



## Introduction to Trade Data Analysis

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## 1. Importance of trade data analysis

- What is the role of trade data?
- And what can a developing country do with trade data?

## 2. Data Classification

- Brief Overview

## 3. Data Sources

- What are the main sources?
- What does the data cover?
- And how can one access the data?

### 4. Weaknesses of available trade data

- How reliable is the data?

### 5. Methods of Analysis

- 2 main ones
- But will concentrate mainly **on one**

### 6. Other Indicators

- Discussion on other relevant indicators

## 1. Revenue Pool

- Regionalism – (most aim to create a CU)
- Trade data becomes importance for revenue sharing
- The revenue sharing formula is to a great extent reliant on trade data

## 2. Government accounts

- The basic formula for calculating the GDP is:

$$Y = C + I + E + G$$

- Trade balance (**E**) (Exports-Imports) is a function of GDP

## 3. In negotiations whether bilateral / multilateral

- Trade data becomes crucial in formulating positions in any type of negotiations
- Each country/ REC has to prepare positions on:
  - its '**offensive**' agenda: what they seek from the partner;
  - its '**defensive**' position': how they should respond to a partner's requests.

## 4. Use in policy formulation

- Industrial policies (e.g. use of the tariff as an instrument of industrial policy)

## 2. Data Classification

- **Countries collect data on goods flowing across borders**
- **How to classify?**
  - Technology based (in terms of production or product?)
  - Factor content based
  - Activity based or commodity based?
  - Use based (home consumption, intermediate use, capital goods, etc.)
- **For negotiations and economic analysis we need to be able to compare data across countries**
  - UN Statistical Division maintain a set of internationally accepted classification systems

## 2. Data Classification

- **The Harmonised System (HS)** widely used as the basis for Customs tariffs and trade statistical nomenclatures all over the world
  - Introduced in 1988 and used in GATT Uruguay Round negotiations
  - Used to classify data in SACU
- **Product level classification system** for merchandise trade.
  - Used as building blocks for more aggregated product classifications such as the Standard International Trade Classification (SITC).
  - Revised in 1988/89, 1996 & 2002

## 2. Data Classification

- **The HS system** classifies goods at different levels of precision:
  - At the highest level of aggregation goods are divided into 96 categories (or 'chapters') that are given 2-digit codes (such as 08 – fruit and nuts).
  - Each of these is then split into more detailed categories given 4 digits (**e.g. 0805 – citrus fruit**), and 6 digits (**e.g. 080510 – oranges**).
  - There are currently **1,251** of the 4-digit categories and **5,705** 6-digit ones.

## 2. Data Classification

- **The first 6 digits (HS6)** are common to all countries under the HS:
  - so 080510 refers to oranges whether one is looking at the trade statistics of Kenya, Jamaica, USA or the EU.
  - In practice, though, many countries go further and have additional sub-divisions which are unique to their system.
- **The level of disaggregation** at which a country sets its tariffs is known as the ‘national tariff line’ (NTL) level.
  - The EU’s, which it terms the Combined Nomenclature, for example, is routinely 8 digits (e.g. 08051010 – sanguine oranges) and currently has 14,758 such categories; in many cases it uses even more precisely defined 10-digit codes when setting tariffs.

## 2. Data Classification

- **Because the codes at NTL level** may be unique to each country, it is not possible to compare trade policy at this level of disaggregation in different countries.
  - For example, EU code 48239010 covers paper gaskets, washers and seals for civil aircraft; but in Zimbabwe the same code covers cards for punched-card machines

## 2. Data Classification

HS	Description
52	
5210	Woven fabrics of cotton, containing less than 85 % by mass of cotton, mixed mainly or solely with man-made fibres, of a mass <b>not exceeding</b> 200 g/m <sup>2</sup>
521021	Bleached plain weave
52102120	Crepe fabrics and seersucker fabrics
52102130	Other, of a mass not exceeding 70g/my
52102140	Other, of a mass exceeding 70g/my but not exceeding 90g/my
52102190	Other
521022	Bleached, 3 or 4 thread twill, incl. cross twill
5211	Woven fabrics of cotton, containing less than 85 % by mass of cotton, mixed mainly or solely with man-made fibres, of a mass <b>exceeding</b> 200 g/m <sup>2</sup>

HS 2-digit, 99 Chapters

HS6 based on nature of material from which they are made, ± 6000 lines

HS8 of specific total

## 2. Data Classification

	<b>Sections</b>	<b>Chapters</b>
C01	Live animals, animal products	Ch 01 – 05
C02	Vegetable products	Ch 06 – 14
C03	Animal or vegetable fats & oils	Ch 15
C04	Food, beverages & tobacco	Ch 16 – 24
C05	Mineral products	Ch 25 – 27
C06	Chemical products	Ch 28 – 38
C07	Plastic products	Ch 39 – 40
C08	Raw hides	Ch 41 – 43
C09	Wood products	Ch 44 – 46
C10	Paper products	Ch 47 – 49
C11	Textiles & clothing	Ch 50 – 63
C12	Footwear, headgear, umbrellas...	Ch 64 – 67
C13	Non-metallic minerals	Ch 68 – 70
C14	Precious stones and metals	Ch 71
C15	Base metals (iron & steel, non-ferrous metals)	Ch 72 – 83
C16	Machinery	Ch 84 – 85
C17	Transport equipment	Ch 86 – 89
	Specialised equipment (optical, surgical, measuring equipment, etc.)	Ch 90 – 92
C18		
C19	Arms & ammunition	Ch 93
C20	Miscellaneous manufactured articles	Ch 94 – 96
C21	Collectors' pieces & antiques	Ch 97
C22	Other unclassified goods	Ch 98 – 99)
C23	Special class/parts for motor vehicles	

- **International Standard Industrial Classification (ISIC)**

- Classification of economic activities arranged so that entities can be classified according to the activity they carry out.
- Widely used to classify data according to kind of economic activity in fields of population, production, employment, GDP.
- Up to 4-digit (“Classes”). There are 298 “Classes”, 161 “Groups” (3-digit), 62 “Divisions (2-digit) and 17 “Tabulation categories” (1-digit)
- Subclassifications can vary across countries (SIC in SA)

## 2. Data Classification

### ■ International Standard Industrial Classification (ISIC)

A (0-02)	Agriculture, hunting and forestry
B (05)	Fishing
C (10-14)	Mining and quarrying
D (15-37)	Manufacturing
E (40-41)	Electricity, gas and water supply
F (45)	Construction
G (50-52)	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
H (55)	Hotels and restaurants
I (60-64)	Transport, storage and communications
J (65-67)	Financial intermediation
K (70-74)	Real estate, renting and business activities
L (75)	Public administration and defence; compulsory social security
M (80)	Education
N (85)	Health and social work
O (90-93)	Other community, social and personal service activities Activities of private households as employers and undifferentiated production
P (95-97)	activities of private households
Q (99)	Extraterritorial organizations and bodies

## 3. Data Sources

- **Country statistical agencies**
  - First stop – country authorities responsible for collection
  - Other data sources rely on these for their data
  - But usually difficult to access data from these in Africa
- **Trade and Industry Policy Strategies (TIPS)**
  - HS based trade data for SADC region
  - Currently covers 11 countries
  - [www.tips.org.za](http://www.tips.org.za)

- **WITS data base**
  - Multi-country database
  - Based on UN data submitted by each country
  - Includes tariff data
  - Presents results according to SITC, HS, ISIC and other classification systems
  
- **FAO**
  - Agricultural products only
  - Database dates back to the 1960s

## 3. Data Sources

- **International Trade Centre (ITC)/ WTO Trade Maps, Market Access Maps (MacMaps)**
  - Requires registration
  - Databases can be free or require subscription
  - But mostly free access to LDCs
- **Brasher Data (World Trade Atlas)**
  - Commercial source
  - Subscribers access only
  - Subscription per dataset/ full access options available

## 4. Weaknesses of trade data

- **Users should factor in the following weak points of foreign trade statistics:**
  - **Trade data are never complete:** Smuggling and non-reporting represent a serious problem in a number of countries. In addition, trade statistics, like any source of information, are not free of mistakes and omissions.
  - **Re-exports:** Most countries include imports for re-exports and re-exports in their trade statistics. A low-income country may show up as an exporter of airplanes simply because its national airline has sold second-hand planes.

## 4. Weaknesses of trade data

- **Merchandise vs. services trade:** Detailed trade statistics are available only for merchandise trade and not for services, although the latter may account for a sizeable share of national exports.
- **Misleading product groupings:** Even at the lowest level of disaggregation, product groups in the trade nomenclatures do not necessarily reflect trade names and often contain a wide range of different products.
- **Exchange rate fluctuations:** Exchange rate fluctuations are not always properly recorded in international trade statistics. Values are normally aggregated over the period of one year in local currency and converted into US dollars.

## 4. Weaknesses of trade data

- **Mirror statistics:** For countries that do not report trade data to the United Nations, partner country data is normally used, an approach referred to as mirror statistics.

Mirror statistics are a second-best solution rather than having no data at all. But, they have a number of shortcomings when compared to the first-best solution of nationally reported data.

- i. First and foremost, they do not cover trade with other non-reporting countries. As a result, mirror statistics hardly cover South-South trade and would not be a suitable source for an assessment of intra-African trade.
- ii. there is the problem of transshipments, which may hide the actual source of supply.
- iii. mirror statistics invert the reporting standards by valuing exports in c.i.f. terms (i.e. including transport cost and insurance) and imports in f.o.b. terms (excluding these items).

## 5. Methods of Analysis

- **Two main ones**
  - Use of Spreadsheets
  - CGE modelling
- **But will focus on spreadsheets**
  - Trade data presented in Excel format
  - This fills a need for a widely usable tool which can facilitate discussions within and between countries.
  - Such discussions can contribute to the definition of the very limited number of scenarios that it will be possible to simulate rigorously through general equilibrium modelling.

### ■ **What can be done with spreadsheets?**

- One can be able to identify various combinations of products that your country will either need to liberalise under, e.g. an FTA or can exclude from liberalisation.
- One is able to identify market shares and changes in shares for a specific product or a country's performance over time
- One can also determine the revenue implications of liberalisation especially for small developing or LDCs that depend on revenue from customs duty
- The list is not exhaustive,

### ■ **Examples**

- **tralac** has prepared several papers involving trade statistics for different countries and scenarios
- The papers available on the tralac website ([www.tralac.org](http://www.tralac.org)) include:
  - i. How can South Africa exploit new opportunities in agricultural export markets? (WP)
  - ii. Trade Creation and Trade Diversion resulting from SACU trading agreements (WP)
  - iii. Southern Africa and the trading relationship with the European Union (EU) (TB)

- SADC MRI Annexes
- Exercise
  - i. Refer to annexes on Trade flows provided
  - ii. Analyse and interpret the data (Exports & Imports) by:
    - Market (share/ value)
    - Product (HS4) (share/ value)
    - Destination (share/ value)
- Discussion