macro SAM for the year 1998 contains 25 non-zero entries and is "anchored" to the 1998 macroeconomic data from the National Accounts, as well as data from the Tanzania Revenue Authority (TRA), including the income tax and customs department.

References:

Bank of Tanzania, Economic and Operations Report, (Various Issues)

United Republic of Tanzania, National Accounts, (Various Issues), National Bureau of Statistics.

United Republic of Tanzania, Tanzanian Revenue Authority Data Base.

Table 2.1: 1998 Tanzania Macro SAM in million TShs

	MacA	MacC	MacF	MacE	MacH	MacG	MacD	MacS	MacM	MacI	MacW	Totals
MacA		5,196,431									0	5,196,431
MacC					4,908,231	433,786				1,044,957	748,973	7,135,947
MacF	5,125,311											5,125,311
MacE			4,652,099									4,652,099
MacH			410,025	4,544,000							123,418	5,077,443
MacG		1,911					168,831	347,225	96,175			614,142
MacD			10,793	108,100	49,938							168,831
MacS	71,120	276,105										347,225
MacM		96,175										96,175
MacI					119,273	180,356					745,328	1,044,957
MacW		1,565,325	52,394									1,617,719
Totals	5,196,431	7,135,947	5,125,311	4,652,099	5,077,443	614,142	168,831	347,225	96,175	1,044,957	1,617,719	

MacA = aggregate activity account

MacC = aggregate commodity account

MacF = aggregate factor account

MacE = enterprise account

MacH = aggregate household account

MacG = government account

MacD = tax collection account for domestic direct taxes
MacS = tax collection account for domestic indirect taxes

MacM = tax collection account for import duty

MacI = savings-investment account MacW = rest of the world account

1. Total supply (MacA, MacC):

5,196,431 million TShs—Total domestic supply including domestically marketed production, as well as exports.

2. Final consumption (MacC, MacH):

4,908,231 million TShs—Final consumption is estimated as total household consumption including own–household consumption of produced goods and services, which will be separated within the Micro SAM construction process described later. The data are obtained from the 1998 National Accounts.

3. Government recurrent expenditures (MacC, MacG):

433,786 million TShs—Government consumption of goods and services. Data for this cell are obtained from the 1998 National Accounts.

4. Gross capital formation (MacC, MacI):

1,044,957 million TShs—Net private investment, including change in stocks. Data are obtained from the 1998 National Accounts and from the Bank of Tanzania publications.

5. Export of goods and services (MacC, MacW):

748,973 million TShs—Total export of goods and services at c.i.f. prices as reported in the 1998 National Accounts.

6. Value-added (MacF, MacA):

5,125,311 million TShs—GDP at factor costs (f.c.), i.e. the sum of primary factors earnings, namely compensation of employees (value-added labor) and operating surplus (value-added capital). Data are obtained from the 1998 National Accounts.

7. Factor income distributed to enterprises (MacE, MacF):

4,652,099 million TShs—Factor income distributed to enterprises is the non-labor value-added of GDP at f.c., i.e. operating surplus. Data are obtained from the 1998 National Accounts.

8. Factor income distributed to households (MacH, MacF):

410,025 million TShs—Factor income directly distributed to households is the labor value-added of GDP at f.c., i.e. compensation of employees. Data are obtained from the 1998 National Accounts.

9. Distributed capital earnings (MacH, MacE):

4,544,000 million TShs—Operating surplus distributed to households is calculated as total enterprise income minus corporate taxes

10. Transfers from abroad (MacH, MacW):

123,418 million TShs—Transfers from the rest of the world to households are computed as a residual in order to balance the household account of the Macro SAM.

11. Export duty (MacG, MacC):

1,911 million TShs—Total collection of export duties as obtained from the 1998 Foreign Trade Statistics.

12. Total domestic direct taxes (MacG, MacD):

168,831 million TShs—This is the sum of individual income and corporate taxes, as well as factor taxes paid to the government.

13. Total indirect taxes (MacG, MacS):

347,225 million TShs—Total collection of value-added tax, sales tax, and excise duty on domestic produce and imports paid to the government.

14. Import duty (MacG, MacM):

96,175 million TShs—Total import duties collections as of 1998 Foreign Trade Statistics paid to the government account.

15. Domestic taxes on factors (MacD, MacF):

10,793 million TShs—Total factor taxes (payroll levy) obtained from the tax revenue reports of the Income Tax Department of the TRA.

16. Corporate taxes (MacD, MacE):

108,100 million TShs—Total corporate taxes paid by enterprises. Data obtained from the tax revenue reports of the Income Tax Department of the TRA.

17. Household income tax (MacD, MacH):

49,938 million TShs—Total individual income taxes as obtained from the tax revenue reports of the Income Tax Department of the TRA.

18. Indirect taxes on production (MacS, MacA):

71,120 TShs—Total indirect tax on domestic production (Business Licenses, Departure Charges, Motor Vehicle Taxes, Road Toll, Stamp Duty, and Non-tax Revenues) as obtained from the tax revenue reports of the Sales Tax and Inland Revenue Department of the TRA.

19. Indirect tax on goods and services (MacS, MacC):

276,105 TShs—This is the sum of indirect taxes (excise and sales tax) on domestic commodities and on imports obtained from the tax revenue reports of the Sales Tax and Inland Revenue Department of the TRA and the 1998 Foreign Trade Statistics, respectively.

20. Import tariffs on commodities (MacM, MacC):

96,175 million TShs—Same as in (MacG,MacM) above.

21. Household savings (MacI, MacH):

119,273 million TShs—Total domestic savings as of 1998 National Accounts net of government savings. The HBS data will be used for splitting this up among the different household groups in the Micro SAM.

22. Government savings (MacI, MacG):

180,356 million TShs—This is government surplus computed as a residual in order to balance the government account and controlled through data obtained from the National Accounts and from the Bank of Tanzania publications.

23. Net capital inflow (MacI, MacW):

745,328 million TShs—Net capital inflow from the rest of the world, balancing the ROW account and including the current external balance of -612,070 million TShs as reported in the 1998 National Accounts by the National Bureau of Statistics.

24. Imports (MacW, MacC):

1,565,325 million TShs—Total imports of goods and services. Data obtained from the 1998 Foreign Trade Statistics.

25. Factor payment abroad (MacW, MacF):

52,394 million TShs—Factor income paid to the rest of the world as obtained from National Accounts information provided by the National Bureau of Statistics.

1.4 The 1998 Tanzania Micro SAM Accounts

The 1998 Tanzania Micro SAM is a 110 by 110 matrix with 42 activity accounts, 45 commodity accounts, five factor accounts, two enterprise accounts, 12 household accounts, two government accounts, one savings-investments account, and one rest of the world (ROW) account.

We used the 1992 Input-Output Table as a benchmark for the disaggregation of the 1998 gross output into their different activities and commodities respectively. The 1992 Input-Output disaggregation does not correspond with the disaggregation of households' consumption items provided in the 1991/92 HBS. A mapping of goods and services in the 1992 Input-Output Table to household consumption of goods and services provided in the 1991/92 HBS had to be made.

We therefore disaggregate the HBS expenditure items and the Input-Output items into 42 categories in order to match household consumption (including own-produced goods) and expenditures with the source of those goods and services. We did that by combining similar household consumption items into one group. Furthermore, we categories the households into twelve groups based on the following three criterions: (a) their geographical location, i.e. rural and urban, (b) their main economic activity of the household, i.e. farm or non-farm, and (c) their position with respect to Tanzania's poverty line levels, i.e. the Food Poverty Line and the Basic Needs Poverty Line.

Since we do not have the desired factor categories in the HBS (labor, land, and capital) for the value-added distribution from factors to households, we could not *per se* determine whether somebody's income related back to returns to labor, land, and/or capital. Therefore, we had to obtain (a) information on the households' total income from all sources distinguished in the HBS and (b) additional information on the occupation status, as well as labor and capital endowment of the 12 household groups, which could be land holding or cropping size to determine value-added land or assets like farming equipment to determine value-added capital. We also computed the household income for our 12 categories based on different income sources provided in the HBS.

I. Activity and commodity accounts

The Micro SAM distinguishes two strata of goods accounts: (a) activities, which represent production sectors that generate gross output and (b) commodities, which represent the markets that cover all transactions of domestic sales. The final commodities are compositions of domestic activity output and imports, including the transport and marketing margins of final sales. The disaggregation of activity and commodity accounts was done in such a way that all activities that make similar, but not necessarily identical commodities are grouped together into one account. 42 activity and 45 commodity accounts were created (refer to Micro SAM in Appendix II). The three additional commodity accounts represent three types of marketing margins, namely domestic, import, and export marketing margins. The aggregation of activity and commodity accounts was based on the sectors found in the 1992 Input-Output Table of Tanzania.

Activity account

The 42 activity accounts purchase intermediate inputs from the commodity accounts worth 4,362.1 billion TShs. They pay a total of 5,125.3 billion TShs to the 5 factor accounts as wages and rents for the factors used in the production process (agricultural and non-agricultural labor and capital, as well as land), representing GDP at factor costs. The activity accounts also pay 71.1 billion TShs as indirect taxes to the respective tax collection account. The total of all these payments is 9,647.6 billion TShs, which is total gross output in the economy in 1998.

The gross output produced in the activity account is supplied to the 45 commodity accounts (8,726.7 billion TShs) and 920.9 billion TShs worth of goods is supplies to the 12 household accounts. The latter constitutes households' consumption of own-produced goods.

Commodity accounts

The commodity accounts pay a total of 8,726.7 billion TShs to the activity accounts for the purchased goods and service and spends 397.8 billion TShs on the three trading margins accounts. They also pay 374.2 billion TShs in indirect taxes to the government account, of which 73.8%, 25.7%, and 0.5% are excise and sales taxes, import duties, and export taxes respectively. Furthermore, the commodity accounts pay 1,565.3 billion TShs to the ROW account for imported goods and services. The commodity accounts earn their income by marketing all these goods and services in the economy as intermediate inputs to the activities (4,451.2 billion TShs), final consumption to the households (3,987.4 billion TShs), the government (433,8 billion TShs), and the savings-investment account (1,045.0 billion TShs). They also receive payments from the ROW account for exporting goods and services worth 749.0 billion TShs.

II. Factor accounts

Factor accounts are disaggregated into five types of factors of production segmented by agricultural and non-agricultural, namely agricultural and non-agricultural labor, agricultural and non-agricultural capital, and the factor land, which is only employed in agriculture. The aggregate distribution of total GDP at factor costs across the five factor types in the 1998 Micro SAM is shown in Table 2.2.

Table 2.2: Distribution of value-added aggregates in billion TShs

	Agriculture	Non-agriculture	Total
Agricultural labor	909.5		909.5
Non-agricultural labor		945.0	945.0
Land	529.8		529.8
Agricultural capital	794.7		794.7
Non-agricultural capital		1,946.3	1,946.3
Total GDP f.c.	2,234.0	2,891.3	5,125.3

Source: 1998 Micro SAM

III. Institutions

We distinguish three kinds of domestic institutions in the 1998 Micro SAM, namely households, enterprises, and the government, as well as one non-domestic institution (the rest of the world). In an earlier SAM of Tanzania for the base year 1992, Wobst (1998) further disaggregates households into four representative categories, distinguishing farmers *versus* non-farmers and rural *versus* urban households. Households in the 1998 SAM are disaggregated into 12 households groups instead of only four, considering different poverty levels for each household category.

Household accounts

The breakdown of households in our 1998 SAM, has taken the different poverty levels among households into considerations, which required the pre-determination of poverty lines. We adopted the two sets of poverty lines provided by the National Bureau of Statistics (Tanzania) and Oxford Policy Management Ltd. (United Kingdom) in their joint work, i.e. the Food Poverty Line and the Basic Needs Poverty Line. The Food Poverty Line reflects the cost of a basic food basket, while the Basic Needs Poverty Line also provides for other non-food expenditure. These poverty lines are given in Table 2.3 below.

Table 2.3: Poverty lines in TShs per adult for 28 days in December 1994 prices

	Dar es Salaam	Other Urban	Rural	Mainland Tanzania
Food Poverty Line	5,711	5,940	5,075	5,113
Basic Needs Poverty Line	8,325	8,659	7,398	7,453

Source: National Bureau of Statistics (2000, p.29)

⁴ Up to the year 2000, Tanzania did not have an official poverty line. The government commissioned the National Bureau of Statistics (Tanzania) and Oxford Policy Management Ltd. (United Kingdom) to produce poverty lines for Tanzania to be used for poverty analysis in the country.

Household disaggregation in our database involved three criterions:

- 1. Distinction of urban and rural households
- 2. Distinction of urban and rural households into agriculture and non-agriculture households respectively
- 3. Further distinction of the four groups obtained by three different levels of poverty as follows:
 - a. Households above Basic Needs Poverty Line
 - b. Households between Basic Needs Poverty Line and Food Poverty Line
 - c. Households below Food Poverty Line

Hence, twelve household groups were obtained (see Appendix I).

Information from different data sources with different sectoral disaggregation, e.g. the 1992 Input-Output Table and the 1991/1992 Household Budget Survey, were used to compute total and household-specific consumption shares. 1998 National Accounts information was used to control for total private consumption, while the relative sectoral shares obtained from the 1992 Input-Output Table were used to control for sectoral private consumption. Individual household expenditure shares for the 12 different household categories were extracted from the 1991/92 HBS raw data and reconciled with the information from the 1998 National Accounts and the 1992 Input-Output Table.

Households pay 18.1% of their income (920.9 billion TShs) to the activity accounts representing the monetary value of households' consumption of own-produced goods, while they pay 78.5% of their income to the commodity accounts representing market purchases of consumer goods and services. They also pay 49.9 billion TShs income taxes to the government (only 1.0% of their income) and save the residual, which is represented by payments from the households to the saving-investment account. In sum, household consumption expenditure, income tax payment, and household savings add to total household expenditures in the economy of 5,077.4 billion TShs.

Households earn their income from providing factors of production, i.e. agricultural and non-agricultural labor and capital (including land), to activities within the economy, and also receive 123.4 billion TShs in transfers from the rest of the world. The amount of factor income earned by each household category depends on their respective factor endowment that was estimated from 1991/92 HBS information. The distributional shares for the transfers from the rest of the world to households were also derived from the 1991/92 HBS data set. Total individual income taxes and total household savings are also distributed across the 12 household categories based on relative shares obtained from the same household survey. Finally, a scheme of inter-household transfers is established to balance the individual household accounts applying information from the 1991/92 HBS.

Enterprises accounts

The agricultural and non-agricultural enterprise accounts transfer a total sum of 794.7 and 1,775.1 billion TShs, respectively, to the 12 household accounts representing operating surplus the enterprise accounts in turn receive from the agricultural and non-agricultural capital factor accounts. Most of the transfers from the agricultural enterprises are received by agricultural households (both urban and rural), while most of the transfers by the non-agricultural enterprises are received by the urban non-agricultural household above the Basic Needs Poverty Line (Table 2.4). Only the non-agricultural enterprises pay corporate taxes amounting 108.1 billion TShs to the government account.

Table 2.4: Agricultural and non-agricultural value-added payments to households (% of total)

	Total income	Agriculture	e income	Non-agriculture	income
Household	(rel. hhld size)	Labor	Land & capital	Labor	Capital
Urban ag below	2.2	0.1	0.5	0.0	0.0
Urban ag within	1.5	5.3	0.5	0.0	0.0
Urban ag above	9.5	4.9	20.2	0.0	0.0
Urban non-ag below	0.9	0.0	0.0	2.2	2.3
Urban non-ag within	1.1	0.0	0.0	6.5	0.8
Urban non-ag above	31.2	2.1	0.0	59.5	92.7
Rural ag below	9.8	27.3	32.9	0.0	0.0
Rural ag within	14.5	14.2	6.4	0.0	0.0
Rural ag above	23.8	44.2	39.6	0.0	0.0
Rural non-ag below	0.1	0.8	0.0	0.0	0.0
Rural non-ag within	0.1	0.0	0.0	0.9	0.0
Rural non-ag above	5.3	1.0	0.0	30.9	4.1
Total	100.0	100.0	100.0	100.0	100.0

Note: Refer to Appendix I for an explanation of the household categories.

Source: 1998 Micro SAM

Government account

The recurrent government account pays 433.8 billion TShs to the commodity accounts for purchasing goods and services that are required to run the government administrative activities. In the 1998 Micro SAM the government runs a budget surplus of 180.4 billion TShs, which is represented by a payment to the savings-investment account.

The government receives its revenues from the tax collection accounts that accumulate (a) direct income taxes, (b) indirect productions, excise, and sales taxes, (c) import duties, and (d) export duties. 56.5% of total government revenue are generated through indirect production, sales, and excise taxes (see Table 2.5).

Table 2.5: Government revenue by source

	Income tax	Production, sales, and excise tax	Import duty	Export duty	Total
Billion TShs	168.8	347.2	96.2	1.9	614.1
Percentage	27.5	56.5	15.7	0.3	100.0

Source: 1998 Micro SAM

The tax collection accounts pay to the government recurrent account in the proportions indicated in Table 2.5. The income tax account receives a total of 168.8 billion TShs, of which 6.4% are factor taxes paid by the non-agricultural capital account, 64.0% are corporate taxes paid by the non-agricultural enterprises, and 29.6% are individual income taxes paid by the 12 household accounts. The production, sales, and excise tax account receives a total of 347.2 billion TShs, of which 20.5% are production taxes paid by the activity accounts and 79.5% are sales and excise taxes paid by the commodity accounts. The import duty and export duty accounts receive 96.2 and 1.9 billion TShs respectively from the commodity accounts.

Rest of the world (ROW) account

The ROW account pays 749.0 billion TShs to the commodity accounts for exports of goods and services, transfers 123.4 billion TShs to households, and contributes 745.3 billion TShs to the savings-investment account. Information on sectoral exports are obtained from the 1998 Foreign Trade Statistics prepared by the Customs Department under the TRA. For our purposes the 97-sector disaggregation of the Foreign Trade Statistics had to be aggregated in order to obtain the 79-sector Input-Output Table disaggregation and finally the 42-sector disaggregation of the 1998 Micro SAM. The ROW account receives 1,565.3 billion TShs from the commodity accounts as payments for imported goods and services. Information on sectoral details has also been obtained from the 1998 Foreign Trade Statistics. Furthermore, the ROW account receives 52.4 billion TShs from the non-agricultural capital factor account as in the Macro SAM.

References

- Bank of Tanzania. Economic and Operations Report (various issues). Bank of Tanzania: Dar es Salaam.
- Morrisson C. and E. Thorbecke. 1990. The Concept of the Agricultural Surplus. *World Development*, 18 (8) pp1081-1095.
- Pyatt G. and E. Thorbecke. 1976. *Planning Techniques for a Better Future*. International Labor Office: Geneva.
- United Republic of Tanzania. (various). National Accounts (various issues). National Bureau of Statistics: Dar es Salaam.
- United Republic of Tanzania. TRA Data Base. Tanzanian Revenue Authority: Dar es Salaam.
- Wobst, P. 1998. A 1992 Social Accounting Matrix (SAM) for Tanzania. Trade and Macroeconomics Division Discussion Paper Series 30. International Food Policy Research Institute: Washington, D.C.

Appendix 1

Table A1.1: Household disaggregation in 1998 Micro SAM

HHUAB	Urban Agricultural Households Below Food Poverty Line
HHUAW	Urban Agricultural Households within Food Poverty Line and Basic Needs
	Poverty Line
HHUAA	Urban Agricultural Households above Basic Needs Poverty Line
HHUNB	Urban Non-Agricultural Households below Food Poverty Line
HHUNW	Urban Non-Agricultural Households within Food Poverty Line and Basic
	Needs Poverty Line
HHUNA	Urban Non-Agricultural Households above Basic Needs Poverty Line
HHRAB	Rural Agricultural Households Below Food Poverty Line
HHRAW	Rural Agricultural Households within Food Poverty Line and Basic Needs
	Poverty Line
HHRAA	Rural Agricultural Households above Basic Needs Poverty Line
HHRNB	Rural Non-Agricultural Households below Food Poverty Line
HHRNW	Rural Non-Agricultural Households within Food Poverty Line and Basic
	Needs Poverty Line
HHRNA	Rural Non-Agricultural Households above Basic Needs Poverty Line

Appendix 2

Table A 2.1: 1998 Tanzania SAM in billion of TShs

		LACOTTO	401041	4TE 4 O.D.	100555	470040	4040115	*****	A)A/I IE A T	ADADDV	4000011	40EDE4	405440
Cotton	ACOTTO	ACOTTO	ASISAL	ATEAGR	ACOFFE	ATOBAC	ACASHE	AMAIZE	AWHEAT	APADDY	ASURGH	ACEREA	ABEANS
Sisal fibre Tea	ASISAL ATEAGR												
Coffee Tobacco	ACOFFE ATOBAC												
Cashew nuts	ACASHE												
Maize Wheat	AMAIZE AWHEAT												
Paddy	APADDY												
Sorghum and millets Other cereal	ASORGH ACEREA												
Beans	ABEANS												
Cassava Other roots and tubers	ACASSA AROOTS												
Oil seeds and coconuts	AOILSE												
Other fruit and vegetable Other crops	AOFRVE AOCROP												
Poultry and other animal farming Fishing and fish farms	ALIVES AFISHI												
Hunting and forestry	AHUFOR												
Mining and quarrying Meat and dairy products	AMININ AMEATD												
Other processed food	APFOOD												
Grain milling Beverages and tobacco	AGRAIN ABEVER												
Textiles	ACLOTH												
Wood products Basic and industrial chemicals	AWOODP ACHEMI												
Fertilizers and pesticid	AFERTI APETRO												
Petroleum refineries Rubber and plastic products	ARUPLA												
Glass products, cement and clay Iron, steel and non-ferrous metals	AGLASS AMETAL												
Machinery equipment	AEQUIP												
Electricity and water Construction	AUTILI ACONST												
Retail and wholesale trade	ATRADE												
Hotels restaurants and tourism Transportation	AHOTEL ATRANS												
Real estate and financial services Public administration	AESTAT												
Other private services	AADMIN APRIVS												
Cotton Sisal fibre	CCOTTO CSISAL	3,680	2,861										
Tea	CTEAGR		2,001	1,991									
Coffee Tobacco	CCOFFE CTOBAC				2,699	5,793							
Cashew nuts	CCASHE					.,	1,020	45.004					
Maize Wheat	CMAIZE CWHEAT							45,001	1,449				
Paddy	CPADDY									73,632	1 5 4 5		
Sorghum and millets Other cereal	CSORGH CCEREA										1,545	2,646	
Beans Cassava	CBEANS CCASSA												17,516
Other roots and tubers	CROOTS												
Oil seeds and coconuts Other fruit and vegetable	COILSE COFRVE												
Other crops	COCROP												
Poultry and other animal farming Fishing and fish farms	CLIVES				4,491								
Hunting and forestry	CHUFOR												
Mining and quarrying Meat and dairy products	CMININ CMEATD												
Other processed food	CPFOOD												
Grain milling Beverages and tobacco	CGRAIN CBEVER												
Textiles	CCLOTH	6,122	0,157	0,020		1,443 0.338	0,635	48,589 0.466	2,000 0.040	19,482 0,820	11,294	0,313	1,222
Wood products Basic and industrial chemicals	CCHEMI	0,281 4,001		0,020	0,241	0,336	0,016 0,100	3,279	0,040	2,472	0,109 0,201	0,008	0,241
Fertilizers and pesticid Petroleum refineries	CFERTI CPETRO	6,901	0,747	3,010 0,651	1,864 2,274	2,845 2,715	3,084	8,730	1,103 1,373	0,497 1,587	0,687	1,246 1,796	0,956
Rubber and plastic products	CRUPLA		0,747	0,096	2,214	0,374			1,575	1,507		1,730	0,056
Glass products, cement and clay Iron, steel and non-ferrous metals	CGLASS CMETAL	2,814		0,109	1,809	0,938	0,205	3,009	0,197	7,249	4,024	0,237	0,273
Machinery equipment	CEQUIP	0,080	1,694		0,008			0,020	0,024	0,068		0,008	
Electricity and water Construction	CUTILI	0,048 0,141	3,129	1,897 0,080	0,470 0,181	0,117 0,201	0,032 0,024	0,153 0,402	0,117 0,020	0,121 0,301	0,040 0,060	0,032 0,012	0,088
Transaction costs for exports	CTDTP-E												
Transaction costs for domestic sales of output Transaction costs for imports	CTDTP-D CTDTP-M												
Retail and wholesale trade Hotels restaurants and tourism	CHOTEL	14,049	0,771	2,413	3,860	4,999	0,604	34,035	1,554	9,076	3,741	1,637	2,582
Transportation	CTRANS	3,566	0,420	0,724	1,134	6,051	0,334	9,556	0,535	7,977	3,436	0,104	0,960
Real estate and financial services Public administration	CESTAT CADMIN	0,100	0,040	0,012	0,060	0,161	0,060	0,301	0,040	0,100	0,060	0,040	0,048
Other private services	CPRIVS	0,121		0,008				0,161	0,080	0,060	0,040	0,056	0,032
Agriculture labor Nonagriculture labor	LABAG LABOR	12,974	3,054	4,352	13,478	12,191	12,477	181,000	6,539	83,741	27,724	9,677	53,236
Land	LAND CAPITAG	7,417	1,727	2,513	7,699	6,934 10,398	7,192	106,350	3,850	49,680 74,519	16,211 24,313	5,588 8,380	30,915 46,368
Agriculture capital Nonagriculture capital	CAPITAL	11,121	2,590	3,769	11,546	10,350	10,787	159,550	5,774	74,515	24,313	0,300	40,300
Agriculture enterprises Nonagriculture enterprises	ENTRA ENTR												
Urban ag below food poverty line (FPL)	HHUAB												
Urban ag within FPL and BPL Urban ag above basic needs poverty line (BPL)	HHUAW HHUAA												
Urban nonag below FPL	HHUNB												
Urban nonag within FPL and BPL Urban nonag above BPL	HHUNW HHUNA	1											
Rural ag below FPL Rural ag within FPL and BPL	HHRAB HHRAW												
Rural ag above BPL	HHRAA												
Rural nonag below FPL Rural nonag within FPL and BPL	HHRNB HHRNW												
Rural nonag above BPL	HHRNA												
Government Direct taxes	GOV DIRTAX	1											
Producer tax and sales tax	INDTAX	0,708	0,200	0,139	0,319	0,373	0,154	2,254	0,106	1,628	0,392	0,153	0,400
Import taxes Export taxes	IMPTAX EXPTAX												
Savings-investment Rest of the World	S-I ROW												
Total	TOTAL	74,123	17,390	21,904	52,134	56,150	36,725	602,856	24,882	333,012	93,878	31,933	154,895

Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

	ACASSA	AROOTS	AOILSE	AOFRVE	AOCROP	ALIVES	AFISHI	AHUFOR	AMININ	AMEATD	APFOOD	AGRAIN	ABEVER	ACLOTH	AWOODP
ACOTTO ASISAL ATEAGR															
ACOFFE ATOBAC ACASHE															
AMAIZE AWHEAT															
APADDY ASORGH ACEREA															
ABEANS ACASSA AROOTS															
AOILSE AOFRVE															
AOCROP ALIVES AFISHI															
AHUFOR AMININ															
AMEATD APFOOD AGRAIN															
ABEVER ACLOTH AWOODP															
ACHEMI AFERTI															
APETRO ARUPLA AGLASS															
AMETAL AEQUIP															
AUTILI ACONST ATRADE															
AHOTEL ATRANS															
AESTAT AADMIN APRIVS															
CCOTTO CSISAL											2,910			78,839 1,042	
CTEAGR CCOFFE CTOBAC											2,072		12,665		
CCASHE CMAIZE CWHEAT						20,240					0,588 1,874 0,614	97,638 14,348	0,319 4,979 0,898		
CPADDY CSORGH						1,915						101,570 20,657	0,258		
CCEREA CBEANS CCASSA	3,218					1,203			0,078		0,220	3,558 12,821	1,576		
CROOTS COILSE	2,2.2	5,433	5,673	40.704							0,085 5,810	,	5.040		
COFRVE COCROP CLIVES				46,731 0,804	0,711 0,201	0,667		0,134		40,701	54,162 0,051 0,273		5,640	0,166	
CFISHI CHUFOR CMININ						0,997	0,594 5,749 0,609	10,354	0,166 1,222	0,323	0,696 0,152 0,200		2,164 0,002	0,087	15,280
CMEATD CPFOOD						11,806	0,009			0,341 0,034	0,386 4,795		11,144	0,181	
CGRAIN CBEVER CCLOTH	0,012	0,012	0,671	0,414		0,406	13,701		0,108 0,111		24,286 0,940 0,055	0,123	15,811 3,467 1,485	22,867	0,051
CWOODP CCHEMI	0,004	0,016	0,088	0,245 0,221	0,028 0,040	0,221 0,173	10,701	0,065	0,095 4,431	0,005 0,024	1,067 0,020	0,394	0,457 5,214	0,570 9,577	12,194 5,661
CFERTI CPETRO CRUPLA	0,088	0,659	0,253	3,206 5,698	0,305		5,597	0,897 0,161 0,021	0,514 0,115	0,032 0,203	1,135 0,887	0,022 0,002 0,012	0,981 0,853	1,263 0,174	0,338 0,070
CGLASS CMETAL CEQUIP	0,004	0,044	0,382 0,020	3,076	2,630	0,723	0,557	0,436	0,284 0,331	2,924	0,044 0,070		0,616 0,102	0,010	0,082
CUTILI CCONST	0,048	0,004 0,052	0,020 0,145 0,020	2,207	0,068	0,647 0,522	2,052 0,071	0,178 0,082	0,807 2,991 0,345	0,137 0,022	2,271 0,998	4,492 5,825	1,986 0,925	6,121 0,994	4,813 1,106
CTDTP-E CTDTP-D CTDTP-M															
CTRADE CHOTEL	0,354	0,623	1,489	9,803	0,784	6,183	3,691	2,904 0,223	1,168	10,563	4,666	2,790	6,563	4,002	4,383
CTRANS CESTAT CADMIN	0,024	0,028	0,498 0,048	7,229 0,088	0,406 0,020	3,447 0,113 0,016	0,025 0,074	3,006 0,165 0,110	1,149 0,530	0,072 0,079	2,078 1,063	0,457 0,087	3,517 0,611	1,041 0,486	1,155 0,561
CPRIVS LABAG	37,899	33,552	0,064 33,559	0,153 172,368	0,012 17,875	75,424	50,519	2,912 67,817	1,094	0,350	1,196	0,466	0,918	1,307	0,877
LABOR LAND CAPITAG	22,141 33,209	19,456 29,182	19,699 29,546	100,127 150,209	10,409 15,611	43,370 65,052	29,652 44,474	38,893 58,336	1,185	4,771	7,623	15,600	7,068	17,250	7,930
CAPITAL ENTRA					-,-	,			69,308	66,090	46,918	5,995	31,282	18,327	27,607
ENTR HHUAB HHUAW															
HHUAA HHUNB HHUNW															
HHUNA HHRAB															
HHRAW HHRAA HHRNB															
HHRNW HHRNA															
GOV DIRTAX INDTAX	0,146	0,136	0,139	4,140	0,095	0,803	0,589	0,816	0,307	0,723	0,743	3,291	1,089	1,349	0,763
IMPTAX EXPTAX	-,	-1:==	-1	.,	-1222	-1	-,	-12:2	-1==:	***==	-11-12	-1	1===	,= :=	-12
S-I ROW TOTAL	97,149	89,198	92,294	506,719	49,197	233,927	157,955	187,509	86,338	127,394	170,950	290,148	122,591	165,654	82,872

Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

ı	ACHEMI	AFERTI	APETRO	ARUPLA	AGLASS	AMETAL	AEQUIP	AUTILI	ACONST	ATRADE	AHOTEL	ATRANS	AESTAT	AADMIN	APRIVS
ACOTTO ASISAL															
ATEAGR ACOFFE															
ATOBAC ACASHE															
AMAIZE															
AWHEAT APADDY															
ASORGH ACEREA															
ABEANS ACASSA															
AROOTS AOILSE															
AOFRVE AOCROP															
ALIVES AFISHI															
AHUFOR AMININ															
AMEATD APFOOD															
AGRAIN ABEVER															
ACLOTH AWOODP															
ACHEMI															
AFERTI APETRO															
ARUPLA AGLASS															
AMETAL AEQUIP															
AUTILI ACONST															
ATRADE AHOTEL															
ATRANS AESTAT															
AADMIN APRIVS															
CCOTTO CSISAL				0,003											
CTEAGR CCOFFE											0,002 0,267				
CTOBAC CCASHE											0,074				
CMAIZE CWHEAT														0,145 0.464	
CPADDY CSORGH											0,362			1,181	
CCEREA CBEANS											1,395			0,747 3,296	
CCASSA CROOTS											2,412			1,887	
COILSE COFRVE				0,007							0,033 6,561			1,095 2,212	
COCROP				0,007							2,012 4,947			0,193 3,850	
CFISHI				0,003					40.007		33,052			0,377	0.400
CHUFOR CMININ	1,756	2,962	4,510	0,354 3,097	3,351	1,043			16,837 48,605		0,325 0,007		21,689	3,800 0,026	0,132
CMEATD CPFOOD											33,607 29,010			1,181 8,769	
CGRAIN CBEVER											7,772 4,232			5,488 0,851	1,198
CCLOTH CWOODP	0,418	0,009	0,165	0,058 0,065	0,179 1,381	1,507 0,613	0,172	0,158 1,606	28,640	1,819	0,538 0,613	0,004 2,839	0,322 4,653	45,515 37,685	1,528 16,325
CCHEMI CFERTI	21,833	0,306	0,621	0,009	2,100	0,073	0,500	3,831	4,129	0,013	0,002 0,026	0,015		46,570 0,822	6,295
CPETRO CRUPLA	0,287 0,070	0,005 0,009	1,056 0,017	0,186 9,982	5,530 0,026	0,428 1,768	0,275 3,405	20,344 0,248	8,392 2,936	3,936 1,863	2,604 1,049	12,601 11,488	1,940 5,678	4,727 14,232	38,727 3,948
CGLASS CMETAL	0,114 0,406			0,017 0,303	1,421	29,098	3,779 13,853	0,127 0,114	47,972 89,620		0,600 2,905	2,009		2,054 1,622	0,033 0,446
CEQUIP CUTILI	0,538	0,240	0,265	2,972	9,258	4,744	18,650 0,654	3,965 8,190	24,313 2,541	2,655 4,529	5,347 4,296	15,375 2,634	12,328 6,160	46,890 13,257	8,158 9,842
CCONST CTDTP-E	0,469	-,	0,080	0,329	0,686	1,193	0,705	2,325	27,362	1,762	0,874	1,921	25,367	10,577	2,396
CTDTP-D CTDTP-M															
CTRADE CHOTEL	1,153	0,225	0,621	1,206	2,555	5,332	3,189	8,420 1,104	21,454 7,928	7,919 8,554	10,460 3,122	10,870 23,726	15,864 24,805	55,313 110,097	23,153 18,665
CTRANS CESTAT	0,668 0,169	0,014 0,007	0,685 0,126	0,732 0,222	0,923 0,189	0,999 0,340	1,176 0,263	6,998 3,632	22,498 3,990	63,519 10,300	4,798 7,027	23,737 10,802	20,975 680,290	101,835 19,183	27,561 22,271
CADMIN CPRIVS	0,309	0,007	0,120		0,189	0,471		0,279	1,696	3,659	0,594	5,119	9,657	396,469	3,180
LABAG				0,409			0,430	2,098	3,192	18,543	2,161	13,031	25,563	20,014	26,068
LABOR LAND	3,795	0,960	2,152	1,880	2,806	4,465	2,787	14,689	181,814	29,572	12,204	22,642	49,762	484,367	69,630
CAPITAG CAPITAL	0,882	0,400	5,727	6,919	9,790	15,544	29,148	63,976	114,511	532,556	47,751	223,551	397,045	54,290	178,723
ENTRA ENTR															
HHUAB HHUAW															
HHUAA HHUNB															
HHUNW HHUNA															
HHRAB HHRAW															
HHRAA HHRNB															
HHRNW HHRNA															
GOV DIRTAX															
INDTAX IMPTAX	0,423	0,011	0,203	0,285	0,402	0,788	0,562	0,866	7,593	4,555	2,646	5,050	5,649	13,012	7,122
EXPTAX S-I															
ROW	20.000	F 101	46.000	20.000	40.070	60 100	70.540	140.070	666 001	60F 757	225 222	207.117	1 207 717	1 514 000	40E 100
TOTAL	33,292	5,164	16,398	29,038	40,872	68,406	79,548	142,970	666,021	695,757	235,686	387,414	1.307,747	1.514,092	465,402

Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

ACOTTO ASISAL	CCOTTO 74,123	CSISAL 17,390	CTEAGR	CCOFFE	СТОВАС	CCASHE	CMAIZE	CWHEAT	CPADDY	CSORGH	CCEREA	CBEANS	CCASSA	CROOTS	COILSE
ATEAGR ACOFFE ATOBAC ACASHE AMAIZE AWHEAT APADDY ASORGH ACERRA ACASHA ACHARA AC		,,,,,,	21,904	52,134	56,150	36,725	498,138	23,406	230,419	68,847	10,097	90,714	46,643	37,583	58,736
AADMIN APRIVS COOTTO CSISAL CTEAGR CCOFFEC CTOBAC CCOFFEC CTOBAC CCASHE CMAIZE COMPANY	2,115 1,065	4,717 0,032	5,710 0,016	16,857 0,033	8,919 0,558 0,290	10,716 0,002	0,059 14,029 4,249	0,052 0,665 0,216	6,543 1,639	0,012 1,966 0,496	0.024 0.286 0.404	0.585 2.521 0,388	0,711 1,250	0,035 1,071 0,060	1,464 1,511
LABOR LAND CAPITAG CAPITAL ENTRA															
ENTR HHUAB HHUAW HHUAA HHUNB HHUNW HHUNA HHRAB HHRAB HHRAW HHRAB HHRAW HHRAB HHRNB HHRNB HHRNB															
DIRTAX INDTAX IMPTAX EXPTAX S-I	2,266 1,085	0,003 0,063	0,025 0,019 0,231	0,040 0,040 0,671	0,031 0,016 0,430	0,142	0,752 2,222	0,045 0,112	0,495 0,850	0,134 0,257	0,041 0,210	0,331 0,201	0,067	0,573 0,031	63,107
ROW TOTAL	5,052 85,707	0,152 22,357	0,077 27,982	0,158 69,933	1,392 67,786	0,008 47,592	20,104 539,555	1,033 25,530	7,772 247,718	2,369 74,081	1,922 12,985	1,855 96,595	48,671	0,288 39,642	0,002 124,820

Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

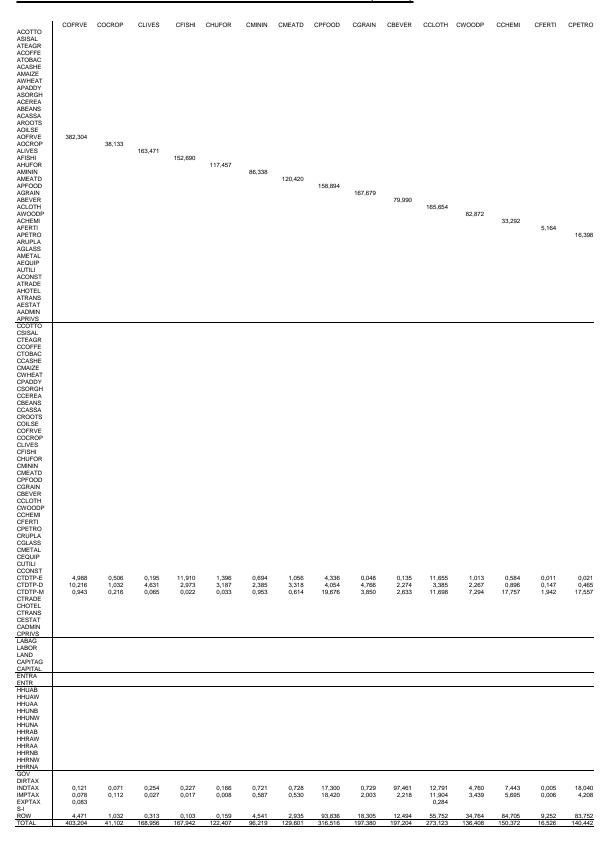


Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

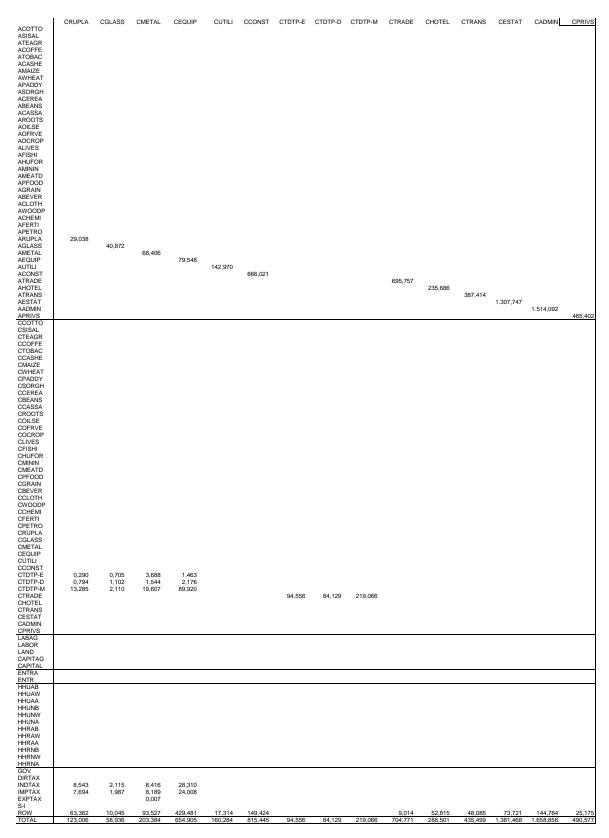


Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

ı	LABAG LA	BOR LAN	D CAPITAG	CAPITAL	ENTRA	ENTR	HHUAB	HHUAW	HHUAA	HHUNB	HHUNW	HHUNA	HHRAB	HHRAW	HHRAA	HHRNB	HHRNW	HHRNA
ACOTTO ASISAL																		
ATEAGR ACOFFE																		
ATOBAC ACASHE																		
AMAIZE AWHEAT							0,368	0,409	3,579	0,040	0,056	1,123 0,442	21,925	20,700	55,183 1,034	0,203	0,111	1,020
APADDY ASORGH							0,212 0,142	1,022 0,068	7,477 0,052	0,010	0,199	0,272 0,003	12,687 3,841	28,346 3,600	52,057 16,349	0,035	0,050	0,224 0,975
ACEREA ABEANS							0,124	0,551	0,001 0,818	0,006	0,033	0,325	4,337 16,553	5,074 14,854	12,418 29,873	0,279	0,061	0,007 0,705
ACASSA AROOTS							0,256 0,099	0,450 0,114	0,338 1,185	0,023	0,038 0,048	0,117 1,383	9,949 7,008	12,377 12,498	26,467 27,653	0,024	0,016 0,082	0,449 1,539
AOILSE AOFRVE							1,307	1,924	0,039 4,253	0,073	0,212	2,206	10,038 31,988	5,550 30,790	17,932 49,897	0,216	0,180	1,370
AOCROP ALIVES							0,029 0,140	0,107 1,154	0,160 2,633	0,006 0,220	0,008	0,102 0,778	1,955 8,860	2,576 17,833	6,028 38,191	0,087	0,011 0,074	0,080 0,411
AFISHI AHUFOR							0,012 1,243	0,056 2,716	1,033 1,995	0,026 0,381	0,028 0,081	0,052 0,778	0,205 16,221	0,730 18,249	3,103 27,102	0,059	0,188	0,019 1,039
AMININ AMEATD							0,006	0,023	0,815	0,001	0,002	0,510	0,442	0,960	4,162	0,030	0,003	0,019
APFOOD AGRAIN							0,026 1,865	0,225 1,958	1,442 4,465	0,024 0,656	0,139 0,500	0,738 2,427	2,061 29,587	1,771 29,935	5,149 49,180	0,063 0,682	0,006 0,309	0,412 0,907
ABEVER ACLOTH							0,135	0,304	0,929	0,146	0,009	1,436	1,569	3,522	32,815		0,004	1,733
AWOODP ACHEMI																		
AFERTI APETRO																		
ARUPLA AGLASS																		
AMETAL AEQUIP																		
AUTILI ACONST																		
ATRADE AHOTEL																		
ATRANS AESTAT																		
AADMIN APRIVS CCOTTO																		
CSISAL CTEAGR																		
CCOFFE CTOBAC																		
CCASHE CMAIZE							4.804	18 656	191,560	2,662	2.967	25,577	15,981	16,375	81.253	0,036	0.201	5,016
CWHEAT CPADDY							0,875	0,280	2,073 17,556	0,056 0,271	0,601	2,640 10,193	6,426	0,412	1,674 22,483	0,008	0,161	0,390
CSORGH CCEREA							0,241	0,192	0,939	0,093	0,350	1,630 0.376	5,097	4,761 0.846	34,829 0,381	0,008	0,118	0,892
CBEANS CCASSA							2,468 0,810	3,438 1,406	8,401 3,819	0,875 0.124	1,723	17,741 3,802	6,763 3,273	6,612 3,463	20,545 9,412	0,396 0,520	0,126 0,059	0,633 0,386
CROOTS COILSE							1,420 0,112	1,379 0,063	3,858 11,421	0,133	0,554 0,043	8,450 6,898	1,698 3,689	1,810 1,597	9,756 76,837	0,174 1,020	0,023 0,027	0,329 0,099
COFRVE COCROP							10,241	12,515 1,353	46,004 4,722	3,002 0,229	6,786 0,464	73,039 9,400	14,407 1,926	21,192 2,491	59,334 12,141	0,597	0,320	4,000 0,280
CLIVES CFISHI							0,903 1,303	1,570 2,881	19,659 8,462	0,528 0,508	1,053 1,005	15,621 8,740	10,102 7,515	11,163 10,023	41,893 20,134	0,107 0,115	0,004 0,081	0,987 1,127
CHUFOR CMININ							2,109	4,367	13,616	1,063	2,081	19,899	1,341	1,347	9,995	0,095	0,057	0,664
CMEATD CPFOOD							1,807 4,530	2,829 5,753	10,909 33,350	0,735 2,467	1,694 4,470	21,333 57,595	5,731 11,862	8,517 13,896	30,469 52,304	0,219 1,385	0,137 0,283	2,161 3,392
CGRAIN CBEVER							2,535 2,039	5,003 8,329	21,496 28,747	1,500 0,102	2,831 2,184	36,594 38,799	11,135 10,733	14,565 10,361	45,630 68,257	0,344 0,246	0,183 0,023	1,856 8,888
CCLOTH CWOODP							0,090	0,108	0,950	0,013	0,148	1,184	1,133	1,189	3,540		0,013	0,205
CCHEMI CFERTI																		
CPETRO CRUPLA							0,380	0,591	3,069	0,097	0,179	4,431	2,656	3,266	12,051	0,047	0,042	0,380
CGLASS CMETAL																		
CEQUIP CUTILI							0,034 0,045	0,358	3,024 10,242	0,170	0,003 0,367	3,376 10,435	11,402 2,110	5,945 0,988	24,593 30,345		0,015	0,045 0,293
CCONST CTDTP-E							101,153	4,407	40,223	14,971		78,136			105,932			
CTDTP-D CTDTP-M																		
CTRADE CHOTEL																		
CTRANS CESTAT									13,220		26,001	57,849	1,854	480,781	31,121			6,566
CADMIN CPRIVS							8,161 0,163	21,481 0,642	86,200 41,777	2,039 0,532	7,939 2,320	120,077 26,995	97,715 93,493	167,959 14,249	287,296 72,219	0,204 0,042	0,684 0,087	3,883 0,220
LABAG LABOR																		
CAPITAG																		
ENTRA ENTRA			794,736	1 000 151														
HHUAB HHUAW	1,296 47,880	2,65 2,74		1.883,154	3,975 4,109					1,930 0,710	0,681 0,249	107,336 39,207	12,820 4,728			0,083 0,030	0,325 0,120	
HHUAA HHUNB	44,431	2,74 107,04 0,739			160,544	40,476				4,737	1,680	264,564	31,455			0,204	0,798	
HHUNW HHUNA		1,417				14,190 1.645,931												
HHRAB HHRAW	248,484 129,191	174,11 33,65			261,191 50,472	1.040,001				10,647	3,770	595,217	70 680			0.459	1 70/	124,198
HHRAA HHRNB	401,672 7,441	209,62			314,444					9,545	3,380	533,971	63,380			0,459		111,349
HHRNW HHRNA		3,597 2.174				0,854 73,602												
GOV DIRTAX	0,111 291	-,		10,793		108,100	2,959	0,034	4,441		0,165	13,714	4,514	5,320	18,359		0,402	0,030
INDTAX IMPTAX				. 5,, 55		,	_,000	-,50 /	.,		-,.00		.,0.1	3,023	. 5,000		5,102	_,000
EXPTAX S-I							0,019	1,454	17,835	0,096	0,022	8,180	8,999	13,515	66,174		0,827	2,152
ROW	909 456 04	1 954 529 93	25 794,736	52,394 1 946 340	794 736	1 883 154	155,795			61,516		2.235,689			1.703,550	8,506		377,270
TOTAL	JUJ,430 944	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	J 134,130	1.340,340	134,130	1.003,134	100,790	110,213	013,216	01,510	11,026	2.203,009	104,013	1.042,094	1.103,550	0,506	3,036	

Table A 2.1: 1998 Tanzania SAM in billion of TShs (cont.)

ACOTTO ASSAL ASSAL ACASEE ACASEA	i	GOV	DIRTAX	INDTAX	IMPTAX	EXPTAX	S-I	ROW	TOTAL
ATEAGR ACCEACE		GOV	DIKTAA	INDIAX	IIVIF I AA	LAFTAA	3-1	KOW	74,123
ACCOPTE ATCISACE AMAIZE ASCREAL ASCREAL ASCREAL ASCREAL ASCREAL ARCAREA ARCAREA ARCAREA ARCOTS ARCOTS ARCOTS AMAINN ARCAREA AMAIZE AM									
ACASHE APADDY APADDY APADOY AP	ACOFFE								52,134
AMANEZ AMANEZ AMANEZ AMANEZ ASORGH ALVES ANNIN AMANIN AMANIN AMANIN AMANTAI AMANTAI ASORGH AS									
APADDY APACDEM APACREM	AMAIZE								602,856
ASORGH ACREEA ACREAN ALLER ANNIN ACREAN ALLER ACREAN ALLER ACREAN ALLER ACREAN									
ABEANS ACASSA	ASORGH								93,878
ACASSA ARCOTTS									
AOLESE AOLESE ALVES ALVE	ACASSA								97,149
ACCROPS ACCROPS APRICE APPLICATION AND TO THE PROPERTY OF THE									
ALVES ARISH AMMIN AMEATD AMEATD AMEATD AFFORD AMIN 12,736 AFFORD AMIN	AOFRVE								506,719
AFISH 157,855									
AMINN AMEATO 127,344 AMEATO 127,346 AGRAN AGRAN AGEVER ACLOTH ACCOTH A	AFISHI								157,955
AMEATD AMEATD AMEACON AGEVER ACLOTH ANCOODP AGEVER ACLOTH AFTERO AGEMEN AGEVER ACLOTH AFTERO AGEMEN AGLASS AG									
AGRAIN AGLOTIO ACLOTIO ACLOTIO ACHEMI									127,394
ACLOTH ACHORD ACHORD ACHORD ACHORD ACHORD ACHORD ACHORD ARUPLA ACHORD ARUPLA ACHORD ARUPLA ACHORD AC	AGRAIN								290,148
AWOODP ACHEMICA APERTRO AREA AREA AREA AREA AGLASS AMETAL ACONST ACONST ACONST ACONST ARACONST ARACONS									
AFERTI ARETRI ACONSE ARTANIS ARSTAT ARADININ ARSTAT ARADININ ARSTAT ARADININ ARSTAT ARADININ ARSTAT ARADININ ARRIVA CRISAL CCIFEAGR COGFE COGRE	AWOODP								82,872
APETRO AGLIAS AGLIAS AGLIAS ACUIP AUTILI ALTONI ALTONI ATRANS ACUIP ATRANS ARSTAT ARSNAS ASSA ARSNAS									33,292 5,164
AGLASS AMETAL ACOUNT ACOUNT ACOUNT ARTADE ACOUNT ARTADE ARTANS ARTANS ARTANS ARTANS ARSTAT AR									16,398
AECUIP ACOINS 79,548 ACOINS 666,021 ACOINS 666,021 ACOINS 666,021 ACOINS 666,021 ACOINS 666,021 ACOINS 666,021 ACOINS 76,021 A									40,872
AUTILI ATRIADS ATRIANS ARCONST ARRANS ASSTAT									
ARRADE ARRANT ARSINN APRIVS COSTTO CSISAL CCOFTC CSISAL CCOFTC CSISAL CCOFTC CSISAL CCOFTC CSISAL CCOFTC COSTC COSTC COSTC CSISAL CCOFTC COSTC	AUTILI								142,970
AHOTEL ATRANS ARSTAT ARSTAT ARSTATA ASSTAT A									
ASSITAT AADMINS APRIVS CUCHTIC	AHOTEL								235,686
AADMIN APRIVS	AESTAT								1.307,747
CCOTTO CSISAL 0.032	AADMIN								1.514,092
CTEAGR CCOFFE	CCOTTO								85,707
CCOFFE CTOBAC CCASHE									22,357 27.982
CCASHE 0.002 45,889 47,582 CWHEAT 4,291 0.301 539,555 CWHEAT 0,384 0,507 25,530 CSORGH 0,496 0,060 74,081 CSORGH 0,496 0,060 74,081 CEREA 0,494 0,124 12,985 CBEANS 0,388 4,200 96,598 CASSA 4,917 48,671 CROOTS 0,060 0,180 33,942 CORROP 2,191 36,844 402,244 CORROP 2,191 36,944 402,244 CHIVES 0,021 10,340 167,952 CHIFOR 0,033 9,021 12,343 167,952 CHIFOR 0,033 9,021 12,437 18,244 402,244 402,244 402,244 402,244 402,244 402,244 402,244 402,244 402,244 402,245 402,241 402,241 402,241 402,241 402,241 402,241 402,241 402	CCOFFE						0,033	64,862	69,933
CMHEAT									
CPAIDDY	CMAIZE						4,291	0,301	539,555
CCEREA CBEANS 0,388 4,0124 12,985 CCASSA CCASSA CROOTS 0,060 0,180 39,642 CORROT 0,060 0,180 39,642 CORROT 0,060 0,180 39,642 CORROT 0,060 0,180 39,642 CORROT 0,061 1,3629 41,102 CORROT 0,061 1,3629 41,102 CILVES 8,275 0,984 41,102 CILVES 8,275 0,985 41,102 CILVES 8,275 0,985 41,102 CILVES 8,275 0,985 41,102 CILVES 1,911 CILVE								0,507	
CBEANS									74,081
CROOTS COILSE COILSE CORNYE COCROP CO	CBEANS							4,200	96,595
COILSE COFRVE 2,191 34,40 403,204 COCROP COCROP CLIVES 2,191 34,62 403,204 COCROP CLIVES 8,275 0,944 108,205 CFISHI 0,022 71,304 167,942 CHIPFOR 0,033 9,027 CMININ 1,487 5,313 96,219 COMEATD 0,163 7,510 CORPOD CORPOD 0,030 2,246 29,460 0,030 30,246 29,460 0,030 30,246 29,460 0,030 30,246 29,460 0,030 30,246 29,460 0,030 2,246 29,460 0,030 30,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 29,460 0,030 2,246 197,300 CERCIT 0,068 18,357 3,111 136,408 169,307 CFERTI 0,068 18,303 0,901 0,848 18,303 0,901 0,848 18,303 0,901 0,848 18,303 0,901 0,848 18,304 0,064 18,557 18,558 0,991 0,848 18,346 0,064 2,386 0,991 0,848 18,346 0,064 2,386 0,991 0,848 18,348 18,345 18,346 18,							0.060		
COCROP	COILSE						-0,002	10,340	124,820
CLIVES CFISHI 8,275 0,994 168,956 CHUFOR 0,033 9,021 122,407 CMININ 1,487 5,331 96,219 CMEATD 0,163 7,510 122,807 CMEATD 0,163 7,510 128,601 CGRAIN -0,003 0,244 197,380 CGEVER 7,117 0,603 0,6244 197,380 CGLOTH 17,530 65,945 227,312 CWOODP 18,571 3,111 36,400 150,372 CFERRI -20,731 0,064 16,526 CFETRIO 12,431 0,109 16,526 CRUPLA 34,284 1,953 120,066 CGLASS 0,991 0,884 59,366 CMETAIL 26,397 7,288 20,334 CEGUIP 45,2567 8,256 664,905 CUTILI -0,064 2,338 160,224 CTDTP-D 18,251 18,251 18,511 CTDTP-M									
CHUFOR CMININ (1487 5.31 96.219 CMEATD CPFOOD (163 7.510) CREATD CPFOOD (163 7.510) CREATD CPFOOD (163 7.510) CREATD COPPOOD (163 7.510) CREATD CORREL (1717 7.117 0.003 0.244 0.7187 0.7197. CRECT CITTH (1718 0.068 197.204 CCLOTH (17630 66.945 CPETRO CPETRO CPETRO CPETRO CPETRO CPETRO CRUPLA (16.526 CRUPLA (16.526 CRUPLA (16.526 CRUPLA (16.526 CRUPLA (16.526 CRUPLA (1717 0.064 2.386 CRUPLA (1717 0.064 2.386 CRUPLA (1717 0.064 2.386 CRUPLA (1717 0.064 2.386 CRECTOTIPE CTOTIPE CT	CLIVES						8,275	0,994	168,956
CMININ 1,487 5,313 96,219 CMEATD 0,163 7,510 129,601 CPFOOD 30,246 29,460 197,308 CREVER 7,117 0,688 197,204 CCLOTH 17,630 68,545 273,132 CWOODP 18,571 3,111 316,408 CHEMI 18,930 18,571 3,111 CFERTI -20,731 0,064 165,262 CPETRO 12,431 0,064 165,262 CRIPLA 34,284 1,953 123,006 CGLASS 0,991 0,064 5,936 CMETAL 26,397 7,298 20,384 CEGUIP 452,567 382,518 56,940 CUTILI -0,064 2,386 66,294 CODNST 382,318 382,318 816,244 CTDTP-D 382,318 382,318 81,245 CTDTP-D 40,080 59,374 49,556 K172 40,080 59,374 <									
CPFOOD 30,246 29,460 197,300 197,0	CMININ						1,487	5,313	96,219
CBEVER							30,246		316,516
CCLOTH CWOODP CCHEMI CCHEMI CCHEMI CCHEMI CCHEMI CCHEMI CCHEMI CCHEMI CCHEMI CHEMI CHEMI CHEMI CHEMI CHEMI CHEMI CHEMI CPERTI CPETRO CPETRO CPETRO CPETRO CPETRO CRIPLA CRIPLA CGLASS CGLASS CGUP CCRUPL CRIPLA CGLASS CMETAL CROUP COLORST CUTILI COLORST COLORST COLORST COLORST CTOTP-D CTOTP-D CTOTP-M CTOTP-M CTOTP-M CTOTP-M CTRANS CESTAT CHOCKEL CADMIN 433,786 CRETAT CADMIN 433,786 CRETAT CADMIN 433,786 CRETAT CADMIN CADMIN CADMIN CADMIN CADMIN CADMIN CADMIN CRETAT CADMIN CADM									
CCHEMI CFERTI CFERTI 18,930 18,940 150,372 CPETRO CFERTRO CPETRO 12,431 10,109 140,442 CRUPLA 34,284 1953 123,006 CGLASS 0,991 0,884 CGUIP CEGLUP 452,567 8,525 CUTILI 4-0,064 2,386 160,228 CCONST CTDTP-B CTDTP-B CTDTP-B CTDTP-M CTDTP-M CTCTANDE CTRANB 40,080 93,74 433,786 40,080 93,74 433,786 40,080 93,74 433,786 CPRIVS -0,195 115,375 400,577 LABAG LABOR LAB	CCLOTH						17,630	65,945	273,123
CFERTIC .20,731 0,064 16,526 CPETRO .20,731 0,064 16,526 CRUPLA .24,31 .01,91 140,442 .23,007 .23,008 .23,008 .23,009 .23,008 .23,009 .23,008 .23,009 .23,008 .23,009 .23,									
CRUPLA CGLASS CMETAL CGLASS CMETAL 26.397 7.298 20.384 58.936 CMETAL 26.397 7.298 20.384 58.936 CMETAL 26.397 7.298 20.384 58.936 CUTILI -0.064 2.386 CUTILI -0.064 2.386 CMETAL 26.397 7.298 28.56 E54.906 CUTILI -0.064 2.386 R1.292 CTOTP-B CTOTP-B CTOTP-B CTOTP-B CTOTP-B CTOTP-B CTOTP-B CTOTP-B CTOTP-M CTRANS 40.080 59.41 288.501 CAPATAL 433,786 40.080 59.44 434,789 CESTAT 0.021 0.222 1.381 488 CADMIN 433,786 0.021 0.292 1.381 488 CPRIVS -0.195 115.375 115.375 110.213 CAPATAL LAND C	CFERTI						-20,731	0,054	16,526
CGLASS 0.991 0.884 58.936 CMETAL 26.397 7.982 203.384 25.956 8.525 65.905 66.905 67.007 77.707 77.77 77.77 77.77 77.77 77.77 77.77 77.77 77.77 77.77 77.77 77.77 77.97 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0,109 1.953</td><td>140,442 123.006</td></td<>								0,109 1.953	140,442 123.006
CEQUIP CUTILI 452,867 8,525 664,905 CUTILI -0,064 2,386 160,284 CCONST 382,318 815,445 CTDTP-E 382,318 815,445 CTDTP-D 48,525 81,545 CTDTP-M 90,041 221,066 CTRANDE 0,236 90,041 CHANDIS 40,080 59,374 433,498 CESTAT 0,021 0,221 1381,468 CRDININ 433,786 -0,195 115,375 490,577 LABOR 1,045,340 90,449 54,955 528,825 528,825 CAPITAG 794,736 528,825 528,8	CGLASS							0,884	58,936
CCONST CTOTP-E CTOTP-B CTOTP-D CTOTP-M CTRADE CHARLE CHOTEL 0.236 90.041 288.501 CTRANS 0.236 90.041 288.501 CTRANS 0.021 0.236 40.080 59.374 435.499 CESTAT 0.021 0.292 13.966 CPRIVS -0.195 115.375 490.577 LABAG CPRIVS -0.195 115.375 490.577 LABAG LABOR LABOR LABOR LABOR LAND 0.21 0.292 13.94.954 LAND 0.221 0.292 13.94.954 1.80.577 1.80.577 1.80.579 1.80.577 1.80.579 1							452,567	8,525	654,905
CTDTP-E CTDTP-D CTDTP-D CTDTP-M CTRANB CREAT CHAPTE CHAPT CHAPTE CHAPTE CHAPTE CHAPT								2,386	
CTDTP-M CTRADE CTRADE 0.236 90.041 CTRANS 40.080 95.374 435.499 CESTAT 0.021 0.292 1381.468 CADMIN 433,786 CPRIVS -0.195 115.375 400.577 LABAG LABOR LABOR LAND CAPITAL LAND CAPITAL ENTRA ENTRA ENTRA HIUJAB HIUJA	CTDTP-E						302,318		94,556
CTRADE CHOTEL CHOTEL CHORNS 0.236 40,080 0,021 0,021 0,021 0,032 0,032 0,032 1,035 0,035 1,035 0,035 1,035 0,035 1,035 0,035 1,035 0,035 1,035 0,035 1,035 0,035 1,035 0,035 1,035 0,035 1,035 1,035 0,035 1,0									
CTRANS 40,080 59,374 435,499 CADMIN 433,786 0,021 0,022 1,381,468 CADMIN 433,786 0,653 1,568,856 155,875 490,577 LABG -0,195 115,375 490,577 149,577 150,993 155,875 190,456 19	CTRADE							00.01	704,771
CESTAT CADMIN 433,786 0,021 0,195 0,222 115,375 1,381,468 1,655,865 0,021 0,195 0,222 115,375 1,381,468 1,405,775 0,0157 <									
CPRIVS -0,195 115,375 490,577 LABAG 903,466 903,466 LABOR 903,466 528,825 LAND 794,736 794,736 CAPITAL 1,946,340 1,946,340 ENTR 1,883,154 1,883,154 HHUAB 2,226 155,795 HHUAB 2,226 161,518 HHUNA 8,593 679,278 HHUNW 1,874 77,828 HHUNW 8,302 22,207 704,073 HHRAB 20,200 704,073 HHRAW 22,017 1042,094 HHRNB 1,065 8,506 HHRNM 9,636 8,506 HHRNM 1,065 8,506 GOV 168,831 347,225 96,175 1,911 INDTAX 1,051 614,142 1,911 INDTAX 1,051 61,151 614,142 IMPTAX 1,044,957 1,911 614,142 IMPTAX 1,911	CESTAT	122 700						0,292	1.381,468
LABAG LABOR 909.456 494.945 140.456	CPRIVS	433,786					-0,195	0,653 115,375	490,577
LAND CAPITAG CAPITAG CAPITAG CAPITAG CAPITAG CAPITAG CAPITAC ENTR 1.946.340 ENTR ENTR 1.883.154 HHUAB 2.261 HHUAB 3.278 HHUAB 3.281 HHUAB 3.282 6.782.78 HHUNW 3.281 HHUNW 3.281 HHUNW 3.281 HHUNW 3.281 HHABB 3.282 2.235.689 HHRAB 3.202 3.272.70 HHABAB 3.202 3.272.70 HHABAB 3.202 3.272.70 HHRAB 3.202 3.372.70 GOV 168,831 347,225 96,175 1,911 614,142 BRSN1 BRSN									909,456
CAPITAL 1.946.340 1.946.	LAND								529,825
ENTRA 794,736 1.883,154 1.893,154 1.									
HHUAB	ENTRA								794,736
HHUAA HHUNB HHUNB HHUNW HHUNB HUNB HRAB HRAB HRAB HRAB HRAB HRAB HRAB HRA									1.883,154
HHUNB HHUNB 1 0.278 6 1,516 HHUNB 1 8.4 77,826 HHUNA 8.302 2.235,689 HHUNA 8.302 2.235,689 HHUNA 8.302 2.235,689 HHRAB 1 0.20,200 704,073 HHRAW 2.20,171 1.042,094 HHRAA 5.4,169 1.703,550 8.5,060 8.5									110,213 679 278
HHUNA	HHUNB							0,278	61,516
HHRAB 20,280 704,073 104,079									
HHRAA	HHRAB							20,280	704,073
HHRNB 1,065 8,506 HHRNA 0,094 9,636 1,065 1,06	HHRAA								1.042,094
HHRNA	HHRNB							1,065	8,506
GOV 168,831 347,225 96,175 1,911 614,142 168,831 INDTAX 1 96,175 1,911 614,142 168,831 INDTAX 1 96,175 1,911 96,175 1,911 1 180,356 745,328 1,911 1 180,356 745,328 1,911 1 180,356 745,328 1,911 1 180,456 1	HHRNA								377,270
INDTAX			168,831	347,225	96,175	1,911			614,142
EXPTAX 1,911 S-I 180,356 745,328 1.044,957 ROW 1,617,719 1.617,719 1.617,719	INDTAX								347,225
S-I 180,356 745,328 1.044,957 ROW 1.617,719	IMPTAX EXPTAX								96,175 1.911
	S-I	180,356						745,328	1.044,957
		614,142	168,831	347,225	96,175	1,911	1.044,957	1.617,719	1.017,719