

A 2015 Social Accounting Matrix (SAM) for South Africa

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Abstract: This paper documents the construction of a South African Social Accounting Matrix (SAM) for the year 2015. The SAM is built using a Statistics South Africa (Stats SA, 2018) Supply Table (ST) and Use Table (UT), National Accounts, and various household and labour market surveys. It provides a detailed representation of the South African economy and identifies 62 activities and 104 commodities; labour is disaggregated by education attainment level; and households by per capita expenditure deciles. Information on labour is drawn from the Statistics South Africa (StatsSA, 2017b) Labour Market Dynamics (LMD) report using 2015 data from the Quarterly Labour Force Survey. Data on households is taken from the StatsSA (2017a) Living Conditions Survey (LCS) for 2014/15. The SAM identifies government, investment and foreign accounts. It is a useful database for conducting economy-wide impact assessments, including SAM-based multiplier analysis and computable general equilibrium (CGE) modelling.

Keywords: social accounting matrix, national accounts, supply table, use table

[Link to the 2015 National Social Accounting Matrix.](#)

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List of acronyms

| | |
|--------|---|
| CGE | Computable General Equilibrium |
| GDP | Gross Domestic Product |
| SAM | Social Accounting Matrix |
| SARB | South Africa Reserve Bank |
| SSA | Statistics South Africa |
| ST | Supply Table |
| SUT | Supply-Use Table |
| SUTSAM | Supply-Use Table Social Accounting Matrix, a SAM with a single household and single labour type |
| UT | Use Table |

1. Introduction

This paper outlines the construction of a 2015 Social Accounting Matrix (SAM) for South Africa. A SAM is a consistent data framework that captures the information contained in the National Income and Product Accounts (SARB, 2018), a Supply Table (ST) and a Use Table (UT) (SSA, 2017c), as well as the monetary flows between institutions. A SAM is an ex-post accounting framework in that within its square format, total receipts must equal total payments for each of its accounts. Since the required data is not drawn from a single source, information is manipulated in order to make it internally 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 the National Accounts. SAMs are economy-wide databases that are used in conjunction with analytical techniques to strengthen the evidence underlying policy decisions.

Section 2 reviews the general structure of SAMs. The first step in constructing the South African SAM is compiling National Accounts and Stats SA's ST and UT data sources into a consistent SAM framework. This results in what we label as the SUTSAM since it only identifies a single type of labour and a single household. The second step then draws on survey information to disaggregate labour and household accounts of the SUTSAM. Given the diversity and inaccuracy of the various data sources, the SAM is initially invariably inconsistent. Section 3 describes the data sources used to construct the unbalanced SAM. The balancing procedure of the SAM accounts is discussed in section 4.

This SAM was constructed in collaboration with the National Treasury of South Africa based mostly on publicly-available information from Statistics South Africa and the South African Reserve Bank.

2. General Structure of SAMs

A SAM is an economy-wide data framework that usually represents the real economy of a single country.¹ More technically, a SAM is a square matrix in which single entry bookkeeping is undertaken for a set of accounts that represent various economic agents such as productive activities, commodities, factors of production and a range of institutions such as households, government and the rest of the world. Each account is represented by a row and a matching 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 same underlying principle of double-entry accounting are applied and in the SAM they require that, for each account in the SAM, total revenue (row total) equals total expenditure (column total). Table 1 shows an aggregate SAM for South Africa (with verbal explanations in place of numbers).

¹ For general discussions of SAMs and SAM-based modeling, see Pyatt and Round (1985), Reinert and Roland-Holst (1997), Pyatt (1988), Robinson and Roland-Holst (1988), and Breisinger, Thomas and Thurlow (2009).

Table 1: Basic structure of a 2015 SAM for South Africa

| | Activities | Commodities | Labour | Capital | Enterprises | Households | Government | Net activity taxes | Net product taxes | Import duties | Income taxes | Changes in inventories | Accumulation | Rest of the world | Total |
|-------------|--------------------------------------|----------------------------------|--------|--|--|--|---|--------------------|-------------------|---------------|--------------|---------------------------------------|-------------------------------|----------------------------------|---------------------|
| Activities | | Output of total domestic economy | | | | | | | | | | | | | Gross output |
| Commodities | Intermediate consumption | Transactions Margins | | | | Final consumption expenditure by households | Final consumption expenditure by government | | | | | Change in inventories + residual item | Gross fixed capital formation | Exports of goods & services | Total demand |
| Labour | Compensation of employees | | | | | | | | | | | | | Compensation SA residents in RoW | Labour income |
| Capital | Net operating surplus + Depreciation | | | | | | | | | | | | | Property income paid: RoW | Capital income |
| Enterprises | | | | Gross operating surplus of corporations, adjusted for property income paid to / received | Net property income + other current transfers received: corporations - non-life insurance claims | Property income paid: households + net non-life insurance premiums: households | Social contributions received: financial corporations + property income paid: general | | | | | | | | Enterprise earnings |

| | | | | | | | | | | | | | | | |
|----------------|--|--|----------------------------------|--|---|--|---|--|---|------------------|--|--|--|--|----------------------------|
| | | | | from RoW | paid: corporati ons | | governm ent | | | | | | | | |
| Househol ds | | | Compens ation of residents | Gross operating surplus / mixed income of househol ds | Misc transfers paid: corporati ons + property income received: househol ds + non-life insurance claims: househol ds + adj for the change in net equity in pension fund reserves: househol ds | | Misc current transfers paid: general governm ent + social benefits received: househol ds | | | | | | | Misc current transfer s paid: RoW | House hold earnings |
| Governm ent | | | | Gross operating surplus of general governm ent | Social benefits paid by corporati ons property income received by General governm ent | Misc transfers received: general governm ent + Social contributi ons paid: househol ds | Net social contributi ons received: General governm ent | Net other taxes on productio n in all industries | Net taxes on products - import duties | Import duties | Current taxes on income and wealth | | | Current internat ional co- operati on paid: RoW | Gover nment receipts |

| | | | | | | | | | | | | | | | |
|------------------------|---|---------------------------------------|--|--|---|--|------------------------------------|--|--|--|--|--|---------------------------------------|--------------------------------|---|
| Net activity taxes | Net other taxes on production in all industries | | | | | | | | | | | | | | Net other taxes on production in all industries |
| Net product taxes | | Net taxes on products - import duties | | | | | | | | | | | | | Net taxes on products - import duties |
| Import duties | | Import duties | | | | | | | | | | | | | Import duties |
| Income taxes | | | | | Current taxes on income and wealth paid by corporations | Current taxes on income and wealth of households | | | | | | | | | Current taxes on income and wealth |
| Changes in inventories | | | | | | | | | | | | | Change in inventories + residual item | | Change in inventories + residual item |
| Accumulation | | | | | Residual: corporations + Gross saving of corporations | Residual: households and NPISHs + Gross saving of households | Gross saving of General government | | | | | | | Current external balance : RoW | Savings |

| | | | | | | | | | | | | | | |
|-------------------|--------------|-----------------------------|---|--------------------------------|--------------------|--------------------------------------|--|---|---------------------------------------|--|--|---------------------------------------|--|---------------------------|
| | | | | | | ds and NPISHs | | | | | | | | |
| Rest of the world | | Imports of goods & services | Compensation of South African employees | Property income received: RoW | | Misc current transfers received: RoW | Current international co-operation received: RoW | | | | | | | Foreign exchange outflows |
| Total | Gross output | Total Supply | 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 - import duties | Taxes on international trade and transactions: Import duties | Current taxes on income and wealth paid by corporations + current taxes on income and wealth of households | Change in inventories + residual item | Gross fixed capital formation (investment) + change in inventories + residual item | Foreign exchange inflow |

Source: own descriptions and labels.

The SAM distinguishes 62 ‘activities’ (the entities that carry out production) and 104 ‘commodities’ (representing markets for goods and non-factor services). The activities and commodities are listed in Appendix A. SAM flows are valued at producers’ prices in the activity accounts and at market prices (including indirect commodity taxes and trade and transport margins) 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 operating surplus and compensation of employees, the latter broken down by education attainment as discussed later) as well as activity (production based) tax. In the commodity columns, payments are made to domestic activities, various tax accounts (for domestic and import taxes), trade and transport margins and the rest of the world. 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. This disaggregation is necessary since otherwise the economic interpretation of some payments is often ambiguous. In the SAM, direct payments between the enterprises, households and government are reserved for transfers as reported in the national accounts. Finally, payments from the government to factors (for the labour services provided by public sector employees) are captured in a government services activity. Government consumption demand is a purchase of the output from this 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 while some profits may be repatriated abroad. The remaining capital earnings, together with labour earnings are paid to households. Households are broken down into a number of household expenditure groups according to deciles. For example, the lowest expenditure group (decile 0 or hhd-0) represents households that cover 0–10 per cent of all households when they are ranked from low to high total expenditure. The top decile, 90–100 per cent, is disaggregated into an additional five groups, each representing 2 per cent of all households. For example, household group hhd-94 represents households in the 96–98 per cent range. Households use their incomes to pay taxes, make transfers, save, and consume domestically produced and imported commodities.

3. Constructing the Prior Social Accounting Matrix

The initial task in building a SAM involves compiling data from various sources into the SAM framework. For South Africa, this information was drawn from National Accounts, Supply Tables, Use Tables, household and labour force surveys. This information often uses (1) different disaggregation of activities, production factors, and socio-economic household groups, (2) different years and/or base-year prices, and (3) different data collection and compilation techniques. Consequently, the initial SAM typically faces some imbalances between row and column account totals.

Table 2: A 2015 Macro SAM for South Africa (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 | | 7,924 | | | | | | | | | | | | | 7,924 |
| Commodities | 4,298 | | | | | 2,417 | 829 | | | | | 29 | 828 | 1,222 | 9,624 |
| Labour | 1,906 | | | | | | | | | | | | | 10 | 1,917 |
| Capital | 1,647 | | | | | | | | | | | | | 88 | 1,735 |
| Enterprises | | | | 939 | 177 | 338 | 384 | | | | | | | | 1,838 |
| Households | | | 1,904 | 521 | 562 | | 427 | | | | | | | 21 | 3,435 |
| Government | | | | 89 | 268 | 249 | 198 | 72 | 381 | 44 | 608 | | | 3 | 1,913 |
| Net activity taxes | 72 | | | | | | | | | | | | | | 72 |
| Net product taxes | | 381 | | | | | | | | | | | | | 381 |
| Import duties | | 44 | | | | | | | | | | | | | 44 |
| Income taxes | | | | | 213 | 395 | | | | | | | | | 608 |
| Changes in inventories | | | | | | | | | | | | | 29 | | 29 |
| Accumulation | | | | | 617 | 28 | 26 | | | | | | | 186 | 857 |
| Rest of the world | | 1,274 | 12 | 186 | | 8 | 50 | | | | | | | | 1,530 |
| Total | 7,924 | 9,624 | 1,917 | 1,735 | 1,838 | 3,435 | 1,913 | 72 | 381 | 44 | 608 | 29 | 857 | 1,530 | |

Source: own accounting of South Africa's National Accounts from the SARB Quarterly Bulletin, March 2018.

The macro SAM shown in Table 2 is an aggregation of the more detailed micro SAM. This section explains how each macro SAM entry is derived and broadly how, where necessary, it is disaggregated to arrive at the unbalanced 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 2015 South African Rand. KBP refers to the SARB series of National Accounts in their Quarterly Bulletin of the South African Reserve Bank. The final disaggregated SAM is quite large and is included in the accompanying [Excel workbook file](#).

- i (Commodities,Activities)...Rb4,298
KBP6871J: Production account: Intermediate consumption of total domestic economy. Intermediate inputs are disaggregated across activities and commodities according to the UT.
- ii (Labour,Activities)...Rb1,906
KBP6000J: Compensation of employees. Labour income is disaggregated across activities according to the UT and subsequently split across four educational groups:
 - - 'primary' refers to workers with some or no primary schooling, i.e., grades 1-7
 - - "middle" includes workers who have completed grade 10
 - - "secondary" includes workers who have completed grade 12
 - - "tertiary" includes workers who have at least some post-secondary or higher education.

Workers' compensation is drawn from the 2012 Labour Force Survey (LFS, StatsSA 2017b). Not all activities are covered in the LFS. Appendix B reports the mapping from LFS to activities used in the SAM.
- iii (Capital,Activities)...Rb1,647
KBP6001J: Net operating surplus + KBP6002J: Consumption of fixed capital (Depreciation). Capital income is disaggregated across activities according to the UT.
- iv (Net activity taxes,Activities)...Rb072
KBP6600J: Other taxes on production in all industries - KBP6601J: Other subsidies on production in all industries. Net activity tax is disaggregated across activities according to the activity shares in the UT.
- v (Activities,Commodities)...Rb7,924
KBP6870J: Production account: Output of total domestic economy. Same as in the ST. Total domestic production of each activity is disaggregated across the commodities that they make according to the ST.
- vi (Net dom prod taxes,Commodities)...Rb381
KBP6603J: Taxes on products - KBP6604J: Subsidies on products - KBP4590J: National government tax revenue: Taxes on international trade and transactions: Import duties. Domestic taxes less subsidies on products including import duties is equal to taxes on products as reported by the National Accounts. Disaggregation of this control total (sum of taxes less subsidies on products less import duties) across products is based on ST values from which import duties, discussed below, are subtracted.
- vii (Import duties,Commodities)...Rb044
KBP4590J: National government tax revenue: Taxes on international trade and transactions: Import duties. Commodity level import duties collected were obtained from in unpublished format from SSA for the year 2010. Import duty collection

- rates were calculated using imports for the year 2010. It is then assumed that the 2010 import duty collection rates are the same as for 2015. Total Import duties are made consistent with the national government tax revenue as reported in the Public Finance Statistics of the SARB Quarterly Bulletin.
- viii (Rest of the world,Commodities)...Rb1,274
KBP6014J: Imports of goods & services. Disaggregated to commodity level based on the ST. Adjustments are made for purchases of residents abroad while benchmarking on National Accounts.
- ix (Households,Labour)...Rb1,904
KBP6240J: Compensation of residents. Disaggregated across types of labour and household income classes according to the 2014/15 Living Conditions Survey (LCS) by published by StatsSA (2017a).
- x (Rest of the world,Labour)...Rb012
KBP6207J: Compensation of South African employees. Disaggregated across types of labour according to total labour income received by households using the 2014/15 LCS (StatsSA, 2017a), see ix above.
- xi (Enterprises,Capital)...Rb939
KBP6706J: Generation of income account: Gross operating surplus of Financial corporations+KBP6746J: Generation of income account: Gross operating surplus of non-financial corporations+KBP6904J: External account of primary incomes and current transfers: Property income paid: ROW-KBP6901J: External account of primary incomes and current transfers: Property income received: ROW
- xii (Households,Capital)...Rb521
KBP6826J: Generation of income account: Gross operating surplus / mixed income of households and NPISHs. Disaggregation across households is based on the 2014/15 LCS (StatsSA, 2017a) for items “Household self-employment and business” and “Income from subsistence farming”.
- xiii (Government,Capital)...Rb089
KBP6786J: Generation of income account: Gross operating surplus of General government.
- xiv (Rest of the world,Capital)...Rb186
KBP6901J: External account of primary incomes and current transfers: Property income received: ROW.
- xv (Enterprises,Enterprises)...Rb177
KBP6707J: Allocation of primary income account: Property income received: Financial corporations+KBP6710J: Allocation of primary income account: Property income paid: Financial corporations-KBP6747J: Allocation of primary income account: Property income received: Non-financial corporations+KBP6752J: Allocation of primary income account: Property income paid: Non-financial corporations+KBP6716J: Secondary distribution of income account: Other current transfers received: Financial corporations-KBP6720J: Secondary distribution of income account: Non-life insurance claims paid: Financial corporations.
- xvi (Households,Enterprises)...Rb562
KBP6721J: Secondary distribution of income account: Miscellaneous transfers paid: Financial corporations+KBP6762J: Secondary distribution of income account: Miscellaneous current transfers paid: Non-financial corporations+KBP6827J: Allocation of primary income account: Property income received: Households and NPISHs+KBP6838J: Secondary distribution of income account: Non-life insurance claims: Households and NPISHs+KBP6845J: Use of disposable income account:

- Adjustment for the change in net equity in pension fund reserves: Households & NPISHs. Disaggregated across household income classes according the LCS for the year 2014/15 (StatsSA, 2017a). The following items are included: “Income from letting of fixed property”, “Interest received”, “Dividends of Listed Companies”, “Dividends of Unlisted Companies”, “Pension from previous employment”, “Annuities from own investment”, “Payments received from boarders and other non-members”, “Claims”, “Non-refundable bursaries”, “Benefits, donations and gifts” and “Cash”.
- xvii (Government,Enterprises)...Rb268
 KBP6718J: Secondary distribution of income account: Social benefits paid by Financial corporations+KBP6759J: Secondary distribution of income account: Social contributions paid by non-financial corporations+KBP6787J: Allocation of primary income account: Property income received: General government.
- xviii (Income taxes,Enterprises)...Rb213
 KBP6717J: Secondary distribution of income account: Current taxes on income and wealth paid by Financial corporations+KBP6758J: Secondary distribution of income account: Current taxes on income and wealth paid by non-financial corporations.
- xix (Accumulation,Enterprises)...Rb617
 KBP6724J: Use of disposable income account: Residual: Financial corporations+KBP6725J: Use of disposable income account: Gross saving of Financial corporations+KBP6764J: Use of disposable income account: Residual: Non-financial corporations+KBP6765J: Use of disposable income account: Gross saving of non-financial corporations.
- xx (Commodities,Households)...Rb2,417
 KBP6007J: Final consumption expenditure by households: Total (PCE). Disaggregated across products according to the expenditure shares in the UT and across household income classes using shares from the LCS data for 2014/15 (StatsSA, 2017a). Close to 800 expenditure items are identified. Due to limited space, the mapping is available on request.
- xxi (Enterprises,Households)...Rb338
 KBP6832J: Allocation of primary income account: Property income paid: Households and NPISHs+KBP6842J: Secondary distribution of income account: Net non-life insurance premiums: Households and NPISHs. Disaggregated across household income classes using shares from the LCS data for 2014/15 (StatsSA, 2017a). The following outlay items are included: “interest on mortgage bonds”, “contribution to pension, provident and annuity funds” and “employer contribution to pension, provident and annuity funds”.
- xxii (Government,Households)...Rb249
 KBP6797J: Secondary distribution of income account: Miscellaneous transfers received: General government+KBP6840J: Secondary distribution of income account: Social contributions paid: Households. Disaggregated across household income classes using shares from the LCS data for 2014/15 (StatsSA, 2017a) for income tax payments (see next item for details).
- xxiii (Income taxes,Households)...Rb395
 KBP6245J: Current taxes on income and wealth of households. Disaggregated across household income classes using shares from the LCS data for 2014/15 (StatsSA, 2017a) based on the distribution of outlays for income tax purposes and includes the following items: “SITE - income tax”, “PAYE - income tax”,

- “According to assessment - income tax”, “Amnesty tax”, “Penalty late submission of tax”.
- xxiv (Accumulation,Households)...Rb028
 KBP6846J: Use of disposable income account: Residual: Households and NPISHs+KBP6848J: Use of disposable income account: Gross saving of households and NPISHs. Disaggregated across household income classes using shares from the LCS data for 2014/15 (StatsSA, 2017a) covering the following items: “Listed company - shares 12 months”, “Unlisted company - shares 12 months”, “Unit trusts 12 months”, “Investment plans 12 months”, “Other investments 12 months”, “Deposits into savings 12 months” and offset by “Withdrawals from savings”.
- xxv (Rest of the world,Households)...Rb008
 KBP6909J: External account of primary incomes and current transfers: Miscellaneous current transfers received: ROW. Disaggregated across household income classes using total income shares from the LCS data for 2014/15 (StatsSA, 2017a) and consists of the same items as used for transfers by households to enterprises (see item xxi above).
- xxvi (Commodities,Government)...Rb829
 KBP6008J: Final consumption expenditure by general government. This is disaggregated across products according to the UT.
- xxvii (Enterprises,Government)...Rb384
 KBP6715J: Secondary distribution of income account: Social contributions received: Financial corporations+KBP6791J: Allocation of primary income account: Property income paid: General government.
- xxviii (Households,Government)...Rb427
 KBP6801J: Secondary distribution of income account: Miscellaneous current transfers paid: General government+KBP6836J: Secondary distribution of income account: Social benefits received: Households and NPISHs. Disaggregated across household income classes using shares from the LCS data for 2014/15 (StatsSA, 2017a) and includes the following items: “Old age pensions”, “Disability grants”, “Family and other allowances” and “Workmen's compensation Funds”.
- xxix (Government,Government)...Rb198
 KBP6794J: Secondary distribution of income account: Social contributions received: General government+KBP6798J: Secondary distribution of income account: Social benefits paid: General government.
- xxx (Accumulation,Government)...Rb026
 KBP6803J: Use of disposable income account: Gross saving of General government.
- xxxi (Rest of the world,Government)...Rb050
 KBP6908J: External account of primary incomes and current transfers: Current international co-operation received: ROW.
- xxxii (Government,Net activity taxes)...Rb072
 KBP6600J: Other taxes on production in all industries - KBP6601J: Other subsidies on production in all industries. Net activity tax is disaggregated across activities according to the activity shares in the UT.
- xxxiii (Government,Net dom prod taxes)...Rb381
 KBP6603J: Taxes on products - KBP6604J: Subsidies on products - KBP4590J: National government tax revenue: Taxes on international trade and transactions: Import duties. Domestic taxes less subsidies on products including import duties is

- equal to taxes on products as reported by the National Accounts. Disaggregation of this control total (sum of taxes less subsidies on products less import duties) across products is based on ST values from which import duties, discussed below, are subtracted.
- xxxiv (Government,Import duties)...Rb044
 KBP4590J: National government tax revenue: Taxes on international trade and transactions: Import duties. Commodity level import duties collected were obtained from in unpublished format from SSA for the year 2010. Import duty collection rates were calculated using imports for the year 2010. It is then assumed that the 2010 import duty collection rates are the same as for 2015. Total Import duties are made consistent with the national government tax revenue as reported in the Public Finance Statistics of the SARB Quarterly Bulletin.
- xxxv (Government,Income taxes)...Rb608
 KBP6717J: Secondary distribution of income account: Current taxes on income and wealth paid by Financial corporations+KBP6758J: Secondary distribution of income account: Current taxes on income and wealth paid by non-financial corporations.
- xxxvi (Commodities,Ch in inventories)...Rb029
 KBP6010J: Change in inventories+KBP6011J: Residual item. Disaggregated across products according to the UT.
- xxxvii (Commodities,Accumulation)...Rb828
 KBP6009J: Gross fixed capital formation (Investment). Disaggregated across products according to the UT.
- xxxviii (Ch in inventories,Accumulation)...Rb029
 KBP6010J: Change in inventories+KBP6011J: Residual item. Disaggregated across products according to the UT.
- xxxix (Commodities,Rest of the world)...Rb1,222
 KBP6013J: Exports of goods & services. Commodity level adjustments are made for purchases of non-residents.
- xl (Labour,Rest of the world)...Rb010
 KBP6208J: Compensation of South African residents in the rest of the world. Disaggregated across types of labour according to shares in total labour income (see ii above).
- xli (Capital,Rest of the world)...Rb088
 KBP6904J: External account of primary incomes and current transfers: Property income paid: RoW.
- xlii (Households,Rest of the world)...Rb021
 KBP6912J: External account of primary incomes and current transfers: Miscellaneous current transfers paid: RoW. The distribution across household income classes is the same as for what households receive from enterprises (see xvi above).
- xliii (Government,Rest of the world)...Rb003
 KBP6911J: External account of primary incomes and current transfers: Current international co-operation paid: RoW.
- xliv (Accumulation,Rest of the world)...Rb186
 KBP6913J: External account of primary incomes and current transfers: Current external balance: RoW.

4. Balancing the Prior SAM

The range of datasets used to construct the SAM described in the previous section suggests that there will may be imbalances (i.e., row and column totals are unequal). However, the ST and UT are almost consistent with each other and with the National Account. The inconsistency is considered to be a rounding error and therefore small enough to load it in the existing UT residual which in itself was already merged with the change in stocks, see xxxvi in the previous section.

After balancing the SUTSAM, it was disaggregated across labour and households using the 2015 LMD data (StatsSA, 2017b) and the LCS data for 2014/15 (StatsSA, 2017a) survey data. Since the SUTSAM is balanced, this can be set up such that this results in imbalances for the household accounts only. We do this by first disaggregating wages and salaries for each activity by education attainment using the 2015 LMD data (StatsSA, 2017b). Summing across activities results in total labour income for each education attainment group. We then disaggregate household expenditure for each commodity and for each of the other outlays across household income groups using the LCS data for 2014/15 (StatsSA, 2017a) survey data . Summing across all commodities and other types of outlays, yields total household outlays for each household income group. Since total households outlays must equal total household income for each household income group we use the former as our benchmark for the latter. Initial shares of household income by sources (wages & salaries by educational attainment, capital income, dividends and various transfers) are obtained from the LCS data for 2014/15 (StatsSA, 2017a). These shares are then applied to the total outlays of each household income group. Finally, as was the case with the 2009 and 2012 SAM, the household accounts were balanced using the biproportional scaling method, also known as RAS while holding all other non-household-related entries of the SUTSAM constant. The result is a fully disaggregated micro SAM with detailed labour and household categories which remains consistent with the National Accounts aggregates.

4. Supplementary Data

Although SAMs are typically presented in monetary values, modellers and other users might wish to refer to the physical quantities that are associated with certain flows. In particular, employment figures related to the wage flows recorded in the SAM can be useful. The level of disaggregation in the Micro SAM has required us to interpolate or infer the monetary flows from higher level data. This means that users cannot easily find matching employment figures. We have thus included estimates of employment in the accompanying workbook.

We derived these figures from the LMD using the same method of allocating labour as we did for wages. However, we find that some of the derivations give rise to wage rates that are implausible. We have therefore adjusted the most egregious figures to avoid this. The adjustments can be traced in the worksheet.

Of course, users are free to estimate employment figures themselves if they prefer.

To assist users further, we have included the national accounts aggregates used to construct the SAM as well as the number of households and the count of the estimated population in each household group.

The final disaggregated SAM is quite large and is included in the accompanying [Excel workbook file](#). This workbook contains the following supplementary data:

1. Macro GDP calculations and consistency check with the National Accounts (SARB, 2018)
2. GDP by activity at factor costs
3. Employment data extracted from the 2015 LMD data (StatsSA, 2017b) survey data by activity and labour type as well as original and adjusted earning per worker calculations.
4. Number of households and population by households' group, extracted from the LCS data for 2014/15 (StatsSA, 2017a) survey data.

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Appendix A: Commodities and Activities identified in a 2015 SAM for South Africa

| Commodities | | Activities | |
|-------------|-------|---------------------------|---|
| 1. | cagri | Agriculture | |
| 2. | clani | Live animal | |
| 3. | cfore | Forestry | |
| 4. | cfish | Fishing | |
| 5. | ccoal | Coal and lignite | |
| 6. | cmore | Metal ores | |
| 7. | comin | Other minerals | |
| 8. | celcg | Electricity and gas | |
| 9. | cwatr | Natural water | |
| 10. | cmeat | Meat | |
| 11. | cpfis | Fish | |
| 12. | cvege | Vegetables | |
| 13. | cfroi | Fruit and nuts | |
| 14. | cfats | Oils and fats | |
| 15. | cdair | Dairy products | |
| 16. | cgrai | Grain mill products | |
| 17. | cstar | Starches products | |
| 18. | cafee | Animal feeding | |
| 19. | cbake | Bakery products | |
| 20. | csuga | Sugar | |
| 21. | cconf | Confectionary products | |
| 22. | cpast | Pasta products | |
| 23. | cofoo | Food n.e.c. | |
| 24. | calcb | Alcohol, beverages | |
| 25. | csftd | Soft drinks | |
| 26. | ctoba | Tobacco products | |
| 27. | ctexf | Textile fabrics | |
| 28. | ctexm | Made-up textile, articles | |
| 29. | ccarp | Carpets | |
| 30. | cotex | Textile n.e.c. | |
| 31. | cknit | Knitting fabrics | |
| 32. | cwear | Wearing apparel | |
| 33. | cleat | Leather products | |
| 34. | cfoot | Footwear | |
| 35. | cwood | Wood products | |
| 36. | cpapp | Paper products | |
| 37. | cpnt | Printing | |
| 38. | cpetr | Petroleum products | |
| 39. | cbchm | Basic chemicals | |
| 40. | cfert | Fertilizers, pesticides | |
| 41. | cpain | Paint, related products | |
| 42. | cphar | Pharmaceutical products | |
| 43. | csoap | Soap, cleaning, perfume | |
| 44. | coche | Chemical products, n.e.c. | |
| | | aagri | Agriculture |
| | | afore | Forestry |
| | | afish | Fishing |
| | | acoal | Mining of coal and lignite |
| | | agold | Mining of gold and uranium ore |
| | | amore | Mining of metal ores |
| | | aomin | Other mining and quarrying |
| | | afood | Food |
| | | abevt | Beverages and tobacco |
| | | aweav | Spinning, weaving and finishing of textiles |
| | | aknit | Knitted, crouched fabrics, wearing apparel, fur articles |
| | | aleat | Tanning and dressing of leather |
| | | afoot | Footwear |
| | | awood | Sawmilling, planing of wood, cork, straw |
| | | apapr | Paper |
| | | aprnt | Publishing, printing, recorded media |
| | | apetr | Coke oven, petroleum refineries |
| | | abchm | Nuclear fuel, basic chemicals |
| | | aochm | Other chemical products, man-made fibres |
| | | arubb | Rubber |
| | | aplas | Plastic |
| | | aglss | Glass |
| | | anmmi | Non-metallic minerals |
| | | abisc | Basic iron and steel, casting of metals |
| | | anfme | Basic precious and non-ferrous metals |
| | | afabm | Fabricated metal products |
| | | amach | Machinery and equipment |
| | | aemch | Electrical machinery and apparatus |
| | | ardtv | Radio, television, communication equipment and apparatus |
| | | amopt | Medical, precision, optical instruments, watches and clocks |
| | | amtp | Motor vehicles, trailers, parts |
| | | aotrp | Other transport equipment |
| | | afurn | Furniture |
| | | aomnf | Manufacturing n.e.c, recycling |
| | | aelcg | Electricity, gas, steam and hot water supply |
| | | awatd | Collection, purification and distribution of water |
| | | acnst | Construction |
| | | awtrd | Wholesale trade, commission trade |
| | | artrd | Retail trade |
| | | amtv | Sale, maintenance, repair of motor vehicles |
| | | aacct | Hotels and restaurants |
| | | altrp | Land transport, transport via pipe lines |
| | | awtrp | Water transport |
| | | aatrp | Air transport |

| | | | | |
|-----|---------------------------|-------------------------------|--------------|--|
| 45. | ctyre | Rubber tyres | atrps | Auxiliary transport |
| 46. | corub | Other rubber products | apost | Post and telecommunication |
| 47. | cplas | Plastic products | afins | Financial intermediation |
| 48. | cglas | Glass products | ainsp | Insurance and pension funding |
| 49. | ccera | Non-structural ceramic | aofin | Activities to financial intermediation |
| 50. | cclay | Structure non-refractory clay | areal | Real estate activities |
| 51. | ccmnt | Plaster, cement | arent | Renting of machinery and equipment |
| 52. | cconc | Articles of concrete | acomp | Computer and related activities |
| 53. | conmp | Non-metallic products n.e.c. | arsea | Research and experimental development |
| 54. | cfurn | Furniture | aobus | Other business activities |
| 55. | cjewl | Jewellery | apuba | Government |
| 56. | comnf | Manufactured products n.e.c. | aeduc | Education |
| 57. | cwast | Wastes, scraps | aheal | Health and social work |
| 58. | cirst | Iron, steel products | awast | Sewerage and refuse disposal |
| 59. | cnfme | Non-ferrous metals | amorg | Activities of membership organisations |
| 60. | cstrm | Structural metal products | arecr | Recreational, cultural and sporting activities |
| 61. | ctank | Tanks, reservoirs | aoact | Other activities |
| 62. | cofbm | Other fabricated metal | anobs | Non-observed, informal, non-profit, households, |
| 63. | cengt | Engines, turbines | | |
| 64. | cpump | Pumps, compressors | | |
| 65. | cgear | Bearings, gears | | |
| 66. | clift | Lifting equipment | | |
| 67. | cgenm | General machinery | | |
| 68. | cspcm | Special machinery | | |
| 69. | cdoma | Domestic appliances | | |
| 70. | coffm | Office machinery | | |
| 71. | celcm | Electrical machinery | | |
| 72. | crdtv | Radio, television | | |
| 73. | cmeda | Medical appliances | | |
| 74. | cmtvp | Motor vehicles, parts | | |
| 75. | cship | Ships and boats | Other | Accounts |
| 76. | crail | Railway and trams | trc | Trade and transport margins |
| 77. | cairc | Aircrafts | flab-p | “Primary” workers with some or no primary schooling (grades 1-7) |
| 78. | coteq | Other transport equipment | flab-m | “Middle” includes workers who have completed grade 10 |
| 79. | ccnst | Construction | flab-s | “Secondary” includes workers who have completed grade 12 |
| 80. | ccsrv | Construction services | flab-t | “Tertiary” workers with some post-secondary or higher education |
| | Commodities (cont) | | Other | Accounts (cont) |
| 81. | ctrad | Trade services | fcap | Gross operating surplus |
| 82. | cacco | Accommodation | ent | Enterprises |
| 83. | ccats | Catering services | hhd-0 | Household income decile up to 10% |
| 84. | cptrp | Passenger transport | hhd-1 | Household income decile 10 - 20% |
| 85. | cftrp | Freight transport | hhd-2 | Household income decile 20 - 30% |
| 86. | ctrps | Supporting transport services | hhd-3 | Household income decile 30 - 40% |
| 87. | cpost | Postal, courier services | hhd-4 | Household income decile 40 - 50% |

| | | | | |
|------|-------|------------------------------|--------|-----------------------------------|
| 88. | celcd | Electricity distribution | hhd-5 | Household income decile 50 - 60% |
| 89. | cwatd | Water distribution | hhd-6 | Household income decile 60 - 70% |
| 90. | cfins | Financial services | hhd-7 | Household income decile 70 - 80% |
| 91. | cinsp | Insurance, pension | hhd-8 | Household income decile 80 - 90% |
| 92. | cofin | Other financial services | hhd-91 | Household income decile 90 - 92% |
| 93. | creal | Real estate services | hhd-92 | Household income decile 92 - 94% |
| 94. | crent | Leasing, Rental services | hhd-93 | Household income decile 94 - 96% |
| 95. | crsea | Research, development | hhd-94 | Household income decile 96 - 98% |
| 96. | clacc | Legal, accounting | hhd-95 | Household income decile 98 - 100% |
| 97. | cobus | Other business services | gov | Government |
| 98. | ctelc | Telecommunications | atax | Activity tax |
| 99. | csupp | Support services | dtax | Income tax |
| 100. | cmnfs | Manufactured services n.e.c. | mtax | Import duties |
| 101. | cpuba | Public administration | stax | Sales tax |
| 102. | ceduc | Education services | s-i | Accumulation account |
| 103. | cheal | Health, social services | dstk | Change in stocks |
| 104. | cosrv | Other services n.e.c. | row | Rest of the world |

Source: own descriptions and labels.

Appendix B: Matching SAM Activities to QLFS/LMD Activities

| LMD Industry Code | LMD Industry Description | SAM Activity # | SAM Activity Code | SAM Activity Description |
|-------------------|---|----------------|-------------------|--|
| 111 | Growing of crops | 1aagri | | Agriculture |
| 112 | Farming of animals | 1aagri | | Agriculture |
| 113 | Growing of crops combined with farming of animals(mixed farming) | 1aagri | | Agriculture |
| 114 | Agricultural and animal husbandry services, except veterinary activities | 1aagri | | Agriculture |
| 115 | Game hunting, trapping and game propagation, including related services | 1aagri | | Agriculture |
| 116 | Production of organic fertilizer | 1aagri | | Agriculture |
| 121 | Forestry and related services | 2afore | | Forestry |
| 122 | Logging and related services | 2afore | | Forestry |
| 131 | Ocean and coastal fishing | 3afish | | Fishing |
| 132 | Fish hatcheries and fish farms | 3afish | | Fishing |
| 210 | Mining of coal and lignite | 4acoal | | Mining of coal and lignite |
| 230 | Mining of gold and uranium ore | 5agold | | Mining of gold and uranium ore |
| 241 | Mining of iron ore | 6amore | | Mining of metal ores |
| 242 | Mining of non-ferrous metal ores | 6amore | | Mining of metal ores |
| 221 | Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction, excluding surveying | 7aomin | | Other mining and quarrying |
| 251 | Stone quarrying, clay and sandpits | 7aomin | | Other mining and quarrying |
| 252 | Mining of diamonds (including alluvial diamonds) | 7aomin | | Other mining and quarrying |
| 253 | Mining and quarrying N.E.C. | 7aomin | | Other mining and quarrying |
| 290 | Service activities incidental to mining of minerals | 7aomin | | Other mining and quarrying |
| 301 | Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats | 8afood | | Food |
| 302 | Manufacture of dairy products | 8afood | | Food |
| 303 | Manufacture of grain mill products, starches and starch products and prepared animal feeds | 8afood | | Food |
| 304 | Manufacture of other food products | 8afood | | Food |
| 305 | Manufacture of beverages | 9abevt | | Beverages and tobacco |
| 306 | Manufacture of tobacco products | 9abevt | | Beverages and tobacco |
| 311 | Spinning, weaving and finishing of textiles | 10aweav | | Spinning, weaving and finishing of textiles |
| 312 | Manufacture of other textiles | 10aweav | | Spinning, weaving and finishing of textiles |
| 313 | Manufacture of knitted and crocheted fabrics and articles | 11aknit | | Knitted, crouched fabrics, wearing apparel, fur articles |
| 314 | Manufacture of wearing apparel, except fur apparel | 11aknit | | Knitted, crouched fabrics, wearing apparel, fur articles |
| 316 | Tanning and dressing of leather; manufacture of luggage, handbag, | 12aleat | | Tanning and dressing of leather |
| 317 | Manufacture of footwear | 13afoot | | Footwear |
| 321 | Sawmilling and planing of wood | 14awood | | Sawmilling, planing of wood, cork, straw |

| LMD Industry Code | LMD Industry Description | SAM Activity # | SAM Activity Code | SAM Activity Description |
|-------------------|---|----------------|-------------------|--|
| 322 | Manufacture of products of wood, cork, straw and plaiting material | 14a | wood | Sawmilling, planing of wood, cork, straw |
| 323 | Manufacture of paper and paper products | 15a | apapr | Paper |
| 324 | Publishing | 16a | prnt | Publishing, printing, recorded media |
| 325 | Printing and service activities related to printing | 16a | prnt | Publishing, printing, recorded media |
| 326 | Reproduction of recorded media | 16a | prnt | Publishing, printing, recorded media |
| 331 | Manufacture of coke oven products | 17a | petr | Coke oven, petroleum refineries |
| 332 | Petroleum refineries / synthesisers | 17a | petr | Coke oven, petroleum refineries |
| 333 | Processing of nuclear fuel | 18a | bchm | Nuclear fuel, basic chemicals |
| 334 | Manufacture of basic chemicals | 18a | bchm | Nuclear fuel, basic chemicals |
| 335 | Manufacture of other chemical products | 19a | ochm | Other chemical products, man-made fibres |
| 336 | Manufacture of manmade fibers | 19a | ochm | Other chemical products, man-made fibres |
| 337 | Manufacture of rubber products | 20a | rub | Rubber |
| 338 | Manufacture of plastic products | 21a | plas | Plastic |
| 341 | Manufacture of glass and glass products | 22a | glss | Glass |
| 342 | Manufacture of non-metallic mineral products N.E.C. | 23a | nmmi | Non-metallic minerals |
| 351 | Manufacture of basic iron and steel | 24a | bisc | Basic iron and steel, casting of metals |
| 353 | Casting of metals | 24a | bisc | Basic iron and steel, casting of metals |
| 352 | Manufacture of basic precious and non-ferrous metals | 25a | nfme | Basic precious and non-ferrous metals |
| 354 | Manufacture of structural metal products, tanks, reservoirs and steam generators | 26a | fabm | Fabricated metal products |
| 355 | Manufacture of other fabricated metal products; metalwork service activities | 26a | fabm | Fabricated metal products |
| 356 | Manufacture of general purpose machinery | 27a | mach | Machinery and equipment |
| 357 | Manufacture of special purpose machinery | 27a | mach | Machinery and equipment |
| 358 | Manufacture of household appliances N.E.C. | 27a | mach | Machinery and equipment |
| 359 | Manufacture of office, accounting and computing machinery | 27a | mach | Machinery and equipment |
| 361 | Manufacture of electric motors, generators and transformers | 28a | emch | Electrical machinery and apparatus |
| 362 | Manufacture of electricity distribution and control apparatus | 28a | emch | Electrical machinery and apparatus |
| 363 | Manufacture of insulated wire and cable | 28a | emch | Electrical machinery and apparatus |
| 364 | Manufacture of accumulators, primary cells and primary batteries | 28a | emch | Electrical machinery and apparatus |
| 365 | Manufacture of electric lamps and lighting equipment | 28a | emch | Electrical machinery and apparatus |
| 366 | Manufacture of other electrical equipment N.E.C. | 28a | emch | Electrical machinery and apparatus |
| 371 | Manufacture of electronic valves and tubes and other electronic components | 29a | rdtv | Radio, television, communication equipment and apparatus |
| 372 | Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy | 29a | rdtv | Radio, television, communication equipment and apparatus |
| 373 | Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods | 29a | rdtv | Radio, television, communication equipment and apparatus |

| LMD Industry Code | LMD Industry Description | SAM Activity # | SAM Activity Code | SAM Activity Description |
|-------------------|---|----------------|-------------------|---|
| 374 | Manufacture of medical appliances and instruments and appliances for measuring, checking, testing, navigating and for other purposes except optical instruments | 30amopt | | Medical, precision, optical instruments, watches and clocks |
| 375 | Manufacture of optical instruments and photographic equipment | 30amopt | | Medical, precision, optical instruments, watches and clocks |
| 376 | Manufacture of watches and clocks | 30amopt | | Medical, precision, optical instruments, watches and clocks |
| 381 | Manufacture of motor vehicles | 31amtvp | | Motor vehicles, trailers, parts |
| 382 | Manufacture of bodies (coachwork) for motor vehicles; | 31amtvp | | Motor vehicles, trailers, parts |
| 383 | Manufacture of parts and accessories for motor vehicles and their engines | 31amtvp | | Motor vehicles, trailers, parts |
| 384 | Building and repairing of ships and boats | 32aotrp | | Other transport equipment |
| 385 | Manufacture of railway and tramway locomotives and rolling stock | 32aotrp | | Other transport equipment |
| 386 | Manufacture of aircraft and spacecraft | 32aotrp | | Other transport equipment |
| 387 | Manufacture of transport equipment N.E.C. | 32aotrp | | Other transport equipment |
| 391 | Manufacture of furniture | 33afurn | | Furniture |
| 392 | Manufacturing N.E.C... | 34aomnf | | Manufacturing n.e.c, recycling |
| 411 | Production, collection and distribution of electricity | 35aelcg | | Electricity, gas, steam and hot water supply |
| 412 | Manufacture of gas; distribution of gaseous fuels through mains | 35aelcg | | Electricity, gas, steam and hot water supply |
| 413 | Steam and hot water supply | 35aelcg | | Electricity, gas, steam and hot water supply |
| 420 | COLLECTION, PURIFICATION AND DISTRIBUTION OF WATER | 36awatd | | Collection, purification and distribution of water |
| 501 | Site preparation | 37acnst | | Construction |
| 502 | Building of complete constructions or parts thereof; civil engineering | 37acnst | | Construction |
| 503 | Building installation | 37acnst | | Construction |
| 504 | Building completion | 37acnst | | Construction |
| 505 | Renting of construction of demolition equipment with operators | 37acnst | | Construction |
| 611 | Wholesale trade on a fee or contract basis | 38awtrd | | Wholesale trade, commission trade |
| 612 | Wholesale trade in agricultural raw materials, livestock, food, beverages and tobacco | 38awtrd | | Wholesale trade, commission trade |
| 613 | Wholesale trade in house-hold goods | 38awtrd | | Wholesale trade, commission trade |
| 614 | Wholesale trade in non-agricultural intermediate products, waste and scrap | 38awtrd | | Wholesale trade, commission trade |
| 615 | Wholesale trade in machinery, equipment and supplies | 38awtrd | | Wholesale trade, commission trade |
| 619 | Other wholesale trade | 38awtrd | | Wholesale trade, commission trade |
| 621 | Non-specialised retail trade in stores | 39artrd | | Retail trade |
| 622 | Retail trade in food, beverages and tobacco in specialised stores | 39artrd | | Retail trade |
| 623 | Other retail trade in new goods in specialised stores | 39artrd | | Retail trade |
| 624 | Retail trade in second-hand goods in stores | 39artrd | | Retail trade |
| 625 | Retail trade not in stores | 39artrd | | Retail trade |
| 626 | Repair of personal and household goods | 39artrd | | Retail trade |

| LMD Industry Code | LMD Industry Description | SAM Activity # | SAM Activity Code | SAM Activity Description |
|-------------------|--|----------------|-------------------|---|
| 631 | Sale of motor vehicles | 40 | amtvs | Sale, maintenance, repair of motor vehicles |
| 632 | Maintenance and re-pair of motor vehicles | 40 | amtvs | Sale, maintenance, repair of motor vehicles |
| 633 | Sale of motor vehicle parts and accessories | 40 | amtvs | Sale, maintenance, repair of motor vehicles |
| 634 | Sale, maintenance and repair of motor cycles and related parts and accessories | 40 | amtvs | Sale, maintenance, repair of motor vehicles |
| 635 | Retail sale of automotive fuel | 40 | amtvs | Sale, maintenance, repair of motor vehicles |
| 641 | Hotels, camping sites and other provision of short stay accommodation | 41 | aacct | Hotels and restaurants |
| 642 | Restaurants, bars and canteens | 41 | aacct | Hotels and restaurants |
| 643 | Shebeen | 41 | aacct | Hotels and restaurants |
| 711 | Railway transport | 42 | altrp | Land transport, transport via pipe lines |
| 712 | Other land transport | 42 | altrp | Land transport, transport via pipe lines |
| 713 | Transport via pipelines | 42 | altrp | Land transport, transport via pipe lines |
| 721 | Sea and coastal water transport | 43 | awtrp | Water transport |
| 722 | Inland water transport | 43 | awtrp | Water transport |
| 730 | AIR TRANSPORT | 44 | aatrp | Air transport |
| 741 | Supporting and auxiliary transport activities; activities of travel agencies | 45 | atrps | Auxiliary transport |
| 751 | Postal and related courier activities | 46 | apost | Post and telecommunication |
| 752 | Telecommunication | 46 | apost | Post and telecommunication |
| 811 | Monetary intermediation | 47 | afins | Financial intermediation |
| 818 | Cash loans | 47 | afins | Financial intermediation |
| 819 | Other financial intermediation N.E.C. | 47 | afins | Financial intermediation |
| 821 | Insurance and pension funding, except compulsory social security | 48 | ainsp | Insurance and pension funding |
| 832 | Activities auxiliary to insurance and pension funding | 48 | ainsp | Insurance and pension funding |
| 831 | Activities auxiliary to financial intermediation, except insurance and pension funding | 49 | aofin | Activities to financial intermediation |
| 841 | Real estate activities with own or leased property | 50 | areal | Real estate activities |
| 842 | Real estate activities on a fee or contract basis | 50 | areal | Real estate activities |
| 851 | Renting of transport equipment | 51 | arent | Renting of machinery and equipment |
| 852 | Renting of other machinery and equipment | 51 | arent | Renting of machinery and equipment |
| 853 | Renting of personal and household goods N.E.C. | 51 | arent | Renting of machinery and equipment |
| 861 | hardware consultancy | 52 | acomp | Computer and related activities |
| 862 | Software consultancy and supply | 52 | acomp | Computer and related activities |
| 863 | Data processing | 52 | acomp | Computer and related activities |
| 864 | Data base activities | 52 | acomp | Computer and related activities |
| 865 | Maintenance and repair of office, accounting and computing machinery | 52 | acomp | Computer and related activities |
| 869 | Other computer related activities | 52 | acomp | Computer and related activities |
| 871 | Research and experimental development on natural sciences and engineering | 53 | arsea | Research and experimental development |
| 872 | Research and experimental develop-ment on social sciences and humanities | 53 | arsea | Research and experimental development |

| LMD Industry Code | LMD Industry Description | SAM Activity # | SAM Activity Code | SAM Activity Description |
|-------------------|---|----------------|-------------------|---|
| 881 | Legal, accounting, bookkeeping and auditing activities; tax consultancy; market research and public opinion research; business and management consultancy | 54aobus | | Other business activities |
| 882 | Architectural, engineering and other technical activities | 54aobus | | Other business activities |
| 883 | Advertising | 54aobus | | Other business activities |
| 889 | Business activities N.E.C. | 54aobus | | Other business activities |
| 932 | Veterinary activities | 54aobus | | Other business activities |
| 911 | Central government activities | 55apuba | | Government |
| 912 | Regional services council activities | 55apuba | | Government |
| 913 | Local authority activities | 55apuba | | Government |
| 914 | Provincial administrations | 55apuba | | Government |
| 915 | SA Defense force | 55apuba | | Government |
| 916 | SA Police service | 55apuba | | Government |
| 917 | Correctional service | 55apuba | | Government |
| 920 | EDUCATION | 56aeduc | | Education |
| 931 | Human health activities | 57aheal | | Health and social work |
| 933 | Social work activities | 57aheal | | Health and social work |
| 395 | Recycling N.E.C. | 58awast | | Sewerage and refuse disposal |
| 951 | Activities of business, employers and professional organisations | 59amorg | | Activities of membership organisations |
| 952 | Activities of trade unions | 59amorg | | Activities of membership organisations |
| 959 | Activities of other member-ship organizations | 59amorg | | Activities of membership organisations |
| 961 | Motion picture, radio, television and other entertainment activities | 60arecr | | Recreational, cultural and sporting activities |
| 962 | News agency activities | 60arecr | | Recreational, cultural and sporting activities |
| 963 | Library, archives, museums and other cultural activities | 60arecr | | Recreational, cultural and sporting activities |
| 964 | Sporting and other recreational activities | 60arecr | | Recreational, cultural and sporting activities |
| 940 | OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICE ACTIVITIES | 61aoact | | Other activities |
| 990 | OTHER SERVICE ACTIVITIES | 61aoact | | Other activities |
| 10 | PRIVATE HOUSEHOLDS WITH EMPLOYED PERSONS | 62anobs | | Non-observed, informal, non-profit, households, |

Source: own descriptions and labels.