

SMART – Analysing Trade Liberalisation

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SMART

- **For any government, it is crucial to be able to assess or to pre-empt the impact of different trade policy options. Market access analysis is a very useful tool that can be used to anticipate the likely economic effects of various policy alternatives.**
- **Single Market Partial Equilibrium Simulation Tool.**
- **Understand and export SMART simulation results by using partial equilibrium analytical tools for market access analysis.**

Assessment

- **Impact of domestic trade reforms** - For political economy or social purposes, it is often important to determine the distribution of the potential gains and losses from any contemplated policy changes. This will assist in anticipating any adjustment costs associated with reform implementation.
- **Impact of foreign trade liberalization** - For instance, when preparing for trade negotiations, market access analysis helps identify the sensitive sectors where negotiating efforts should be focused. Also, it could be useful in the formation of negotiating coalitions in multilateral/regional negotiations.

Results

- The **Detailed Data report** is to check the raw data used for smart simulation just to make sure the dataset corresponds to expectations.
- The **Export View report** shows the impact of the tariff reform on partners exports to the considered market. It displays the pre value of exports (before the tariff change), the post value of exports (after the tariff change) to the considered market as well as the net value between the two, considered as the change in exports revenue.
- The **Market View report** returns all three types of effects affecting the market (trade value, tariff revenue and welfare change) by individual product code and for all products as one aggregate.
- The **Revenue Impact report** returns individual results on the market's revenue by product code and for all products as one aggregate. The report displays the tariff revenue change between the pre and post tariff cut situation as well as the trade total effects.
- The **Trade Creation Effect report** returns individual results on Trade Total effect by product code/partner combination and for all products as one aggregate. This report also shows the trade diversion effect among partners and trade creation effect for both the market and its partners.
- The **Welfare Effect report** returns individual results on the market's welfare by product code and for all products as one aggregate. The report displays the Total Trade Effect, which is defined as the sum of Trade Diversion effect, Trade Creation Effect and Price Effect as well as the Welfare Effect defined as the benefits consumers in the importing country derive from the lower domestic prices after the removal or reduction of tariffs.

- **Trade creation**
- **Trade diversion**

Running Simulation

- **Case of Sri Lanka**
- **Bilateral Case Exercise**
 - Sri Lanka India FTA
- **Multilateral Case Exercise**
 - WTO NAMA simulation
- **Discuss Results:**
 - Gains to partner(s)
 - Trade Creation
 - Trade Diversion
 - Revenue Loss

Step 1

WITS - Home Page

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WITS

Quick Search Advanced Query **Tariff and Trade Simulations** Results Utilities Support Materials

SMART

SMART

Welcome

WITS application is aimed to help users find trade values and quantities for products on various nomenclatures; find tariff rates for products in different markets based on various product classifications; compare tariffs across markets; analyze protection levels for countries and products over time; compare scenarios of changes to applied or bound tariffs; or simulate economic impacts of various market access conditions. List of available data include:

What is new:

- Generate Trade Indicators charts
- eLearning
- Tariff Cuts & Trade Simulator
- Offline tool
- Tariff Bulk download
- Tariff Indicators module

- MFN and preferential rates
- Bound tariffs for WTO member countries
- Ad valorem equivalents (AVEs) of specific tariffs using different methodologies

- Trade values and quantities from UNSD's COMTRADE database
- Tariff simulations
- Predefined country and product groups (various product nomenclatures: HS, SITC, ISIC, CPC, GTAP etc)

Home About Contact Usage Conditions Legal Data Providers

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http://wits.worldbank.org/WITS/WITS/TariffAndTradeSimulations/SMART/SmartQuery.aspx?Page=SMART

100%

9:40 PM 7/3/2015

Step 2 – set query

The screenshot shows a web browser window with the URL <http://wits.worldbank.org/WITS/WITS/TariffAndTrade>. The browser's address bar and tabs are visible at the top. Below the browser window, the WITS SMART interface is displayed. The page has a header with the WITS logo and navigation links: [Quick Search](#), [Advanced Query](#), [Tariff and Trade Simulations](#), [Results](#), [Utilities](#), and [Support Materials](#). A breadcrumb trail indicates the current location: [Home](#) > [Tariff and Trade Simulations](#) > [SMART](#).

The main content area is titled **SMART ?** and contains a paragraph explaining the tool: "SMART allows analysis of the impact of unilateral, preferential and multilateral trade reforms at home or abroad on variables including trade flows (imports, exports, trade creation, trade diversion), world prices, tariff revenues, and economic welfare. This market access analysis is a very useful tool that can be used to anticipate the likely economic effects of various policy alternatives. You can use databases from either UNCTAD or WTO. [More details...](#)"

Below the text, there is a form for setting a query. It includes two radio buttons: ☒ **New Query** and ☐ **Existing Query**. To the right of these buttons is a dropdown menu labeled "Select a Query -". Below the radio buttons, there are three input fields: "SMART Query Name:" with the value "SIFTA", "SMART Query Description:" with the value "Sri Lanka FTA", and "Data Source:" with a dropdown menu showing "TRAINS". At the bottom of the form are three buttons: "Proceed", "Delete", and "Reset".

The footer of the page contains links: [Home](#), [About](#), [Contact](#), [Usage Conditions](#), [Legal](#), and [Data Providers](#). On the right side of the footer are logos for UNCTAD, UNO, and other organizations. The Windows taskbar at the bottom shows the system clock as 9:42 PM on 7/3/2015, and the name "Rajan Sudesh Ratna" is displayed in the center.

Step 3 – set country and year

http://wits.worldbank.org/WITS/WITS/TariffAndTrade

WITS - SMART Definition Q...

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Quick Search Advanced Query Tariff and Trade Simulations Results Utilities Support Materials

Home > Tariff and Trade Simulations > SMART

SMART ?

Scenario Name: sifta

Country: [Select a Country]

Year: - Select a Year -

Products: <<-Select->>

Scenario: <<-Select->>

Elasticity

Import Demand Elasticity: ☒ System Defined ☐ Other

Substitution Elasticity: 1.5

Supply Elasticity: 99

Apply Tariff Change on: ☒ Applied Rate ☐ Bound Rate

Save Save & Submit Back

Home About Contact Usage Conditions Legal Data Providers

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Step 4 – select products

The screenshot shows a web browser window with the URL <http://wits.worldbank.org/WITS/WITS/TariffAndTrade>. The page has a navigation bar with tabs: Quick Search, Advanced Query, Tariff and Trade Simulations, Results, Utilities, and Support Materials. The main content area shows the 'SMART' tool interface. The 'Scenario Name' is 'sifta', 'Country' is 'Sri Lanka -- LKA', and 'Year' is '2000'. The 'Products' section is highlighted with a red box, showing 'Selected' products: 'HS - Combined (Selected Classification)' and 'ALL1 -- Chapter (all 2-digit HS codes)'. To the right of this box is a red link '<<-Modify->'. Below the products section, the 'Scenario' is '<<-Select->', 'Elasticity' is '1.5', 'Substitution Elasticity' is '99', and 'Apply Tariff Change on:' is 'Applied Rate'. At the bottom, there are buttons for 'Save', 'Save & Submit', and 'Back'. The Windows taskbar at the bottom shows the time as 9:51 PM on 7/3/2015, and the name 'Rajan Sudesh Ratna'.

Home > Tariff and Trade Simulations > SMART

SMART ?

Scenario Name:

Country:

Year:

Products:

Selected
HS - Combined (Selected Classification)
ALL1 -- Chapter (all 2-digit HS codes)

<<-Modify->

Scenario: <<-Select->

Elasticity

Import Demand Elasticity: ☒ System Defined ☐ Other

Substitution Elasticity:

Supply Elasticity:

Apply Tariff Change on: ☒ Applied Rate ☐ Bound Rate

<http://wits.worldbank.org/WITS/WITS/CommonControls/ProductList/ProductgroupList.aspx?submodule=3020&querytoken=478145&selsource=TRN&rwndrmd=0.22418394889342824>

Rajan Sudesh Ratna

9:51 PM
7/3/2015

Step 5 – select product tree

The screenshot shows a web browser window with the URL <http://wits.worldbank.org/WITS/WITS/TariffAndTrade>. The browser's address bar and menu bar are visible. Below the browser window, a red-bordered application window titled "Product List" is open. The window contains a section titled "Select Products/Product Groups" with a descriptive paragraph: "You can use the product search box to find a specific product. You can also select from one or several products by choosing desired nomenclature. Once you choose your nomenclature, you can select products based on their (a) aggregation level (one-digit codes, 2-digit codes, etc.); (b) Product list which contains all products and sub-products; (c) Standard Product Groups which are pre-defined aggregates; and (d) Product Groups which are your own customized product aggregates. Please note that you can select from one or all these options."

Below the paragraph, there is a "Product Search" section with a text input field labeled "Enter a product for search" and a "Search" button. Below this is a "Nomenclature" section with a dropdown menu currently showing "HS - Combined".

The main area of the application is divided into two panels. The left panel, titled "Search based on level of aggregation", contains three sub-sections: "Select from product tree", "Clusters", and a list of aggregation levels: "ALL1 -- Chapter (all 2-digit HS codes)", "ALL2 -- Heading (all 4-digit HS codes)", and "ALL3 -- Sub-Heading (all 6-digit HS codes)". A right-pointing arrow button is located at the bottom of this list. The right panel, titled "ALL1 -- Chapter (all 2-digit HS codes)", is currently empty.

The Windows taskbar at the bottom of the screen shows the Start button, several application icons (including Internet Explorer, Google Chrome, and a folder), and the system clock displaying "9:51 PM 7/3/2015". The name "Rajan Sudesh Ratna" is visible in the taskbar area.

Step 6 – set tariff simulation

The screenshot displays the WITS - SMART Definition Q... web application interface. The browser address bar shows the URL <http://wits.worldbank.org/WITS/WITS/TariffAndTrade>. The application has a navigation bar with tabs: Quick Search, Advanced Query, Tariff and Trade Simulations (selected), Results, Utilities, and Support Materials. The main content area shows the 'Select a Scenario' dialog box, which is a red-bordered window with a title bar. Inside the dialog, there are two columns: 'Available Scenarios' and 'Selected Scenarios'. The 'Available Scenarios' column lists four options: 'Dutyfree - Cut duties to zero', 'dutyfree - duty free', 'wto - cut', and 'zeroduty - if india duty becomes zero for all c'. The 'Selected Scenarios' column is currently empty. Between the columns are four buttons: '>', '>>', '<', and '<<'. At the bottom of the dialog, there is a '<<-Add/Modify->>' button and two buttons: 'Proceed' and 'Cancel'. The background of the application shows a form with fields for 'Scenario Name' (sifta), 'Country' (Sri Lanka --), 'Year' (2000), 'Products' (HS - Comb, ALL1 -- Cha), 'Scenario' (<<-Select->), 'Elasticity', 'Import Demand Elasticity' (System D), 'Substitution Elasticity' (1.5), 'Supply Elasticity' (99), and 'Apply Tariff Change on:' (Applied Rate, Bound Rate). The bottom of the screen shows a Windows taskbar with various icons and the system clock displaying 9:53 PM on 7/3/2015.

Home > Tariff and Trade Simulations > SMART

SMART ?

Scenario Name: sifta

Country: Sri Lanka --

Year: 2000

Products: HS - Comb, ALL1 -- Cha

Scenario: <<-Select->

Elasticity

Import Demand Elasticity: ☒ System D

Substitution Elasticity: 1.5

Supply Elasticity: 99

Apply Tariff Change on: ☒ Applied Rate ☐ Bound Rate

Save Save & Submit Back

Select a Scenario

Available Scenarios

- Dutyfree - Cut duties to zero
- dutyfree - duty free
- wto - cut
- zeroduty - if india duty becomes zero for all c

Selected Scenarios

<<-Add/Modify->>

Proceed Cancel

Rajan Sudesh Ratna

9:53 PM 7/3/2015

Step 7 – set tariff simulation (2)

http://wits.worldbank.org/WITS/WITS/TariffAndTrade WITS - SMART Definition Q...

File Edit View Favorites Tools Help

Google Search

Sign In

Country: Sri Lanka -- LKA

Year: 2000

Products:

Selected

HS - Combined (Selected Classification)
ALL1 -- Chapter (all 2-digit HS codes)

<<-Modify->>

Scenario:

Selected

Dutyfree - Cut duties to zero

<<-Modify->>

Elasticity

Import Demand Elasticity: ☒ System Defined ☐ Other

Substitution Elasticity: 1.5

Supply Elasticity: 99

Apply Tariff Change on: ☒ Applied Rate ☐ Bound Rate

Save Save & Submit Back

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http://wits.worldbank.org/WITS/WITS/TariffAndTradeSimulations/SMART/SelectScenario.aspx?querytoken=478145&rwndrmd=0.6438915927849654 100%

Rajan Sudesh Ratna 10:00 PM 7/3/2015

Step 8 – download results

WITS - Query Result

File Edit View Favorites Tools Help

Google Search

Sign In

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Quick Search Advanced Query Tariff and Trade Simulations Results Utilities Support Materials

Home > Results > Download and View Results

Download and View Results ?

This option allows you to check the status of your submitted queries including simulations, view results, add/remove indicators from your results, and download the data. [More details...](#)

View and Request Download Download Data

ID	Query/Simulation Name	View	Chart	Download	Delete	Log	Status	Source	Date
746864	sifta						Completed	SMART - TRAINS	7/3/2015 11:03:00 AM
667137	a						Completed	Trade Indicator	2/18/2015 10:37:00 PM
667135	anirban						Completed	Trade Indicator	2/18/2015 10:35:00 PM
658143	aplcdmarket						Completed	Trade Indicator	2/5/2015 3:57:00 AM
601380	afghan						Completed	SMART - TRAINS	10/18/2014 3:25:00 AM

http://wits.worldbank.org/WITS/WITS/Results/Queryview/QueryView.aspx?Page=DownloadandViewResults

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10:05 PM 7/3/2015

Column Heading	Content
Nomencode	HS nomenclature;
Reporter_iso_n	3-digit code for reporters;
Reporter Name	name of reporter;
Product Code	HS 6-digit code;
Partner Name	the partner (exporter) name;
Partner_ISO_N	3-digit code for partners;
Trade Total Effect (\$'000)	sum of Trade Diversion effect, Trade Creation Effect and Price Effect. It corresponds to the impact of the tariff reform on import flows.
Price Effect (\$'000)	a value different from zero only in simulations to a change in the world unit price following a change in domestic demand for imported goods.
Trade Creation Effect (\$'000)	trade creation effect for both the market and its partners;
Trade Diversion Effect (\$'000)	trade diversion effect among partners. Market side, trade diversion is equal to zero since what is gained by beneficiaries of the tariff reform is exactly compensated by the loss of all other partners;
Old Simple Duty Rate (%)	pre-tariff change simple average tariff;
New Simple Duty Rate (%)	post-tariff change simple average tariff;

Note: \$'000 means thousand of current US dollars.

Ref: Pages 192-197 of WITS Manual

Column Heading	Description
Nomencode	HS nomenclature;
Reporter_iso_n	3-digit code for reporters;
Reporter Name	name of reporter;
Product Code	HS 6-digit code;
Tariff Line Code	replicates the HS 6-digit code since tariff line level simulation is not working yet;
Trade Total Effect (\$'000)	sum of Trade Diversion effect, Trade Creation Effect and Price Effect;
Welfare (\$'000)	welfare change and correspond to the change in the dead-weight loss as explained in details in E3. SMART - Theoretical Background ;
New Weighted Rate (%)	post-tariff change weighted (by bilateral trade) average tariff;
Old Weighted Rate (%)	pre-tariff change weighted (by bilateral trade) average tariff;

Note: \$'000 means thousand of current US dollars.

Column Heading	Content
Nomencode	HS nomenclature;
Reporter_iso_n	3-digit code for reporters;
ReporterName	name of reporter;
Product Code	HS 6-digit code;
Imports Before (\$'000)	initial import value;
Imports, Changes in (\$'000)	equal to the Trade Total Effect;
Tariff Revenue (\$'000)	initial tariff revenue;
Tariff New Revenue (\$'000)	post-tariff revenue;
Tariff Change in Revenue (\$'000)	equal to New Tariff Revenue minus Tariff Revenue;
Consumer Surplus (%)	welfare change that corresponds to the change in the dead-weight loss as explained in details in E3. SMART - Theoretical Background .

Note: \$'000 means thousand of current US dollars.

DISCUSSION ON RESULTS

EXERCISE

- **Sri-Lanka/Republic of Korea FTA: Determine effects to Sri Lanka**
 - **How would it affect imports and exports of Sri Lanka in terms of**
 - **Changes of imports and exports**
 - **Major affected products (top-5 exports and imports increase at 2 digit)**
 - **How would it affect tariff revenue of Sri Lanka?**
 - **How would it affect the welfare of Sri Lanka when Sri Lanka is an importer**
 - **How would it affect the Republic of Korea?**

DISCUSSION ON RESULTS

THANK YOU