

A 2012 Social Accounting Matrix (SAM) for Mozambique

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Abstract: This paper documents a 2012 Social Accounting Matrix (SAM) for Mozambique. The SAM is built using Instituto Nacional de Estatística (INE) unpublished industry-level production accounts, commodity-level supply–demand balances and a Supply Matrix together with national accounts, IMF government and balance of payment statistics, all for the year 2012 and a Use Matrix and household and labour market survey data from a 2007 SAM for Mozambique. It provides a detailed representation of the Mozambican economy and separates 55 activities and commodities. Labour is disaggregated by education attainment level; and households by per capita expenditure quintiles for urban and rural areas. The SAM features production for home consumption as reported in the unpublished data made available by INE and identifies government, investment and foreign accounts. It is a suitable database for conducting economy-wide impact assessments, including SAM-based multiplier analysis and computable general equilibrium (CGE) modelling.

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Table of contents

A 2012 Social Accounting Matrix (SAM) for Mozambique	1
List of acronyms	2
1 Introduction	3
2 General structure of SAMs	3
3 Constructing the prior SAM	5
4 Balancing the SAM	4
5 Data issues	5
6 Snapshot through the 2012 SAM lens	6
7 Summary	8
Appendix A: Mapping from INE to SAM Activity and Commodity	10
Appendix B: Global Set for a 2012 SAM for Mozambique	16
References	16

List of acronyms

CGE	Computable general equilibrium
GDP	Gross domestic product
INE	Instituto Nacional de Estatística
SAM	Social accounting matrix
SUT	Supply-use table

1 Introduction

This paper outlines the construction of a 2012 social accounting matrix (SAM) for Mozambique. A SAM is a consistent data framework that captures the information contained in the national income and product accounts and a supply-use table (SUT), as well as the monetary flows between institutions. Since it is an ex-post accounting framework, within its square matrix, total receipts must equal total payments for each account reported by the SAM. The required data is drawn from various sources and must therefore be compiled and made consistent. This process is valuable since it helps identify inconsistencies among statistical sources. For example, there are invariably differences between the incomes and expenditures reported in national household surveys and national accounts. SAMs are economy-wide databases which are used in conjunction with analytical techniques to strengthen the evidence underlying policy decisions.

Section 2 reviews the general structure of SAMs and Section 3 presents the key features of a SAM for Mozambique. A number of steps are involved. The first step in constructing the Mozambican SAM is compiling national accounts and other official data sources into a consistent SAM framework. The second step then draws on survey information to disaggregate labour and household accounts. Given the diversity and inaccuracy of survey data sources, the prior SAM is invariably inconsistent (i.e., there are inequalities between household receipts and payments). Section 4 describes the data sources used to construct the prior SAM and the balancing procedure of SAM accounts. Section 5 reports on some key data issues that were noted during the compilation process which highlights the need for further work on this SAM. Section 6 offers a snapshot picture of the Mozambique economy through the lens of the SAM.

This SAM is based on INE unpublished industry-level production accounts, commodity-level supply-demand balances and a Supply Matrix for 2012 together with IMF's Government Finance Statistics and Balance of Payment Statistics and selected data from the 2007 SAM. It was constructed in a collaboration of the World Bank, Instituto Nacional de Estatística (INE), Mozambique's Ministry of Economics and Finance, the International Food Policy Research Institute (IFPRI) and the United Nations University's World Institute for Development Economics Research (UNU-WIDER).

2 General structure of SAMs

A SAM is an economy-wide data framework that usually represents the real economy of a single country.² More technically, a SAM is a square matrix in which each account is represented by a row and column. Each cell shows the payment from the account of its column to the account of its row – the incomes of an account appear along its row, its expenditures down its column. The underlying principle of double-entry accounting requires that, for each account in the SAM, total revenue (row total) equals total expenditure (column total). Table 1 shows an aggregate SAM (with verbal explanations in place of numbers) with specific reference to data for Mozambique.

² For general discussions of SAMs and SAM-based modelling, see Pyatt and Round (1985); Reinert and Roland-Holst (1997); Pyatt (1988); Robinson and Roland-Holst (1988); and Breisinger et al (2009).

Table 1: Basic structure of a 2012 SAM for Mozambique

	Activities	Commodities	Land	Labour	Capital	Enterprises	Households	Government	Net activity taxes	Net product taxes	Import duties	Income taxes	Changes in inventories	Accumulation	Rest of the world	
Activities		Marketed output of total domestic economy					Output for domestic consumption									Gross output
Commodities	Intermediate Inputs	Transaction margins					Final marketed consumption expenditure by households	Final consumption expenditure by general government					Change in inventories	Gross fixed capital formation	Exports of goods & services	Total demand
Land	Compensation for land use															Income from land
Labour	Compensation of employees														Compensation of Mozambican residents in the rest of the world	Labour income
Capital	Net operating surplus + Consumption of fixed capital (Depreciation)														Investment income (primary income) receipts	Capital income
Enterprises					Gross operating surplus of corporations			Government transfers to enterprises							Current transfers from the rest of the world to enterprises	Enterprise earnings
Households			Household earnings from land holdings	Compensation of residents		Property and investment income received by households		Government transfers to households							Current transfers from the rest of the world to households	Household earnings
Government					Property income of the government	Miscellaneous transfers by enterprises to government		Government transfers to other government units (can be netted out)		Sales tax collected and transferred to the government	Import duties collected and transferred to the government	Income and corporate tax collected and transferred to the government			Current transfers from the rest of the world to government	Government receipts
Net activity taxes																Net other taxes on production in all industries
Net product taxes		Taxes on products														Net taxes on products less import duties
Import duties		Import duties														Import duties
Income taxes						Corporate tax	Income tax on individuals									Current taxes on income
Changes in inventories														Change in inventories		Change in inventories
Accumulation						Corporate savings	Household savings	Government budget deficit							Balance on the current account	Savings
Rest of the world		Imports of goods & services		Remittances to non-resident workers	Investment income outflows	Transfers by enterprises to the rest of the world		Government transfers to the rest of the world								Foreign exchange outflows
Total	Gross output	Total Supply	Distribution of income from land	Distribution of labour income	Distribution of capital income	Enterprise outlays	Household outlays	Government outlays	Net other taxes on production in all industries	Net taxes on products less import duties	Taxes on international trade and transactions: Import duties	Current taxes on income	Change in inventories	Gross fixed capital formation (investment) + change in inventories	Foreign exchange inflow	

Source: see text.

The SAM distinguishes between ‘activities’ (the entities that carry out production) and ‘commodities’ (representing markets for goods and non-factor services). SAM flows are valued at producers’ prices in the activity accounts and at market prices (including indirect commodity taxes and transactions costs) in the commodity accounts. The commodities are activity outputs, either exported or sold domestically, and imports. In the activity columns, payments are made to commodities (intermediate demand), and factors of production (value-added comprising of operating surplus and compensation of employees, land and/or livestock). In the commodity columns, payments are made to domestic activities, the rest of the world, and various tax accounts (for domestic and import taxes). This treatment provides the data needed to model imports as perfect or imperfect substitutes vis-à-vis domestic production.

The government is disaggregated into a core government account and different tax collection accounts, one for each tax type identified in the data. This disaggregation is necessary since otherwise the economic interpretation of some payments can be ambiguous. In the SAM, direct payments between the enterprises, households, government and the rest of the world are reserved for transfers as reported in the national accounts, government and balance of payment statistics. In the case of Mozambique, we draw on IMF’s government finance statistics and balance of payment statistics. Note that payments from the government to factors (for the labour services provided by public sector employees) are captured in the government services activity. Government consumption demand is a purchase of the output from the government services activity, which in turn, pays labour.

The SAM contains a number of factors of production, which earn incomes from their use in the production process, and then pay their incomes to enterprises, households, government and the rest of the world. Indirect capital earnings or enterprise profits are taxed according to average corporate tax rates and some profits may be repatriated abroad. The remaining capital earnings, together with labour earnings are paid to households. Households use their incomes to pay taxes, make transfers, save, and consume domestically produced and imported commodities.

3 Constructing the prior SAM

The initial task in building a SAM involves compiling data from various sources into the SAM framework. For Mozambique, this information was drawn from unpublished INE data together with IMF published government finance statistics and balance of payment statistics and other selected data from the 2007 SAM.

The INE unpublished industry-level production accounts, commodity-level supply–demand balances and a Supply Matrix for 2012 are consistent with each other (barring some rounding difference). The government finance and balance of payment data other than the INE data involves macro accounts and do not require adjustment. Where they overlap with the INE data, the latter is used. The Use Matrix taken from the 2007 SAM is fitted to the INE activities’ intermediate use data and their commodities’ intermediate sales estimates using biproportional scaling. The Use Matrix had to be subjected to minor manual adjustment to ensure a solution to this scaling. Although household and labour force survey data are available from INE (2009), we use the data that was processed for the 2007 SAM for reasons of convenience as the level of disaggregation is very similar.

Table 2: 2012 Macro SAM for Mozambique (billions of Rands)

	Activi- ties	Commodi- ties	Labour	Capital	Enter- prises	House- holds	Govern- ment	Net activity taxes	Net product taxes	Import duties	Income taxes	Changes in invent- ories	Accumu- lation	Rest of the world	Total
Activities		6,344													6,344
Commodities	3,524					1,908	684					14	593	939	7,662
Labour	1,452													9	1,460
Capital	1,328													40	1,367
Enterprises				832	242	214	287								1,576
Households			1,450	360	527		307							11	2,655
Government				64	163	188	165	41	281	37	466			2	1,407
Net activity taxes	41														41
Net product taxes		281													281
Import duties		37													37
Income taxes					182	283									466
Changes in inventories													14		14
Accumulation					461	53	-70							165	608
Rest of the world		999	11	111		9	36								1,165
Total	6,344	7,662	1,460	1,367	1,576	2,655	1,407	41	281	37	466	14	608	1,165	

Source: see text.

The macro SAM shown in Table 2 is an aggregation of the more detailed micro SAM. The rest of this section explains how each macro SAM entry is derived and disaggregated to arrive at the prior micro SAM. Each entry in the SAM is discussed below. The notation for SAM entries is (row, column) and the values are in billions of 2012 Meticals. The final disaggregated SAM is quite large and is included in the accompanying Excel workbook.

- i (Commodities, Activities)...MTmill305,248
Intermediate consumption of total domestic economy. Available from unpublished INE industry production accounts. A breakdown by activities using commodities is based on a Use Matrix from the 2007 SAM.
- ii (Land, Activities)...MTmill26,834
Compensation for land use. Part of gross value added with the latter available from unpublished INE industry production accounts. The breakdown of gross value added by factor and by activity is based on the 2007 SAM.
- iii (Labour, Activities)...MTmill230,316
Compensation of employees. Part of gross value added with the latter available from unpublished INE industry production accounts. The breakdown by activity is based on the 2007 SAM while a further breakdown into labour categories is based on the 2008/09 Household Survey as used in the 2007 SAM
- iv (Capital, Activities)...MTmill133,173
Net operating surplus plus consumption of fixed capital (depreciation). Part of gross value added with the latter available from unpublished INE industry production accounts. The breakdown is based on the 2007 SAM.
- v (Activities, Commodities)...MTmill595,842
Marketed output of total domestic economy. Available from unpublished INE industry production accounts. A breakdown by activities making commodities implies homogeneity in production (characterised by a diagonal Supply Matrix).
- vi (Commodities, Commodities)...MTmill82,580
Transaction margins. Available from unpublished INE commodity supply–demand balance accounts.
- vii (Net product taxes, Commodities)...MTmill25,039
Taxes on products. Available from unpublished INE commodity supply–demand balance accounts.
- viii (Import duties, Commodities)...MTmill8,372
Import duties. Available from unpublished INE commodity supply–demand balance accounts.
- ix (Rest of the world, Commodities)...MTmill162,189
Imports of goods & services. Available from unpublished INE commodity supply–demand balance accounts.
- x (Households, Land)...MTmill26,834
Household earnings from land holdings. Is equal to compensation for land use. A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xi (Households, Labour)...MTmill232,802
Compensation of residents. Is calculated as compensation of employees plus remittances from residents abroad less remittances to non-resident workers. A breakdown into labour and household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.

- xii (Rest of the world, Labour)...MTmill839
Remittances to non-resident workers. Available from IMF balance of payments statistics (primary income flows). It is assumed that these remittance outflows only apply to the highest skilled labour category.
- xiii (Enterprises, Capital)...MTmill129,774
Gross operating surplus of corporations. Derived as a residual by subtracting net primary income outflows and property income of the government from total gross operating surplus.
- xiv (Government, Capital)...MTmill449
Property income of the government. Available from the IMF' government finance statistics.
- xv (Rest of the world, Capital)...MTmill4,698
Investment income outflows. Available from IMF balance of payments statistics (primary income flows).
- xvi (Households, Enterprises)...MTmill115,261
Property and investment income received by households. Derived as a residual by netting out transfers by households to - and from the government and the rest of the world and corporate tax and savings from gross operating surplus of corporations. A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xvii (Government, Enterprises)...MTmill8,467
Miscellaneous transfers by enterprises to government. Available from the IMF' government finance statistics (social contribution, incidental sales and miscellaneous revenues)
- xviii (Income taxes, Enterprises)...MTmill26,709
Corporate tax. Available from the IMF' government finance statistics
- xix (Accumulation, Enterprises)...MTmill8,111
Corporate savings. Assumed to be 5% (same as in 2007 SAM)
- xx (Rest of the world, Enterprises)...MTmill3,667
Transfers by enterprises to the rest of the world. Available from IMF balance of payment statistics (Other current transfers).
- xxi (Activities, Households)...MTmill99,729
Output for domestic consumption. Available from unpublished INE industry production accounts.
- xxii (Commodities, Households)...MTmill202,960
Final consumption expenditure by households. Available from unpublished INE commodity supply-demand balance accounts. A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xxiii (Income taxes, Households)...MTmill12,015
Income tax on individuals. Available from the IMF' government finance statistics. A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xxiv (Accumulation, Households)...MTmill64,379
Household savings. Derived as a residual of household income and expenditure. A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.

- xxv (Commodities, Government)...MTmill90,943
Final consumption expenditure by general government. Available from unpublished INE commodity supply–demand balance accounts.
- xxvi (Enterprises, Government)...MTmill25,507
Government transfers to enterprises. Available from the IMF government finance statistics
- xxvii (Households, Government)...MTmill1,295
Government transfers to households. Available from the IMF government finance statistics. A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xxviii (Government, Government)...MTmill2,257
Government transfers to other government units (can be netted out). Available from the IMF government finance statistics
- xxix (Accumulation, Government)...MTmill-17,899
Government budget deficit. Derived as a residual of government revenues and expenditures
- xxx (Rest of the world, Government)...MTmill1,368
Government transfers to the rest of the world. Available from the IMF government finance statistics (includes payments to international organisations and interest payments)
- xxxi (Government, Net product taxes)...MTmill25,039
Sales tax collected and transferred to the government. Derived from elsewhere in the SAM
- xxxii (Government, Import duties)...MTmill8,372
Import duties collected and transferred to the government. Derived from elsewhere in the SAM
- xxxiii (Government, Income taxes)...MTmill38,725
Income and corporate tax collected and transferred to the government. Derived from elsewhere in the SAM
- xxxiv (Commodities, Changes in inventories)...MTmill8,538
Change in inventories. Available from unpublished INE commodity supply–demand balance accounts.
- xxxv (Commodities, Accumulation)...MTmill64,722
Gross fixed capital formation. Available from unpublished INE commodity supply–demand balance accounts.
- xxxvi (Changes in inventories, Accumulation)...MTmill8,538
Change in inventories. Derived from elsewhere in the SAM and transferred to the accumulation account.
- xxxvii (Commodities, Rest of the world)...MTmill119,030
Exports of goods & services. Available from unpublished INE commodity supply–demand balance accounts.
- xxxviii (Labour, Rest of the world)...MTmill3,325
Compensation of Mozambican residents in the rest of the world. Available from IMF balance of payment statistics (primary income flows). A breakdown into labour categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xxxix (Capital, Rest of the world)...MTmill1,748
Investment income (primary income) receipts. Available from IMF balance of payment statistics (primary income flows).
- xl (Enterprises, Rest of the world)...MTmill6,934
Current transfers from the rest of the world to enterprises. Available from IMF balance of payment statistics (other current transfers).

- xli (Households, Rest of the world)...MTmill2,891
Current transfers from the rest of the world to households. Available from IMF balance of payment statistics (other current transfers). A breakdown into household categories is based on the 2008/09 Household Survey as used in the 2007 SAM.
- xlii (Government, Rest of the world)...MTmill20,162
Current transfers from the rest of the world to government. Available from IMF balance of payment statistics (other current transfers).
- xliii (Accumulation, Rest of the world)...MTmill18,669
Balance on the current account. Derived as a residual of receipts from and payments to the rest of the world

4 Balancing the SAM

The balancing procedure takes place in two stages. First, a detailed SAM was constructed that contains aggregate entries for factors and households (known from here as the SUTSAM). As mentioned at the start of the previous section, the core data of this SUTSAM is derived from INE's unpublished industry-level production accounts, commodity-level supply–demand balances and a Supply Matrix for 2012. Aggregation of these data sources is reported in Appendix A. These data source are consistent with each other (barring some rounding difference). The government finance and the balance of payment data other than the INE data involves macro accounts and do not require adjustment. Where they overlap such as with total government expenditure on goods and services and total exports and total imports, the INE data is used. The Use Matrix taken from the 2007 SAM is fitted to the INE activities's intermediate use estimates and their commodities' intermediate sales estimates, using biproportional scaling. The Use Matrix had to undergo minor manual adjustment to ensure a solution to this scaling.

In order to complete the SUTSAM, minor rounding errors in INE's data were made to be absorbed by household expenditure as it has the widest possible coverage across both commodities and activities—with the latter representing own consumption of goods produced.

After balancing the SUTSAM, it was then disaggregated across factors and households using the 2008/9 household survey data previously used for the 2007 SAM. Since the aggregate SUTSAM is balanced, this results in imbalances for the household accounts only. These household accounts were balanced by biproportional scaling of the income distribution matrix. All sources of household income and household expenditure were initially disaggregated using the 2008/9 household survey data as previously used for the 2007 SAM. The resulting total income was compared with the total outlays of each household. Adjustments were made by scaling across the income sources while the target household income/expenditure total for the final balanced SAM was set to be the household outlay totals. Imbalances were therefore eliminated while holding all other non-household-related entries of the SUTSAM constant.

Finally, all operating surplus payments by the three livestock industries are reallocated to a newly created production factor 'livestock'. The receipts by the livestock production factor account are paid directly to households according to the shares of the underlying 2008/9 household survey that was also used in the 2007 SAM. These receipts are subtracted from the payments by capital to enterprises and by enterprises to households. In that way, no rebalancing is required. By doing so, the assumption is made that all livestock is directly owned by households and that the income tax and savings rates of households apply to this stream of income instead of those of enterprises.

5 Data issues

While the SAM construction described above can be considered as the acceptable given the data sources at hand, a number of improvement can be considered in the near future. They are:

1. Breakdown of value added. INE's production accounts reports on value added by industry but not its breakdown into labour, capital and land. INE is expected to complete these estimates during the second half of 2015. For our purposes, we currently make use of a breakdown that is derived from the 2007 SAM.
2. Breakdown of household and labour. INE is currently in the process of conducting a new household and labour force survey as a follow-up for the one that took place in 2008/09. Although the first results are out (INE 2015) they refer to the period August-October 2014. Full results are expected to be released in the second half of 2015. Using the first results would require making seasonal adjustments based on the survey that took place in 2008/09. This was considered a suboptimal solution and it was decided at this stage to continue using the 2008/9 survey (INE 2009).
3. Related to the previous comment, the unpublished INE activity production accounts makes a distinction between domestic marketed output and output for own consumption. Likewise, the unpublished INE commodity supply–demand balance identifies home consumption. After some rearranging we were able to report this in an internally consistent way in our 2012 SAM. However, the 2008/9 household survey data that is used for the 2007 SAM and which we have adopted for this 2012 SAM does not offer a breakdown of own consumption by household income groups. While awaiting the new survey results, we adopted the rule that no urban households other than the lowest quintile engages in home production and consumption. The exception is for home consumption of real estate services (imputed rent) which have been distributed across all households and geographic (rural/urban) areas according to the 2008/9 survey results used for the 2007 SAM.
4. The Use Matrix is at this stage derived from the 2007 SAM. Earlier, we mentioned that we had to make several manual adjustments in order to fit the Use Matrix to the INE industry and commodity-level intermediate use and sales respectively. Moreover, it appears that several further manual adjustments have been made in the past and that the origin of the Use Matrix dates back well into the 1990s (Arndt et al. 1998). It is recommended that recent enterprise surveys are explored in order to construct a new Use Matrix.
5. There seems to be considerable discrepancies between the IMF's government finance and balance of payment statistics on key variables that are also available from the unpublished INE data. For example, the INE data is about 20% higher than the IMF for government expenditure and more than 40% lower for taxes on goods and services. While we use the INE unpublished data where there is overlap, it does raise questions about the data on primary incomes and current transfers drawn from the IMF. Somewhat smaller but otherwise similar differences in terms of direction are recorded between the INE unpublished data that we use for purposes of the 2012 SAM and their Statistical Yearbook (INE 2014: 92). Recordings of imports and exports also vary across the

three sources: INE unpublished, *INE Statistical Yearbook*, and the IMF Balance of Payment Statistics.

6 Snapshot through the 2012 SAM lens

In this section, a first impression is reported of the structure of the Mozambique economy through the lens of the SAM. For activities and commodities, we aggregate up from the 55 available to 7 (See Appendix B). We start with the distribution of value added. It can be seen that although with almost 55%, services make the largest contribution to GDP, agriculture still accounts for close to 30% of GDP (at factor costs). Mining's contribution is 3.5% while manufacturing's is 12%. Most unskilled earnings are due in agriculture and most higher skilled earnings can be found in services.

Table 3: Distribution of value added according to a 2012 SAM of Mozambique

Value Added	Crop land	Livestock	labour - not completed primary	labour - completed primary	labour - completed secondary	labour - completed tertiary	Capital	GDP @ Fct Cst	Crop land	Livestock	labour - not completed primary	labour - completed primary	labour - completed secondary	labour - completed tertiary	Capital	GDP @ Fct Cst	
1 Agr, For & Fish	100.0%	100.0%	43.7%	15.3%	3.6%	1.3%	29.3%	10.7%	28.5%	24.1%	2.5%	51.3%	8.3%	0.7%	0.4%	60.8%	12.6%
2 Mining	0.0%	0.0%	1.3%	1.6%	1.2%	1.1%	1.4%	7.8%	3.4%	0.0%	0.0%	11.5%	6.3%	2.1%	2.8%	23.3%	76.7%
3 Food, beverages & tobacco	0.0%	0.0%	5.8%	5.4%	2.8%	0.7%	4.6%	7.4%	5.2%	0.0%	0.0%	32.8%	15.5%	3.2%	1.2%	52.6%	47.4%
4 Light manufacturing	0.0%	0.0%	2.9%	3.5%	1.3%	1.5%	2.7%	1.7%	2.1%	0.0%	0.0%	39.5%	24.2%	3.5%	6.3%	73.6%	26.4%
5 All other manufacturing	0.0%	0.0%	1.0%	2.4%	1.7%	0.6%	1.4%	10.5%	4.4%	0.0%	0.0%	7.1%	8.3%	2.4%	1.3%	19.1%	80.9%
6 Utilities	0.0%	0.0%	1.8%	1.4%	1.2%	2.9%	1.8%	7.2%	3.5%	0.0%	0.0%	15.4%	6.2%	2.0%	7.3%	31.0%	69.0%
7 All services	0.0%	0.0%	37.4%	69.8%	88.3%	91.8%	58.8%	54.7%	52.9%	0.0%	0.0%	20.8%	19.6%	9.9%	15.2%	65.5%	34.5%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.6%	6.3%	0.7%	29.4%	14.3%	6.0%	8.7%	59.0%	33.4%

Source: see text.

Only 13% of agriculture's value added is distributed to capital, but if income from crop land and livestock is added in this rises to just under 40%. Labour earns therefore just over 60% of agriculture's value added suggesting that commercial agriculture is an important income earner in rural areas. About 30% of total GDP (at factor costs) is earned by unskilled labour, and if primary schooled labour is added this rises to about 45%. In light manufacturing this is as much as almost 65%, hence the earnings of capital are low at just over 25%. As expected, relatively high capital shares of value added are recorded in other manufacturing (mainly metals and machinery) and utilities.

Domestic marketed commodity supply consists of what is produced by local activities for the market (excluding what is produced for own consumption) plus sales and import taxes, margins and what is imported. In the next table it can be seen that the role of agriculture is much smaller than in the previous table as most of its output is for own consumption. On the other hand, agriculture accounts for a large part of the transaction margins, suggesting high cost distribution channels. Sales tax and import duties are mainly generated by food production and other manufacturing. Likewise, most imports are accounted for by these products.

Table 4: Distribution of domestic marketed supply according to a 2012 SAM of Mozambique

Domestic Marketed Supply	Domestic marketed output	Transaction margins	Sales tax	Import duties	Imports	Total marketed supply	Domestic marketed output	Transaction margins	Sales tax	Import duties	Imports	Total marketed supply
1 Agr, For & Fish	8.3%	26.5%	3.2%	1.9%	5.5%	3.3%	60.7%	27.0%	1.0%	0.2%	11.1%	100.0%
2 Mining	3.3%	2.1%	0.0%	0.0%	0.2%	2.9%	31.8%	6.8%	0.0%	0.0%	1.4%	100.0%
3 Food, beverages & tobacco	8.2%	30.1%	39.7%	14.1%	14.4%	12.3%	45.1%	23.0%	9.2%	1.1%	21.6%	100.0%
4 Light manufacturing	2.8%	3.9%	3.3%	10.4%	8.0%	4.7%	40.9%	19.8%	5.7%	2.1%	31.5%	100.0%
5 All other manufacturing	3.0%	30.4%	29.2%	73.5%	52.6%	20.3%	30.3%	14.1%	4.1%	3.5%	48.0%	100.0%
6 Utilities	3.7%	0.0%	1.4%	0.0%	2.2%	3.0%	84.8%	0.0%	1.3%	0.0%	13.8%	100.0%
7 All services	64.2%	1.1%	17.2%	0.0%	17.0%	47.5%	92.1%	0.2%	1.0%	0.0%	6.7%	100.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	68.2%	3.4%	2.9%	1.0%	18.6%	100.0%

Source: see text.

Household expenditure patterns for marketed consumption is reported in the next table. Food is the dominant item except for the highest two urban income quintiles. For the latter, services become most important but typical consumer goods (light and other manufacturing) do not seem to feature much in their (or any other) consumption basket.

Table 5: Expenditure patterns of marketed consumption according to a 2012 SAM of Mozambique

Marketed Consumption	rural	rural	rural	rural	rural	rural	urban	urban	urban	urban	urban	urban	total
	quintile 1	quintile 2	quintile 3	quintile 4	quintile 5	total	quintile 1	quintile 2	quintile 3	quintile 4	quintile 5	total	
1 Agr, For & Fish	38.3%	32.0%	30.1%	23.4%	15.8%	23.2%	30.4%	24.3%	20.3%	16.7%	5.7%	8.2%	13.7%
2 Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3 Food, beverages & tobacco	33.1%	33.8%	38.7%	41.0%	33.4%	36.8%	33.7%	40.0%	38.1%	41.2%	26.2%	28.7%	31.7%
4 Light manufacturing	8.6%	10.0%	11.1%	10.6%	13.7%	11.8%	4.5%	7.3%	7.3%	8.2%	6.8%	7.0%	8.8%
5 All other manufacturing	12.5%	11.5%	10.6%	11.5%	13.5%	14.8%	11.4%	9.6%	10.7%	9.0%	13.4%	12.7%	13.5%
6 Utilities	0.4%	0.2%	0.4%	0.4%	0.3%	0.3%	2.8%	3.1%	4.8%	4.4%	3.9%	4.0%	2.6%
7 All services	7.1%	6.6%	3.1%	13.2%	17.3%	13.1%	11.3%	15.0%	18.1%	20.4%	44.0%	33.4%	23.7%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: see text.

The dependence on food products become even more apparent when considering the expenditure patterns of own consumption. As discussed earlier, by assumption, we have excluded all urban quintiles except the lowest. In the last row of the next table, we calculate the share of food products (include agriculture own and marketed consumption reported in the previous table) of total household expenditure. The shares range around 85% for the lowest rural three quintiles.

Table 6: Expenditure patterns of own consumption according to a 2012 SAM of Mozambique

Own Consumption	rural	rural	rural	rural	rural	rural	urban	urban	urban	urban	urban	urban	total	
	quintile 1	quintile 2	quintile 3	quintile 4	quintile 5	total	quintile 1	quintile 2	quintile 3	quintile 4	quintile 5	total		
1 Agr, For & Fish	32.8%	34.4%	35.4%	34.6%	33.0%	34.2%	88.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	82.1%
2 Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3 Food, beverages & tobacco	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
4 Light manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5 All other manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
6 Utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
7 All services	7.2%	5.6%	4.6%	5.3%	7.0%	5.8%	11.5%	100.0%	100.0%	100.0%	100.0%	100.0%	90.4%	17.3%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
8 Own sh of total consumption	62.3%	60.5%	62.1%	55.6%	40.8%	53.2%	54.5%	3.7%	3.3%	3.1%	3.1%	10.0%	32.3%	
9 Food prods (agr own&mrk)	84.7%	85.4%	85.3%	81.2%	67.1%	78.2%	80.1%	58.7%	53.2%	52.7%	23.0%	34.2%		

Source: see text.

Own consumption of services (row 7) is mainly imputed rent associated with home ownership.

Finally, we report on household income distribution and expenditure. Starting with the first, the next table shows that household income consist of earnings from crop land, livestock, labour, investment income from enterprises, government transfers and transfers from the rest of the world. As was observed earlier, the share of labour in rural household income is higher than perhaps expected, only slightly lower than in urban areas. Government transfers to households seem to have an urban bias but also appear to be relatively low. Note that the share these transfers in household income is the highest for the top urban quintile. It will be interesting to confirm this observation when the new household survey data becomes available.

Table 7: Household income patterns according to a 2012 SAM of Mozambique

Household income	Crop land	Livestock	labour - not completed primary	labour - completed primary	labour - completed secondary	labour - completed tertiary	Labour	Investment income	Governance at transfers	Transfers from the RoW	Total income
1 rural quintile1	22.3%	1.8%	47.0%	5.4%	0.6%	0.0%	52.3%	20.3%	0.1%	2.0%	100.0%
2 rural quintile2	16.8%	1.7%	46.0%	9.0%	0.9%	0.0%	55.3%	24.6%	0.1%	0.3%	100.0%
3 rural quintile3	13.9%	1.6%	45.0%	11.1%	1.3%	0.9%	58.3%	25.1%	0.1%	1.1%	100.0%
4 rural quintile4	12.5%	1.3%	42.7%	11.8%	2.3%	2.4%	59.3%	24.3%	0.2%	1.3%	100.0%
5 rural quintile5	9.5%	1.1%	39.1%	12.8%	3.0%	7.2%	62.1%	26.6%	0.2%	0.6%	100.0%
6 rural total	13.0%	1.3%	42.6%	11.2%	2.2%	3.3%	59.3%	25.2%	0.2%	1.0%	100.0%
7 urban quintile1	8.0%	0.2%	36.1%	23.2%	1.5%	0.1%	62.3%	28.1%	0.2%	0.6%	100.0%
8 urban quintile2	4.3%	0.2%	30.9%	20.9%	1.7%	0.2%	53.7%	41.1%	0.2%	0.6%	100.0%
9 urban quintile3	3.0%	0.1%	26.5%	22.0%	3.4%	0.8%	52.6%	43.4%	0.2%	0.7%	100.0%
10 urban quintile4	2.0%	0.1%	23.8%	19.6%	6.3%	1.5%	51.8%	45.6%	0.2%	0.3%	100.0%
11 urban quintile5	0.7%	0.1%	16.8%	19.8%	11.5%	17.7%	65.3%	32.2%	0.6%	0.6%	100.0%
12 urban total	1.1%	0.1%	18.7%	20.0%	10.3%	14.6%	63.5%	34.2%	0.5%	0.5%	100.0%
households total	7.1%	0.7%	30.7%	15.6%	6.2%	8.3%	61.4%	29.7%	0.3%	0.8%	100.0%

Source: see text.

The last table shows household total outlay patterns. Obviously, expenditure on goods and services dominates. Income tax increases with income and from rural to urban households as expected. Nevertheless, the income tax collection rate does not reach more than 5.5%.

Table 8: Household total outlay patterns according to a 2012 SAM of Mozambique

	rural quintil e1	rural quintil e2	rural quintil e3	rural quintil e4	rural quintil e5	rural total	urban quintil e1	urban quintil e2	urban quintil e3	urban quintil e4	urban quintil e5	urban total	total
1 Expenditure	90.7%	88.0%	87.8%	84.9%	78.9%	84.1%	90.8%	81.5%	77.4%	73.4%	75.2%	75.5%	79.8%
2 Income tax	0.0%	0.0%	0.2%	1.1%	3.8%	1.7%	0.0%	0.1%	0.7%	2.4%	5.4%	4.7%	3.2%
3 Savings	9.3%	12.0%	12.0%	14.0%	17.3%	14.2%	9.1%	18.3%	21.3%	24.2%	19.4%	19.8%	17.0%
Tot inc	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: see text.

The savings rate is recorded to be about 10% for the lowest rural quintile and more than 20% for the higher urban quintiles. Such high savings rates are perhaps the result of limited forced savings channels through employer pension funds or lack of tax benefits and other government support.

7 Summary

This paper documented a 2012 Social Accounting Matrix (SAM) for Mozambique. The SAM is built using INE unpublished industry-level production accounts, commodity-level supply–demand balances and a Supply Matrix together with national accounts, IMF government and balance of payment statistics, all for the year 2012 and a Use Matrix and household and labour market survey data from a 2007 SAM for Mozambique.

It provides a detailed representation of the Mozambican economy and separates 55 activities and commodities. Labour is disaggregated by education attainment level, and households by per capita expenditure quintiles for urban and rural areas. The SAM features production for home consumption as reported in the unpublished data made available by INE and identifies government, investment and foreign accounts.

The core data for the SAM uses INE unpublished industry-level production accounts, commodity-level supply–demand balances and a Supply Matrix together with national accounts. Only minor inconsistencies were observed which were absorbed in an ad hoc manner. While the SAM construction described above can be considered as the acceptable given the data sources at hand, a number of improvements can be considered in the near future. They should focus on:

1. A breakdown of value added by factors and activities.

2. Breakdown of household and labour using the new household and labour force survey.
3. The distinction between domestic marketed output and output for own consumption across household groups using the new household and labour force survey.
4. Updating the Use Matrix using enterprise surveys.
5. Discrepancies between national accounts and IMF Government Finance and Balance of Payment Statistics on key variables.

The data was used to describe the Mozambique economy through the SAM lens. A number of observations were made, including relatively high wage earnings amongst low income rural households, high government transfers to high income urban households, low tax collection rates and high savings rates.

Appendix A: Mapping from INE to SAM Activity and Commodity

SAM Code	SAM Description	INE Activity Code	INE Activity Description	INE Commodity Code	INE Commodity Description
1. ocer	Other cereals	R011	Agricultura	P01111-1	Trigo
2. maiz	Maize	R011	Agricultura	P01111-2	Milho
3. sorg	Sorghum and millet	R011	Agricultura	P01111-9	Mapira, mexoeira e outro cereais em grão
4. puls	Pulses	R011	Agricultura	P01112-1	Feijão
5. gnut	Groundnuts	R011	Agricultura	P01112-2	Amendoim
6. rice	Rice	R011	Agricultura	P01120	Arroz em casca
7. cass	Cassava	R011	Agricultura	P01131	Mandioca
8. root	Other roots	R011	Agricultura	P01139-1	Outros tubérculos e raízes
9. vege	Vegetables	R011	Agricultura	P01139-2	Produtos hortícolas
10. sugr	Sugar cane	R011	Agricultura	P01140	Cana de açúcar
11. toba	Tobacco	R011	Agricultura	P01150	Tabaco-folha
12. cott	Cotton and fibres	R011	Agricultura	P01161	Algodão-carçoço
13. frui	Fruits and nuts	R011	Agricultura	P01200	Frutos frescos
14. frui	Fruits and nuts	R011	Agricultura	P01231	Cajú
15. oils	Other oilseeds	R011	Agricultura	P01240-1	Copra e coco
16. ocrp	Other crops	R011	Agricultura	P01240-9	Jatrofa
17. coff	Coffee and tea	R011	Agricultura	P01251	Chá-folha
18. ocrp	Other crops	R011	Agricultura	P01291	Outros produtos agrícolas de uso industrial
19. ocrp	Other crops	R011	Agricultura	P01292	Outros produtos agrícolas não industriais
20. catt	Cattle	R014	Produção animal	P01410	Gado bovino
21. oliv	Other livestock	R014	Produção animal	P01420	Gado ovino e caprino
22. oliv	Other livestock	R014	Produção animal	P01430	Gado suíno
23. poul	Poultry	R014	Produção animal	P01440-1	Aves vivas
24. poul	Poultry	R014	Produção animal	P01440-2	Ovos frescos
25. oliv	Other livestock	R014	Produção animal	P01499-1	Animais selvagens e outros comestíveis
26. oliv	Other livestock	R014	Produção animal	P01499-9	Produtos de origem animal
27. fore	Forestry	R020	Silvicultura, exploração florestal e actividades relacionadas	eP02200-1	Lenha e carvão vegetal
28. fore	Forestry	R020	Silvicultura, exploração florestal e actividades relacionadas	eP02200-2	Madeira em toros e outros produtos da silvicultura
29. fore	Forestry	R020	Silvicultura, exploração florestal e actividades relacionadas	eP02300	Outros produtos florestais, excepto madeira
30. fish	Fishing	R030	Pesca, aquacultura, e actividades dos serviços relacionados	P03111-1	Peixes frescos, refrigerados
31. fish	Fishing	R030	Pesca, aquacultura, e actividades dos serviços relacionados	P03111-2	Camarão, gamba e lagosta
32. fish	Fishing	R030	Pesca, aquacultura, e actividades dos serviços relacionados	P03111-3	Outros produtos da pesca
33. coal	Coal and lignite	R051	Extracção de carvão	P05100	Carvão mineral
34. ngas	Natural gas	R062	Extracção de gás natural condensados	eP06201	Gás natural, liquefeito ou no estado gasoso
35. ngas	Natural gas	R062	Extracção de gás natural condensados	eP06202	Condensados de gás natural
36. omin	Other mining	R070	Extracção e preparação de minérios metálicos	deP07291	Bauxite
37. omin	Other mining	R070	Extracção e preparação de minérios metálicos	deP07299	Outros minerais metálicos
38. omin	Other mining	R080	Outras indústrias extrativas	P08100	Pedra, argila e areia
39. omin	Other mining	R080	Outras indústrias extrativas	P08991	Pedras preciosas e semi-preciosas
40. omin	Other mining	R080	Outras indústrias extrativas	P08999	Outros minerais não metálicos
41. meat	Meat	R101	Abate de animais, preparacao e conservacao de carne e de produtos a base de carne	eP10101-1	Carne de bovino
42. meat	Meat	R101	Abate de animais, preparacao e conservacao de carne e de produtos a base de carne	eP10101-2	Carne de suíno
43. meat	Meat	R101	Abate de animais, preparacao e conservacao de carne e de produtos a base de carne	eP10101-3	Carne de outros animais domesticados, excepto aves
44. meat	Meat	R101	Abate de animais, preparacao e conservacao de carne e de produtos a base de carne	eP10101-8	Peles e couro

Appendix A (cont): Mapping from INE to SAM Activity and Commodity

SAM Code	SAM Description	INE Activity Code	INE Activity Description	INE Commodity Code	INE Commodity Description
45	meat Meat	R101	Abate de animais, preparacao e conservacao de carne e de produtos a base de carne	eP10102	Carne de aves
46	meat Meat	R101	Abate de animais, preparacao e conservacao de carne e de produtos a base de carne	eP10104	Produtos a base de carne
47	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10200	Produtos da pesca preparados e em conserva
48	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10301	Frutos e produtos vegetais transformados incl sumos
49	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10302	Amêndoa de cajú inteira e partida
50	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10400	Óleos vegetais e animais
51	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10500	Leite processado e derivados
52	cvgrp Cereal and processing vegetable	R106	Transformação de cereais leguminosas; fabricação de rações	eP10611-1	Farinha de trigo
53	cvgrp Cereal and processing vegetable	R106	Transformação de cereais leguminosas; fabricação de rações	eP10611-2	Farinha de milho
54	cvgrp Cereal and processing vegetable	R106	Transformação de cereais leguminosas; fabricação de rações	eP10612	Farinha de mandioca e derivados, inclui tapioca
55	cvgrp Cereal and processing vegetable	R106	Transformação de cereais leguminosas; fabricação de rações	eP10613	Arroz descascado
56	cvgrp Cereal and processing vegetable	R106	Transformação de cereais leguminosas; fabricação de rações	eP10619	Outros produtos e serviços de moagem
57	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10710	Pão, e produtos de pasteleria e doçaria
58	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10730	Açúcar e Melaço de açúcar
59	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10750	Massas alimentícias
60	food Other foods	R107	Fabricação de outros alimentares diversos, n.e.	produtosP10790	Outros produtos das indústrias alimentícias
61	cvgrp Cereal and processing vegetable	R106	Transformação de cereais leguminosas; fabricação de rações	eP10800	Rações
62	beve Beverages	R110	Fabricação de bebidas e tabaco	P11010-1	Aguardentes e outras bebidas espirituosas
63	beve Beverages	R110	Fabricação de bebidas e tabaco	P11010-2	Bebidas alcóolicas tradicionais
64	beve Beverages	R110	Fabricação de bebidas e tabaco	P11020	Vinho
65	beve Beverages	R110	Fabricação de bebidas e tabaco	P11030	Cerveja e malte
66	beve Beverages	R110	Fabricação de bebidas e tabaco	P11041	Águas minerais e bebidas refrigerantes não alcoólicas
67	ptob Tobacco processing	R110	Fabricação de bebidas e tabaco	P12002	Cigarros, de charutos e similares
68	text Textiles	R130	Fabricação de artigos têxteis vestuário	eP13111-1	Fibra de algodão
69	text Textiles	R130	Fabricação de artigos têxteis vestuário	eP13111-2	Outros produtos de fiação
70	text Textiles	R130	Fabricação de artigos têxteis vestuário	eP13900	Produtos têxteis, malhas e tapecaria
71	clth Clothing	R130	Fabricação de artigos têxteis vestuário	eP14100	Vestuário, excepto de plástico
72	leat Leather and footwear	R150	Preparação de couro e artigos de couro	eP15000	Curtumes, calçado e artigos de couro
73	wood Wood and paper	R160	Industria de madeira e da cortica excepto mobiliario	P16000	Produtos da serração de madeira, folhados e contraplacados, carpintaria
74	wood Wood and paper	R170	Produção de papel e impressão	P17000	Papel e artigos de papel e cartão
75	wood Wood and paper	R170	Produção de papel e impressão	P18100	Impressão
76	petr Petroleum	R200	Fabricação de produtos plásticos e de borracha	quimicos,P19200-1	Gasolina
77	petr Petroleum	R200	Fabricação de produtos plásticos e de borracha	quimicos,P19200-2	Gasóleo
78	petr Petroleum	R200	Fabricação de produtos plásticos e de borracha	quimicos,P19200-3	Outros combustíveis derivados do petróleo
79	petr Petroleum	R200	Fabricação de produtos plásticos e de borracha	quimicos,P19200-9	Óleos e massas lubrificantes, inclui betume
80	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P20100	Outros produtos químicos industriais
81	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P20210	Adubos e pesticidas

Appendix A (cont): Mapping from INE to SAM Activity and Commodity

SAM Code	SAM Description	INE Activity Code	INE Activity Description	INE Commodity Code	INE Commodity Description
82	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P20220	Tintas, vernizes, resinas sintéticas e materiais plásticos
83	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P20231	Sabões e sabonetes, detergentes, produtos de limpeza
84	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P20290	Produtos químicos diversos
85	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P21000	Produtos farmacêuticos
86	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P22110	Pneus e câmaras de ar
87	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P22190	Outros artigos de borracha
88	chem Chemicals	R200	Fabricação de produtos plásticos e de borracha	quimicos,P22200	Artigos de plástico
89	nmet Non-metal minerals	R230	Fabricação de produtos minerais não metálicos	minerais nãoP23100	Vidro e artigos de vidro
90	nmet Non-metal minerals	R230	Fabricação de produtos minerais não metálicos	minerais nãoP23920	Materiais de barro para a construção
91	nmet Non-metal minerals	R230	Fabricação de produtos minerais não metálicos	minerais nãoP23910	Artigos de porcelana, faiança e grés
92	nmet Non-metal minerals	R230	Fabricação de produtos minerais não metálicos	minerais nãoP23941	Cimento e clínquer
93	nmet Non-metal minerals	R230	Fabricação de produtos minerais não metálicos	minerais nãoP23950	Produtos de fibrocimento ç cal e gesso ou (Fabricação de produtos de betão)
94	nmet Non-metal minerals	R230	Fabricação de produtos minerais não metálicos	minerais nãoP23960	Pedra para construção e outros produtos nao metalicos
95	metl Metals and products	and metalR241	Indústria metalúrgica de base	P24100-1	Produtos laminados de ferro e aço
96	metl Metals and products	and metalR241	Indústria metalúrgica de base	P24100-2	Varão, arame e tubos de ferro ou aço
97	metl Metals and products	and metalR241	Indústria metalúrgica de base	P24100-3	Outros produtos básicos de ferro ou aço
98	metl Metals and products	and metalR242	Indústria de alumínio de base	P24200-1	Alumínio
99	metl Metals and products	and metalR241	Indústria metalúrgica de base	P24200-2	Outros produtos da industria basica de metais não ferrosos
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P25110	Elementos de construção em metal
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P25930	Cutelarias, ferramentas manuais
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P25990	Outros produtos metálicos
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P26200	Maquinas de escritorio e equipamento
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P26400	Equipamento e aparelhos de radio, TV e comunicacoes
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P26999	Outros produtos electrónicos e ópticos
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P27500	Aparelhos para uso doméstico, electrico e não electrico
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P27900	Maquinas e aparelhos electricas exc. para uso doméstico
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P28210	Tractores e seus acessórios, maquinas e equipamentos agricolas
10	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P28240	Máquinas para as indústrias extractivas e para construção
11	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P28999	Outras maquinarias e equipamento
11	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P29100-1	Automóveis para o transporte de passageiros
11	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P29100-2	Outros automóveis (incl. machimbombos)
11	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P29300	Partes, peças separadas e acessórios de automveis
11	mach Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P30000	Outro material de transporte n.e.c.
11	oman Other manufacturing	R310	Fabricação de mobiliário (não madeira) e outras indústrias transformadoras	P31000	Mobília

Appendix A (cont): Mapping from INE to SAM Activity and Commodity

SAM Code	SAM Description	INE Activity Code	INE Activity Description	INE Commodity Code	INE Commodity Description
11 oman	Other manufacturing	R310	Fabricação de mobiliário (não transformadoras e outras indústrias)	P32000	Outros produtos transformados não especificados
11 mach	Machinery equipment	andR250	Fabricação de prod. metálicos incluído maquinas e equip.	P33000	Reparação e manutenção de produtos metálicos, máquinas e equipamentos
11 elec	Electricity, gas steam	andR351	Produção, transporte, distribuição e comércio de electricidade	P35100	Electricidade
11 elec	Electricity, gas steam	andR352	Produção de gás; distribuição e comércio de gás por conduta	P35200	Gas
12 watr	Water supply and sewage	R360	Captação, tratamento e distribuição de água	P36000	Captação, tratamento e distribuição de água
12 watr	Water supply and sewage	R380	Recolha, tratamento, etc. de águas residuais, lixo, resíduos; descontaminação	P38000	Recolha, tratamento, etc. de águas residuais, lixo, resíduos; descontaminação
12 cons	Construction	R410	Construção geral de edificios e desenvolvimento de projectos de edificios	P41000	Construção de edificios (residenciais e não residenciais)
12 cons	Construction	R421	Construção de auto-estradas, pontes, aeroportos e vias ferreas	P42100	Construcao de auto-estradas, estradas, pontes, aeroportos e vias ferreas
12 cons	Construction	R422	Construção de redes de transporte de agua, distribuição de energia, de telecomunicacoes e outras redes	P42200	Construcao de redes de transporte de agua, distribuicao de energia, de telecomunicacoes e outras redes
12 trad	Wholesale and trade	andR451	Comercio por grosso e a retalho	P45100	Serviços de comércio
12 trad	Wholesale and trade	andR452	Manutenção e reparação de veiculos automoveis e motociclos	P45200	Reparação de veículos
12 tran	Transportation storage	andR491	Transporte ferroviario	P49110	Transporte ferroviário de passageiros
12 tran	Transportation storage	andR491	Transporte ferroviario	P49120	Transporte ferroviário de mercadorias
12 tran	Transportation storage	andR492	Transporte rodoviario	P49210	Transporte rodoviário de passageiros
13 tran	Transportation storage	andR492	Transporte rodoviario	P49230	Transporte rodoviário de mercadorias
13 tran	Transportation storage	andR493	Oleodutos e gasodutos	P49300-1	Transporte por oleodutos
13 tran	Transportation storage	andR493	Oleodutos e gasodutos	P49300-2	Transporte por gasoduto
13 tran	Transportation storage	andR500	Transportes por água	P50000	Transporte marítimo e cabotagem
13 tran	Transportation storage	andR510	Transportes aéreo	P51000	Transporte aéreo
13 tran	Transportation storage	andR520	Armazenagem e actividades auxiliares dos transportes	P52240	Serviços anexos e auxiliares dos transportes
13 comm	Information communication	andR530	Actividades postais e dos correios	P53000	Servicos de correio
13 hotl	Accomodation and services	andR550	Alojamento e hotéis	P55000	Serviços de hotéis
13 hotl	Accomodation and services	andR560	Restauração e similares	P56000	Serviços de restaurantes
13 comm	Information communication	andR580	Actividades de edição de livros, jornais e de outras publicações	P58000	Edição de livros, jornais e de outras publicações
14 comm	Information communication	andR590	Actividades de rádio e de televisão	P59000	TV, rádio, filmes videos
14 comm	Information communication	andR610	Telecomunicações	P61100	Serviços de telecomunicações por fio
14 comm	Information communication	andR610	Telecomunicações	P61200	Servicos de telefonia móvel
14 comm	Information communication	andR610	Telecomunicações	P61900	Outros serviços de telecomunicações
14 comm	Information communication	andR620	Consultoria informática e actividades de processamento de dados; portais web	P62000	Consultoria informática, etc.
14 fsrv	Finance and insurance	R642	Outras instituições financeiras monetárias	P64000-1	Serviços de intermediação financeira exc. SIFIM
14 fsrv	Finance and insurance	R642	Outras instituições financeiras monetárias	P64000-2	SIFIM
14 fsrv	Finance and insurance	R650	Seguros e fundos de pensões	P65000	Serviços de seguros

Appendix A (cont): Mapping from INE to SAM Activity and Commodity

SAM Code	SAM Description	INE Activity Code	INE Activity Description	INE Commodity Code	INE Commodity Description
14 fsrv	Finance and insurance	R660	Actividades auxiliares de servicos financeiros e de seguros	P66000	Servicos auxiliares de intermediação financeira
14 real	Real estate activities	R680	Actividades imobiliarias	P68000-1	Servicos de imóveis residenciais
15 real	Real estate activities	R680	Actividades imobiliarias	P68000-2	Outros servicos de imóveis
15 bsrv	Business services	R690	Actividades de consultoria, científicas, técnicas e similares	P69000	Consultorias científicas, técnicas e similares
15 bsrv	Business services	R770	Actividades de aluguer	P77000	Servicos de aluguer de máquinas e equipamentos de transporte
15 bsrv	Business services	R790	Agencias de viagem, operadores turísticos e outros servicos de reservas e actividades relacionadas	P79000	Servicos das agências de viagens e turismo
15 bsrv	Business services	R820	Actividades de servicos administrativos e de apoio prestados as empresas	P82000	Servicos prestados principalmente às empresas
15 padm	Public administration	R841	Administração central	P84111	Servicos da administração pública (central) e defesa
15 padm	Public administration	R842	Administração local	P84112	Servicos da administração autárquica
15 padm	Public administration	R843	Segurança social obrigatória	P84300	Servicos de segurança social obrigatoria
15 educ	Education	R850	Educação	P85000-1	Servicos de educação pública
15 educ	Education	R850	Educação	P85000-2	Servicos de educação privada
16 educ	Education	R850	Educação	P85000-3	Outros servicos educativos
16 heal	Health and social work	R860	Actividade de saude humana	P86000-1	Servicos de saúde pública
16 heal	Health and social work	R860	Actividade de saude humana	P86000-2	Servicos de saúde privada
16 heal	Health and social work	R870	Actividades de acção social	P87000-1	Servicos de acção social pública
16 heal	Health and social work	R870	Actividades de acção social	P87000-2	Servicos de acção social privada
16 osrv	Other services	R900	Actividades artisticas, espectaculos, desportivos e recreativos	P90000	Servicos artisticas, espectaculos, desportivos e recreativos
16 osrv	Other services	R940	Actividades de organizações associativas	P94000	Servicos prestados por organizações
16 osrv	Other services	R950	Reparação de computadores e bens de uso pessoal e doméstico	P95000	Reparação de computadores e bens de uso pessoal e doméstico
16 osrv	Other services	R960	Outras actividades de servicos pessoais	P96000	Outros servicos pessoais
16 osrv	Other services	R970	Actividades das familias empregadoras de pessoal domestico	P97000	Servicos domésticos
17 osrv	Other services			P99300	Aquisições efectuadas directamente no estrangeiro
17 osrv	Other services			P99400	Aquisições efectuadas pelos não residentes no país
17 mach	Machinery and equipment			P99900	Produtos não especificados

Appendix B: Global Set for a 2012 SAM for Mozambique

Code	Code	SubCode	Description	Code	Code	SubCode	Description
1 amaiz	cmaiz	saff	Maize	42 aelec	celec	sutil	Electricity, gas and steam
2 asorg	csorg	saff	Sorghum and millet	43 awatr	cwatr	sutil	Water supply and sewage
3 arice	crice	saff	Rice	44 acons	ccons	sasrv	Construction
4 aocer	cocer	saff	Other cereals	45 atrad	ctrad	sasrv	Wholesale and retail trade
5 apuls	cpuls	saff	Pulses	46 atran	ctran	sasrv	Transportation and storage
6 agnut	cgnut	saff	Groundnuts	47 ahotl	chotl	sasrv	Accommodation and food services
7 aoils	coils	saff	Other oilseeds	48 acomm	ccomm	sasrv	Information and communication
8 acass	ccass	saff	Cassava	49 afsrv	cfsrv	sasrv	Finance and insurance
9 aroot	croot	saff	Other roots	50 areal	creal	sasrv	Real estate activities
10 avege	cvege	saff	Vegetables	51 absrv	cbsrv	sasrv	Business services
11 asugr	csugr	saff	Sugar cane	52 apadm	cpadm	sasrv	Public administration
12 atoba	ctoba	saff	Tobacco	53 aeduc	ceduc	sasrv	Education
13 acott	ccott	saff	Cotton and fibres	54 aheal	cheal	sasrv	Health and social work
14 afrui	cfroi	saff	Fruits and nuts	55 aosrv	cosrv	sasrv	Other services
15 acoco	ccoco	saff	Cocoa	56	flab-n		labor - not completed primary
16 acoff	ccoff	saff	Coffee and tea	57	flab-p		labor - completed primary
17 aocrp	cocrp	saff	Other crops	58	flab-s		labor - completed secondary
18 acatt	ccatt	saff	Cattle	59	flab-t		labor - completed tertiary
19 apoul	cpoul	saff	Poultry	60	flnd		Crop land
20 aoliv	coliv	saff	Other livestock	61	fliv		Livestock
21 afore	cfore	saff	Forestry	62	fcap		Capital
22 afish	cfish	saff	Fishing	63	hhd-r1		Rural - Quintile 1
23 acoal	ccol	smine	Coal and lignite	64	hhd-r2		Rural - Quintile 2
24 acoil	ccoil	smine	Crude oil	65	hhd-r3		Rural - Quintile 3
25 angas	cngas	smine	Natural gas	66	hhd-r4		Rural - Quintile 4
26 aomin	comin	smine	Other mining	67	hhd-r5		Rural - Quintile 5
27 ameat	cmeat	sfobt	Meat	68	hhd-u1		Urban - Quintile 1
28 acvvp	ccvvp	sfobt	Cereal and vegetable processing	69	hhd-u2		Urban - Quintile 2
29 afood	cfood	sfobt	Other foods	70	hhd-u3		Urban - Quintile 3
30 abeve	cbeve	sfobt	Beverages	71	hhd-u4		Urban - Quintile 4
31 aptob	cptob	sfobt	Tobacco processing	72	hhd-u5		Urban - Quintile 5
32 atext	ctext	slmnf	Textiles	73	ent		Enterprises
33 aclth	clth	slmnf	Clothing	74	gov		Government
34 aleat	cleat	slmnf	Leather and footwear	75	atax		Taxes - Activity
35 awood	cwood	slmnf	Wood and paper	76	dtax		Taxes - Direct
36 apetr	cpetr	shmnf	Petroleum	77	mtax		Taxes - Import
37 achem	cchem	shmnf	Chemicals	78	stax		Taxes - Sales
38 anmet	cnmet	shmnf	Non-metal minerals	79	s-i		Savings-Investment
39 ametl	cmatl	shmnf	Metals and metal products	80	dstk		Change in stocks
40 amach	cmach	shmnf	Machinery and equipment	81	row		Rest of world
41 aoman	coman	slmnf	Other manufacturing				

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