

# PRASC



**Project for the Regional  
Advancement of Statistics  
in the Caribbean**

**Projet régional pour  
l'avancement de la statistique  
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# CARIBBEAN NATIONAL ACCOUNT TRAINING PROGRAM

Project for the Advancement of Statistics in the Caribbean Region (PRASC)  
National Accounts Training  
Session 10 – Goods and Services Account

January 2018



# **National Accounts**

## **Goods and Services Account**

# National Accounts - Overview




## ➤ Course Objective

- ✓ Provide national account compilers with an overview of the 'goods and services' account which is not really an SNA account but rather a convenient way to draw the link between GDP-P and GDP-E.

# The product balance

## The fundamental SNA identity



- The amount of a product available within the economy must have been **supplied** either by domestic production or by imports. This represents the SUPPLY of a product in the economy.
- The same amount of the product entering an economy in an accounting period must be **used** for intermediate consumption, final consumption, capital formation (including changes in inventories) or exports. This represents the USE of a product within the economy.
- Within the context of the System of National Accounts
  - SUPPLY = USE
- This is known as the supply-use identity or put in the context of macroeconomic theory  supply = demand.

# The product balance

## The fundamental SNA identity



- The identity takes the form of:

Supply

Use

Output  
+  
Imports  
+  
Margins  
+  
Taxes on  
products less  
subsidies on  
products

=

Intermediate consumption  
+  
Final consumption  
+  
Capital formation  
+  
Exports

# The product balance

## The fundamental SNA identity



- Since output is generally valued at basic prices we need to modify the identity to ensure that the supply side is valued at market prices. This modification results in the following:

### Supply at purchasers price

Output
+
Taxes on products
-
Subsidies on products
+
Imports
+
Margins

=

### Use at purchasers price

Final consumption
+
Intermediate consumption
+
Capital formation
+
Exports

# The product balance

## Re-arranging the identity



- The supply-use identity can be re-arranged into what is called the goods and services account which shows:

### GDP by production approach

	Output
	–
Intermediate consumption	
	+
Taxes on products	
	–
Subsidies on products	
	+
	Margins

=

### GDP by expenditure approach

Final consumption
+
Capital formation
+
Exports
–
Imports

- The right-hand side is equal to GDP at market prices and is the well-known statement of GDP often described as the “**expenditure approach**” to measuring GDP. The left-hand side is equal to GDP at market prices and is known as the “**production approach**” to measuring GDP.

# The product balance

## The fundamental SNA identity



- Aside from providing a framework to measure gross domestic product, the product balance is also a powerful tool with which to compare and contrast data from various sources to improve the coherence of the economic information system.

# The product balance

## The fundamental SNA identity



- Example: cigarettes
  - Household surveys report expenditure of \$100
  - Producers report output of \$120.
  - Taxes are \$50
  - Margins are \$25
- Suppose there are neither imports or exports, intermediate consumption nor fixed capital of cigarettes
- So, supply side suggests final consumption of \$195 ( $120+50+25$ ) while the use side suggests \$100.
- Could households under report cigarette consumption?

# The product balance – data sources



Supply			=
Production	Imports	Taxes on products	
Annual Survey of Manufactures and Logging	International Merchandise Trade / Trade in Services	Government Financial Systems	

Demand					
Household consumption	Government consumption	NPISH	Investment	Inventories	Imports and exports
Survey of Household Spending / Retail Commodity Survey	Government Financial Systems	Tax Form T3085	Capital Expenditure and Repairs Survey	Annual Survey of Manufactures, Annual Survey of Wholesale and Retail	International Merchandise Trade / Trade in Services

# The product balance

## Residual calculation



- We need to caution against residual calculation. Given the SUPPLY=USE identity it is always possible to residually calculate one of the variables.
- For example: suppose that a statistical agency did not collect information on final consumption but collected information on all other activities within the goods and services account. Final consumption could then be estimated residually as:

$$\text{Final consumption} = \text{output} - \text{intermediate consumption} + \text{taxes on products} - \text{subsidies on products} - \text{capital formation} - \text{exports} + \text{imports}$$

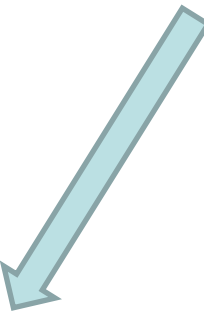
- The problem is that the system loses its power—that of coming up with two measures of GDP from different perspectives and comparing and contrasting.

# The product balance

## Supply – Use Analysis / Balancing



	Unbalanced		
	2014	2015	2016
<b>Farm and fishing products</b>			
Production	63,304	67,111	69,229
Imports	13,029	12,838	13,557
Margins	16,961	17,087	17,398
<b>TOTAL SUPPLY</b>	<b>93,294</b>	<b>97,036</b>	<b>100,184</b>
Intermediate input	50,665	51,275	52,775
Household consumption	17,700	17,854	18,273
Government consumption	0	0	0
NPISH consumption	0	0	0
Gross Fixed Capital Formation	0	0	0
Inventories	-4,057	-1,122	-3,127
Exports	28,986	28,851	29,381
<b>TOTAL USE</b>	<b>93,294</b>	<b>96,858</b>	<b>97,302</b>
Difference	0	178	2,882



*Supply ≠ Use*

# The product balance

## Supply – Use Analysis / Balancing



	Unbalanced		Balanced	
	2015	2016	2015	2016
Farm and fishing products				
Production	67,111	69,229	67,111	68,829
Imports	12,838	13,557	12,838	13,557
Margins	17,087	17,398	17,087	17,398
TOTAL SUPPLY	97,036	100,184	97,036	99,784
Intermediate input	51,275	52,775	51,275	52,975
Household consumption	17,854	18,273	17,854	18,273
Government consumption	0	0	0	0
NPISH consumption	0	0	0	0
Gross Fixed Capital Formation	0	0	0	0
Inventories	-1,122	-3,127	-944	-845
Exports	28,851	29,381	28,851	29,381
TOTAL USE	96,858	97,302	97,036	99,784
Difference	178	2,882	0	0

Production was moved slightly downward as not all data sources were finalized.

Data for imports and exports are based on customs data and so are considered to be of high quality and rarely adjusted.

Intermediate inputs are based on the uses of other industries (e.g. food manufacturing).

Inventories were changed for both years. They are generally considered to have the lowest data quality.

Data for imports and exports are based on customs data and so are considered to be of high quality and rarely adjusted.

*Supply = Use*

# National Accounts – Goods and Services Account

## ➤ Key takeaways

- ✓ Supply = Use is one of the most powerful accounting identities in the SNA.
- ✓ Supply = Use is a key quality check on the data used to construct the National Accounts.
- ✓ The Supply-Use identity is an excellent tool to confront independent measures of GDP-E and GDP-P

# National Accounts - Overview



## ➤ Activity

- ✓ What are the data sources you could use to construct a supply=use comparison for major products produced in your country?