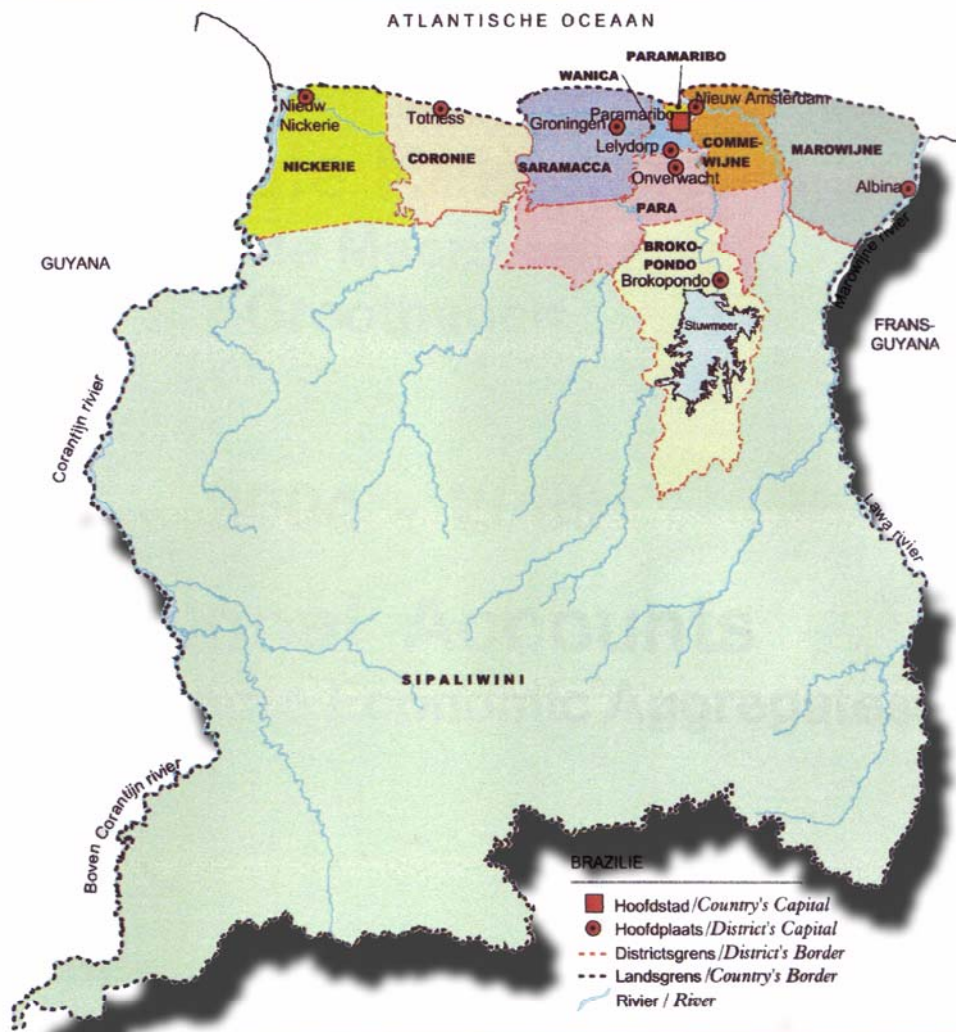


National Accounts

(Nationale Rekeningen)

Selected Macro Economic Aggregates

2006–2010



Sources and Methods

REBASED SERIES

(Base Year 2007, SNA 1993 compliant)

PREFACE

In March 1973, the General Bureau of Statistics (GBS) commenced producing National Accounts Statistics for Suriname and the first publication, pertaining to the year 1972 was released in January 1974. The GBS has always been one for transparency because regularly it has released information about the compilation of its National Accounts, under various names, but which always included something about “Sources and Methods”. So far “Sources and methods”, were released separately from an actual National Accounts publication, but we took the decision that they should be integrated.

- The first “Sources and Methods, Manual for compiling National Accounts in Suriname” (internally called van Schaaijk Report), was released in June 1974
- The second “National Accounts Statistics for Suriname: Sources and methods” (internally called Lal Report), was released in September 1985
- The third “Sources and methods for Annual Production Data” (internally called Hughes Report), was released in November 2002.

In this publication – **which includes an extensive “Sources and Methods”, the fourth in the history of the GBS** – several aggregates are included, for example Gross Domestic and Gross National Product, in current and constant prices, GDP by kind of activity and deflators, as well as Expenditure on GDP. Anyway, there will be something for everyone’s fancy. This publication is in English and the GBS is considering producing a Dutch version by the end of this year.

For the realization of this publication, primarily based on actual response, we thank all responding enterprises and institutions and express our deepest appreciations to CARTAC, especially consultant Ms. M. Blokland. Ms. Blokland’s contribution has been exceptional and she worked tirelessly with her counterparts to achieve these results. There is no doubt in our mind that internally this will be called “Blokland Report”. Finally, thanks are due to all pertinent staff of the GBS (i.e. WOP, MES, NR), particularly of the National Accounts Section of the GBS managed by Ms. Helen J. Raadwijk (+597-474861/-473737 / ext 242), where one has to be for more information or to provide meaningful criticism.

General Bureau of Statistics – Suriname, March 2012

Iwan A. Sno
Director

Symbols

*	Provisional figures
⁰	n.e.c (not elsewhere classified)
-	Zero

Abbreviations and Acronyms

ABS/GBS	General Bureau of Statistics (Algemeen Bureau voor de Statistiek)
CARTAC	Caribbean Regional Technical Assistance Centre
CPI	Consumer Price Index
DoF	Department of Forestry
DOF	Department of Fishery
DQAF	Data Quality Assessment Framework
ECCB	Eastern Caribbean Central Bank
FISIM	Financial Intermediation Services Indirectly Measured
GBS	General Bureau of Statistics
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GNDI	Gross Nationaal Disposable Income
GNI	Gross National Income
GVA	Gross Value Added
IFS	International Financial Statistics
ISIC	International Standard Industrial Classification
MES	Manager Economic Statistics
MOA	Ministry of Agriculture
NA	National Accounts
NAS	National Accounts Survey
NPI	Non Profit Institution
NR	National Accounts Section (Afdeling Nationale Rekeningen)
QGDP	Quarterly Gross Domestic Product
QNA	Quarterly National Accounts
RIPDs	Rent, Interest, Profits, Dividends (factor income)
SUT	Supply and Use Table
TA	Technical Assistance
WOP	Scientific Research and Planning (Wetenschappelijk Onderzoek en Planning)

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EXECUTIVE SUMMARY

- In response to a request from the General Bureau of Statistics (GBS) and as part of the Caribbean Regional Technical Assistance Center (CARTAC) work program the consultant Ms. M. Blokland conducted seven national accounts missions to Paramaribo, Suriname to assist the authorities in revising the national accounts estimates at current prices and rebasing the constant price estimates.
- The revision and rebasing of the national accounts is expected to bring major improvements in the current and constant price estimates, arising from broader coverage, conceptual and methodological changes, and improved estimation procedures.
- Some of the milestones in support of the revision and rebasing are implementation of *System of National Accounts 1993 (1993 SNA)* concepts and methods; revised national accounts survey questionnaires based on *1993 SNA* concepts and definitions; elaborating national accounts surveys to compile basic data to support the compilation of the production account, including:
 - First establishment survey to collect financial information on small establishments (those with less than 10 employees); the previous establishment survey covered larger enterprises only; and
 - First intermediate cost structure survey, to improve estimates of intermediate consumption and to support future SUT calculations
 - Collection of basic data based on the revised questionnaires and an updated business register based on the 2007 Business Census.
 - Improved indicators and extrapolators used for constant price calculation
- As in other countries in the region, the calculation of GDP in current and at constant prices in the previous system, focused on the calculation of Gross Value Added (GVA) only. The GVA at constant prices was calculated by directly extrapolating or deflating the GVA of an outdated base year. The base year 1980/1990 GVA by industry is extrapolated or inflated where applicable by appropriate deflators and extrapolators. Only for selected industries namely mining, part of manufacturing (alumina and gold processing), electricity and water, hotels and restaurants, air transport, and financial intermediation, GVA was calculated as output minus intermediate consumption. The definitions used were predominantly according to the System of National Accounts 1968 (*1968 SNA*)
- In the revised system focus is on the compilation of a complete production account consisting of output, intermediate consumption, other taxes on production and gross value added (GVA) using the System of National Accounts 1993 definitions (*1993 SNA*).
- In the revised system output and intermediate consumption at current prices are mainly based on the results from the National Accounts Survey (NAS). The results from this survey are grossed up to arrive at the results by industry. GVA at current prices is

calculated as the difference between output and intermediate consumption at current prices.

- In the previous system GVA at current prices was mainly based on GVA at constant prices reflatd by a corresponding price index, while intermediate consumption was calculated only for the selected industries mentioned before. The revised methodology is explained in chapter IV. A summary of the methodology used in the previous and new system is included in the annex I to III.
- In order to apply the revised methodology of grossing up sample data from the NAS, the consultant assisted the GBS to develop the grossing up framework. This framework has to be improved when additional data becomes available.
- The consultant indicated that the double deflation method is the preferred method for calculating constant price estimates. Due to lack of Producers' Price indices (PPI) and input prices for the different activities, alternative methods have been applied in some cases. The consultant recommended developing PPIs and investigating prices of inputs.
- The consultant, together with the staff was able to improve and finalize the calculation framework linking the basic data to the final data by means of Excel formulas, and calculating the preliminary growth rates in current and constant prices by industry, sector, and the total economy for the period 2006-2010.
- So far most data are obtained from the annual National Accounts survey. The survey is conducted among large establishments (10 and more employees).
- The results of this survey lag behind for one or two years. Given the urgency of the availability of recent estimates the consultant assisted the authorities to set up the system of preliminary estimates using available information (e.g. for financial institutions about 90% is already available); quarterly survey data, and extrapolation of base year data by a volume index for constant price estimation and reflatng this by an appropriate price index to arrive at current prices.
- The consultant recommended continuing to improve the framework and datasets. Even after the concluding mission the system should be continuously improved as additional data and improved methodologies become available. As mentioned before for some industries second best methods have been applied to lack of the required information. Despite of the aforementioned the quality of the estimates has improved considerably.
- As of 2012 the annual national accounts survey will be expanded with a sample of small establishments (less than 10 employees).

Chapter 1

United Nations System of National Accounts

1.1 Overview

The System of National Accounts (SNA) is the internationally agreed statistical standard on how to compile measures of economic activity. The SNA describes a comprehensive, consistent and integrated set of macro economic accounts in the context of a set of internationally agreed concepts, definitions, classifications and accounting rules.

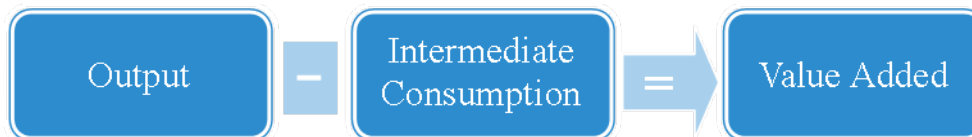
In addition, the SNA provides an overview of economic processes, recording how production is distributed among consumers, businesses, government and foreign nations. It shows how income originating in production, modified by taxes and transfers, flows to these groups and how they allocate these flows to consumption, saving and investment. Consequently, the national accounts are one of the building blocks of macroeconomic statistics forming a basis for economic analysis and policy formulation.

The SNA is intended for use by all countries, having been designed to accommodate the needs of countries at different stages of economic development. It also provides an overarching framework for standards in other domains of economic statistics, facilitating the integration of these statistical systems to achieve consistency with the national accounts.

The international recommendations are expressed in terms of a set of concepts, definitions, classifications and accounting rules that comprise the standard for measuring such items as gross domestic product (GDP), the most frequently used indicator of economic performance.

GDP combines all the output (or production) undertaken by all firms, nonprofit institutions, government bodies and households in a given country during a given period, regardless of the type of goods and services produced, provided that the production takes place within the country's economic territory. In most cases, GDP is compiled quarterly or annually. In Suriname, GDP estimates are compiled annually. Three approaches for deriving the GDP are: the production approach, the income approach, the expenditure approach. Each approach should, conceptually, deliver the same estimate of GDP. A description of each approach is as follows:

- GDP using the production approach is derived as the sum of gross value added for each industry, at basic prices, plus taxes less subsidies on products. Basic values represent the amounts received by producers, including the value of any subsidies on products, but before any taxes on products. The difference between the sum over all industries of gross value added at basic prices, and GDP at market prices, is the value of taxes less subsidies on products;



- GDP using the income approach is derived as the sum of compensation of employees, gross operating surplus, gross mixed income and taxes less subsidies on production and imports;



- GDP using the expenditure approach is derived as the sum of all final expenditures, changes in inventories and exports of goods and services less imports of goods and services;



1.2 Concepts and Definition of main aggregates

The concepts and definitions used in this publication are those stated in the “United Nations Manual - A System of National Accounts 1993”.

Actual Government final consumption expenditure

Actual Government final consumption expenditure, refers to expenditure incurred for the provision of collective services. Final consumption expenditure incurred by households comprises the value of goods and services purchased by households including the value of imputed rent of owner occupied dwellings. For a better measure of standard of living, actual private final consumption expenditure is used.

Actual private final consumption expenditure

Actual private final consumption expenditure covers goods and services supplied to households, irrespective of whether these goods and services are actually paid by government or households themselves. Consequently, it consists of expenditure incurred by households and government on the provision of individual services.

Change in inventories

Change in inventories includes the value of the physical change in inventories of raw materials, work in progress and finished goods held by producers.

Compensation of employees

Compensation of employees comprises all payments of wages and salaries by producers to their employees. Payments in kind and contributions to social security and to private pension fund, casualty insurance and similar schemes are also included.

Wages and salaries in cash comprise all payments which employees receive in respect of their work, before deductions of employees' contributions to social security schemes. Payments such as refund of traveling of work, commissions, overtime, bonuses, and cost of living allowances are also included. Payments in kind include goods and services provided to employees free of charge or at markedly reduced costs which are clearly of direct benefit to the employees as consumers.

Exports and Imports of goods and services

Both exports and imports are measured on an f.o.b. basis. Exports and imports of goods are compiled according to the General Trade System, using the national boundary as the statistical frontier. All goods entering the country are recorded in imports and goods leaving the country, in exports. However, for the sake of continuity and consistency gross imports and exports through the customs and the free zone area are shown separately.

Final Consumption expenditure

Consumption expenditure is made up of final consumption expenditure of households and of government. Government final consumption expenditure is further disaggregated into collective and individual consumption expenditure. **Collective** expenditure consists of the services which government provides to the community as a whole, for example, security and defense whereas **individual** expenditure is made up of expenses incurred in providing services which are mostly beneficial to individuals, mainly in respect of health and education.

Financial intermediation services indirectly measured (FISIM)

FISIM is the difference between interest received and interest paid by banks excluding those received on own funds. As it is difficult to allocate FISIM to the intermediate consumption of different industries, the total value of FISIM is imputed to a nominal industry with a negative value added.

Goods-producing industries

Goods-producing industries comprise “Agriculture, hunting, forestry and fishing”, “Mining and quarrying”, “Manufacturing”, “Electricity, gas and water supply” and, “Construction”.

Gross Fixed Capital Formation (GFCF)

Gross Domestic Fixed Capital Formation (GDFCF) consists of the net additions to the assets of producers of tangible reproducible goods which have an expected lifetime of use of more than one year. These assets are buildings, plants, machinery and transport equipment. The additions are valued at purchasers' prices. Non-reproducible tangible assets such as land and mineral deposits are not included in gross capital formation. However, outlays on improvement of land and development of mining sites are considered as gross domestic fixed capital formation.

Durable goods purchased by households, with the exception of dwellings, are not classified as capital formation but are treated as consumption expenditure.

Gross Domestic Product (GDP)

The sum of value added of all domestic producers gives the Gross Domestic Product (GDP). It represents the aggregate money value of all goods and services produced within a country out of economic activity during a specified period usually a year, before provision for the consumption of fixed capital.

GDP at basic prices

GDP at basic prices is obtained as the difference between output and intermediate consumption whereby output is valued at basic prices and intermediate consumption at purchasers' prices.

GDP at market prices

GDP at market prices is equal to the GDP at basic prices plus taxes (net of subsidies) on products.

Gross National Disposable Income (GNDI)

The sum of Gross National Income (GNI) and net transfers from the rest of the world gives Gross National Disposable Income (GNDI).

Gross National Income (GNI)

GDP plus net primary income from the rest of the world gives Gross National Income (GNI).

Gross National Saving

Gross National Disposable Income (GNDI) less total final consumption expenditure gives Gross National Saving.

Gross operating surplus

Gross operating surplus is defined as the excess of value added over the cost of employees' compensation and other taxes on production and imports net of subsidies.

Gross output

Gross output of industries covers the value in the market of goods and services produced, including work in progress and products for own use. Valuation is usually at basic prices. The imputed rent of owner-occupied dwellings is also included.

The **basic price** is the amount receivable by the producer exclusive of taxes on products and inclusive of subsidies on products. The equivalent of imported products is the cost insurance freight (c.i.f.) value at the border.

Gross output for "general government" and for "non-profit institutions serving households" are computed as the sum of the cost of intermediate consumption expenditure, compensation of employees and consumption of fixed capital.

Intermediate consumption

"Intermediate consumption of industries" covers non-durable goods and services used up in production and includes repairs and maintenance of the capital stock and is valued at purchasers' prices. The purchasers' price is the amount payable by the purchaser exclusive of deductible taxes on products (e.g deductible value added tax). "Intermediate consumption of general government" is made up of acquisitions (purchases and transfers in kind) of new goods and services on current accounts.

Service industries

Service industries include "Wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods", "Hotels and restaurants", "Transport, storage, communications", "Financial intermediation", "Real estate, renting and business services", "Public administration and defence; compulsory social security", "Education", "Health and social work", "Other

community, social and personal service activities and private households with employed persons”.changes over time.

Taxes on production and imports

Taxes on production and imports comprise all taxes that enterprises incur by engaging in production. There are two categories of taxes, namely taxes on products and other taxes on production. Taxes on products are payable on goods and services when they are produced, sold or used. Examples are excise duties, import duties and Value Added Taxes (VAT). Other taxes on production are taxes payable out of the value added of producers. This category of taxes includes taxes levied on property, fixed assets and labor employed. Examples are municipal rates, motor vehicle licenses and business licenses.

Value added

The value added is equal to the gross output at basic prices less the value of intermediate consumption at purchasers' prices.

CHAPTER 2

SURINAME SYSTEM OF NATIONAL ACCOUNTS

2.1 INTRODUCTION

In response to a request from the General Bureau of Statistics (GBS) and as part of the Caribbean Regional Technical Assistance Center (CARTAC) work program a consultant conducted seven national accounts missions to Paramaribo, Suriname. The purpose of the exercise was to update the base year from 1990 to 2007 and to revise the current price series using the 1993 System of National Accounts (SNA1993) recommendations.

There have been no CARTAC missions on national accounts to Suriname before 2008. Therefore, technical assistance missions were undertaken to address the deficiencies identified by the General Bureau of Statistics (GBS) of Suriname to enhance the quality of GDP estimates of Suriname to international standards. The GBS compiles and disseminates annual national accounts statistics. The main aggregate compiled on a regular basis is GDP by type of economic activity at current prices and at 1990 constant prices. In addition the GBS compiles estimates of other macro-economic aggregates such as Gross National Income and Gross National Disposable income.

The GBS initiated the rebasing work of GDP in the year 2009. The starting point for this was the revision of the national accounts surveys based on *1993 SNA* concepts and definitions; and elaborating national accounts surveys to compile basic data to support the compilation of the production account.

The revision process was quite exhaustive since it involved the whole process from reviewing and revising questionnaires, collecting basic data, revising the grossing up framework, developing the processing framework, up to compilation of the estimates. The revision process used data from different sources of such as the revised national accounts survey data, financial accounts of companies, government budget documents, and latest surveys.

The previous national accounts series (1990 base year series) focussed on the calculation of GVA at current and at constant prices. The revised national accounts series (2007 base year series) GDP estimates are compiled by economic activity within the framework of a complete production account consisting of output, intermediate consumption and GVA at current and at constant prices using improved deflators and extrapolators. The revised methodology is explained in chapter IV. A summary of the methodology used in the previous and revised system is included in Annex I, II and III.

During the project, meetings were held with several key data providers and users of which the Central Bank of Suriname, the Tax Department, the planning Office, the Tourism Authorities,

the Ministry of Agriculture and the Department of Forestry. The GBS and CARTAC would like to express their appreciation for the cooperation and support extended by these authorities.

2.2 SCOPE OF NATIONAL ACCOUNTS AND CONCEPTUAL FRAMEWORK

The previous national accounts series consisted of estimates of GDP by production in current and at constant 1990 prices, and GDP by expenditure at current prices, Gross National Income and Gross National Disposable Income following the concepts, definitions and classifications broadly consistent with *System of National Accounts, 1968 (1968 SNA)*. Establishments are classified according to the International Standard Industrial Classification (*ISIC*) Rev.2.

The revised system, compiles estimates of GDP by production at current and at constant 2007 prices, and GDP by expenditure at current prices, following the concepts, definitions and classifications broadly consistent with *System of National Accounts, 1993 (1993 SNA)*. In addition macro-economic aggregates such as Gross National Income and Gross National Disposable Income are derived. The Establishments are classified according to the International Standard Industrial Classification (*ISIC*) Rev.3. The GBS does not compile institutional sector accounts, integrated economic accounts, Supply and Use Tables (SUT) and Quarterly national Accounts as yet.

The GBS has requested TA for the compilation of quarterly GDP and Supply and Use Tables.

2.3 ANNUAL GDP BY INDUSTRIAL ACTIVITY

A. Data Sources

The main data source used in the compilation of annual GDP by industrial activity is the annual enterprise survey. This survey covers all enterprises with 10 and more employees and includes information regarding turnover, intermediate consumption, compensation of employees, capital formation, changes in inventories and number of employees. The survey covers all industries except for Agriculture, Animal Husbandry, Forestry, and Fishing, and Financial Intermediation. The information for these industries is collected from respectively the Ministry of Agriculture, the Ministry of Natural Resources, the Department of Fisheries and the Central Bank.

The last survey conducted for small enterprises dates back to 1986. Following the recommendation from CARTAC the GBS conducted a survey for small enterprises (enterprises with less than 10 employees). An Establishment Census 2007 was also conducted. The establishment survey for small enterprises started in September 2009 and collected data for the year 2007.

The GBS conducted a first intermediate cost structure survey. The purpose of this survey is to supplement the data on intermediate consumption of all industries and to compile the

intermediate cost quadrant of the Supply and Use and Input Output tables. The survey was conducted in three major districts covering a 10 percent sample of enterprises stratified by industry. A comparison was made between the level of the intermediate consumption from the national accounts survey and that of the cost structure survey by industry. The main conclusion was that the coverage was very low, except for agriculture, and data were even missing for some industries.

Another data source is the quarterly enterprise survey. The GBS has conducted quarterly surveys from the 1970's. The survey includes data regarding turnover, compensation of employees, employment and output of manufacturing by product. Following recommendations of the consultant the questionnaire has been adapted to include intermediate costs in order to be able to calculate GVA by production. The first QGDP survey based on the revised questionnaire started in April 2009 collecting data for the first and second quarter of 2009.

The intermediate costs structure survey provided additional information related to the intermediate consumption by industry and product, mainly for agriculture.

Data related to the financial sector are provided by the Central Bank of Suriname (CBoS). The GBS sends the related questionnaires to the CBoS. In addition the CBoS provides the GBS with their annual reports.

The source for government related activities in the government budget as received from the Ministry of Finance.

Other sources used are :

- Ministry of agriculture: quantity and price data for selected agricultural products
- Customs; import and export of goods
- financial statements of selected enterprises
- Bauxite Institute; production and export of bauxite and alumina

The response rate in industries such as mining and manufacturing, electricity and water, financial intermediation, transport and communication is about 100 percent. In addition the agriculture industry and trade industry are covered sufficiently. Together with the government sector activities, these activities cover about 60 percent of total GVA.

The most challenging response rates are those for the construction industry, real estate renting and business services industry. The consultant assisted the GBS to make estimates for missing data using different methodologies such as using the structure of data from previous years, data from the quarterly enterprise survey and other data sources. An attempt was made to use data from administrative data sources mainly the Tax Department. However this department indicated to be involved in a major automation project and could not provide the GBS with the requested information. CARTAC recommended continuing to contact this Department to get the required support and information.

In view of the above, the following was recommended to the GBS:

- Conduct the small enterprise survey every year to support the information from the large enterprises.
- Continue the intermediate costs structure survey using a larger sample
- Continue to explore ways to improve the response rate

B. Specific Data sources and Compilation Procedures

A detailed review of the data sources and worksheets used for the compilation GDP by production in current and at constant prices was undertaken. The revision and rebasing of the national accounts is expected to bring major improvements in the current and constant price estimates, arising from broader coverage, conceptual and methodological changes, and improved estimation procedures.

The compilation procedures for calculating GVA at current and at constant prices were reviewed. GVA at current prices is calculated as a balancing item by subtracting intermediate consumption from output in basic prices. The calculation of intermediate consumption at purchaser's prices and the output in basis prices follows the guidelines of the *1993 SNA*. In the case of GVA at constant prices a distinction is made in best or most appropriate methods, second best methods and methods that should be avoided as described below.

It is acknowledged that double deflation method is the preferred method for calculating constant price estimates. In this method output and intermediate consumption are deflated by separately by using an appropriate (Paasche type) price index. However most countries do not have the required resources to apply this method. The second best method is to use the single extrapolation method by extrapolating output and intermediate consumption by the same volume indicator. This method assumes a constant ratio between intermediate consumption and output. Direct deflation of GVA should be avoided at all times since GVA does not have a corresponding price measure as a balancing item.

The single indicator/extrapolation method arrives at the same results as directly extrapolating GVA by an appropriate volume indicator. However, the consultant recommended to show the results for both output and intermediate consumption and calculating GVA as the balancing item in order to set up the production account.

For market output and output for own final use at constant prices, the best method would be to deflate the output at current prices by the respective PPIs or to extrapolate the base year output by an appropriate volume index, or to multiply the quantity in the current years by the base year producers price. Second best methods would be less appropriate PPIs, product specific CPIs and volume indices that are less representative. The use of indices related to the intermediate consumption should be avoided.

In the case of non-market output at constant prices, the preferred method would be deflation of the components of output namely compensation of employees, intermediate consumption and consumption of fixed capital by their respective price indices or to extrapolate the output components in the base year by an appropriate volume index. Since the major part of non-market output consists of compensation of employees, an employment related volume index such as the number of employees or the hours worked may be used as alternative.

The best method for arriving at intermediate consumption at constant prices would be to have a breakdown of the intermediate cost components and to deflate each (homogenous) product separately. In addition a distinction should be made between imported and locally produced products. The imported products should be deflated by separately (preferably by an import price index) from the locally produced products. Deflation of intermediate consumption at an aggregated level should be avoided.

Deflators for intermediate consumption by product are generally not widely used and developed. This is also the case in Suriname. The second best method would be to use the same extrapolator as used for the output (single extrapolation, single indicator method). This method assumes a constant input output ratio for the different years.

In the case of Suriname, due to the lack of PPIs, XMPIs and input prices for the different activities, alternative methods such as single extrapolation have been applied. In this method output and intermediate consumption are extrapolated by the same volume indicator, which arrives at the same results as extrapolating GVA by a volume index. The consultant recommended developing PPIs and XMPIs and investigating prices of inputs.

The following paragraph contains a description of the revised methodology related to the output and the intermediate consumption in current and at constant prices by industry for the years 2006-2010.

Agriculture, hunting and forestry

Introduction

Suriname produces a variety of agricultural products such as paddy, bananas, and vegetables, and animal husbandry. No data on hunting is currently included in the calculations. Most hunting activity is of an informal nature and is partly exported. The GBS has not been able to collect additional data, but the expert estimate is that the contribution of this activity is marginal compared to the other activities within this section.

The main data source for agricultural production is the Ministry of Agriculture (MOA). The MOA collects data on physical quantities, and prices are obtained for a range of agricultural products such as rice, bananas, and vegetables. Financial data regarding turnover and intermediate consumption is not available.

Gross output at current prices is calculated by the quantity produced in the current years multiplied by the producer's price in those years. The intermediate consumption at current prices for the years 2007 and 2008 is based on the information from the intermediate costs structure survey. The intermediate consumption for the other years in which no information is available is assumed to be equal to the import of agricultural imports. These imports are derived from the trade data classified by end-use using the Broad Economic Categories (BEC) classification. GVA at current prices is derived by subtracting the intermediate consumption at current prices from the output at current prices.

Gross output at constant 2007 prices is obtained by multiplying the current year quantities produced by the producer's price in the base year (revaluation). Intermediate consumption at constant prices is derived by extrapolating the base year intermediate consumption by the volume index of output (single indicator/single extrapolator method). The previous method (1990 base year), used the volume index of agriculture production as single extrapolator.

Suriname produces a variety of wood and wood products. The main data source for forestry activities is the Ministry of Natural Resources (MONR). The MONR has elaborate information regarding the quantities produced, and the purchaser's price of wood products. There is no information available regarding the costs of the inputs. In addition there is no data available from the enterprise survey. Given the aforementioned the following methodology has been applied.

Gross output at current prices is calculated as the quantity of wood felled multiplied by the export price of wood products due to lack of an appropriate producer's price. There is no information available about the trade margins to correct the export price to obtain producer prices, and no information about the intermediate consumption. It is assumed that the margins are about 10 percent and that intermediate consumption is about 25 percent of the output. GVA at current prices is derived by subtracting the intermediate consumption at current prices from the output at current prices. The consultant recommended to revisit the assumptions of 10 and 25 percent and/or collect additional information from the MONR.

Gross output at constant prices is calculated by multiplying the quantities in current year by the base year export price of wood and wood products. Intermediate consumption at constant prices is equal to the base year intermediate consumption extrapolated by the volume index of output. GVA at constant 2007 prices was derived by extrapolating the GVA in 2007 prices by the volume index of wood felled.

Fishing

The main products produced in the fishing industry are shrimp and fish. Shrimp is mainly exported while fish is mainly sold on the local market. The main data source currently used is the Department of Fishery (DOF).

Gross output at current prices is calculated by multiplying the production volume of fish and shrimp multiplied by the export price of the respective products adjusted for margins to arrive at producer's prices . Since no additional information could be obtained regarding the margins and the costs structures the following assumptions have been used. Margins are assumed to be equal to 10 percent of the output. Intermediate consumption at current prices is assumed to be equal to about 50 percent of the output. The consultant has recommended revisiting the assumption of 50 percent by using the information from the intermediate cost structure survey and/or collect additional information from the Department of Fishery.

Gross output at constant prices is calculated by multiplying the quantity of fish and shrimp as provided by the DOF in the current year by the adjusted export price in the base year. Base year intermediate consumption is extrapolated by the volume indices of output in the respective years to arrive at intermediate consumption at constant prices.

Mining and quarrying

The mining and quarrying industry includes oil extraction, mining of bauxite, and mining of gold. The quarrying of stone and sand is marginal compared to the other activities. This industry is monopolistic in nature. All extraction and refining of oil and mining of bauxite is also undertaken by single companies. The mining of gold is undertaken by one major company and a lot of sole proprietor businesses. The major challenge in this industry is to make the distinction between the mining and manufacturing activities since the distinction is not relevant for the operation of the companies.

Oil extraction

The oil company regularly responds to the national accounts survey and in addition submits an annual report. There is also information available regarding the quantities produced and the price of crude oil. The information in both the national accounts survey and the annual report contain the combined information regarding the mining and manufacturing activities. The consultant recommended the following calculation of output and intermediate consumption.

The output of crude oil at current prices is calculated by multiplying the quantity produced of crude oil by the corresponding producer's price. The changes in inventories are assumed to be negligible. The intermediate consumption attributed to the mining activity is derived from the annual report containing a breakdown of the costs. The overhead costs (operational expenditures) are both for the mining and manufacturing activities and are distributed according to the output of these activities. Output at current prices is deflated by the PPI of crude oil received from the oil company to arrive at output at constant prices as in the method previously used. Base year intermediate consumption is extrapolated by the volume index of oil produced.

Mining of bauxite

The main data source for the current price estimates is the annual enterprise survey. Additional information regarding quantities produced, is obtained from the quarterly production survey and from the Bauxite Institute. The output at current prices is calculated as sum of sales, own account

capital formation and changes in inventories. The output at constant prices is calculated by extrapolating the base year output by the volume index of bauxite mined.

Mining of gold

The main data source for the current price estimates is the annual enterprise survey and data related to the activities of the small scale gold miners, provided by the CBoS. Output at constant prices is equal to the base year output extrapolated by the volume index of gold mined as in the previous methodology.

Manufacturing

Alumina production

Output and intermediate consumption at current prices are derived from the national accounts survey (NAS). In addition quantities produced are available from the quarterly production survey. The output at current prices is calculated as the sum of sales, own account capital formation and changes in inventories.

As in the previous (1990 base year) method output at constant prices is calculated by extrapolating the base year output by the volume index of the physical quantities of alumina produced. Intermediate consumption at constant prices is computed by extrapolating base year intermediate consumption by the volume index of output.

Gold processing

Another main activity within the manufacturing industry is related to the processing of gold. The same methodology as alumina manufacturing is applied in the sense that current price output and intermediate consumption are derived from the annual enterprise survey. Output is equal to the sales corrected for the changes in inventories.

As in the previous (1990 base year) method constant price output is arrived at by extrapolating the base year output by the physical quantities index of gold produced. These quantities are obtained from the quarterly production survey.

Processing of fish, shrimp, rice and wood

Output at current prices is calculated as the quantity of fish, shrimp, and rice and wood products multiplied by the purchaser's price adjusted for (a 10% assumed) trade margin to arrive at the producer's price of the respective products.

The calculation of intermediate consumption varies. The intermediate consumption related to the production of fish and shrimp is assumed to be equal to 0.71 as derived from the intermediate cost structure survey. Intermediate consumption of wood processing uses the input-output ratio from agriculture. Intermediate consumption of rice uses the input-output structure from one of the major rice companies.

For all these products output at constant prices is calculated by extrapolating the base year output by their corresponding physical quantity indices as derived from information from the Ministry

of Agriculture, the Department of Fisheries and the Ministry of Natural resources. In the previous method GVA at constant prices was calculated by extrapolating the base year GVA by the volume index of exported fish, shrimp and wood.

Other manufacturing

This industry is minor and covers other manufacturing activities such as the manufacture of beverages, food products, textiles, wood and wood products, and furniture. The current price series are derived from the NAS. Base year output is extrapolated by the volume index of imported raw material of the respective products to arrive at output at constant prices. The intermediate consumption at constant prices uses the single extrapolation method. The same extrapolator was used in the previous method.

Electricity, gas and water supply

Electricity is supplied by three suppliers namely a semi-private electricity supplier (EBS), the private bauxite processing company (Suralco), and the government. The government mainly covers remoter parts of the country not covered by the semi-private supplier. There is no production of gas but only sale of imported gas in canisters which is covered in the trade industry.

The main data source for the current price value is the NAS. The quantity and price information is available from the companies and/or from the quarterly production survey. The constant price methodology uses the single extrapolator method whereby the base year output and intermediate consumption are extrapolated by the quantity indices of electricity. These extrapolators are the same as the previous method.

The methodology differs in the case of the government supplier, a non-market producer, providing services free or at economically insignificant prices. Gross output at current prices is calculated as the sum of the production costs defined as compensation of employees, intermediate consumption and consumption of fixed capital. Intermediate consumption at current prices is calculated as the total value of materials purchased. Output at current prices is deflated by the wage rate index to arrive at output at constant prices. Previous method used the volume index of the number of employees as extrapolator.

Water is supplied by a semi-private water supplier (SWM) and the government. The government mainly covers remoter parts of the country not covered by SWM. The current price values are derived from the NAS. Output at constant prices is based on the volume index of cubic meters water produced. For the government; current price output is calculated as the sum of cost consisting of intermediate consumption and compensation of employees as derived from the budget. Intermediate consumption equals the value of materials purchased.

Construction

The main data source for the current price estimates is the NAS. However given the fact that this industry suffers from low response rates resulting in unrealistic results, it was decided to use the commodity flow approach in the estimations.

The output at current prices for the construction industry is calculated as the sum of the import of construction materials. The import data are adjusted for trade margins and import duties. The local production of construction materials mainly wood and wood products is added to the import of construction materials to arrive at the total output. The intermediate consumption is assumed to be around 16 percent of the output, based on the intermediate consumption output ratio from one of the major construction companies.

Output at current prices is deflated by a suitable price index to arrive at output at constant prices. The previous method used the volume index of locally produced and imported building materials as extrapolator.

Wholesale and retail trade

Gross output is equal to the trade margin as derived from the NAS. The value of base year output is extrapolated by a volume index of turnover to arrive at output at constant prices. The volume index of turnover is equal to the turnover at current prices deflated by the CPI for goods. Base year GVA in the previous method was extrapolated by the import price index in USD which is used as a volume proxy. The value of imports in USD was regarded as representing the volume of import given the high fluctuations in the Surinamese guilder before the change to the Surinamese dollar.

The base year intermediate consumption is extrapolated by the volume index of output to arrive at a series of intermediate consumption at constant prices.

Hotels and restaurants

The current price values are derived from the NAS. The constant price output is calculated by extrapolating the base year output by the volume index of the number of tourists staying in hotels. Data from the Suriname Tourism Foundation show that about 30 percent of the total number of tourists overnight in hotels. The remainder of the tourists stays with friends and family. The consultant noted that the preferred extrapolator would be the number of stay over nights. However, this information was lacking at the time of the missions. The previous method used the average room occupancy as extrapolator.

Transport and communication

A distinction is made between land transport, air transport, supporting and auxiliary transport services, and post and telecommunication. Both the output and intermediate consumption at current prices are derived from the NAS except for the activities of the government operated buses and postal services. The information regarding government operated buses is derived from the budget. The calculation of output at constant prices differs by category as will be described in the following paragraphs.

Transportation

Land transport uses the purchaser's price index of tickets sold as deflator to arrive at output at constant prices, due to lack of an appropriate producer's price index. Transportation by air in the base year is extrapolated by the number of passengers transported, while the base year output of supporting transport is extrapolated by the quantity index of the number of employees to calculate the series of output at constant prices for other years.

The government provides transportation services at an economically insignificant price. As such the output is treated as non-market output and gross output is calculated as the sum of production costs consisting of compensation of employees, intermediate consumption and consumption of fixed capital. Intermediate consumption is equal to the value of materials purchased. Value of output of the base year is extrapolated by the volume index of the number of employees to arrive at output at constant price for the subsequent years.

Postal services

The office of postal services is government owned. The available information shows that the sales revenues are less than half of the operating costs. The postal services operate at huge losses which are compensated by transfers from the government. Given the aforementioned the output is calculated as the sum of cost. Intermediate consumption is equal to the value of materials purchased. Output at constant price is calculated by extrapolating the 2007 base year value by the volume index of the number of employees due to lack of better extrapolators.

Communication

Constant price output is derived by extrapolating the output by a volume index of the sales. The volume index of sales is derived by deflating the sales by the price index of communication services. The purchaser's price is adjusted by 10 percent to arrive at producer's prices. Volume indicators such as the number of minutes are only available for some years and not at all for the newer services such as mobile telephones and internet services.

The following extrapolators were used in the previous method:

Land transport	Quantity index of the number of buses
Air transport	Volume index of passengers transported
Supporting transport	The volume index of passengers' arrival
Government operated buses	Volume index of the number employees
Postal services	Volume index of number of employees
Telecommunications	The volume index of call minutes

Financial intermediation

This industry covers financial intermediation except insurance and pension funding (ISIC 65), insurance and pension funding except social security (ISIC 66) , and activities auxiliary to financial intermediation (ISIC 67). The calculations differ by sub industry and have been adjusted to 1993 SNA definitions.

The main data source is the Central Bank of Suriname (CBoS) which provides the necessary information to the GBS using questionnaires provided by the GBS. In addition the CBoS provides their annual report which contains consolidated profit and loss accounts from the commercial banks.

The output of financial intermediation except insurance and pension funding at current prices is calculated as the difference between the interest received and paid (FISIM, Financial Intermediation services Indirectly Measured) plus fees and commissions received. This sub industry includes the output of the Central Bank.

The output of life insurance companies at current prices is calculated as premiums earned plus premium supplements minus claims plus changes in actuarial reserves, while the output of non-life insurance is equal to premiums earned plus premium supplements minus claims. In the previous methodology output at current prices of insurance both life and non-life was calculated as the premiums minus claims and the output of included the interest received minus paid from the Central Bank

In addition activities auxiliary to financial intermediation of which information from the exchange offices (Cambio's) which *were previously not included* are now included in the estimates. The output of financial activities auxiliary to financial intermediation is equal to the fees and commissions earned.

Since direct deflation of FISIM is not possible the preferred method for arriving at the output at constant prices is used for financial intermediation except insurance and pension funding. This it to extrapolate base year output by a volume index of the deflated loans and deposits. CPI is used as a proxy deflator for the loans and deposits.

The preferred method for calculating the output of life insurance would be to first collect information on the aggregate value of life insurance policies (owed or in force), deflate this by the all-items CPI and calculate a volume index of the value of life insurance policies. This volume index can be used next to extrapolate base year output. Due to lack of data, the methodology used is to extrapolate the output by the index of gross premiums deflated by the all items CPI.

The constant price output of non-life insurance should preferably be calculated separately for property insurance, automobile insurance and all other insurance. Due to lack of data the second best method is used by extrapolating the base year total output by the index of gross premiums deflated by the product specific CPI.

Real estate, renting and business activities

Current price values of output and intermediate consumption and as such GVA, are based on the NAS except for the imputed rental of owner occupied dwellings. The base year output is extrapolated by the volume index of the number of employees to calculate output at constant prices.

The imputed rental of owner occupied dwellings *is added to the estimates*. The output is calculated by multiplying the number of owner occupied houses by the average rental value. The number of owner occupied houses derived from the 2004 Census is extrapolated by the number of building permits to arrive at the number of owner occupied houses for the following years. The average rental value from the 2004 Census is extrapolated by CPI to arrive at the rental values for the following years. Intermediate consumption is assumed to be already included in the calculations of the remainder of the industry.

Private education, health and other services

Output for education, health and other services at current prices is based on the NAS. Current price output is deflated by the wage rate index to calculate the constant price estimates.

Public administration and defense, education, health and other service

Output for public administration and defense, education, health and other services, is calculated as the sum of costs. Intermediate consumption is equal to the value of materials purchased. Base year output is extrapolated by the volume index of the number of employees to calculate output at constant prices. Intermediate consumption in the base year is extrapolated by the respective volume indices of output.

Taxes less subsidies on products

The previous indirect taxes less subsidies as derived from the budget of the Ministry of Finance were analyzed and reclassified to taxes less subsidies on production using 1993 SNA definitions. Taxes less subsidies at constant prices are based on the values at current prices multiplied by the base year ratio of taxes less subsidies over GVA. There is a minor definitional difference.

**“STATISTICAL THINKING WILL ONE DAY
BE AS NECESSARY FOR EFFICIENT CITIZENSHIP
AS THE ABILITY TO READ AND WRITE”.**

(H.G. WELLS)



Tables

Table 1**Gross Value Added at basic prices (1000 SRD) by kind of Economic Activity at Current Prices 2006-2010**

Sector NFC, FC, HH, NPISH	2006	2007	2008*	2009*	2010*
Agriculture, Hunting and Forestry	433.702	529.378	631.542	843.545	889.609
Fishery	286.187	289.005	234.288	247.784	292.876
Mining and Quarrying	546.174	583.046	723.566	758.893	864.995
Manufacturing	1.671.916	1.892.983	2.455.043	2.155.887	2.516.500
Electricity, Gas and Water supply	96.597	132.321	179.992	210.394	215.340
Construction	349.977	379.860	527.395	522.954	576.095
Wholesale and Retail trade	1.160.620	1.293.919	1.760.425	2.094.576	2.329.591
Hotels and Restaurants	203.794	197.268	194.975	275.966	315.808
Transport, Storage and Communication	484.800	475.886	588.230	622.047	775.911
Financial Intermediation	391.799	419.517	444.490	487.451	547.007
Real Estate, Renting and Business activities	240.428	317.147	274.351	314.805	333.867
Education	4.664	7.505	5.405	5.100	7.891
Health and Social work	45.151	49.193	55.076	62.107	50.592
Other Community, Social and Personal services	41.958	44.009	55.112	63.149	66.302
Subtotal	5.957.768	6.611.038	8.129.891	8.664.658	9.782.384
Sector Government					
Agriculture, Hunting and Forestry	14.046	17.150	19.567	22.424	27.046
Electricity, Gas and Water supply	5.914	6.205	7.624	9.043	10.305
Construction	6.458	7.005	8.162	9.319	11.398
Transport, Storage and Communication	18.442	18.011	17.598	21.573	25.548
Public administration	258.947	309.697	368.203	462.359	520.319
Education	223.706	253.570	278.001	377.261	406.127
Health and social work	170.525	190.264	207.079	247.554	305.544
Subtotal	698.038	801.902	906.234	1.149.533	1.306.287
GDP at basic prices	6.655.807	7.412.941	9.036.125	9.814.192	11.088.671
Taxes less subsidies on production	550.518	647.591	661.930	869.224	855.092
GDP at market prices	7.206.325	8.060.532	9.698.055	10.683.416	11.943.763

Note: Please reckon with rounding errors when manually summing components.

Table 2**Gross Value Added at basic prices (1000 SRD) by kind of Economic Activity at constant prices 2006-2010**

Sector NFC, FC, HH, NPISH	2006	2007	2008*	2009*	2010*
Agriculture, Hunting and Forestry	457.078	529.378	517.920	749.182	735.688
Fishery	319.072	289.005	224.761	268.958	287.275
Mining and Quarrying	521.580	583.046	607.301	526.442	553.717
Manufacturing	1.857.453	1.892.983	2.067.460	1.830.294	1.947.443
Electricity, Gas and Water supply	126.102	132.321	144.509	142.468	167.841
Construction	368.398	379.860	410.502	403.183	460.032
Wholesale and Retail trade	1.209.422	1.293.919	1.324.588	1.587.845	1.628.679
Hotels and Restaurants	198.978	197.268	202.573	210.372	225.288
Transport, Storage and Communication	459.269	475.886	563.785	561.642	588.768
Financial Intermediation	384.560	419.517	418.789	436.876	446.928
Real Estate, Renting and Business activities	283.813	317.147	296.118	297.147	278.326
Education	5.825	7.505	6.341	6.548	6.682
Health and Social work	48.907	49.193	39.551	43.856	42.978
Other Community, Social and Personal services	35.402	44.009	62.931	49.785	53.506
Subtotal	6.275.857	6.611.038	6.887.130	7.114.598	7.423.152
Sector Government					
Agriculture, Hunting and Forestry	16.064	17.150	18.411	17.142	17.349
Electricity, Gas and Water supply	5.593	6.205	7.522	8.951	12.202
Construction	6.716	7.005	7.619	6.526	7.136
Transport, Storage and Communication	18.891	18.011	23.132	26.231	20.198
Public administration	296.584	309.697	328.526	340.215	346.830
Education	251.375	253.570	247.938	238.463	243.871
Health and social work	187.723	190.264	201.236	201.815	208.927
Subtotal	782.946	801.902	834.386	839.343	856.513
GDP at basic prices	7.058.803	7.412.941	7.721.516	7.953.941	8.279.665
Taxes less subsidies on production	610.665	647.591	673.478	694.260	723.176
GDP at market prices	7.669.468	8.060.532	8.394.994	8.648.201	9.002.841

Note: Please reckon with rounding errors when manually summing components.

Table 3
Percentage contribution by kind of Economic activity to the nominal GDP at market prices, 2006-2010

Sector NFC, FC, HH, NPISH	2006	2007	2008*	2009*	2010*
Agriculture, Hunting and Forestry	6,0	6,6	6,5	7,9	7,4
Fishery	4,0	3,6	2,4	2,3	2,5
Mining and Quarrying	7,6	7,2	7,5	7,1	7,2
Manufacturing	23,2	23,5	25,3	20,2	21,1
Electricity, Gas and Water supply	1,3	1,6	1,9	2,0	1,8
Construction	4,9	4,7	5,4	4,9	4,8
Wholesale and Retail trade	16,1	16,1	18,2	19,6	19,5
Hotels and Restaurants	2,8	2,4	2,0	2,6	2,6
Transport, Storage and Communication	6,7	5,9	6,1	5,8	6,5
Financial Intermediation	5,4	5,2	4,6	4,6	4,6
Real Estate, Renting and Business activities	3,3	3,9	2,8	2,9	2,8
Education	0,1	0,1	0,1	0,0	0,1
Health and Social work	0,6	0,6	0,6	0,6	0,4
Other Community, Social and Personal services	0,6	0,5	0,6	0,6	0,6
Subtotal	82,7	82,0	83,8	81,1	81,9
Sector Government					
Agriculture, Hunting and Forestry	0,2	0,2	0,2	0,2	0,2
Electricity, Gas and Water supply	0,1	0,1	0,1	0,1	0,1
Construction	0,1	0,1	0,1	0,1	0,1
Transport, Storage and Communication	0,3	0,2	0,2	0,2	0,2
Public administration	3,6	3,8	3,8	4,3	4,4
Education	3,1	3,1	2,9	3,5	3,4
Health and social work	2,4	2,4	2,1	2,3	2,6
Subtotal	9,7	9,9	9,3	10,8	10,9
GDP at basic prices	92,4	92,0	93,2	91,9	92,8
Taxes less subsidies on production	7,6	8,0	6,8	8,1	7,2
GDP at market prices	100,0	100,0	100,0	100,0	100,0

Table 4
Percentage contribution by kind of economic activity to the real GDP at market prices, 2006-2010

Sector NFC, FC, HH, NPISH	2006	2007	2008*	2009*	2010*
Agriculture, Hunting and Forestry	6,0	6,6	6,2	8,7	8,2
Fishery	4,2	3,6	2,7	3,1	3,2
Mining and Quarrying	6,8	7,2	7,2	6,1	6,2
Manufacturing	24,2	23,5	24,6	21,2	21,6
Electricity, Gas and Water supply	1,6	1,6	1,7	1,6	1,9
Construction	4,8	4,7	4,9	4,7	5,1
Wholesale and Retail trade	15,8	16,1	15,8	18,4	18,1
Hotels and Restaurants	2,6	2,4	2,4	2,4	2,5
Transport, Storage and Communication	6,0	5,9	6,7	6,5	6,5
Financial Intermediation	5,0	5,2	5,0	5,1	5,0
Real Estate, Renting and Business activities	3,7	3,9	3,5	3,4	3,1
Education	0,1	0,1	0,1	0,1	0,1
Health and Social work	0,6	0,6	0,5	0,5	0,5
Other Community, Social and Personal services	0,5	0,5	0,7	0,6	0,6
Subtotal	81,8	82,0	82,0	82,3	82,5
Sector Government					
Agriculture, Hunting and Forestry	0,2	0,2	0,2	0,2	0,2
Electricity, Gas and Water supply	0,1	0,1	0,1	0,1	0,1
Construction	0,1	0,1	0,1	0,1	0,1
Transport, Storage and Communication	0,2	0,2	0,3	0,3	0,2
Public administration	3,9	3,8	3,9	3,9	3,9
Education	3,3	3,1	3,0	2,8	2,7
Health and social work	2,4	2,4	2,4	2,3	2,3
Subtotal	10,2	9,9	9,9	9,7	9,5
GDP at basic prices	92,0	92,0	92,0	92,0	92,0
Taxes less subsidies on production	8,0	8,0	8,0	8,0	8,0
GDP at market prices	100,0	100,0	100,0	100,0	100,0

Table 5
Percentage change of the real V.A. by kind of economic activity per year, 2007-2010

Sector NFC, FC, HH, NPISH	2007	2008*	2009*	2010*
Agriculture, Hunting and Forestry	15,8	-2,2	44,7	-1,8
Fishery	-9,4	-22,2	19,7	6,8
Mining and Quarrying	11,8	4,2	-13,3	5,2
Manufacturing	1,9	9,2	-11,5	6,4
Electricity, Gas and Water supply	4,9	9,2	-1,4	17,8
Construction	3,1	8,1	-1,8	14,1
Wholesale and Retail trade	7,0	2,4	19,9	2,6
Hotels and Restaurants	-0,9	2,7	3,8	7,1
Transport, Storage and Communication	3,6	18,5	-0,4	4,8
Financial Intermediation	9,1	-0,2	4,3	2,3
Real Estate, Renting and Business activities	11,7	-6,6	0,3	-6,3
Education	28,8	-15,5	3,3	2,0
Health and Social work	0,6	-19,6	10,9	-2,0
Other Community, Social and Personal services	24,3	43,0	-20,0	7,5
Subtotal	5,3	4,2	3,3	4,3
Sector Government				
Agriculture, Hunting and Forestry	6,8	7,4	-6,9	1,2
Electricity, Gas and Water supply	10,9	21,2	19,0	36,3
Construction	4,3	8,8	-14,3	9,3
Transport, Storage and Communication	4,7-	28,4	13,4	-23,0
Public administration	4,4	6,1	3,6	1,9
Education	0,9	-2,2	-3,8	2,3
Health and social work	1,4	5,8	0,3	3,5
Subtotal	2,4	4,1	0,6	2,0
GDP at basic prices	5,0	4,2	3,0	4,1
Taxes less subsidies on production	6,0	4,0	3,1	4,2
GDP at market prices	5,1	4,1	3,0	4,1

Table 6
Deflator 2007=100

Sector NFC, FC, HH, NPISH	2006	2007	2008*	2009*	2010*
Agriculture, Hunting and Forestry	95	100	122	113	121
Fishery	90	100	104	92	102
Mining and Quarrying	105	100	119	144	156
Manufacturing	90	100	119	118	129
Electricity, Gas and Water supply	77	100	125	148	128
Construction	95	100	128	130	125
Wholesale and Retail trade	96	100	133	132	143
Hotels and Restaurants	102	100	96	131	140
Transport, Storage and Communication	106	100	104	111	132
Financial Intermediation	102	100	106	112	122
Real Estate, Renting and Business activities	85	100	93	106	120
Education	80	100	85	78	118
Health and Social work	92	100	139	142	118
Other Community, Social and Personal services	119	100	88	127	124
Subtotal	95	100	118	122	132
Sector Government					
Agriculture, Hunting and Forestry	87	100	106	131	156
Electricity, Gas and Water supply	162	100	101	101	84
Construction	96	100	107	143	160
Transport, Storage and Communication	98	100	76	82	126
Public administration	87	100	112	136	150
Education	89	100	112	158	167
Health and social work	91	100	103	123	146
Subtotal	89	100	109	137	153
GDP at basic prices	94	100	117	123	134
Taxes less subsidies on production	90	100	98	125	118
GDP at market prices	94	100	116	124	133

Table 7
National Income a.o. per year, 2006-2010

Social Economic Aggregates	2006	2007	2008*	2009*	2010*
Gross Domestic Product (basic prices)	6.655.807	7.412.941	9.036.125	9.814.192	11.088.671
Taxes less of subsidies	550.518	647.591	661.930	869.224	855.092
Net factor Income (RIPDs)	-144.377	22.944	57.546	14.734	-286.074
Gross Domestic Product (market prices)	7.206.325	8.060.532	9.698.055	10.683.416	11.943.763
Gross National Income (basic prices)	6.511.430	7.435.737	9.093.671	9.828.926	10.802.597
Gross National Income (market prices)	7.061.948	8.083.328	9.755.601	10.698.150	11.657.689
Disposable Income	7.162.396	8.298.500	10.007.191	10.959.470	11.900.053
Mid-Year Population	504.257	509.970	517.052	524.143	531.170
Gross Domestic Product per capita in SRD	14.291	15.806	18.756	20.383	22.486
National Income per Capita in SRD	14.005	15.851	18.868	20.411	21.947

Table 8
Taxes and subsidies on production per year, 2006 - 2010

Economic aggregates	2006	2007	2008	2009*	2010*
Indirect taxes	557,350	653.600	670.500	872.500	859.500
of which					
Import duties	166.000	184.798	160.000	220.000	220.000
Statistic duty	19.000	30.193	30.000	35.000	30.000
Sales tax on beer	10.000	14.415	15.000	15.000	15.000
Sales tax on tobacco	14.000	63.274	60.000	70.000	70.000
Tax on locally produced alcohol	6.000	7.603	6.000	16.000	10.000
Tax on public recreation					
Tax on bauxite					
Consumers tax on fuel	125.000	168.760	135.000	200.000	200.000
Sales tax on softdrinks	9.000	13.922	13.000	15.000	13.000
General sales tax	208.000	169.765	250.000	300.000	300.000
Other n.e.c. *	350	870	1.500	1.500	1.500
Subsidies on production	6.832	6.009	8.570	3.276	4.408
Taxes less Subsidies on production	550.518	647.591	661.930	869.224	855.092

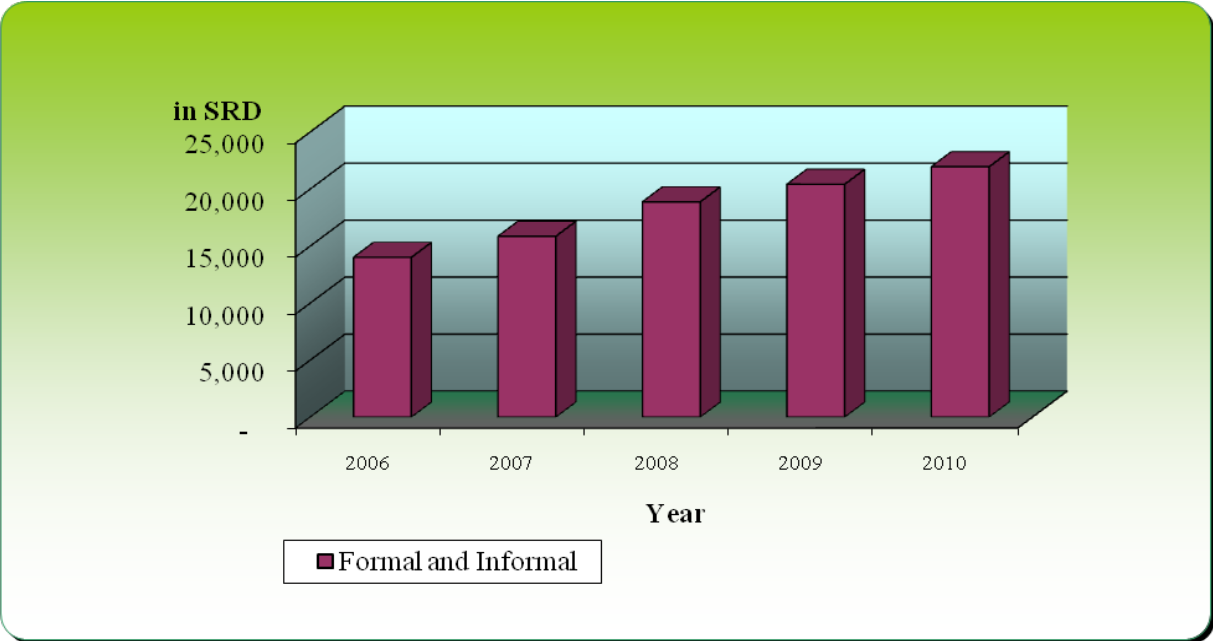
*n.e.c.: not elsewhere classified

Source: Ministry of Finance
Section Economic Affairs
Central Budget Accounts

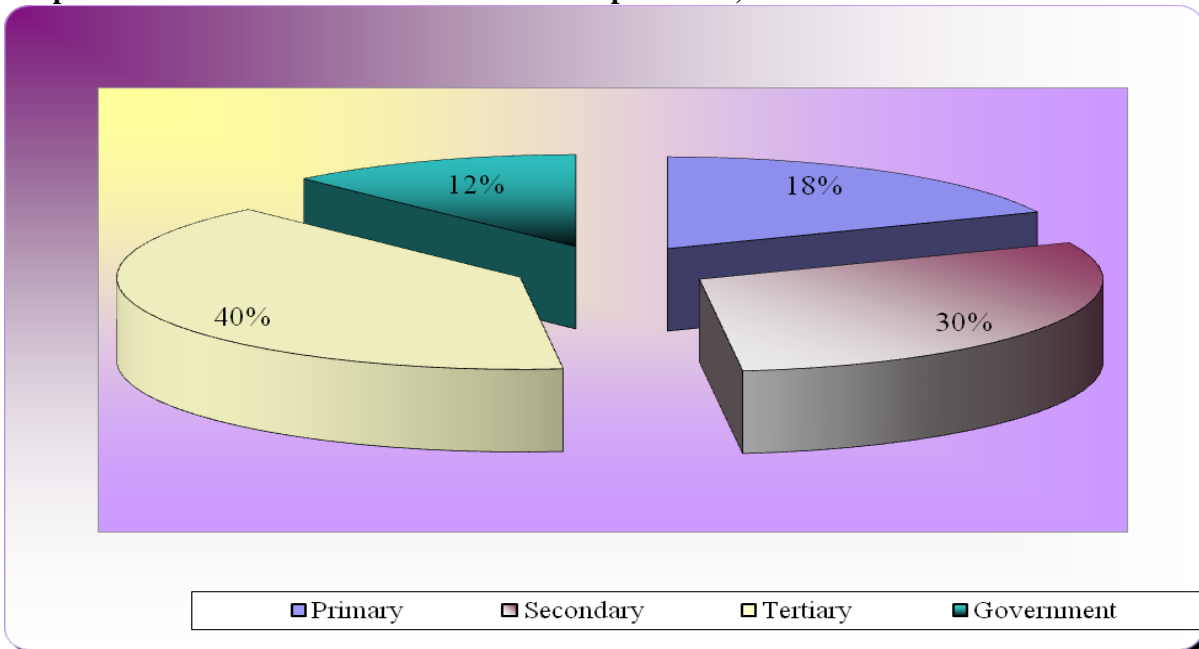
Graphs

“YOU MAY NOT FEEL HAPPIER,
BUT THE STATISTICS SAY
YOU OUGHT TO FEEL RICHER”
(SOURCE: THE GUARDIAN, 13 DECEMBER 1980)

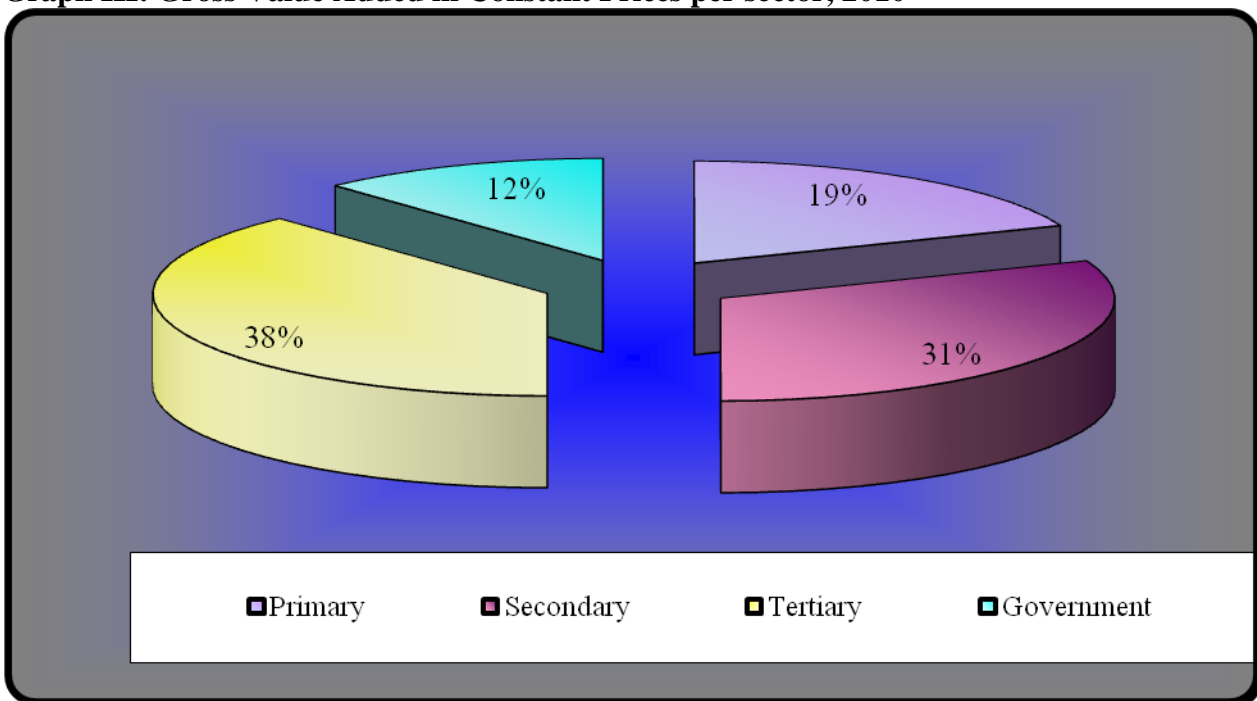
Graph I: National Income per capital



Graph II: Gross Value Added in Current Prices per sector, 2010



Graph III: Gross Value Added in Constant Prices per sector, 2010



Chapter 3

Expenditure method

3.1 The components of the GDP via the expenditure method are:

- **Consumer expenditures.**

Consumer expenditures households:

In the method that is used, the total expenditures for consumer goods is calculated as the sum of imported consumer goods and local produced consumer goods and services including real estate. For the calculation of households, the expenditures of goods are equal to the turnover of the retail trade minus the sales of commercial goods to other enterprises and to travelers, increased with the purchases of citizens abroad, plus the consumption of dwellings.

The sales of commercial goods (value of commercial goods purchased) are derived from the annual forms of enterprises. The revenues and expenditures of tourists are derived from the Balance of Payments. In addition, the consumption of goods has to be added to the consumption of dwellings and other services for the calculation of the total consumption.

Government consumer expenditures:

This is defined as the sum of Wages and Salaries, Intermediate Consumption, Depreciation, other taxes on product minus Sales on goods and services minus own account investments. The data is coming mainly from the Ministry of Finance.

- **Investments.**

Enterprise Investments.

From the trade statistics the imports of investment goods are known. The import value of investment goods is used as a proxy for the investments of enterprises from imported goods. The investments in land and in own account and changes in stocks are derived from the annual statistics of enterprises.

Government investments.

These are based on the recorded capital expenditures in the financial report. In this only the Tangible Fixed Assets are recorded. During the mission the investments from development aid as obtained from the Planning Office are added.

- **Exports and imports.**

The exports and imports of goods are available on cash and accrual basis and the services on cash basis. The total exports and imports are calculated as the sum of goods on accrual basis and the services on cash basis. The data regarding the flow of goods are GBS figures as derived from the customer statistics.

The data regarding services are derived from the Balance of Payments of the Central Bank of Suriname (CBS).

3.2 Calculation of the GDP according to the expenditure method.

With the available data estimations are made for the calculation of the GDP according to the expenditure method on the basis of several combinations of methods; due to statistical discrepancies the GDP via the production method differs from the GDP via the expenditure method. In the decision about what to do with the differences the next cases has to be taken into consideration:

- For a good analysis of the differences and balancing thereof, a comprehensive Supply and Use Table (SUT) is necessary. This is however not available yet at the moment.
- The intention was to make use of a summarized table due to a lack of the extensive SUT. The formation of it is also not realistic given the present means and the available time.
- The causes of the discrepancies lay in all probability both on the production side and on the expenditure side. In addition, there may also be the influence of the informal sector

Given above mentioned considerations, the next alternatives concerning the statistical discrepancies were suggested namely:

- a. The reconciliation of the differences of the current level of the GDP according to the production method.
- b. To register the statistical discrepancies (thus in fact not reconcile).

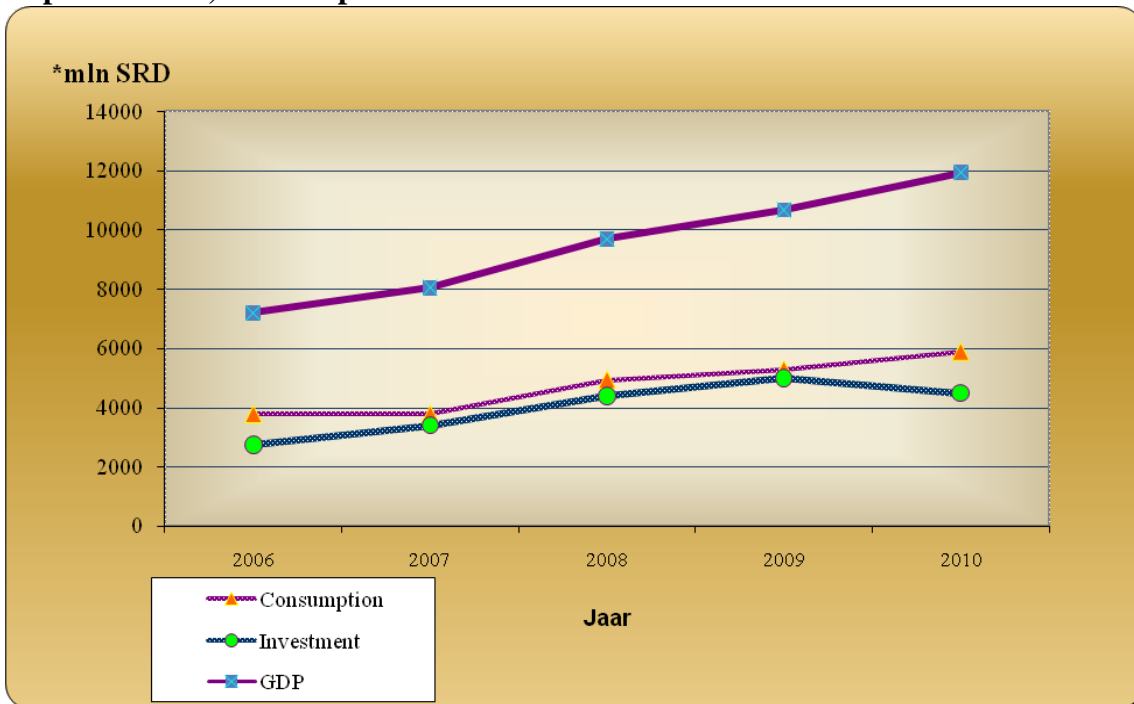
The final decision that is taken by the GBS is to reconcile the differences and bring to the level of the GDP via the production methods by distributing the differences over the expenditure components.

The GDP according to the Expenditure Method (mln. SRD),2006-2010

Components	2006	2007	2008	2009	2010
Consumer expenditures (a)	3,783	3,784	4,950	5,309	5,907
Households	2,870	2,968	3,893	3,907	4,308
Government	913	816	1,057	1,402	1,598
Investment (b)	2,741	3,410	4,409	5,008	4,502
Enterprises	2,103	2,768	3,757	3,741	3,486
Government	637	642	652	1,268	1,016
Changes in stocks (c)	154	313	-112	331	-160
Exports (d)	3,801	4,363	5,519	4,694	6,302
Imports (e)	3,273	3,809	5,068	4,659	4,607
GDP Expenditure (f)	7,206	8,061	9,698	10,683	11,944
GDP Production method (g)	7,206	8,061	9,698	10,683	11,944

Note: f=a+b+c+d-e

Graph IV: GDP, Consumption and Investment 2006-2010



ANNEXES pertaining to the production method

ANNEX I.

Summary of Sources and Methods of GDP Compilation by Economic Activity –comparison of previous and revised deflators and extrapolators

Activity	Method of Estimation	
	At Constant 2007 Prices	At Constant 1990 Prices
Agriculture	Quantity of agriculture production in the current years multiplied by the base year producer's price of agriculture production (revaluation method)	Base year GVA extrapolated by volume index of agriculture production
Forestry, logging, and related service activities	Quantity of wood felled in the current years multiplied by the base year export price of wood and wood products	Base year GVA extrapolated by output volume index of wood felled
Fishing	Quantity of fish and shrimp as provided by the DOF in the current year by the export price in the base year	Base year GVA extrapolated by the volume index of exported shrimps
Mining and Quarrying		
Oil extraction	Output at current prices deflated by the PPI of crude oil	Value of output at current prices deflated by the PPI of crude oil
Mining of bauxite	Output at current prices deflated by the export price index of bauxite produced	Base year GVA extrapolated by the volume index of bauxite mined
Mining of gold	Output at current prices deflated by the export price index of gold mined	Base year GVA extrapolated by the volume index of gold mined
Alumina production	Base year output extrapolated by the quantity index of quantities of processed alumina	Base year GVA extrapolated by the quantity index of alumina produced
Gold processing	Value of output in the base year 2007 extrapolated by the volume index of quantities of gold processed	Base year GVA extrapolated by the volume index of gold processed
Processing of fish, shrimp, rice and wood	Output of the base year extrapolated by the physical quantity index of processed shrimp, fish, rice and wood resp.	Base year GVA extrapolated by the volume index of exported shrimps; volume index of paddy produced; volume index of wood processed resp.

Activity	Method of Estimation	
	At Constant 2007 Prices	At Constant 1990 Prices
Other manufacturing	Output of the base year extrapolated by the volume index of imported raw materials	Base year GVA extrapolated by a volume index of imported raw materials
Electricity, and water supply, private	Base year output extrapolated by the volume index of electricity and water produced	Base year GVA extrapolated by the volume index of electricity and water produced
Electricity, and water supply, semi-private	Value of output at current prices deflated by the wage rate index	Base year GVA extrapolated by the volume index of electricity produced
Electricity, and water supply, public	Output at current prices deflated by the wage rate index	Base year GVA extrapolated by the volume index of number of employees from the corresponding department
Construction	Output at current prices deflated by the buildings materials price index	Base year GVA extrapolated by the volume index of locally produced and imported building materials
Wholesale and retail trade	Base year output extrapolated by a volume index of turnover; which equals turnover at current prices deflated by the CPI for goods	Base year GVA extrapolated by the import price index in USD which is used as a volume proxy
Hotels and restaurants	Base year output extrapolated by the index of the number of tourists staying in hotels	Base year GVA extrapolated by the average room occupancy
Land transport	Output at current prices deflated the purchaser's price index of tickets sold	Base year GVA extrapolated by the quantity index of the number of buses

Activity	Method of Estimation	
	At Constant 2007 Prices	At Constant 1990 Prices
Air transport	<ul style="list-style-type: none"> Base year output extrapolated by the volume index of the number of passengers transported 	Base year GVA extrapolated by the volume index of passengers transported
Supporting transport	Base year output extrapolated by the volume index of the number of employees	Base year GVA extrapolated with the volume index of passengers' arrival Only travel agencies included
Government operated buses	Value of output of the base year extrapolated by the volume index of the number of employees	Base year GVA extrapolated by the volume index of the number employees
Postal services	Base year output extrapolated by the volume index of the number of employees	Base year GVA extrapolated with the volume index of number of employees
Telecommunications	<ul style="list-style-type: none"> Output at current prices deflated by the wage rate index 	Base year GVA extrapolated with the volume index of call minutes
Financial Intermediation	<ul style="list-style-type: none"> Output at current prices deflated by the wage rate index 	Base year GVA extrapolated with the volume index of number of employees
Activities auxiliary to financial intermediation	<ul style="list-style-type: none"> Output at current prices deflated by the wage rate index 	Not estimated
Real estate renting and business activities	<ul style="list-style-type: none"> Value of output of the base year extrapolated by the volume index of the number of employees 	Base year GVA of real estate extrapolated with a 0,5 change in the population plus base year GVA of business activities extrapolated with the volume index of number of employees. No estimates for renting

Activity	Method of Estimation	
	At Constant 2007 Prices	At Constant 1990 Prices
Imputed rental of owner occupied dwellings	<ul style="list-style-type: none"> Output at current prices deflated by the average rental value 	Not estimated
Private education, health and other services	<ul style="list-style-type: none"> Output at current prices deflated by the wage rate index 	No separate estimation, included in total for the industry
Public administration, public education, health and other services	<ul style="list-style-type: none"> Base year output extrapolated by the volume index of the number of employees 	Base year GVA extrapolated with the volume index of number of employees
Taxes less subsidies on products	<ul style="list-style-type: none"> Output at current prices multiplied by the base year taxes minus subsidies ratio 	Base year VA extrapolated by the growth in constant price value added

ANNEX II.

Summary of Sources and Methods of GDP Compilation by Economic Activity –Revised series

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 2007 Prices
Agriculture	Ministry of Agriculture (MOA), data on price and quantities	Value of output obtained as the product of current year producer's price and production; Input structure taken from intermediate cost structure survey	Quantity of agriculture production in the current years multiplied by the base year producer's price of agriculture production (revaluation method)
Forestry, logging, and related service activities	Ministry of Natural Resources (MONR); data on quantities produced and related prices	Value of output obtained as the product of current year producer's price and production; Input structure unknown, assumed to be about 25 percent, which have to be revisited	Quantity of wood felled in the current years multiplied by the base year export price of wood and wood products
Fishing	Department of Fishery (DOF); data on quantities produced and related prices	Value of output obtained as the product of current year price and production; Input structure unknown, assumed to be about 25 percent, which have to be revisited	Quantity of fish and shrimp as provided by the DOF in the current year by the export price in the base year
Oil extraction	Oil company information regarding quantity of oil extracted and the corresponding price.	Value of output obtained as the product of current year price and production; Input structure obtained from the annual report of the company	Output at current prices deflated by the PPI of crude oil
Mining of bauxite	National accounts survey (NAS) data, quarterly enterprise survey, Bauxite Institute	Value of output calculated as turnover adjusted for changes in inventories as derived from the NAS Intermediate consumption derived from the NAS	Output at current prices deflated by the export price index of bauxite produced

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 2007 Prices
Mining of gold	NAS	Value of output calculated as turnover adjusted for changes in inventories as derived from the NAS Intermediate consumption derived from the NAS	Output at current prices deflated by the export price index of gold mined
Alumina production	NAS, quarterly production survey	Value of output calculated as turnover adjusted for changes in inventories as derived from the NAS. Intermediate consumption derived from the NAS	Base year output extrapolated by the quantity index of quantities of processed alumina
Gold processing	NAS	Value of output calculated as turnover adjusted for changes in inventories as derived from the NAS. Intermediate consumption derived from the NAS	Value of output in the base year 2007 extrapolated by the volume index of quantities of gold processed
Processing of fish, shrimp, rice and wood	DOF, MOA, MONR	Value of output obtained as the product of current year price and production; Input structure for fish and shrimp 0.71 ratio from the intermediate cost structure survey; for wood processing i/o ratio from agriculture; for rice i/o structure from one of the major rice companies	Output of the base year extrapolated by the physical quantity index of processed shrimp, fish, rice and wood resp.
Other manufacturing	NAS	Value of output calculated as turnover adjusted for changes in inventories as derived from the NAS. Intermediate consumption derived from the NAS	Output of the base year extrapolated by the volume index of imported raw materials
Electricity, and water supply, private	NAS, Quarterly production survey, annual reports	Value of output calculated as turnover adjusted for changes in inventories as derived from the NAS. Intermediate consumption derived from the NAS	Base year output extrapolated by the volume index of electricity and water produced

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 2007 Prices
Electricity, and water supply, public	NAS	Value of output calculated as the sum of costs. Intermediate consumption derived from the NAS	Value of output at current prices deflated by the wage rate index
Construction	NAS, buildings material price index	Commodity flow method	Output at current prices deflated by the buildings materials price index
Wholesale and retail trade	NAS	Value of output calculated as the trade margin as derived from the NAS	Base year output extrapolated by a volume index of turnover; which equals turnover at current prices deflated by the CPI for goods
Hotels and restaurants	NAS, Tourism Foundation	Value of output and intermediate consumption derived from the NAS	Base year output extrapolated by the index of the number of tourists staying in hotels
Land transport	NAS	Value of output and intermediate consumption derived from the NAS	Output at current prices deflated the purchaser's price index of tickets sold
Air transport	NAS, airport statistics	Value of output and intermediate consumption derived from the NAS	Base year output extrapolated by the volume index of the number of passengers transported
Supporting transport	NAS	Value of output and intermediate consumption derived from the NAS	Base year output extrapolated by the volume index of the number of employees
Government operated buses	Ministry of Finance	Value of output is calculated as the sum of cost. Intermediate consumption is equal to the value of materials purchased	Value of output of the base year extrapolated by the volume index of the number of employees

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 2007 Prices
Postal services	NAS	Output is calculated as the sum of cost. Intermediate consumption is equal to the value of materials purchased	Base year output extrapolated by the volume index of the number of employees
Telecommunication	NAS	Value of output and intermediate consumption derived from the NAS	Output at current prices deflated by the wage rate index
Financial intermediation except insurance and pension funding	Central Bank of Suriname (CBoS)	Value of output calculated as the difference between the interest, fees and commissions received and the interest paid. Intermediate consumption derived from source as sum of operational expenditures.	Output at current prices deflated by the wage rate index
Activities auxiliary to financial intermediation	Central Bank of Suriname (CBoS)	Value of output calculated as the fees and commissions earned. Intermediate consumption derived from source as sum of operational expenditures.	Output at current prices deflated by the wage rate index
Real estate renting and business activities	NAS	Value of output and intermediate consumption derived from the NAS	Value of output of the base year extrapolated by the volume index of the number of employees
Imputed rental of owner occupied dwellings	2004 Census	Value of output equals the number of owner occupied houses from the 2004 Census multiplied by the average rental value of the respective years	Output at current prices deflated by the average rental value
Private education, health and other services	NAS	Value of output and intermediate consumption derived from the NAS	Output at current prices deflated by the wage rate index
Public administration, public education, health and other services	Ministry of Finance	Output is calculated as the sum of costs. Intermediate consumption is equal to the value of materials purchased	Base year output extrapolated by the volume index of the number of employees

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 2007 Prices
Taxes less on products	Ministry of Finance	Budget data on income and expenditure	Output at current prices multiplied by the base year taxes minus subsidies ratio

ANNEX III.

Summary of Sources and Methods of GDP Compilation by Economic Activity –Previous series

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 1990 Prices
Agriculture	Ministry of Agriculture (MOA), data on price and quantities	GVA in constant prices reflatd by a price index for agriculture	Base year GVA extrapolated by volume index of agriculture production
Forestry, logging, and related service activities	Ministry of Natural Resources (MONR); data on quantities produced and related prices	GVA in constant prices reflatd by the export price index of wood estimated as unit value	Base year GVA extrapolated by output volume index of wood felled
Fishing	Department of Fishery (DOF); data on quantities produced and related prices	GVA in constant prices reflatd by the world market price for shrimps and CPI for fish	Base year GVA extrapolated by the volume index of exported shrimps
Oil extraction	National accounts survey (NAS), Oil company information regarding quantity of oil extracted and the corresponding price.	Output intermediate consumption minus from NAS	Output at current prices deflated by the price index of crude oil
Mining of bauxite	National accounts survey (NAS) data, quarterly enterprise survey, Bauxite Institute	Output intermediate consumption minus from NAS	Base year VA extrapolated by the volume index of bauxite mined
Mining of gold	NAS	Output intermediate consumption minus from NAS	Base year GVA extrapolated by the volume index of gold mined

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 1990 Prices
Alumina production	NAS, quarterly production survey	Output intermediate consumption minus from NAS	Base year GVA extrapolated by the volume index of alumina produced
Gold processing	NAS	Output intermediate consumption minus from NAS	Base year GVA extrapolated by the volume index of gold mined
Processing of fish, shrimp, rice and wood	DOF, MOA, MONR	GVA in constant prices reflatd by the world market price for shrimps and CPI for fish; the price index of paddy; price index for wood processing respectively	Base year GVA extrapolated by the volume index of exported shrimps; volume index of paddy produced; volume index of wood processed resp.
Other manufacturing	Customs	GVA Proxied by the import of raw materials in SRD	Base year GVA extrapolated by a volume index
Electricity, and water supply, private	NAS, Quarterly production survey, annual reports	Output intermediate consumption minus from NAS	Base year GVA extrapolated by the volume index of electricity produced
Electricity, and water supply, semi-private	NAS, Quarterly production survey, annual reports, CPI	GVA in constant prices reflatd by the CPI component of electricity	Base year GVA extrapolated by the volume index of electricity produced
Electricity, and water supply, public	Ministry of Finance, D&D	wages and salaries	Base year GVA extrapolated by the volume index of number of employees from the corresponding department

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 1990 Prices
Construction	buildings material price index	GVA in constant prices reflatd by the implicit construction price index	Base year GVA extrapolated by the volume index of locally produced and imported building materials
Wholesale and retail trade	Customs, CPI	GVA in constant prices reflatd by CPI	Base year GVA extrapolated with the import price index in USD which is used as a volume proxy
Hotels and restaurants	NAS, Tourism Foundation	Output intermediate consumption minus from NAS	Base year GVA extrapolated with the average room occupancy
Land transport	CPI	GVA in constant prices reflatd by the price index of bus tickets	Base year GVA extrapolated with the volume index of the number of buses
Air transport	• NAS, airport statistics	Output intermediate consumption minus from NAS	Base year GVA extrapolated with the volume index of passengers transported
Supporting transport	• E-D cards, airport statistics	GVA at constant prices reflatd by a wage index	Base year GVA extrapolated with the volume index of passengers' arrival
Government operated buses	• Ministry of Finance	Wages and salaries	Base year GVA extrapolated with the volume index of the number employees of the Department of transport
Postal services	• Ministry of Finance	Wages and salaries	Base year GVA extrapolated with the volume index of number of employees

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 1990 Prices
Communication	• NAS	Output intermediate consumption minus from NAS	Base year GVA extrapolated with the volume index of call minutes
Financial intermediation except insurance and pension funding	• Central Bank of Suriname (CBoS)	Output intermediate consumption minus from NAS	Base year GVA extrapolated with the volume index of number of employees
Insurance	Central Bank of Suriname (CBoS)	Output intermediate consumption minus from NAS	Base year GVA extrapolated with the volume index of number of employees
Activities auxiliary to financial intermediation	Not estimated		
Real estate renting and business activities	NAS	GVA in constant prices reflatd by a price index for construction Output intermediate consumption minus from NAS	Base year GVA of real estate extrapolated with a 0,5 change in the population plus Base year VA of business activities extrapolated with the volume index of number of employees. No estimate for renting
Imputed rental of owner occupied dwellings	Not estimated		
Private education, health and other services	Not estimated		
Public administration, public education, health and other services	Ministry of Finance	Wages and salaries	Base year GVA extrapolated with the volume index of number of employees
Financial services indirectly measured	CBoS/NAS	Interest received minus paid from the NAS/CBoS	Base year GVA extrapolated with the volume index of number of bank employees

Activity	Sources of Data	Method of Estimation	
		At Current Prices	At Constant 1990 Prices
Taxes less subsidies on products	Ministry of Finance	Budget data on income and expenditure	Base year GVA extrapolated by the growth in constant price value added

ANNEX IV

CARTAC MISSIONS FINDINGS AND RECOMMENDATIONS

The implemented recommendations provided by the missions resulted in improvements in the current and constant price estimates, arising from broader coverage, conceptual and methodological changes, and improved estimation procedures. Some of the general findings and recommendations are summarized below.

The missions recommended to update the sample framework using the results of the 2007 Business Census. The Business Census contains an updated list of all the establishments in the country, data regarding employed persons and legal status of the establishments. No data regarding the profit and loss accounts and balance sheets were collected in order not to affect the response rate negatively. The updated Business Register provided an improved sample framework for the national accounts survey and for the compilation of the estimates. The missions recommended to continue to improve and update the register on a regular basis and to pay special attention to the business classification.

The missions reviewed the different questionnaires and recommended to revise these. The recommendations were in the area of simplifying the questionnaires and to include variables to accommodate the calculation of output and intermediate consumption using 1993 SNA definitions. Three annual questionnaires were developed namely a general questionnaire covering all the industries except banking and insurance and nonprofit institutions serving households (NPISHs). For these industries separate questionnaires were recommended to take account of their specific output calculation.

The response rate in industries such as mining and manufacturing, electricity and water, financial intermediation, transport and communication is about 100 percent. In addition the agriculture industry and trade industry are covered sufficiently. Together with the government sector activities, these activities cover about 60 percent of total GVA.

The most challenging response rates are those for the construction industry, real estate renting and business services industry. The missions assisted the GBS to make estimates for missing data using different methodologies such as using the structure of data from previous years, data from the quarterly enterprise survey and other data sources. An attempt was made to use data from administrative data sources mainly the Tax Department. However this department indicated to be involved in a major automation project and could not provide the GBS with the requested information. The missions recommended continuing to contact this Department to get the required support and information.

The missions recommended the following activities to improve the response rate:

- conduct more face-to-face interviews esp. for the key-establishments instead of sending the questionnaires by mail.
- reorganize the data collection section and the data collection process, and allocate more resources especially to the data checking and editing

- increase the staff of the National Accounts Section
- use a combination of moral suasion and improved advertising of statistical products
- continue to explore the use of administrative data sources such as the Tax Department
- find ways of using the statistics act efficiently

It is noteworthy that the GBS has made extra effort in increasing the response rates among which sending out reminder notes and conducting extra enterprise visits. In addition a discussion paper was produced in which a non-response analysis was made. On the basis of this analysis a strategy for improving the response rate will be developed. The non-response analysis focuses only on the respondents. The missions have recommended including an evaluation of the input of the interviewers and the resources they have available for conducting interviews in the analysis.

The missions recommended to revise the calculation framework. Adjusted 1993 SNA formula by industry, and the plausibility check of the growth rates by industry were included in the system for the years 2004 to 2010. Together with the National Accounts Department a system was set up using Excel spreadsheets in which the proper formulas have been included by industry. This system replaced the previous system used.

As in many countries, the national accounts survey data lag behind with about 2 years. Given the aforementioned a preliminary system was set up using extrapolators by industry and the available data sources (e.g. financial statements, data from the quarterly and annual survey already available etc.) at the time of the estimates.

The missions recommended revising the grossing up framework using employment data by industry supported by employment data from the national accounts survey. The total number of employees by industry was calculated using:

- the change in the number of employees from the labor force survey to extrapolate the business census data,
- data from the annual and quarterly national accounts survey to supplement the business census data,
- growth rate of the number of employees of a panel in the sample to extrapolate the business census data. The panel was constructed from the sample data by selecting those enterprises that have responded regularly and are leading within the industry. An additional benefit of constructing the panel was that data gaps were identified for certain industries. The missions assisted the authorities to impute for missing data using information from previous years and other sources.

The missions recommended to conduct an intermediate cost structure survey. The purpose of this survey is to supplement the data on intermediate consumption of all industries and to compile the planned intermediate cost quadrant of the Supply and Use and Input Output tables. The survey was conducted in three major districts covering a 10 percent sample of enterprises stratified by industry. A comparison was made between the level of the intermediate consumption from the national accounts survey and that of the cost structure survey by industry. The main conclusion

was that the coverage was very low, except for agriculture, and data were even missing for some industries. The missions have recommended continuing to improve the response rates, and to repeat the survey using a larger sample.

The missions recommended to the introduction of a (simple) institutional sector approach. The *1993 SNA* distinguishes five institutional sectors, namely the Non-Financial Corporate sector (NFC), the Financial Corporate sector (FC), the Government sector (GOV), the Household sector (HH), and the Nonprofit Institutions Serving Households sector (NPISH). Based on data availability, the activities of the NFC, FC, HH and NPISH were grouped into a sector called the business sector, whereas the other production activities were grouped under the government sector.

The missions recommended to conduct a survey for small enterprises (enterprises with less than 10 employees). The establishment survey for small companies started in September 2009 and regards data for the year 2007. The last survey conducted for small enterprises dates back to 1986. The missions recommended repeating this survey every year to supplement the response.

The missions recommended to conduct additional research to improve the identification of NPIs within Education, Health and Other services, and the amount of transfers that these institutions receive. The missions have recommended to contact the major NPIs and to adapt the NPI questionnaire to collect the additional information.

ANNEX V

Effect of the Revised Series on the Levels and Growth Rates of GDP

In general, there is some change in the levels of GDP estimates after rebasing the national accounts. This happens due to improved methodologies, coverage and inclusion of latest data from surveys and other sources. In the case of the Suriname national accounts, CARTAC observed that the revision process was quite exhaustive and improved the coverage of GDP estimates to the maximum extent. As a result, current price estimates of GDP in the 2007 base year went up by between around 12 and 17 percent during 2007-2010 (see table A5-1). It should be noted that the data from 2008-2010 are preliminary estimates and will be revised as additional data becomes available.

Year	GDP current new series	GDP current old series	Percentage difference
	mln SRD	mln SRD	%
2007	8,061	6,763	19.2
2008*)	9,698	8,461	14.6
2009*)	10,683	8,927	19.7
2010*)	11,944	9,913	20.5

*) preliminary data

The GDP at constant prices are not fully comparable since the currency used in 1990 was Surinamese guilders (Sf). The currency was changed in 2004 to Surinamese dollars (SRD) whereby 1 SRD equals 1000 Sf.

Year	GDP constant new series	GDP constant old series	Percentage difference
	mln SRD	mln SRD	%
2007	8,061	6,006	34.2
2008*)	8,395	6,254	34.2
2009*)	8,648	6,473	33.6
2010*)	9,003	6,766	33.1

*) preliminary data

The revision process has also affected the growth rates of GDP at constant prices in comparison to the previous series, mainly on account of improvements in volume indicators, deflation of current price estimates by relevant price indices, and improvement in coverage. In addition the historical growth rates based on the new series have been reconciled as much as possible. The real GDP growth rates are almost the same, deviating by some small percentage points. In Annex VII information for the period 2000-2010 is presented.

Year	GDP constant 2007 prices	GDP constant 1990 prices	Real GDP growth rate 2007 prices	Real GDP growth rate 1990 prices
	mln SRD	mln SRD	%	%
2007	8,061	6,006		
2008*)	8,395	6,254	4.2	4.1
2009*)	8,648	6,473	3.0	3.5
2010*)	9,003	6,766	4.1	4.5

The structure of the economy as derived from the GVA contribution to GDP has not changed considerably. The main contributors to GDP are still the Mining, Manufacturing and Trade industry with a respective contribution of 8, 26 and 18 percent.

However the contribution of the industries has changed. Noteworthy is the decline of the GVA contribution of the mining industry with 5 percentage points from about 13 to 8 percent whereas the Manufacturing industry shows an increase of almost 3 percentage points. Noteworthy are also the increase of GVA contribution in the Trade industry (about 7 percentage points), and Agriculture, Forestry and Fishing by almost 6 percentage points

It should be noted that the industries are not fully comparable due to the change from ISIC rev.2 to ISIC rev 3. In addition the data from the revised series cover a wider range of activities e.g. the real estate renting and business activities includes the imputed rental of owner occupied dwellings and business activities which were excluded in the previous calculations.

ANNEX VI

Detailed explanation of differences Old versus New in 2007

Sector NFC, FC, HH, NPISH	2007		Difference (D = A-C)		
	A = NEW	B = OLD	C= OLD-FISIM+INFORMAL	Absolute	Percent
Agriculture, Animal Husbandry and Forestry	529,378	252,086	269,050	260,328	20.0
Fishery	289,005	46,429	44,013	244,992	19.0
Mining and Quarrying	583,046	723,292	1,184,399	-601,353	-47.0
Manufacturing	1,892,983	1,266,895	1,519,218	373,765	29.0
Electricity, Gas and Water	132,321	261,462	261,438	-129,117	-10.0
Construction	379,860	251,595	195,271	184,589	14.0
Trade	1,293,919	601,894	641,399	652,520	51.0
Hotels and Restaurants	197,268	111,753	103,179	94,089	7.0
Transport and Communication	475,886	360,047	395,769	80,117	6.0
Financial Intermediation	419,517	398,501	365,092	54,425	4.0
Business services				56,700	
METHODOLOGICAL	56,700			0	5.0
Business services-CLASSIFICATION	317,147	393,506	361,137	-43,990	-8.0
Government	801,902	672,310	635,479	166,423	17.0
Other services	44,009	76,131	136,981	-92,972	-7.0
		5,415,901	6,112,425		
Informal		932,575			
FISIM		236,051			
GDP at basic prices	7,412,941	6,112,425			
(Indirect) Taxes minus subsidies on production*	647,591	650,550	650,550	-2,959	-0.2
GDP at market prices	8,060,532	6,762,975	6,762,975	1,297,557	100.0

* A minor definitional change.

ANNEX VII

NEW SERIES: 2000-2010 PER SECTOR

Current	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Primary Sector	401,966	630,863	846,056	1,021,752	1,172,534	1,298,529	1,266,064	1,401,429	1,589,396	1,850,222	2,047,480
secondary Sector	268,270	405,475	633,805	823,630	1,106,037	1,364,677	2,118,490	2,405,164	3,162,430	2,889,235	3,307,935
Tertiary Sector	777,962	957,748	1,137,724	1,532,324	1,889,231	2,480,385	2,573,214	2,804,445	3,378,065	3,925,201	4,426,969
Government	118,692	156,026	343,906	430,202	507,692	526,724	698,039	801,902	906,234	1,149,534	1,306,287
GDP at basic prices	1,566,890	2,150,112	2,961,491	3,807,908	4,675,494	5,670,315	6,655,807	7,412,941	9,036,125	9,814,192	11,088,671
Taxes less subsidies	107,050	224,076	268,664	392,008	429,796	435,600	550,518	647,591	661,930	869,224	855,092
GDP at market prices	1,673,940	2,374,188	3,230,155	4,199,916	5,105,290	6,105,915	7,206,325	8,060,532	9,698,055	10,683,416	11,943,763
Growth in % (new)		41.8	36.1	30.0	21.6	19.6	18.0	11.9	20.3	10.2	11.8
Growth in % (old)		45.4	41.3	29.0	22.4	20.7	20.3	14.8	25.1	5.5	11.0

Constant	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Primary Sector	1,197,617	1,461,030	1,413,713	1,415,460	1,519,827	1,460,253	1,297,730	1,401,429	1,349,982	1,544,582	1,576,680
secondary Sector	1,254,365	1,441,270	1,502,418	1,723,945	1,801,470	1,836,175	2,351,953	2,405,164	2,622,471	2,375,945	2,575,317
Tertiary Sector	2,138,738	1,925,541	2,013,069	2,075,133	2,363,028	2,669,830	2,626,174	2,804,445	2,914,677	3,194,071	3,271,156
Government	489,753	454,875	569,388	639,823	716,436	725,382	782,946	801,902	834,386	839,343	856,513
GDP at basic prices	5,080,473	5,282,716	5,498,588	5,854,361	6,400,761	6,691,640	7,058,803	7,412,941	7,721,516	7,953,914	8,279,665
Taxes less subsidies	492,620	563,568	548,772	586,457	510,582	559,648	610,665	647,591	673,478	694,260	723,176
GDP at market prices	5,573,093	5,846,284	6,047,360	6,440,818	6,911,343	7,251,288	7,669,468	8,060,532	8,394,994	8,648,201	9,002,841
Growth in % (new)		4.9	3.4	6.5	7.3	4.9	5.8	5.1	4.1	3.0	4.1
Growth in % (old)		4.2	2.8	6.3	8.5	4.5	4.7	4.6	4.1	3.5	4.5

The growth in the constant series (2007 prices) depicts the economic performance. The annual average growth rate between 2000 and 2010 was 4.76 % for the old series and is 4.94 % for the new series.

ANNEX VIII

Table A7-1: Results of OECS Countries that Rebased and Implemented SNA 93

OECS Countries	Increase in GVA	
	Range 2000-2009	Average % Increase
Anguilla	27.8 - 59.0	47.2
Antigua and Barbuda	15.9 - 24.0	18.2
Dominica	25.0 - 38.9	32.6
Grenada	25.4 - 32.1	28.8
Montserrat	6.3 - 20.7	14.1
St Kitts and Nevis	18.1 - 33.4	25.5
Saint Lucia	0.6 - 15.2	6.3
St Vincent and the Grenadines	22.1 - 32.2	29.4
OECS	19.9 - 24.1	21.5

Source: ECCB

Table A7-2: Results of Other Countries that Rebased and Implemented SNA93

Caribbean and Latin American Countries	Average % Increase in the revised over previous series
Barbados	23.0
Jamaica	14.8
Guyana	70.1
Brazil	7.0
Honduras	19.0

Source: ECCB

Suriname	Increase in GVA	
	Range 2006-2010	Average % Increase
Suriname	14.6 - 20.5	18.5

Source ABS/GBS – Suriname

Graph A8-1

Average percentage increase of new over old series of GDP (current prices) after Rebasing and implementing SNA 1993

