A 2012 Social Accounting Matrix (SAM) for Mozambique

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**June 2015**

**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 The SAM is built using Instituto Nacional de Estatística (INE) unpublished industry-level production accounts, commodity-level supply–demand balances and a Supply Matrix together with national accounts, IMF government and balance of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 The SAM features production for home consumption as reported in the unpublished data made available by INE and identifies government, investment and foreign accounts.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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# 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 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]](#footnote-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.

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-  tories | 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 places 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

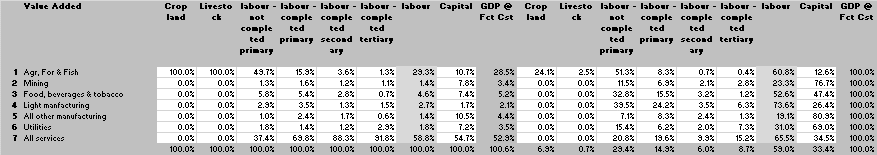
While the SAM construction described above can be considered as the acceptable given the data sources at hand, a number of improvement can be considered in the near future. They are:

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

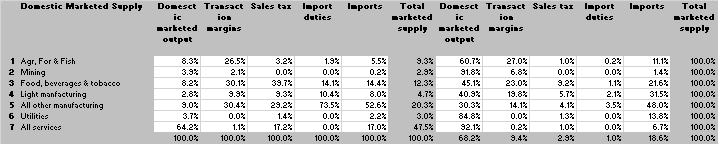


Source: see text.

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 if 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.

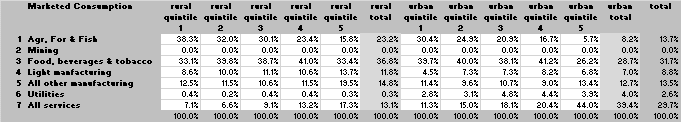
Table 4: Distribution of domestic marketed supply according to a 2012 SAM of Mozambique



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.

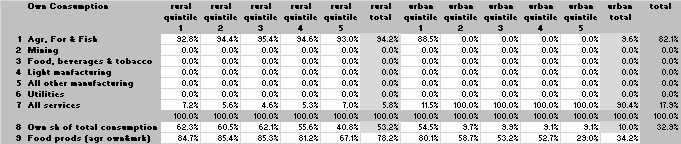
Table 5: Expenditure patterns of marketed consumption according to a 2012 SAM of Mozambique



Source: see text.

The dependence on food products become even more apparent when considering the expenditure patters 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

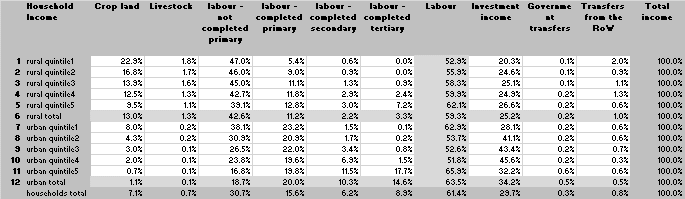


Source: see text.

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.

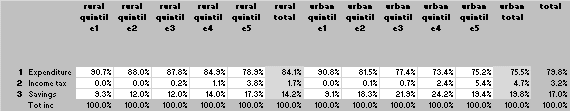
Table 7: Household income patterns according to a 2012 SAM of Mozambique



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



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 |
|  | ocer | Other cereals | R011 | Agricultura | P01111-1 | Trigo |
|  | maiz | Maize | R011 | Agricultura | P01111-2 | Milho |
|  | sorg | Sorghum and millet | R011 | Agricultura | P01111-9 | Mapira, mexoeira e outro cereais em grão |
|  | puls | Pulses | R011 | Agricultura | P01112-1 | Feijão |
|  | gnut | Groundnuts | R011 | Agricultura | P01112-2 | Amendoim |
|  | rice | Rice | R011 | Agricultura | P01120 | Arroz em casca |
|  | cass | Cassava | R011 | Agricultura | P01131 | Mandioca |
|  | root | Other roots | R011 | Agricultura | P01139-1 | Outros tubérculos e raízes |
|  | vege | Vegetables | R011 | Agricultura | P01139-2 | Produtos hortícolas |
|  | sugr | Sugar cane | R011 | Agricultura | P01140 | Cana de açúcar |
|  | toba | Tobacco | R011 | Agricultura | P01150 | Tabaco-folha |
|  | cott | Cotton and fibres | R011 | Agricultura | P01161 | Algodão-caroço |
|  | frui | Fruits and nuts | R011 | Agricultura | P01200 | Frutos frescos |
|  | frui | Fruits and nuts | R011 | Agricultura | P01231 | Cajú |
|  | oils | Other oilseeds | R011 | Agricultura | P01240-1 | Copra e coco |
|  | ocrp | Other crops | R011 | Agricultura | P01240-9 | Jatrofa |
|  | coff | Coffee and tea | R011 | Agricultura | P01251 | Chá-folha |
|  | ocrp | Other crops | R011 | Agricultura | P01291 | Outros produtos agrícolas de uso industrial |
|  | ocrp | Other crops | R011 | Agricultura | P01292 | Outros produtos agrícolas não industriais |
|  | catt | Cattle | R014 | Produção animal | P01410 | Gado bovino |
|  | oliv | Other livestock | R014 | Produção animal | P01420 | Gado ovino e caprino |
|  | oliv | Other livestock | R014 | Produção animal | P01430 | Gado suíno |
|  | poul | Poultry | R014 | Produção animal | P01440-1 | Aves vivas |
|  | poul | Poultry | R014 | Produção animal | P01440-2 | Ovos frescos |
|  | oliv | Other livestock | R014 | Produção animal | P01499-1 | Animais selvagens e outros comestíveis |
|  | oliv | Other livestock | R014 | Produção animal | P01499-9 | Produtos de origem animal |
|  | fore | Forestry | R020 | Silvicultura, exploração florestal e actividades relacionadas | P02200-1 | Lenha e carvão vegetal |
|  | fore | Forestry | R020 | Silvicultura, exploração florestal e actividades relacionadas | P02200-2 | Madeira em toros e outros produtos da silvicultura |
|  | fore | Forestry | R020 | Silvicultura, exploração florestal e actividades relacionadas | P02300 | Outros produtos florestais, excepto madeira |
|  | fish | Fishing | R030 | Pesca, aquacultura, e actividades dos serviços relacionados | P03111-1 | Peixes frescos, refrigerados |
|  | fish | Fishing | R030 | Pesca, aquacultura, e actividades dos serviços relacionados | P03111-2 | Camarão, gamba e lagosta |
|  | fish | Fishing | R030 | Pesca, aquacultura, e actividades dos serviços relacionados | P03111-3 | Outros produtos da pesca |
|  | coal | Coal and lignite | R051 | Extracção de carvão | P05100 | Carvão mineral |
|  | ngas | Natural gas | R062 | Extracção de gás natural e condensados | P06201 | Gás natural, liquefeito ou no estado gasoso |
|  | ngas | Natural gas | R062 | Extracção de gás natural e condensados | P06202 | Condensados de gás natural |
|  | omin | Other mining | R070 | Extracção e preparação de de minérios metálicos | P07291 | Bauxite |
|  | omin | Other mining | R070 | Extracção e preparação de de minérios metálicos | P07299 | Outros minerais metálicos |
|  | omin | Other mining | R080 | Outras indústrias extrativas | P08100 | Pedra, argila e areia |
|  | omin | Other mining | R080 | Outras indústrias extrativas | P08991 | Pedras preciosas e semi-preciosas |
|  | omin | Other mining | R080 | Outras indústrias extrativas | P08999 | Outros minerais não metálicos |
|  | meat | Meat | R101 | Abate de animais, preparacao e conservaçao de carne e de produtos a base de carne | P10101-1 | Carne de bovino |
|  | meat | Meat | R101 | Abate de animais, preparacao e conservaçao de carne e de produtos a base de carne | P10101-2 | Carne de suino |
|  | meat | Meat | R101 | Abate de animais, preparacao e conservaçao de carne e de produtos a base de carne | P10101-3 | Carne de outros animais domesticados, excepto aves |
|  | meat | Meat | R101 | Abate de animais, preparacao e conservaçao de carne e de produtos a base de carne | P10101-8 | 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 | |
|  | meat | Meat | | R101 | | Abate de animais, preparacao e conservaçao de carne e de produtos a base de carne | | P10102 | | Carne de aves |
|  | meat | Meat | | R101 | | Abate de animais, preparacao e conservaçao de carne e de produtos a base de carne | | P10104 | | Produtos a base de carne |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10200 | | Produtos da pesca preparados e em conserva |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10301 | | Frutos e produtos vegetais transformados incl sumos |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10302 | | Amêndoa de cajú inteira e partida |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10400 | | Óleos vegetais e animais |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10500 | | Leite processado e derivados |
|  | cvgp | Cereal and vegetable processing | | R106 | | Transformação de cereais e leguminosas; fabricação de rações | | P10611-1 | | Farinha de trigo |
|  | cvgp | Cereal and vegetable processing | | R106 | | Transformação de cereais e leguminosas; fabricação de rações | | P10611-2 | | Farinha de milho |
|  | cvgp | Cereal and vegetable processing | | R106 | | Transformação de cereais e leguminosas; fabricação de rações | | P10612 | | Farinha de mandioca e derivados, inclui tapioca |
|  | cvgp | Cereal and vegetable processing | | R106 | | Transformação de cereais e leguminosas; fabricação de rações | | P10613 | | Arroz descascado |
|  | cvgp | Cereal and vegetable processing | | R106 | | Transformação de cereais e leguminosas; fabricação de rações | | P10619 | | Outros produtos e serviços de moagem |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10710 | | Pão, e produtos de pastelaria e doçaria |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10730 | | Açúcar e Melaço de açúcar |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10750 | | Massas alimentícias |
|  | food | Other foods | | R107 | | Fabricação de outros produtos alimentares diversos, n.e. | | P10790 | | Outros produtos das indústrias alimentícias |
|  | cvgp | Cereal and vegetable processing | | R106 | | Transformação de cereais e leguminosas; fabricação de rações | | P10800 | | Rações |
|  | beve | Beverages | | R110 | | Fabricação de bebidas e tabaco | | P11010-1 | | Aguardentes e outras bebidas espirituosas |
|  | beve | Beverages | | R110 | | Fabricação de bebidas e tabaco | | P11010-2 | | Bebidas alcóolicas tradicionais |
|  | beve | Beverages | | R110 | | Fabricação de bebidas e tabaco | | P11020 | | Vinho |
|  | beve | Beverages | | R110 | | Fabricação de bebidas e tabaco | | P11030 | | Cerveja e malte |
|  | beve | Beverages | | R110 | | Fabricação de bebidas e tabaco | | P11041 | | Águas minerais e bebidas refrigerantes não alcoólicas |
|  | ptob | Tobacco processing | | R110 | | Fabricação de bebidas e tabaco | | P12002 | | Cigarros, de charutos e similares |
|  | text | Textiles | | R130 | | Fabricação de artigos têxteis e vestuário | | P13111-1 | | Fibra de algodão |
|  | text | Textiles | | R130 | | Fabricação de artigos têxteis e vestuário | | P13111-2 | | Outros produtos de fiação |
|  | text | Textiles | | R130 | | Fabricação de artigos têxteis e vestuário | | P13900 | | Produtos têxteis, malhas e tapecaria |
|  | clth | Clothing | | R130 | | Fabricação de artigos têxteis e vestuário | | P14100 | | Vestuário, excepto de plástico |
|  | leat | Leather and footwear | | R150 | | Preparação de couro e artigos de couro | | P15000 | | Curtumes, calçado e artigos de couro |
|  | wood | Wood and paper | | R160 | | Industria de madeira e da cortica excepto mobiliario | | P16000 | | Produtos da serração de madeira, folhados e contraplacados, carpintaria |
|  | wood | Wood and paper | | R170 | | Produção de papel e impressão | | P17000 | | Papel e artigos de papel e cartão |
|  | wood | Wood and paper | | R170 | | Produção de papel e impressão | | P18100 | | Impressão |
|  | petr | Petroleum | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P19200-1 | | Gasolina |
|  | petr | Petroleum | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P19200-2 | | Gasóleo |
|  | petr | Petroleum | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P19200-3 | | Outros combústíveis derivados do petróleo |
|  | petr | Petroleum | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P19200-9 | | Óleos e massas lubrificantes, inclui betume |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P20100 | | Outros produtos químicos industriais |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P20210 | | Adubos e pestecidas |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P20220 | | Tintas, vernizes, resinas sintéticas e materiais plásticas |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P20231 | | Sabões e sabonetes, detergentes, produtos de limpeza |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P20290 | | Produtos químicos diversos |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P21000 | | Produtos farmacêuticos |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P22110 | | Pneus e câmaras de ar |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P22190 | | Outros artigos de borracha |
|  | chem | Chemicals | | R200 | | Fabricação de produtos quimicos, plásticos e de borracha | | P22200 | | Artigos de plástico |
|  | nmet | Non-metal minerals | | R230 | | Fabricação de produtos minerais não metálicos | | P23100 | | Vidro e artigos de vidro |
|  | nmet | Non-metal minerals | | R230 | | Fabricação de produtos minerais não metálicos | | P23920 | | Materiais de barro para a construção |
|  | nmet | Non-metal minerals | | R230 | | Fabricação de produtos minerais não metálicos | | P23910 | | Artigos de porcelana, faiança e grés |
|  | nmet | Non-metal minerals | | R230 | | Fabricação de produtos minerais não metálicos | | P23941 | | Cimento e clinquer |
|  | nmet | Non-metal minerals | | R230 | | Fabricação de produtos minerais não metálicos | | P23950 | | Produtos de fibrocimentoç cal e gesso ou (Fabricação de produtos de betão) |
|  | nmet | Non-metal minerals | | R230 | | Fabricação de produtos minerais não metálicos | | P23960 | | Pedra para construção e outros produtos nao metalicos |
|  | metl | Metals and metal products | | R241 | | Indústria metalúrgica de base | | P24100-1 | | Produtos laminados de ferro e aço |
|  | metl | Metals and metal products | | R241 | | Indústria metalúrgica de base | | P24100-2 | | Varão, arame e tubos de ferro ou aço |
|  | metl | Metals and metal products | | R241 | | Indústria metalúrgica de base | | P24100-3 | | Outros produtos básicos de ferro ou aço |
|  | metl | Metals and metal products | | R242 | | Indústria de aluminio de base | | P24200-1 | | Aluminio |
|  | metl | Metals and metal products | | R241 | | Indústria metalúrgica de base | | P24200-2 | | Outros produtos da industria basica de metais não ferrosos |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P25110 | | Elementos de construção em metal |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P25930 | | Cutelarias, ferramentas manuais |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P25990 | | Outros produtos metálicos |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P26200 | | Maquinas de escritorio e equipamento |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P26400 | | Equipamento e aparelhos de radio, TV e comunicacoes |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P26999 | | Outros produtos electrónicos e ópticos |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P27500 | | Aparelhos para uso doméstico, electrico e não electrico |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P27900 | | Maquinas e aparelhos electricas exc. para uso doméstico |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P28210 | | Tractores e seus acessórios, maquinas e equipamentos agricolas |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P28240 | | Máquinas para as indústrias extractivas e para construção |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P28999 | | Outras maquinarias e equipamento |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P29100-1 | | Automóveis para o transporte de passageiros |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P29100-2 | | Outros automóveis (incl. machimbombos) |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P29300 | | Partes, peças separadas e acessórios de automveis |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P30000 | | Outro material de transporte n.e.c. |
|  | oman | Other manufacturing | | R310 | | Fabricação de mobiliário (não madeira) e outrras indústrias transformadoras | | P31000 | | Mobília |
|  | oman | Other manufacturing | | R310 | | Fabricação de mobiliário (não madeira) e outrras indústrias transformadoras | | P32000 | | Outros produtos transformados não especificados |
|  | mach | Machinery and equipment | | R250 | | Fabricação de prod. metálicos incluido maquinas e equip. | | P33000 | | Reparação e manutenção de produtos metálicos, máquinas e equipamentos |
|  | elec | Electricity, gas and steam | | R351 | | Produção, transporte, distribuição e comércio de electricidade | | P35100 | | Electricidade |
|  | elec | Electricity, gas and steam | | R352 | | Produção de gás; distribuição de combustíveis gasosos por condutas e comércio de gás por conduta | | P35200 | | Gas |
|  | watr | Water supply and sewage | | R360 | | Captação, tratamento e distribuição de água | | P36000 | | Captação, tratamento e distribuição de água |
|  | 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 |
|  | cons | Construction | | R410 | | Construção geral de edificios e e desenvolvimento de projectos de edificios | | P41000 | | Construção de edifícios (residenciais e não residenciais) |
|  | cons | Construction | | R421 | | Construção de auto-estradas, pontes, aeroportos e vias ferreas | | P42100 | | Construcao de auto-estradas, estradas, pontes, aeroportos e vias ferreas |
|  | 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 |
|  | trad | Wholesale and retail trade | | R451 | | Comercio por grosso e a retalho | | P45100 | | Serviços de comércio |
|  | trad | Wholesale and retail trade | | R452 | | Manutenção e reparação de veiculos automoveis e motociclos | | P45200 | | Reparação de veículos |
|  | tran | Transportation and storage | | R491 | | Transporte ferroviario | | P49110 | | Transporte ferroviário de passageiros |
|  | tran | Transportation and storage | | R491 | | Transporte ferroviario | | P49120 | | Transporte ferroviário de mercadorias |
|  | tran | Transportation and storage | | R492 | | Transporte rodoviario | | P49210 | | Transporte rodoviário de passageiros |
|  | tran | Transportation and storage | | R492 | | Transporte rodoviario | | P49230 | | Transporte rodoviário de mercadorias |
|  | tran | Transportation and storage | | R493 | | Oleodutos e gasodutos | | P49300-1 | | Transporte por oleodutos |
|  | tran | Transportation and storage | | R493 | | Oleodutos e gasodutos | | P49300-2 | | Transporte por gasoduto |
|  | tran | Transportation and storage | | R500 | | Transportes por água | | P50000 | | Transporte marítimo e cabotagem |
|  | tran | Transportation and storage | | R510 | | Transportes aéreo | | P51000 | | Transporte aéreo |
|  | tran | Transportation and storage | | R520 | | Armazenagem e actividades auxiliares dos transportes | | P52240 | | Serviços anexos e auxiliares dos transportes |
|  | comm | Information and communication | | R530 | | Actividades postais e dos correios | | P53000 | | Servicos de correio |
|  | hotl | Accomodation and food services | | R550 | | Alojamento e hoteis | | P55000 | | Serviços de hotéis |
|  | hotl | Accomodation and food services | | R560 | | Restauração e similares | | P56000 | | Serviços de restaurantes |
|  | comm | Information and communication | | R580 | | Actividades de edição de livros, jornais e de outras publicações | | P58000 | | Edição de livros, jornais e de outras publicações |
|  | comm | Information and communication | | R590 | | Actividades de rádio e de televisão | | P59000 | | TV, rádio,filmes videos |
|  | comm | Information and communication | | R610 | | Telecomunicações | | P61100 | | Serviços de telecomunicações por fio |
|  | comm | Information and communication | | R610 | | Telecomunicações | | P61200 | | Servicos de telefonia móvel |
|  | comm | Information and communication | | R610 | | Telecomunicações | | P61900 | | Outros serviços de telecomunicações |
|  | comm | Information and communication | | R620 | | Consultoria informática e actividades de processamento de dados; portais web | | P62000 | | Consultoria informática, etc. |
|  | fsrv | Finance and insurance | | R642 | | Outras instituições financeiras monetárias | | P64000-1 | | Serviços de intermediação financeira exc. SIFIM |
|  | fsrv | Finance and insurance | | R642 | | Outras instituições financeiras monetárias | | P64000-2 | | SIFIM |
|  | fsrv | Finance and insurance | | R650 | | Seguros e fundos de pensões | | P65000 | | Serviços de seguros |
|  | fsrv | Finance and insurance | | R660 | | Actividades auxiliares de servicos financeiros e de seguros | | P66000 | | Servicos auxiliares de intermediação financeira |
|  | real | Real estate activities | | R680 | | Actividades imobiliarias | | P68000-1 | | Serviços de imóveis residenciais |
|  | real | Real estate activities | | R680 | | Actividades imobiliarias | | P68000-2 | | Outros serviços de imóveis |
|  | bsrv | Business services | | R690 | | Actividades de consultoria, cientificas, tecnicas e similares | | P69000 | | Consultorias cientificas, tecnicas e similares |
|  | bsrv | Business services | | R770 | | Actividades de aluguer | | P77000 | | Serviços de aluguer de máquinas e equipamentos de transporte |
|  | bsrv | Business services | | R790 | | Agencias de viagem, operadores turisticos e outros servicos de reservas e actividades relacionadas | | P79000 | | Serviços das agências de viagens e turismo |
|  | bsrv | Business services | | R820 | | Actividades de servicos administrativos e de apoio perstados as empresas | | P82000 | | Serviços prestados principalmente às empresas |
|  | padm | Public administration | | R841 | | Administração central | | P84111 | | Serviços da administração pública (central) e defesa |
|  | padm | Public administration | | R842 | | Administração local | | P84112 | | Serviços da administração autárcica |
|  | padm | Public administration | | R843 | | Segurança social obrigatória | | P84300 | | Servicos de segurança social obrigatoria |
|  | educ | Education | | R850 | | Educação | | P85000-1 | | Servicos de educação pública |
|  | educ | Education | | R850 | | Educação | | P85000-2 | | Servicos de educação privada |
|  | educ | Education | | R850 | | Educação | | P85000-3 | | Outros serviços educativos |
|  | heal | Health and social work | | R860 | | Actividade de saude humana | | P86000-1 | | Servicos de saúde pública |
|  | heal | Health and social work | | R860 | | Actividade de saude humana | | P86000-2 | | Servicos de saúde privada |
|  | heal | Health and social work | | R870 | | Actividades de acção social | | P87000-1 | | Servicos de acção social pública |
|  | heal | Health and social work | | R870 | | Actividades de acção social | | P87000-2 | | Servicos de acção social privada |
|  | osrv | Other services | | R900 | | Actividades artisticas, espectaculos, desportivos e recreativos | | P90000 | | Serviços artisticas, espectaculos, desportivos e recreativos |
|  | osrv | Other services | | R940 | | Actividades de organizações associativas | | P94000 | | Serviços prestados por organizações |
|  | 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 |
|  | osrv | Other services | | R960 | | Outras actividades de serviços pessoais | | P96000 | | Outros serviços pessoais |
|  | osrv | Other services | | R970 | | Actividades das familias empregadoras de pessoal domestico | | P97000 | | Serviços domésticos |
|  | osrv | Other services | |  | |  | | P99300 | | Aquisições efectuadas directamente no estrangeiro |
|  | osrv | Other services | |  | |  | | P99400 | | Aquisições efectuadas pelos não residentes no país |
|  | mach | Machinery and equipment | |  | |  | | P99900 | | Produtos não specificados |

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| 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 | Accomodation 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 | cfrui | 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 | ccoal | 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 | acvgp | ccvgp | 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 | cclth | 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 | cmetl | 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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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). [↑](#footnote-ref-2)