



ST VINCENT AND THE GRENADINES

ANNUAL GROSS DOMESTIC PRODUCT BY EXPENDITURE

SOURCES AND METHODS

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ABBREVIATIONS

1993 SNA	System of National Accounts 1993
BEC	Classification by Broad Economic Categories
CARTAC	Caribbean Regional Technical Assistance Centre
CIF	Cost Insurance and Freight
COFOG	Classification of Functions of Government
COICOP	Classification of Individual Consumption according to Purpose
CPI	Consumer Price Index
ECCB	Eastern Caribbean Central Bank
EGDP	GDP by Expenditure Approach
ETS	External Trade Section
FOB	Free On Board
GDP	Gross Domestic Product
GFCE	Government Final consumption Expenditure
GFCF	Gross Fixed Capital Formation
GVA	Gross Value Added
HBS	Household Budget Survey
HFCE	Household Final Consumption Expenditure
HS	Harmonized System Commodity Classification
IC	Intermediate Consumption
ISIC	International Standard Industrial Classification
MoF	Ministry of Finance
NPI	Non Profit Institution
NPISH	Non-Profit Institutions Serving Households
NPISHFCE	Non-Profit Institutions Serving Households Final Consumption Expenditure
PSIP	Public Sector Investment Programme
SITC	Standard International Trade Classification
SO	Statistical Office

Introduction

This document serves as a guide on how the expenditure – based Gross Domestic Product (GDP) is compiled by the Statistical Office (SO) - St. Vincent and the Grenadines. The sources and methods described herein apply to the period 2008 to date. Previous estimates of GDP (E) were compiled by the SO using different methods.

In 2011, the SO in collaboration with Caribbean Regional Technical Assistance Centre (CARTAC) and Eastern Caribbean Central Bank (ECCB) embarked on a pilot project to revise the estimates of Expenditure on Gross Domestic Product (EGDP). The main purpose of the exercise was to revise the EGDGP estimates in current and constant prices through the autonomous calculation of Household Final Consumption Expenditure (HFCE).

Although the expenditure on gross domestic product described in this document is an official statistic, the official estimate of GDP is derived from the production approach. These two estimates are not exactly the same, and the difference is known as the statistical discrepancy (SD) in the GDP. This applies to GDP in both nominal terms (current prices) and real terms (constant prices).

Detailed information on how the published estimates are put together, are recorded in the tables at the end of the document.

Data Sources

National accounting estimates are very seldom the result of direct measurement. Some data are derived from statistical inquiries, while other basic information is derived from administrative data sources. The data sources by expenditure component are as follows:

- Household Final Consumption Expenditure (HFCE) at current prices: external trade statistics, production data from establishments, and the 2007/8 Household Budget Survey (HBS).
- Non Profit Institutions Serving Households Final Consumption Expenditure (NPISHFCE): the national accounts survey.
- General Government Final Consumption Expenditure (GFCE): government budget from the Ministry of Finance (MoF), Public Sector Investment Program (PSIP), the financial statements of NIS, financial statements from the statutory bodies.
- Capital Formation: external trade statistics adjusted for import duties, VAT and trade and transport margins and local sales of construction materials
- Exports and Imports of Goods: the external trade statistics.
- The Exports and Imports of Services: Balance of Payments
- Changes in Inventories: national accounts survey data of the manufacturing and wholesale and retail trade industry

Compilation Procedures

Household Final Consumption Expenditure – Goods

HFCE for 2008 is mainly derived from the HBS. The *HFCE of goods* is calculated by extrapolation of the base year (2008) HFCE data by *the change* in the supply of consumption goods. The supply consists of import of consumption goods (using BEC, SITC, and COICOP classification) plus the supply of consumption goods from domestic sales (if applicable). Where applicable the domestic sales data is adjusted for intermediate consumption and exports. In cases where the HBS data is lacking or not plausible, *the level* of the direct estimates and import of consumption goods combined with domestic supply is used. HFCE at constant prices is calculated as the current price HFCE by commodity (5 digit COICOP) deflated by the commodity specific CPI.

Household Final Consumption Expenditure – Services

The *HFCE of services* is calculated by extrapolation of the base year (2008) HFCE with the service specific output as derived from the supply side. The output is adjusted for other uses such as intermediate consumption and export where applicable and/or feasible, to make an estimate of HFCE. For those commodities without an estimate in the HBS e.g. life insurance, the output of life insurance, the HFCE of this service is used to make estimation. In this particular case the output is equal to the HFCE. For those commodities without an estimate in the HBS, the output is equal to the HFCE. Also, in some cases, the level of the direct estimates is applied and equal to HFCE. The commodity specific CPI is used as a deflator for the service related products to derive HFCE in constant prices.

Nonprofit institutions serving Households Final Consumption Expenditure (NPISHFCE)

The final consumption expenditure of the NPISH is equal to their output minus any revenue from sales of goods and services. Since there are no sales of goods and services the output is equal to the NPISH final consumption expenditure. The output is calculated as the sum of costs' (compensation of employees, intermediate consumption, and consumption of fixed capital). NPISHFCE in constant prices is derived by deflating the intermediate consumption in current prices by the product specific CPI of the major expenditure categories and to deflate compensation of employees by the wage index.

Government Final Consumption Expenditure (GFCE)

The GFCE is calculated for General Government consisting of final consumption expenditure by the central government, the statutory bodies (government NPIs) and the National Insurance Service (NIS). GFCE is calculated according to the System of National Accounts 1993 (*1993 SNA*) definitions as the value of output of general government less the value of output of own account capital formation, less the value of sales of goods and services, plus social transfers in kind to households. The value of output of General Government is

estimated as the sum of costs involved in production. This is equal to compensation of employees, intermediate consumption, consumption of fixed capital and other taxes less subsidies on production. GFCE in constant prices is derived by deflating the intermediate consumption in current prices by the product specific CPI of the major expenditure categories and to deflate compensation of employees by the wage index.

Gross Capital Formation (GCF)

Machinery and Equipment and Transport Equipment

Estimates are derived using the commodity flow approach. Imports of machinery and equipment and transport equipment from external trade are adjusted for capital formation as end use using BEC. Imports (c.i.f) are adjusted for re-exports, taxes and trade and transport margins to derive total available. GFCF at constant prices is derived by deflating the current price value of transport and other machinery and equipment by the product specific UVI of imports.

Construction

Estimates are derived using the commodity flow approach. Imports (c.i.f) are adjusted for re-exports, taxes and trade and transport margins. Domestic sales of locally produced construction materials are added to derive total available. The total available is adjusted to determine total cost of construction. The constant price value of the construction component of GFCF is derived by deflating the current price value of building and other structures by the composite buildings and materials price index.

Changes in Inventories

This is estimated as the changes in inventories of the Wholesale and Retail Trade industry and Manufacturing sector with an adjustment for under-coverage. The constant price value for changes in inventory is derived by deflating the current prices by the all items CPI.

Imports and Exports of Goods

External trade statistics on merchandise goods are used to compile the imports and exports of goods. This is also the main source for the imports and exports of merchandise goods in the BOP. The imports and exports of goods in constant prices are calculated by deflating the imports in current prices by the product specific import unit value index (UVI) for a selected group of (as much as possible homogeneous) products.

Imports and Exports of Services

Service specific surveys are used for the collection of data regarding the imports and exports of services as included in the BOP. Two approaches are used to derive imports and exports of services in constant prices, namely, deflation of the current price values by a corresponding price index, or extrapolation of the base year value by an output related volume index.

Table 1: Data sources and methodology Household Final Consumption Expenditure by product – in Current Prices

Product Description	2008 Base year	2009 -
Rice	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Other cereals, flour and other products	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Bread	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Other bakery products	HFCE from import	HFCE from import
Pasta products	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC and domestic exports
Beef and veal	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Pork	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Lamb, mutton and goat	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Poultry	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Other meats and meat preparations	HBS	HBS extrapolated by the change in HFCE from import
Fresh, chilled or frozen fish and seafood	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC and domestic exports
Preserved or processed fish and seafood	HBS	HBS extrapolated by the change in HFCE from import
Fresh milk	HFCE from import	HHFCE from import
Preserved milk and other milk products	HBS	HBS extrapolated by change in HFCE from import
Cheese	HBS	HBS extrapolated by change in HFCE from import
Eggs and egg-based products	HFCE from import	HFCE from import plus domestic production adjusted for IC
Butter and margarine	HBS	HBS extrapolated by change in HFCE from import
Other edible oils and fats	HFCE from import	HFCE from import
Fresh or chilled fruit	HFCE from import	HFCE from import plus domestic production adjusted for IC and domestic exports
Frozen, preserved or processed fruit and fruit-based products	HBS	HBS extrapolated by change in HFCE from import
Fresh or chilled vegetables other than potatoes	HFCE from import	HFCE from import plus domestic production adjusted for IC and domestic exports
Fresh or chilled potatoes	HFCE from import	HFCE from import plus domestic production adjusted for IC and domestic exports
Frozen, preserved or processed vegetables and vegetable-based products	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Sugar	HBS	HBS extrapolated by the change in HFCE from import
Jams, marmalades and honey	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Confectionery, chocolate and ice cream	HFCE from import	HFCE from import plus domestic sales adjusted for IC

Product Description	2008 year	Base 2009 -
Food products n.e.c.	HBS	HBS extrapolated by change in HFCE from import
Coffee, tea and cocoa	HBS	HBS extrapolated by change in HFCE from import
Mineral waters, soft drinks, fruit and vegetable juices	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Spirits	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC and domestic exports
Wine	HBS	HBS extrapolated by the change in HFCE from import
Beer	HBS	HBS extrapolated by the change in HFCE from import
Tobacco	HFCE from imports	HFCE from imports plus domestic production adjusted for IC and domestic exports
Narcotics	Not available	Not available
Clothing materials, other articles of clothing and clothing accessories	HBS	HBS extrapolated by change in HFCE from import
Garments	HBS	HBS extrapolated by the change in HFCE from import plus domestic less exports
Cleaning, repair and hire of clothing	Output from the supply side adjusted for IC	Output from the supply side adjusted for IC
Shoes and other footwear	HBS	HBS extrapolated by the change in HFCE from import plus domestic
Repair and hire of footwear	SO estimate	Estimate based on the population between 16 and 60 years for males and females and 40 percent was assumed and an average spending of \$30 for ladies and \$20 for men
Actual and imputed rentals for housing	Supply side estimates	Supply side estimates
Maintenance and repair of the dwelling	NA	Not applicable
Water supply	Direct estimate from company	Base year HFCE extrapolated by the change in output at current prices
Miscellaneous services relating to the dwelling	Supply side estimates	Supply side estimates
Electricity	Direct estimates from the company	Direct estimates from the company
Gas	HBS	HBS extrapolated by change in HFCE from import
Other fuels	HHFCE from import	HFCE from import
Furniture and furnishings	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC and domestic exports
Carpets and other floor coverings	HBS	HBS extrapolated by change in HFCE from imports
Repair of furniture, furnishings and floor coverings	Supply side estimates	10 percent of manufacturing output
Household textiles	HBS	HBS extrapolated by change in HFCE from imports
Major household appliances whether electric or not	HBS	HBS extrapolated by change in HFCE from imports
Small electric household appliances	HBS	HBS extrapolated by change in HFCE from imports

Product Description	2008 Base year	2009 -
Repair of household appliances	Supply side estimates	ISIC 5260 - Repairs of personal and household goods
Glassware, tableware and household utensils	HBS	HBS extrapolated by change in HFCE from imports
Major tools and equipment	HFCE from import	HFCE from import
Small tools and miscellaneous accessories	HBS	HBS extrapolated by change in HFCE from imports
Non-durable household goods	HFCE from import	HFCE from import
Domestic services	HBS	HBS extrapolated by the output of domestic services
Household services	HBS	HBS extrapolated by the output of other household services
Pharmaceutical products	HBS	HBS extrapolated by change in HFCE from imports
Other medical products	HFCE from import	HFCE from import
Therapeutic appliances and equipment	HFCE from import	HFCE from import
Medical services	HBS	HBS extrapolated by the output in medical services
Dental services	HBS	HBS extrapolated by the output in medical services
Paramedical services	HBS plus govt. services	HBS extrapolated by the output in medical services plus government services
Hospital services	HBS plus govt. services	HBS extrapolated by the output in medical services plus government services
Motor cars	HFCE from import	HFCE from import – commodity flow approach
Motor cycles	HFCE from import	HFCE from import
Bicycles	HFCE from import	HFCE from import
Animal drawn vehicles	Not applicable	Not applicable
Fuels and lubricants for personal transport equipment	HBS	HBS extrapolated by change in HFCE from imports
Maintenance and repair of personal transport equipment	HBS	HBS extrapolated by the output
Other services in respect of personal transport equipment	Not applicable	Not applicable
Passenger transport by railway	Not applicable	Not applicable

Product Description	2008 Base year	2009 -
Passenger transport by road	Output from supply side	Output from the supply side
Passenger transport by air	Direct estimate from companies	Base year ratio multiplied by output current
Passenger transport by sea and inland waterway	Output from supply side	Output from the supply side plus transport margin
Combined passenger transport	Not applicable	Not applicable
Other purchased transport services	HBS plus direct estimates from govt. account	HBS plus direct estimates from government account
Postal services	HBS	HBS extrapolated by the change in output of postal services – supply side estimates
Telephone and telefax equipment	HBS	HBS extrapolated by change in HFCE from imports
Telephone and telefax services	Direct estimates from the company	Base year consumption share multiplied by output current
Audio-visual, photographic and information processing equipment	HBS	HBS extrapolated by change in HFCE from imports
Recording media	HFCE from import	HFCE from import
Repair of audio-visual, photographic and information processing equipment	HBS	Base year HBS value extrapolated by product specific CPI and volume index of annual population change
Major durables for outdoor and indoor recreation	HFCE from import	HFCE from import
Maintenance and repair of other major durables for recreation and culture	Not applicable	Not applicable
Other recreational items and equipment	HBS	HBS extrapolated by change in HFCE from imports
Garden and pets	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales adjusted for IC
Veterinary and other services for pets	Output from supply side	Output from supply side adjusted for IC
Recreational and sporting services	HBS	Base year HBS value extrapolated by product specific CPI and volume index of annual population change
Cultural services	HBS	HBS data extrapolated by the change in output in cultural services
Games of chance	Output from supply side	Output from supply side
Newspapers, books and stationery	HBS	HBS extrapolated by the change in HFCE from import plus domestic sales
Package holidays	Not applicable	Not applicable
Education	HBS	HBS extrapolated by the change in output of education services – supply side estimates
Catering services	Output from supply side	Output from supply side adjusted for IC
Accommodation services	Output from supply side	Output from production approach - 5 percent of output for use by residents

Product Description	2008 year	Base 2009 -
Hairdressing salons and personal grooming establishments	HBS	HBS data extrapolated by the change in output of hairdressers etc.
Appliances, articles and products for personal care	HBS	HBS extrapolated by change in HHFCE from imports
Jewellery, clocks and watches	HBS	HBS extrapolated by change in HHFCE from imports
Other personal effects	HBS	HBS extrapolated by change in HHFCE from imports plus domestic sales adjusted for IC
Social protection	HBS	HBS data extrapolated by product specific output
Insurance	Output from supply side	Output from supply side
Financial Intermediation Services Indirectly Measured (FISIM)	Output from supply side	Output from the supply side
Other financial services	Output from supply side	Output from production approach adjusted to estimate HFCE
Other services n.e.c	HBS	HBS data extrapolated by the movement of the output in the various ISIC categories
Final consumption expenditure of resident households in the rest of the world	External sector accounts	bop, travel, debit

Table 2: Data sources and methodology GFCE, NPISHFCE, GCF, Imports and Exports – in Current Prices

Expenditure component	Data source	Methodology
General GFCE	Government budget, data from Statutory bodies, data from National Insurance Service (NIS), Public Sector Investment Program (PSIP)	-Value of output less the value of output of own account capital formation, less the value of sales of goods and services, plus social transfers in kind to households plus PSIP consumption component - Output: sum of costs = compensation of employees, intermediate consumption, consumption of fixed capital and other taxes less subsidies on production - Consumption of fixed capital imputed as 5 percent of GFCF
NPISHFCE	Survey data trade unions, religious organizations, other membership organizations, sporting activities and other member organizations	Gross output minus any revenue from sales of goods and services
GFCF		
Transport equipment	External trade statistics/Customs	Import of transport equipment from external trade statistics (Customs) adjusted for capital formation as end use using the BEC
Other machinery and equipment	External trade statistics/Customs	Import of other machinery and equipment adjusted for capital formation end use using the BEC
Construction	External trade statistics/Customs plus national accounts survey data related to domestic suppliers	-0.95 of total cost of construction, assuming that about 5 percent of the total cost of construction is related to repair and maintenance -Total cost of construction proxied by the value of imported construction materials plus domestic supply adjusted for services and repair and maintenance
GFCF government	PSIP	Capital formation component of the PSIP
Changes in inventories	National accounts survey data	Changes in inventories of manufacturing and wholesale and retail trade adjusted for under coverage
Imports and exports of goods	External trade statistics on merchandise/Customs	External trade statistics on merchandise/Customs
Imports and exports of services	Service specific surveys for Balance of Payments (BOP) compilation	BOP data

Table 3: Data sources and methodology Imports and Exports of Goods and Services – in Constant Prices	
Variable	Indicator
Imports of goods	
Main imports	Product specific UVI of imports of goods
Other imports	Composite UVI of imports of goods
Exports of goods	
Main exports	Product specific UVI of exports of goods
Other exports	Composite UVI of exports of goods
Imports of services	
Sea Transport	Volume index of cargo landed
Air Transport	Volume index of passenger departures
Travel	Volume index of visitor departures
Freight Insurance	Volume index of cargo landed
Life Insurance	Price index of life insurance rates
Non-life insurance	Price index of non-life insurance rates
Other Business Services	USA product specific PPI
Resident Government	USA CPI Re-indexed
Foreign Government	All items CPI
Other (Technical assistance received)	Volume index of OECD Output
Exports of services	
Sea Transport	Volume index of cargo loaded
Air Transport	Volume index of passenger arrivals
Travel	Volume index of visitor arrivals
Freight Insurance	Volume index of cargo loaded
Life Insurance	Price index of life insurance rates
Non-life insurance	Price index of non-life insurance rates
Insurance Agents Commissions	Price index of insurance rates
Financial Services	Wage rate index
Other Business Services	CPI for services

Table 4: Data sources and methodology Final Consumption Expenditure and GFCF – in Constant Prices	
Variable	Indicator
Household final consumption expenditure by product	Product specific CPI
NPISH final consumption expenditure	
Compensation of employees	Wage rate index
Intermediate consumption	All items CPI
Government Final Consumption	
Compensation of employees	Wage rate index
Intermediate consumption	All items CPI
Gross Capital Formation	
Transport and other machinery and equipment	Product specific UVI of imports of goods
Construction	Buildings materials price index
Changes in Inventories	All items CPI