



STATISTICS
DENMARK



Statistics Norway
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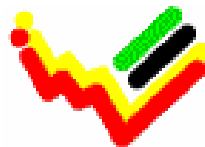
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Report from work at the National Statistical Institute of Mozambique

TA for the Scandinavian Support Program to Strengthen the Institutional
Capacity of the National Statistics, Mozambique

Jan Redeby

November 2004 - November 2005



Instituto Nacional de Estatística

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Executive summary

I have been engaged for a series of missions from August 2004 to December 2005 to support the national accounts, in total about 40 weeks. This report covers the period from November 16, 2004 to November 30, 2005. My tasks during this period have been: design of a new IT-system for the national accounts; compilation of benchmark estimates for 2003, which is also the new base year for estimates at constant prices; and preparations for and development of quarterly national accounts.

The work on the revised and rebased annual national accounts is well underway, and are now planned to be published in the third quarter of 2006. The new IT-system is in place, designed in Microsoft Excel and Access. It includes procedures for exchange of data between Excel and an Access database.

Quarterly estimates are now planned to be published for the first time in the fourth quarter of 2006. A system is in place and data sources are being identified. As a start, the quarterly national accounts will be limited to estimates of GDP by activity at constant prices, possibly also at current prices.

1 Introduction

I have been engaged by the Scandinavian Programme for support to the Statistical Institute of Mozambique (Instituto Nacional de Estatística, INE) for a series of missions from August 2004 to December 2005 to support the national accounts, in total about 40 weeks. The terms of reference are attached as Appendix 1 and a time schedule as Appendix 2. This report covers the period from November 16, 2004 to November 30, 2005. An inception report covered the first two months (Aug 16 – Oct 23, 2004).

I have been dealing with the following major tasks in the planned national accounts activities for the years 2004-2006.

- Compilation of benchmark estimates for 2003 as well as the change of base year. This also includes the computer system for the compilation of national accounts. See section 2 of the report.
- Development of quarterly national accounts. See section 3 of the report.

I have worked with Ms. Mónica Magaua, Head of the Department for National Accounts, with the national accounts statisticians and with Ms. Fernanda Teixeira, long-term advisor (IMF) in the GDDS-project for Lusophone Africa. On a regular basis, I have also had discussions with Mr. Saide Dade, Director of National Accounts and Global Indicators.

INE has also organised support from the World Bank – in total about fifteen weeks – for the compilation of a social accounting matrix. This task is intimately related to the compilation of the benchmark estimates. I worked together with the two consultants, Mr. Antonio Lazo and Ms. Carmen Reyes, during their first mission.

The compilation of the revised national accounts is well underway as well as the preparation of quarterly GDP-estimates. All this is planned to be finished towards the end of 2006 and would benefit from an extension of the current support to the national accounts. The recent evaluation of the Scandinavian programme recommended an additional support during 2006 – eight months organised as a series of missions. This will go a long way to help achieving the goals set.

2 Benchmark estimates and change of base year

Publication of revised and rebased national accounts is planned for the third quarter of 2006. This comprises time series on the 2003 base year for the years 1991-2005, the last year using a simplified model. Three major tasks are involved:

- Design of a new IT-system
- Change of base year and revised estimates
- Design of a simplified system for preliminary estimates

The new IT-system

INE has adopted software developed in Microsoft Excel by the United Nations Statistical Department. It is based on a UN handbook (Systems Approach to National Accounts Compilation). The general design and ideas of this system has been kept. However, the IT-solution has been improved by integrating the database software Microsoft Access in the system, which is now fully functional after a fourth mission by Mr. Søren Netterstrøm, Statistics Denmark. He has designed the "engine" of the system, which, as a core, includes procedures for exchange of data between Excel and an Access database. Besides, the system includes features such as a menu for finding and opening the Excel files included, defining user rights and many others. The other part of the system is made up of pre-designed Excel files and a flow of calculations based on the UN handbook mentioned above.

The engine of the system has been given the name NADABAS (National Accounts Data Base System).

Change of base year and revised estimates

The base year for national accounts at constant prices is being changed from 1996 to 2003. This also includes a review of sources and methods and the establishment of a benchmark for 2003 using new data sources such as the household income and

expenditure survey for 2003. The time series for the years before 2003 will then be revised and linked to the benchmark.

There are three basic dimensions in the compilation of national accounts in the UN-handbook – products, economic activities, institutional sectors – which are compiled on the basis of various source data. These are then brought together on the basis of tables defined in the 1993 SNA:

- Supply and use table
- Cross-classification of institutional sectors and economic activities
- Integrated economic accounts

The year 2002 is compiled concurrently with the benchmark 2003. 2004 will be compiled somewhat later, as soon as source data are available. The old time series will then be linked to the revised estimates for 2002 resulting in consistent and revised estimates back to 1991.

There will be more details for the base year and the compilation of the SAM, notably sub-sectors for the household sector. It will therefore be advantageous to compile the base year with the SAM-details in separate Excel workbooks, which save to and load from the Access database.

Simplified system for preliminary estimates

Preliminary estimates for the past year should be available in March/April. A simplified system is needed for that purpose. Initially – as is the case now – the preliminary estimates will be limited to gross domestic product by activity and, possibly, by expenditure. The system will be based on product balances with less detail in the classifications; it will be connected to the database in the full system and use the NADABAS features.

3 Quarterly national accounts

There is an increasing user demand for quarterly national accounts and the development of this is included in INE's work plan for 2004 and 2005. As a start, the quarterly national accounts will be limited to estimates of GDP by activity at constant prices, possibly also at current prices. The general method will be to extrapolate values added with output indicators and then benchmark the results with the annual estimates. The Denton method will be used for the benchmarking.

A working/study visit by four national accounts staff to Statistics Sweden and Denmark took place in June. The main task during the visit was the preparation of quarterly GDP-estimates. The report from the visit includes an outline of the quarterly GDP-estimates, discussion of sources and a time plan for the implementation aiming at making quarterly estimates available by November next year.

Excel will be used for the quarterly estimates. There is one workbook for each industry linked to workbooks for totals. Each workbook includes macros for running programmes for benchmarking and seasonal adjustment. Later on the quarterly files can be linked to the NADABAS system.

4 The way forward – recommendations

Annual estimates

- a) Mainly for the purpose of the SAM, the benchmark estimates require more details compared to current annual estimates. Therefore, the detailed benchmark should be kept in separate workbooks containing only the base (benchmark) year, 2003. These workbooks will be connected to the NADABAS-system, saving data to and loading data from the Access database.
- b) It is important to work with a perspective of time series. Therefore, the year 2002 is compiled concurrently with 2003. As far as available data permit, 2004 should also be compiled at the same time.
- c) As soon as sufficient data have been compiled for 2002 and 2003, the simplified system for preliminary estimates should be designed. It will be based on aggregated variables from full system, loaded from the Access database. Later on, as they become available, quarterly estimates should also be loaded to the simplified system.

Quarterly estimates

- d) The workload regarding the new base year is significant. Therefore – at least initially – the compilation of the quarterly GDP-estimates should be handled by the section for short-term indicators (Conjuntura). In due course, it could be considered whether to allocate the responsibilities for the quarterly estimates to the national accounts section. However, keeping the quarterly estimates with Conjuntura should also be a possible option.

The NADABAS system

- e) The NADABAS system has been designed using Visual Basic. Currently, there is no capacity at INE to mend and adjust the system if that would be necessary. In the medium term, one or two staff members at the IT section should be trained for this task.
- f) A more immediate task is the training of staff members at the national accounts section to be administrators of the system. This entails ability to design the links between the Excel workbooks and the Access database.

Terms of reference – national accounts adviser (Jan Redeby)

General responsibilities and tasks

The adviser shall assist INE in the elaboration of plans, guidelines and procedure for the compilation of annual and quarterly national accounts. He will report to the Team Leader and shall collaborate with and assist the Vice-President, the Head of the Directorate for National Accounts and Global Indicators and other staff at INE. The adviser shall provide assistance, guidance, advice and training related to national accounts.

The adviser will work at INE for about ten months during the period August 2004 – December 2005.

Specific tasks

The specific tasks shall include but not necessarily be limited to:

- Support the improvement of source data for the national accounts;
- Consolidate and improve the current production of the annual national accounts, in particular the compilation of a new benchmark estimate for 2003;
- Support the review of the current compilation system aiming at making it easier to handle and overview; and
- Support the establishment and production of quarterly national accounts.

Qualifications

- A masters degree in economics;
- At least 10 years working experience with national accounts;
- Substantial experience of statistical systems and the development of national accounts systems in particular;
- Substantial experience of the 1993 SNA;
- Experience from advisory positions and/or training;
- Familiarity with Scandinavian development assistance in general; and
- Fluency in written and spoken English and adequate working knowledge of Portuguese.

Working language

Portuguese and English

Schedule

					Working days at INE									Working days at INE			
Week: no and dates					Planned	Actual	Week: no and dates					Planned	Actual				
04	34	16	Aug	22	Aug	5	5	05	18	2	May	8	May				
	35	23	Aug	29	Aug	5	5		19	9	May	15	May	5	5		
	36	30	Aug	5	Sep	5	5		20	16	May	22	May	5	5		
	37	6	Sep	12	Sep	3	3		21	23	May	29	May	2			
	38	13	Sep	19	Sep	5	5		22	30	May	5	Jun				
	39	20	Sep	26	Sep	5	5		23	6	Jun	12	Jun		2		
	40	27	Sep	3	Oct	5	5		24	13	Jun	19	Jun		5		
	41	4	Oct	10	Oct	3	3		25	20	Jun	26	Jun		2		
	42	11	Oct	17	Oct	5	5		26	27	Jun	3	Jul	5			
	43	18	Oct	24	Oct	5	5		27	4	Jul	10	Jul	5	5		
	44	25	Oct	31	Oct				28	11	Jul	17	Jul	5	5		
	45	1	Nov	7	Nov				29	18	Jul	24	Jul				
	46	8	Nov	14	Nov				30	25	Jul	31	Jul		5		
	47	15	Nov	21	Nov	4	4		31	1	Aug	7	Aug		5		
	48	22	Nov	28	Nov	5	5		32	8	Aug	14	Aug		4		
	49	29	Nov	5	Dec	5	5		33	15	Aug	21	Aug	5			
	50	6	Dec	12	Dec	5	5		34	22	Aug	28	Aug	5			
	51	13	Dec	19	Dec				35	29	Aug	4	Sep	5			
	52	20	Dec	26	Dec				36	5	Sep	11	Sep	5			
05	53	27	Dec	2	Jan				37	12	Sep	18	Sep	5	5		
	1	3	Jan	9	Jan				38	19	Sep	25	Sep	5	5		
	2	10	Jan	16	Jan				39	26	Sep	2	Oct	4	4		
	3	17	Jan	23	Jan				40	3	Oct	9	Oct	4	4		
	4	24	Jan	30	Jan				41	10	Oct	16	Oct	5	3		
	5	31	Jan	6	Feb	5			42	17	Oct	23	Oct	5	4		
	6	7	Feb	13	Feb	5	5		43	24	Oct	30	Oct		5		
	7	14	Feb	20	Feb	5	5		44	31	Oct	6	Nov		4		
	8	21	Feb	27	Feb		5		45	7	Nov	13	Nov				
	9	28	Feb	6	Mar	5	3		46	14	Nov	20	Nov				
	10	7	Mar	13	Mar	5	5		47	21	Nov	27	Nov	5	5		
	11	14	Mar	20	Mar	5	5		48	28	Nov	4	Dec	5	3		
	12	21	Mar	27	Mar	5	5		49	5	Dec	11	Dec	5			
	13	28	Mar	3	Apr	5	5		50	12	Dec	18	Dec	5			
	14	4	Apr	10	Apr	5	3		51	19	Dec	25	Dec				
	15	11	Apr	17	Apr	5	5		52	26	Dec	1	Jan				
	16	18	Apr	24	Apr		5		Occasional days off				-8				
	17	25	Apr	1	May				Total weeks at INE				40.4	40.2			