

Exercise 1: Basic TradeSift Operations with Preloaded Data



TradeSift allows you to analyse trade and tariff data in a simple and intuitive way. In this session, we will practice how to use TradeSift to obtain quick and useful information about a given country's trade profile and its tariff structure.

Expected Outcomes: By the end of this session, participants will have familiarised themselves with the Project Data tool and will obtain generic information about partners and tariff structures.

Exercise 1.1. Unpacking a project

For this session, you will be using data, which we have provided for you in a packed project.

Find the folder "TS Packed Projects" on your desktop/USB, and unpack the project course data project. This will take several minutes – so please be patient.

Exercise 1.2. Obtaining some initial information about the country of your choice (Country A's) trade: Main partners.

The first piece of information we would probably like to find is who Country A is trading with.

- *Who are Country A's main import suppliers in 2013?*
- *Who are Country A's main export customers in 2013?*
(Hint: use total trade)

Exercise 1.3. Most imported products.

In the previous exercise we obtained a very general picture of Country A's imports. Now, we focus on their product composition.

- *Find Country A's top ten imported products from the World using the H1 6-digit classification for 2013*
- *Find Country A's top ten imported products from another origin of your choice (Country B) at the H1 6-digit classification for 2013*

Now, we can compare the main products imported from the World and from a given important partner (Country B that you will select based on the previous exercise). This will give us an initial idea on how an FTA between these two may affect Country A's importing structures.

- *Find Country A's imports from the World and Country B at H1 6 digit.*
- *Classification for 2013. What products, among those most imported by Country A, are not imported from Country B?*
- *Among the top ten imported products by Country A from the World, in what products does the share imported from Country B exceed the share imported from the World?*

Exercise 1.4. Tariff data.

It is important to obtain a general picture of what the main protected sectors in Country A are. We will use the HS 2 digit classification to obtain this information.

- *Has the average level of Country A's aggregate MFN tariff decreased over time?*
- *At the aggregate sector level, what can be said about Country A's tariffs? What are the most protected sectors? (Use the HS 2 digit classification for the year 2013)*

Exercise 2: Core Indicators

In this session, we calculate some trade indicators that allow us to identify certain country characteristics. We focus on; products where a country may have a comparative advantage; the similarity in the trade structure of two countries; and the degrees of diversification of export structures. In addition, we discuss the data that is necessary to perform these calculations.

Expected Outcomes: By the end of this session, participants will have calculated some basic indicators (RCA, FK, and TCI).

NOTE: On day 1 you will calculate these exercises using a packed project provided by us but on day 2 you will need to download some data and do the exercises based on this. Please consider what type of data you need to make the calculations.

Exercise 2.1. Trade Concentration Index.

This indicator is used to calculate how concentrated or diversified exports or imports are of a given country in terms of products. We will focus on two questions:

How concentrated or diversified, in terms of products, are Country A's total exports?

How concentrated or diversified, in terms of products, are they compared to other destinations of choice?

Look to the definition of the indicator. You will need to ask yourself:

- Who are the reporters? Do I need additional reporters?
- What level of disaggregation? Are total exports by destination enough or do I need more disaggregated data?
- How many years? Do I want to have a snapshot or the evolution of the indicator over time?
- Who are the partners?
- What Nomenclature should I use?

Once you have thought about these questions, try to calculate this indicator.

Exercise 2.2. Finger-Kreinin.

The Finger-Kreinin Indicator reveals the degree of similarity between either the structure of imports and exports; by extension, this may capture the similarity of the structure of production across two countries.

Therefore, the questions to answer here are:

- *How similar are the export structures of country A's and country B's exports to the World?*
- *How similar are the import structure of country A's and country B's imports from the World?*
- *Is there evidence of growing similarities/dissimilarities?*

(Note: Country B needs to be one for whom we have export data)

Go through the points presented in the question above. Given that the nature of the question has changed, the data necessary to calculate it will also change. You may need more disaggregated data in terms of products but more aggregated in terms of destinations.

Exercise 2.3. Revealed Comparative Advantage.

The RCA will tell you in which products a country may have a comparative advantage. The question to answer here is:

For country A and country B, compare for which products country A has a comparative advantage over country B in their exports to the world.

Exercise 3: Revealed Comparative Advantage Indicator

3.1 What is the indicator of revealed comparative advantage (RCA) and what is the intuition behind it?

3.2 Exports: Take Country A as the reporting country:

- a. At the 6-digit level, identify the top 5 exported goods in 2013.
- b. Save this industry selection.
- c. For these 5 industries select all years. What share of Country B's exports did these five industries account for in 2008 and in 2013 respectively?
- d. Now produce a line graph of the evolution of trade over time. Save this chart.
- e. What conclusions do you derive from the preceding?

3.3 Revealed Comparative Advantage:

- a. Calculate the normalised revealed comparative advantage for your saved industry selection, over time. (Hint: use the normalised indicator)
- b. Graph this, and save your graph.
- c. What do you learn from this analysis?

Exercise 4: Identifying and Downloading Trade Data

In this session, we will focus on the process of downloading trade data using WITS or COMTRADE.

By the end of this session, you should have downloaded the necessary trade data to show, for a country of your choice (different to the one you were working):

- 1) Top 10 aggregate import origins and export destinations during the latest available year. You will be required to identify the top export destination for the latest available year; this country will be known as '**Country B**' subsequently).
- 2) Top 10 6-digit imports from the world and exports to the world for the latest available year.
- 3) Trade Concentration Index with respect to the world and Country B for at least two years in time.
- 4) Finger-Kreinin indicator of similarity between your country and Country B's exports to the world (Common Destination - World) for the latest available year.
- 5) RCA for top 10 exports of your country and Country B to the world.

4.1. Choosing your country

You can choose any country that you want but before downloading the data, you will need to look at data availability in WITS or COMTRADE for the country of choice.

Go to the 'Data Availability' tab in the COMTRADE webpage and look for your country of choice. You will need to think of both nomenclature and the level of aggregation first. Exercise 6b will require both total trade data (for the top import and export origin/destination) and disaggregate data for subsequent analysis.

Based on this, choose a nomenclature that gives you an appropriate length of time for the analysis. (You will need at least 3 data points in time in the last decade). Should your country of choice not be covered please select another country

4.2. First extraction and identification of Country B

Once you have chosen your country and the nomenclature you can begin with the download process.

For the first extraction, download TOTAL trade data (exports and imports) for the country of your choice with respect to ALL PARTNERS for the latest available year.

Once this is done open a new project in TS with the name of the country of your choice. Load the aggregate data into TS and identify **Country B** i.e. the biggest export destination for your country.

4.3. Second extraction

The rest of the analysis will require that you download disaggregated data for your country of choice. Have a look at exercise 6b and try to think of the aggregation level and the nomenclature that you will need for this. You will also need to consider the partners and years (and perhaps additional reporters?). Do not forget Country B! Once you feel confident that you have identified the parameters of choice try to download the data. Bear in mind that the more data that you ask COMTRADE the longer it will take to download so just try to get the minimum amount of data to answer the above questions (i.e. 2 – 5).

4.4 Loading the data into TradeSift

Load the data into TS in the same project that you created earlier. Save the project.

Exercise 5: Practice in Advanced TS Operations

TradeSift not only calculates complex indicators, but it also provides a user-friendly way of digesting the data. In this session, we will play around with some useful TradeSift tools that give users flexibility in analysing and digesting large datasets.

Expected Outcomes: By the end of this session, you will be able to operate more complex TS operations such as selecting different industries for more in depth analysis, summing across rows and creating more complex graphs.

Exercise 5.1. Identifying the evolution of Country A's imports from main partners.

If two countries are already trading substantially with one another, this could suggest they are already exploiting comparative advantages. A reduction in the tariff level faced could lead to **increases in trade flows and welfare gains from import price reductions**.

- 1) Create a 'full stacked bar chart' for country A's total imports from main partners for the period 2008-2013
- 2) What preliminary conclusions can we draw from this figure? Is there an obvious natural trading partner?

Exercise 5.2. Saving product selections and exporting – compiling the Top 10 table

In many instances you will find it useful to carry out further analysis on a subsample of products such as the top exports or imports. TradeSift allows you to create such subsamples and then to calculate indicators based on these.

- 1) Identify Country A's top exports to its proposed preferential partner in 2013
- 2) Save the selection and export the table to Excel
- 3) Calculate Country A's RCA in these products and export the table to Excel.
- 4) Now calculate the proposed partner's RCA in these products
- 5) What emerges from the data

Exercise 5.3. Advanced Data manipulation options - changes in the data field

Users may also want to look at how trade flows have evolved and in particular how they have changed in time. TradeSift will allow you to look at changes across columns.

- 1) Using the above identified selection (i.e. Country A's top 10 exports to its preferential partners), identify how exports in these products have evolved in time 2008-2013. Calculate the percentage point change per column (i.e. use the 'change per column' function).
- 2) Graph these changes [hint: you will have to change the layout of the graph, in particular the Y-axis field]
- 3) What can be said about the changes in these top 10 exports in time?

Exercise 6: Export Opportunities

Exercise 6.1 Supply:

Use TradeSift to identify at the 6-digit level the top "n" e.g., 30 export products of Country A:

1. By share of exports to the world
[Note: check what share of trade your top "n" covers to make sure that you have included all products that are significant in that country's trade]
2. By (normalised) RCA to the world

See which products are on both lists. If the number of products with both high export shares and high RCAs is small, you can think about increasing the selection to top 40 or even top 50 (or vice versa).

Examine the changes in exports and in the normalised RCA's over time for these products – do this either by appropriate tables or charts. Consider what conclusions you might draw from looking at these changes over time.

If you have time, do the same exercise as above but this time identify the top “n” products with the biggest:

3. Changes in exports.

[Note: you will need to decide over what time period you think is most relevant; you will also need to decide over which products you examine the changes. If you look at the changes for **all** the products the country exports, with products which you export very little small changes in exports can lead to large percentage changes, and so there is a risk you end up with lots of very small industries as high growth. So you probably want to first choose the top “n” exports for your country (e.g., 50 or 100); save that selection; and then calculate the changes in exports.

4. Change in the normalised RCA

Exercise 6.2 Demand:

For the subset of product which you have identified above see if you can identify:

- How has world demand changed for the products / sectors?
- Who are the key importing countries?
- Who are the key suppliers to those importing countries?
- How successfully is your country exporting to these countries?