

STATISTICAL MEASURE OF GROWTH AND THEIR CHANGES OVER TIME

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What is the System of National Accounts (SNA)?

- Is a coherent, consistent and integrated set of macroeconomic accounts
- Is based on a set of internationally agreed concepts, definitions, classifications and accounting rules
- is designed to describe the entire **system of production**

Who constructed the SNA?

- SNA formally established in 1950s (1st version of SNA)
- United Nations Statistical Commission established group to develop SNA framework – 1950s
- The group currently consists of national statistical offices + international agencies (UN, IMF, World Bank, OECD, Eurostat)
- SNA is usually revised at long intervals after extensive consultation: previous SNA was 1968, 25 years before SNA 1993
- SNA 1993 revision is expected to be released in the year 2008

Why 1993 SNA?

- Evolution of economies in the 25 years since publishing 1968 SNA
- Change of role in government notably those moving towards market economies
- Services' activities increasing importance in economies
- Financial institutions and markets becoming increasingly sophisticated
- *The 1993 SNA was a response to these changes*

System of National Accounts, SNA 1993

Provides Primary source of information about economy used by all countries

Most widely used economic information, including

- indicators of economic performance, like GDP and sectoral contribution to GDP
- Detailed statistics for economic analysis and modelling (SUT, SAM)

Describes essential phenomena of the economy:

- Production and income by industry
- Consumption, private and public (government)
- Investment (capital formation)
- Trade, imports & exports

Changes and Characteristics

- 1993 SNA is not a radically new system-continuity with 1968 SNA
- Fundamentals of national accounting
 - Economic theory
 - Techniques in business accounting
- What is new in 1993 SNA
 - ✓ clarifications, adjustments and definitions
 - ✓ harmonization with other statistical systems e.g. GFS, BOP
 - ✓ high priority to topics relevant to developing countries

Changes and Characteristics cont'd

- Design of 1993 SNA
 - description of a country's economy:
macro level & disaggregated level
 - flexible: countries can apply the system
to suits their specific needs
 - Universal: set up to describe any
market economy

Changes and Characteristics cont'd

- Implementation of 1993 SNA – two interpretations
 - ✓ implement the concepts and definitions of 1993 SNA
 - ✓ implement the full system
- Flexibility
 - ✓ quarterly accounts
 - ✓ regional accounts
 - ✓ satellite accounts e.g. Tourism satellite account

Uses of National Accounts

- Monitoring the behavior of the economy
- Informing economic policy making and decision taking process
- Economic analysis and research
- International comparisons
- Co-ordination framework for economic statistics

KENYAN SYSTEM OF NATIONAL ACCOUNTS

- National accounts for Kenya dates far back as **1949**
- In **1949**, the then East African Statistical department prepared the first estimates of domestic income and product for the years 1947-1948
- Kenya eventually adopted the United Nations System of National Accounts (SNA 1953) in 1959 and subsequently moved to 1968 SNA in 1976
- Estimates of National accounts statistics have since been based on 1968 SNA
- Implementation process of SNA 1993 commenced in 2001 and the first estimates for the period 1996 to 2003 were released in 2004

COMPONENTS OF THE REVISION

- Change from SNA 1968 to SNA 1993
- Review of data sources and methods
- Change of base year from 1982 to 2001

COMPARISON BETWEEN 1968 AND 1993 SNA

SNA 1968	SNA 1993
“Indirect taxes”	“Taxes on production and imports”
“Direct taxes”	“Current taxes on income and wealth”
Value added at factor cost	Value added at basic prices
“Imputed bank charges”= Intermediate consumption	“FISIM”= Final consumption (HH and Govt)
Govt expenditure on durable military goods = Intermediate consumption	Govt expenditure on military durable goods = Gross Fixed Capital Formation (GFCF)
Reported GDP at factor cost	Reports GDP at market prices
Economic Free Zones excluded	Production from EPZ included
	Mineral exploration = GFCF Estimates for intangible assets

COMPARISON BETWEEN 1968 AND 1993 SNA

Apart from inclusion of EPZ
production the following were
previously not fully covered

- Horticultural production
- Informal sector

Major characteristics of Informal sector

- activities are undertaken with primary objective of self generation of employment and incomes
- mostly unregistered and unrecorded in official statistics
- operate in small scale and mostly have very low level of capital, productivity and income
- have little or no access to organized market, credit institutions, modern technology, formal education
- many activities are carried without fixed location or in places that are not visible to the authorities such as small shops, stalls, or home-based operations

INFORMAL SECTOR ACTIVITIES IN NATIONAL ACCOUNTS

- **Definition:** includes activities carried by establishments that are not registered with the registrar of companies except small-scale farming and pastoralist activities
- Informal sector activities in Kenya are mainly concentrated in certain sectors as listed in the next table

Measurement of Informal Sector activities

Activity	Data sources	Remarks
Repairs of motor vehicle	Motor vehicles with current licenses - Registrar of motor vehicles	Various categories of MV * av cost of repairs (labour)
Construction	Own acc. 1999 and 1989 housing and pop censuses. 2003 traditional hses model	2003 benchmark run forward intercensal growth rate
Manufacturing	MSE 1999 KIPPRA survey	MSE – output BM KIPPRA – IC/O ratio Run fwd with pop growth
Mining and quarrying	Quarrying; 1998 LFS Sand; cement consumption	BM of output based LFS run forward by growth in informal sector employment Use cement / sand ratio

Measurement of Informal Sector activities Cont'd

Activity	Data sources	Remarks
Hotels and restaurants	Restaurant; LFS 1998	Informal BM – based on no. of person engaged run fwd by pop gr rate
Forestry and logging	WMS 97, 1999 census, 1989 census	No.of hh using firewood, no. of hh * hrs per year * av value per hour. Run fwd using intercensal hh growth rate
Water supply	WMS 97, 1999 census, 1989 census	A similar method as firewood was used
Transport	No. of matatus licensed – registrar of motor vehicles	Average daily revenue * no. of days in operation. IC assumed to be 58% of output

What is GDP?

GDP – gross domestic product – is a measure that summarizes in a single number *value of economic activity* in a given period of time- usually one calendar year

GDP is

- Total income of everyone in the economy
- Total expenditure of goods and services within an economy's

Methods of measuring GDP

- Production approach

GDP mkt = ? Gross Output _(basic prices) –
? Intermediate Consumption _(p/prices)
+ (taxes – subsidies) on products

- Income approach

GDP mkt = COE + Taxes on prodⁿ &
imports – subsidies + CFC +
Net OS/MI

Methods of measuring GDP

cont'd

- Expenditure approach

$$\text{GDP}_{\text{mkt}} = Y$$

$$Y = C + I + (X-M)$$

- In Kenya GDP has been compiled using both the production and expenditure approaches
- Production approach is preferred

Production Vs Expenditure

GDP_{mkt} (Current prices)	2000	2001	2002	2003	2004
GDP_{expenditure}	994,306	1,050,743	1,083,460	1,190,685	1,287,318
GDP_{production}	967,838	1,025,918	1,038,764	1,141,780	1,273,716
Discrepancy	26,468	24,825	44,696	48,905	13,602

What is GDP growth?

- Change of real GDP is expressed as percentage of the previous year e.g.

$$\text{GDP growth}_{2004} = 4.3$$

$$= \frac{(\text{GDP}_{2004} - \text{GDP}_{2003}) * 100}{\text{GDP}_{2003}}$$

Base year

- Ideally, the base year is a normal year, followed by a number of years in which the relative prices of commodities remain stable
- In a dynamic economy, relative prices constantly shift due to such factors as uneven technological developments in different industries, shifts in consumer demand etc
- The more remote a base year becomes in time, the more today's relative prices will have changed compared to those of the base year
- Usefulness of constant price estimates diminishes as we move away from the base year
- Rate of obsolescence depends on the degree of relative price changes

Choice of 2001 as the base year

- 1996 – 1999 period; way too back to give meaningful constant price estimates
- 2000 – drought year
- 2002 – election year
- In brief judgemental method was used to arrive at the 2001 base year

Comparison of previous and revised GDP

Comparison

GDP, current prices	1996	1997	1998	1999	2000	2001	2002	2003
Revised Kshs billion	688	770	851	907	968	1,025	1,039	1,142
Previous Kshs billion	529	623	694	744	796	879	963	1,092
Diff, KShs billion	159	147	157	163	172	146	76	50
Difference, per cent	30	24	23	22	22	17	8	5

Comparison of previous and revised GFCF

	1996	1997	1998	1999	2000	2001	2002	2003
GFCF at current prices, Ksh billion								
Revised estimates	110	119	133	141	162	185	178	179
Previous estimates	104	110	114	113	116	123	124	137
Difference	6	9	19	28	45	62	53	43
Difference, per cent	5	8	17	25	39	50	43	31
GFCF at constant prices, growth rates								
Revised estimates		0.2	6.4	2.0	5.8	11.0	-5.7	-6.4
Previous estimates		1.9	-0.1	-4.6	-2.4	0.9	-2.9	3.6

Why revised GDP is higher than previous GDP

- Definitional changes in the 1993 SNA (e.g. inclusion of EPZ, treatment of military durable goods and FISIM)
- Thorough revision of methods (e.g. use of TM from commodity flow for wholesale trade)
- Change of some data sources (e.g. Tea Board in place of exported tea)
- Coverage (inclusion of traditional crops e.g. millet, potatoes)

Why revised GFCF is higher than previous GFCF

- Inclusion of government expenditure on military durable goods (transport and machinery equipment and other installation)
- Inclusion of expenditure on mineral exploration
- Output of construction — mainly used for fixed capital formation — is considerably higher in the revised estimates; thus corresponding estimates for GFCF are also higher

Data Sources for National Accounts

- Administrative records
- Surveys (household and establishment)
- Censuses (household and establishment)

Dissemination of National Accounts statistics

- Are mainly disseminated through:
 - The annual economic survey report
 - The annual statistical abstract
 - CBS website
 - Specific requests

Role of data providers in National Accounts

- Quality of statistics in general depend on
 - accurate data
 - timely data
 - consistent reporting
- It is therefore imperative that respondents at all levels provide quality information to enable compilation of realistic estimates

Limitations

- 1993 SNA has not been fully implemented due to lack of sufficient data to build all the requirement accounts
- Difficulties in obtaining data from illegal production

Manual for Kenya's revised SNA

- A detailed description of sources and methods used for Kenya's National Accounts "**Grey Book**" is available and;
- the compilation of national accounts is based on a computer application known as System of National Accounts on a Personal Computer (**SNAPC**)

The End

Thank you