

Trade data sources overview

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To download entire report in a file, select the format: PDF Report or Word report.

1 UN Comtrade

Comtrade is a UN based comprehensive trade data collection and dissemination platform maintained and owned by The United Nations Statistics Division (UNSD). From the FAO building, everyone has full access to all Comtrade services. All information is available on the Comtrade website <https://comtrade.un.org/>.

In Comtrade there are few main options of data access:

- Regular download - manually insert a query in the browser and get a table in the browser or download a `.csv` file with selected data;
 - Bulk download - manually insert short query on a web page, or use the browser command line (address line in the browser) to pass arguments to the server. In return, user will download a zip archive with data that covers trade of selected country (or all countries) in one time period (year or month) and specified coding system (HS as reported, HS2007, HS2012, etc.). Bulk download has an option to download data of all reporters for one period/coding system in file;
 - Official and not official data visualization solutions.
-

1.1 Data availability in Comtrade

To save time before starting analysis, it is always good to know data availability in Comtrade. There are two interfaces for data availability analysis:

- New trade availability visualization tool <https://comtrade.un.org/data/da>, where it is possible to explore one country availability or download (clicking **Download** button) an extensive `.csv` file with information about all available data.
- Old outdated interface for data availability per country, commodity, year and other parameters is available at <https://comtrade.un.org/db/mr/daReportersResults.aspx>.

It is also possible to access data availability for the Bulk download. This data is available at the address line call: <http://comtrade.un.org/api//refs/da/view?parameters>. More information here.

1.2 Regular download in Comtrade

Source

Regular downloads is available here: <https://comtrade.un.org/data/>. This is a query based approach to load Comtrade data selecting a specific range of parameters. With the regular download is it possible to obtain a CSV file, which can be analyzed in excel, R, Stata and other tools.

How to access data

For an extensive overview, see the tutorial video below (<https://www.youtube.com/watch?v=oflKZUj2BgE>).

The most common query that will return data that we need in 90% of our analysis is the following:

- Type of product: Goods;
- Frequency: Annual;
- HS: As reported (Most frequently used because it combines all codes that were ever recorded);
- Period: 2014-2016 (Limited up to 5 in regular download);
- Reporter: All, or anything needed;

- Partners: World, or anything needed;
- Trade flow: Import and Export (select Import and Export instead of all to not receive data about re-export and re-import);
- HS (as reported) commodity codes: Total, any 2, 4 and 6 digits code (11, 1101, 110100).

UNITED NATIONS > DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS > STATISTICS DIVISION > TRADE STATISTICS

UN Comtrade Database Extract data Bulk download **new** Data Availability Metadata Reference Knowledge base API portal

1. Type of product & Frequency

Type of product
☒ Goods ☐ Services

Frequency
☒ Annual ☐ Monthly

2. Classification

HS
☒ As reported ☐ 92 ☐ 96 ☐ 02 ☐ 07 ☐ 12

SITC
☐ As reported ☐ Rev. 1 ☐ Rev. 2 ☐ Rev. 3 ☐ Rev. 4

BEC
☐ BEC

3. Select desired data

Periods (year)

All or a valid period. Up to 5 may be selected.

Reporters

All or a valid reporter. Up to 5 may be selected. All may only be used if a partner is selected.

Partners

World, All, or a valid reporter. Up to 5 may be selected. All may only be used if a reporter is selected.

Trade flows

All or select multiple trade flows.

HS (as reported) commodity codes

All, Total, AG[X] or a valid code. Up to 20 may be selected. If you know the code number, e.g. 01 - Live animals, type 01. To search by description type a word, e.g. rice.

4. See the results

Issues opening CSV in Excel? See this Microsoft how-to.

Data response

Normally, data is returned in the long format with the variables describing main data dimensions selected above and variables with Trade quantities, Trade value, and units of measurement.

1.3 Bulk download in Comtrade

Comtrade bulk download is available at the web page <https://comtrade.un.org/data/bulk>.

There are two options how to access bulk data in Comtrade:

- Web based query in the browser. Link: <https://comtrade.un.org/data/bulk>;
- API call based approach to load Comtrade data. Link: <https://comtrade.un.org/data/doc/api/bulk/>.

1.3.1 Web based bulk query

Source

Web based query for accessing Comtrade bulk data in the browser is available here: <https://comtrade.un.org/data/bulk>.

First time you need to access it from the FAO buildings in order to authorize your email. Insert your email in the “Enter your email” field and press “Authenticate my IP”. After that your email will be saved in the Comtrade database and you will be granted with the access to the bulk download interface (same address <https://comtrade.un.org/data/bulk>).

Sign in using:

IP Authentication

Username and Password

Token

Your IP address is successfully authenticated, please enter your email address to proceed further.
Email

Authentication

Authentication is required to access this page. Please choose from the following options:

1. If your organisation has premium site license subscription (through IP addresses), please select **IP Authentication**.

2. If you have user name and password, please select **Username and Password**.

3. If you have authentication token/code, please select **Token**. Authorization by token is intended for premium site license subscribers that wish to access the data outside from registered IP addresses. Learn more at [API documentation](#). You can also obtain the token from our [API tester](#).

To subscribe: <https://shop.un.org/comtrade>

How to access data

In order to access Comtrade bulk data on the bulk data access page select required set of parameters. For example, to download bulk commodity statistics for France, select:

- Type of product: Goods;
- Frequency: Annual;
- HS: As reported;
- Period: All;
- Reporter: France (or All - all reporters in one file or any single reporter that you needed);
- Publication data: keep unchanged.

1. Type of product & Frequency

Type of product

☒ Goods ☐ Services

Frequency

☒ Annual ☐ Monthly

2. Classification

HS

☒ As reported ☐ 92 ☐ 96 ☐ 02 ☐ 07 ☐ 12

SITC

☐ As reported ☐ Rev. 1 ☐ Rev. 2 ☐ Rev. 3 ☐ Rev. 4

BEC

☐ BEC

3. Select desired data

Periods (year)

Reporters

Publication Date

From

01/01/2000

to

08/30/2017

All or a valid period.

All or a valid reporter.





4. See the results

5. Bulk data API list

After clicking “Preview” you will be returned with the list of all bulk data files available for your selection. Clicking on any of them will run the file, clicking on “Show API link” will provide you with the API data request command (see the next subsection) for returning a bulk data file. Be aware that any bulk data file could range in size from 1 to 500 megabyte.

5. Bulk data API list

Search the result:

<div>France - 2016 - HS</div>  <div>03/30/2017 - 12.95 MB</div> <div>Show API link</div>	<div>France - 2015 - HS</div>  <div>10/24/2016 - 13.07 MB</div> <div>Show API link</div>	<div>France - 2012 - HS</div>  <div>05/04/2016 - 12.81 MB</div> <div>Show API link</div>	<div>France - 2011 - HS</div>  <div>05/04/2016 - 10.63 MB</div> <div>Show API link</div>
---	---	---	---

Data response

Your browser will download one **zip** archive with data for a selected country (all countries), period and classification.

Attention! Data files could be very. In zipped format file size may range from 1 to 500 megabyte. Un extracted format, file size could be up to 9 gigabytes.

1.3.2 API bulk query

Source

If you do not want to click in the browser, you can use the API for accessing Comtrade data. Extensive explanation about the Comtrade API tools is available here <https://comtrade.un.org/data/doc/api/bulk/>.

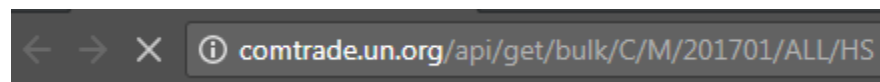
How to access data

To access Comtrade bulk data with API, we need to construct a request, insert it to the browser command line and run it.

To request a bulk data file we need to use the specific format explained here. The main idea is to construct a request based on the template `http://comtrade.un.org/api/get/bulk/{type}/{freq}/{ps}/{r}/{px}?{token=}` specifying correct parameters:

- **type** - trade type C - Commodities of S - Services;
- **freq** - frequency A - Annual or M - Monthly;
- **ps** - period coverage for annual data **ps=YYYY** - e.g. **ps=2010**, for monthly **ps=YYYY** or **ps=YYYYMM**;
- **r** - reporter area code - e.g. **r=804** or **r=All**. Extensive list available here;
- **px** - classification, available values are: HS - Harmonized System (HS) as reported, H0-HS 1992, H1-HS 1996, H2-HS 2002, H3-HS 2007, H4-HS 2012 and others see;
- **token** - optional parameter for data from outside of the authorized network.

For example, we want to request monthly data **freq=M** of commodities trade **type=C** for All reporters **r=ALL** for period January, 2017 **ps=201701**, in the HS as reporter classification **px=HS**. The request is `http://comtrade.un.org/api/get/bulk/C/M/201701/ALL/HS`. We insert this request to the browser address line and download the file.



Data response

Your browser will download one **zip** archive with data for a selected country (all countries), period and classification.

Attention! Data files could be very. In zipped format file size may range from 1 to 500 megabyte. Un extracted format, file size could be up to 9 gigabytes.

1.3.3 Token for data access

To generate an authentication token for the UN Comtrade from the registered IP range (i.e. from the FAO headquarters), we first need to go to the UN Comtrade authentication page and insert our email into the **Sign in using:** > **IP Authentication:** field. Pressing **Authenticate my IP** will ensure we are registered in the UN Comtrade system. Please note, you need to do this only once.

Subsequently we need to go to comtradePlus.API and select `/getSubUserToken` in the **Auth** section

GET /getSubUserToken

. After inserting the email, which you used to register above, into the corresponding field, press “try it out”:

Parameters

Parameter	Value
email	<input type="text" value="(required)"/>

Try it out!

In **Response Headers** the token will appear as a long string of symbols and characters. This token is to be copied to a secure place and used to access data in some programming cases or in the World Bank WITS database.

```
{
  "pragma": "no-cache",
  "date": "Mon, 04 Sep 2017 08:29:39 GMT",
  "server": "Microsoft-IIS/7.5",
  "x-aspnet-version": "4.0.30319",
  "x-powered-by": "ASP.NET",
  "content-type": "application/json; charset=utf-8",
  "access-control-expose-headers": "Token,TokenExpiry",
  "cache-control": "no-cache",
  "content-length": "383",
  "token": "REDACTED",
  "expires": "-1"
}
```

1.4 Data visualization options

UN Comtrade lists several visualization platforms on the page <https://comtrade.un.org/labs/>. Here, we will discuss some of them in more details.

1.4.1 Comtrade data-explorer

Comtrade data explorer <https://comtrade.un.org/labs/data-explorer/> (unfortunately was not working on 2017-08-31). A tool for visualization of the main trade flows between selected reporters and partners of the selected commodity. Here, you will find a [.pdf](#) guidelines on how to use Comtrade data-explorer.

Limitations:

- Commodities are not defined using the HS commodity codes, but as a free text, therefore, it is difficult to understand the meaning behind some commodity names.
- Options of custom-defined aggregates of countries or commodities are not available.

1.4.2 Bilateral trade exploration tool

BIS trade in goods tool is available at <https://comtrade.un.org/labs/BIS-trade-in-goods/> it allow to visualize trade of a selected good from a selected reporter to all or selected partner.

Limitations:

- Commodity coverage is limited to the 2 digits HS commodity description;
 - Options of custom-defined aggregates of countries or commodities are not available.
-

1.5 General Comtrade related information

Official introduction in how to use Comtrade <https://unstats.un.org/unsd/tradekb/Knowledgebase/50049/How-to-use-UN-Comtrade>.

Official “What is Comtrade” page <https://unstats.un.org/unsd/tradekb/Knowledgebase/What-is-UN-Comtrade>.

Old Comtrade data access interface <https://comtrade.un.org/db/default.aspx>.

1.5.1 Metadata and documentation

Generally, all information related to Comtrade metadata is organised here: <https://unstats.un.org/unsd/tradekb/Knowledgebase/>.

If you are looking for the country specific data publication notes, they are available at <https://comtrade.un.org/db/mr/daPubNoteDetail.aspx> with more information here. API interface for accessing publication notes is explained here and here.

1.5.2 Commodity mapping tables

Mapping tables for conversion between different coding systems (HS 2012 to HS 2002 or SITC) are here: <https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp>. Please note, that conversions are only available from the most recent coding system to the older version because most of the new coding systems are dis-aggregating previously existing ones.

Detailed information on the statistical classification of the commodities could be found here <https://unstats.un.org/unsd/class/default.asp>.

To convert between the FAOSTAT commodities and HS/SICT classification, see official FAOSTAT conversion tables <http://www.fao.org/economic/ess/ess-standards/commodity/en/> or contact ESS division.

1.5.3 Country classification

Please note Comtrade, FAOSTAT and UNSD all have different country classification. Although, all of them might be similar, there are some peculiarities in classifying some European countries as well as politically sensitive countries. Clear data classification tables are available at <https://comtrade.un.org/db/mr/rfReportersList.aspx> and <http://www.fao.org/faostat/en/#definitions>.

2 World Bank

World Bank offers great variety of databases on the subject of trade, agriculture and many others. The full list is available [here](#). We will discuss some selected data sources in more details below. In particular, we will focus on:

- World Integrated Trade Solution (WITS)
 - **TCdata360**
 - Miscellaneous data sources
-

2.1 WITS

Source

World Integrated Trade Solution is located here: <http://wits.worldbank.org/>. However, this is the guest users interface with the access to simple summary data. If you need to access full capabilities of WITS database, you need to log-in here (see more details below).

WITS database is a website, that uses trade and tariff data from various sources (UN Comtrade, WTO, World Bank) in order to provide users with the interface for generating own trade statistics and indicators. WITS application also provides tools to perform single and multi-market tariff cut simulations. Extensive description of the methodology, used by WITS is located here: <http://wits.worldbank.org/methodology.html>.

WITS provides multiple ways to access trade, tariff and non-tariff data. It has the following main sections.

- TradeStats: Summary trade, tariff, non-tariffs and development indicators;
- Analytical Databases: Databases derived using official trade data sources;
- Global Preferential Trade Access Database (GPTAD): Search across different preferential trade agreements.

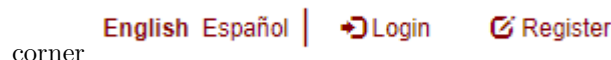
For more information, see this introductory overview video.


How to access data

WITS is a complex tool, however it has a very good set of learning materials. If you have time, you can take an eLearning course, otherwise, it is possible to follow video tutorials from WITS.

Registration and login

In order to use full capabilities of the WITS database all users need to log-in. The log in page is located here. You can access this page from the main WITS website, by clicking first ‘Register’ in the top right

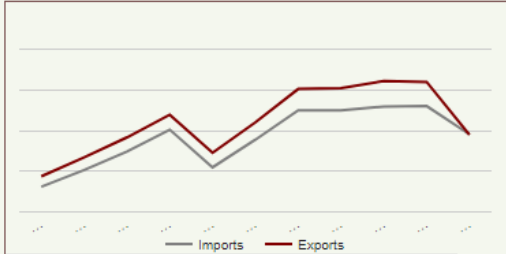
corner . Follow all registration instructions. People with the FAO email are allowed to register in WITS and use all available capacities of the database. After you have finished your registration, click ‘log in’ in the same top-right corner of the WITS website, enter your email and password and you will log into the WITS database:



[Quick Search](#)
[Advanced Query](#)
[Tariff and Trade Simulations](#)
[Results](#)
[Utilities](#)
[Support Materials](#)

WITS

World Integrated Trade Solution



* Data from wits.worldbank.org

World Exports and Imports (2015)

World integrated Trade Solutions (WITS) gives access to international trade and protection related data and offers built-in analytical tools allowing users to assess the impact of tariff changes. WITS provide users with capabilities to retrieve and analyze trade and tariff data; convert data between different nomenclatures; customize country and product groups; calculate trade indicators and assess competitiveness of countries; visualize; and download data. WITS also includes simulation tool to calculate the impact of tariff changes on trade flows (trade creation and diversion), tariff revenues, and consumer welfare using partial equilibrium modeling tools.






Email address:

Password:

[Forgot password?](#) [Log in >>](#)

Not registered yet? [Create your user identity here.](#)

[Trouble logging in.](#)

[About](#)
[Contact](#)
[Usage Conditions](#)
[Legal](#)
[Data providers](#)






Other important informatoin

When the user are logged into WITS, the website offer a greater range of documentation and metadata. In particular:

- WITS data availability report can be explored and generated here, it is only possible after log in;
- Reference tables for converting countries, commodities and classifications are here;
- Detailed product nomenclature is here;
- Comprehensive WITS guide is here;
- WITS has a developed API interface for direct data access from a programming environment. More information is available here. Here is the [WITS-API USER GUIDE](#).

2.1.1 WITS Trade data

There are two main types of trade data in WITS, (1) UN Comtrade up to 6 digits oh HS classification trade data and (2) UN Comtrade Tariff-line data. To access UN Comtrade data we only need to log in to WITS with our user name (email) and password. However, if we want to extract bulk Comtrade data, we may need to provide our Comtrade data access token (see more details below).

2.1.1.1 Advance query for trade data access

The main tool of generating user-defined trade data reports from the UN Comtrade data in WITS is in using the [Home > Advanced Query > Trade Data \(UN Comtrade\)](#). Here you can select any reporters, partners, commodities, periods, and classification systems in order to generate desirable table with the trade data.

Important to note. At this step our queries are limited to the maximum of 100 000 rows. In order to be able to download more than 100 000 rows, you either need to log in from the FAO network, or provide a UN

Comtrade token to the WITS database by clicking “click here to activate” on the page Home > Advanced Query > Trade Data (UN Comtrade) and follow the instructions:

All users can download UN COMTRADE data with a limit of 100,000 rows/request. If you (or your organization) have UN COMTRADE subscriptions, to enable unlimited download (no limit on number of rows) through WITS [click here to activate](#). To subscribe to UN COMTRADE [click here](#)

A comprehensive instruction on how to use advanced queries is provided in the WITS tutorial video.

IMPORTANT about ommodity classification Selecting the commodity classification is always tricky, when you want to construct a consistent time series they covers multiple years (5 and more)? you may find that more modern HS classifications will not be available in the past. For tackle this problem you need to switch to the old HS classification, such as HS 2002 or even HS 1992. Be ready, that the coding system in the old HS classifications may differ significant. To overcome this problem, check the WITS mapping tables or tables of concordance.

2.1.1.2 User defined groups of commodities and countries

Tutorial video Highlights both options for user defined grouping of data. The best description of how to create and use the user-defined country and commodity groups is described in the WITS e-learning here in the sections 20 and 21. Please check them for the guided instructions.

The lists of standard - predefined commodities and country groups are here: <http://wits.worldbank.org/referencedata.html> in the sections **Products** and **Countries**.

2.1.1.3 Tariff-line and bulk Comtrade data

WITS offers a user friendly interface for accessing Tariff-line data ([link to the interface](#)) and bulk Comtrade data ([link to the interface](#)). Practically, this interface repeats the one available in the Comtrade. To learn more about how to use it, see:

- Tariff-line tutorial video;
- WITS bulk donwload tutorial video.

2.1.2 Triffs data

WITS Trade and Tariffs data offers access to the UNCTAD and WTO databases and the tariffs data in particular. It is available on the Home > Advanced Query > Tariff and Trade Analysis page. To get to know how to use this data, see this tutorial video.

It is also possible to download bulk tariff data from the UNCTAD TRAINS database directly from WITS. You need to follow Home > Advanced Query > Bulk Download (TRAINS) to access the download interface. For more information, see tutorial documentation and tutorial video below:

2.1.3 Trade indicators

The Trade Outcomes Indicators tool lets you to construct numbers of trade indicators that are classified into four dimensions of trade performance: Orientation and Growth, Export Diversification, Export Sophistication, and Export Survival. All calculations are performed by the WITS, according to the published methodology based on the UN Comtrade data.

To see explicit details on how to use Trade Outcomes Indicators, see this video.

2.2 TCdata360

Source

TCdata360 provides open data on trade and competitiveness. The site aggregates and visualizes data from multiple sources and presents it in tandem with other knowledge and resources. The website is available at <https://tcdata360.worldbank.org/>. At TCdata360 offers a wide range of user friendly instruments for trade data comparison and analysis’.

See this brief guide video:

How to access data

This is a purely analytic tool with very intuitive interface. Unfortunately, there are no guides, which would describe all possibilities of data access options. Some main features are explained here: <https://tcdata360.worldbank.org/faq>.

Developers options

There are numerous options of data access for developers and different software, so-called API interface. To see more about it visit <https://tcdata360.worldbank.org/tools>.

2.3 Miscellaneous

2.3.1 Most recent WB researches on trade

- This is the website dedicated to the ongoing researches on trade conducted by of the World Bank.
- Comprehensive search over the WB researches is here.
- Generic website with the modern interface for searching through the WB researches is here.

2.3.2 Temporary Trade Barriers Database

The Temporary Trade Barriers Database (TTBD) contains detailed data on more than thirty different national governments’ use of policies such as antidumping (AD), global safeguards (SG), China-specific transitional safeguard (CSG) measures, and countervailing duties (CVD).

For more information, see the Temporary Trade Barriers Database and Global Antidumping Database.

2.3.3 Trade costs database

The Trade Costs database provides estimates of bilateral trade costs in agriculture and manufactured goods for the 1995-2015 period. It is built on trade and production data collected in 178 countries.

The database is available here.

2.3.4 Interface to access UNCTAD TRAINS data

The UNCTAD Trade Analysis Information System (TRAINS) is a comprehensive computerized information system at the HS-based tariff line level (HS 6-digit). The database provides data on trade control measures, including:

- Tariffs;
- Para-tariffs;

- Non-tariff measures;
- Imports by suppliers at HS 6-digit level.

The interface is available [here](#).

3 WTO

4 WTO

1. WTO

1. Overview of the WTO sources
2. Trade time series <http://stat.wto.org/Home/WSDBHome.aspx?Language=>
3. WTO Tariffs database <http://tariffdata.wto.org/>

Source

How to access data

Registration and login

5 ITC Trade Map

ITC - Trade Map Bank

Source

How to access data

Registration and login

6 Economic Complexity solutions (Harvard/MIT)

7 CEPI

CEPI <http://www.cepii.fr/>

Source

How to access data

Registration and login