

Manual for the Upstream Tariff Simulator (UTAS)



WORLD BANK GROUP
Macroeconomics, Trade & Investment

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1 – Introduction

What does UTAS do?

The Upstream Tariff Simulator (UTAS) is an Excel-based tool developed by the World Bank Group to help policy makers assess the impact of tariff reforms on production costs and effective protection across a variety of sectors in a flexible and time-efficient manner.

Why do upstream tariffs matter?

- 1) Access to cheap inputs from abroad has been shown to be a key export driver for firms because they lead to:
 - Increased productivity
 - Quality upgrading
 - Participation in global value chains

- 2) A large gap between a sector's upstream and downstream tariff results in an anti-export bias:
 - Reduces the attractiveness of exporting
 - Disincentivizes firms to become more efficient
 - Firms remain inward oriented

How does UTAS help?

Aggregates detailed tariff data at the product level into a measure of upstream costs for different sectors in the economy

- Uses input-output data to capture each sectors' production structure.
- Both direct and indirect effects can be taken into account.

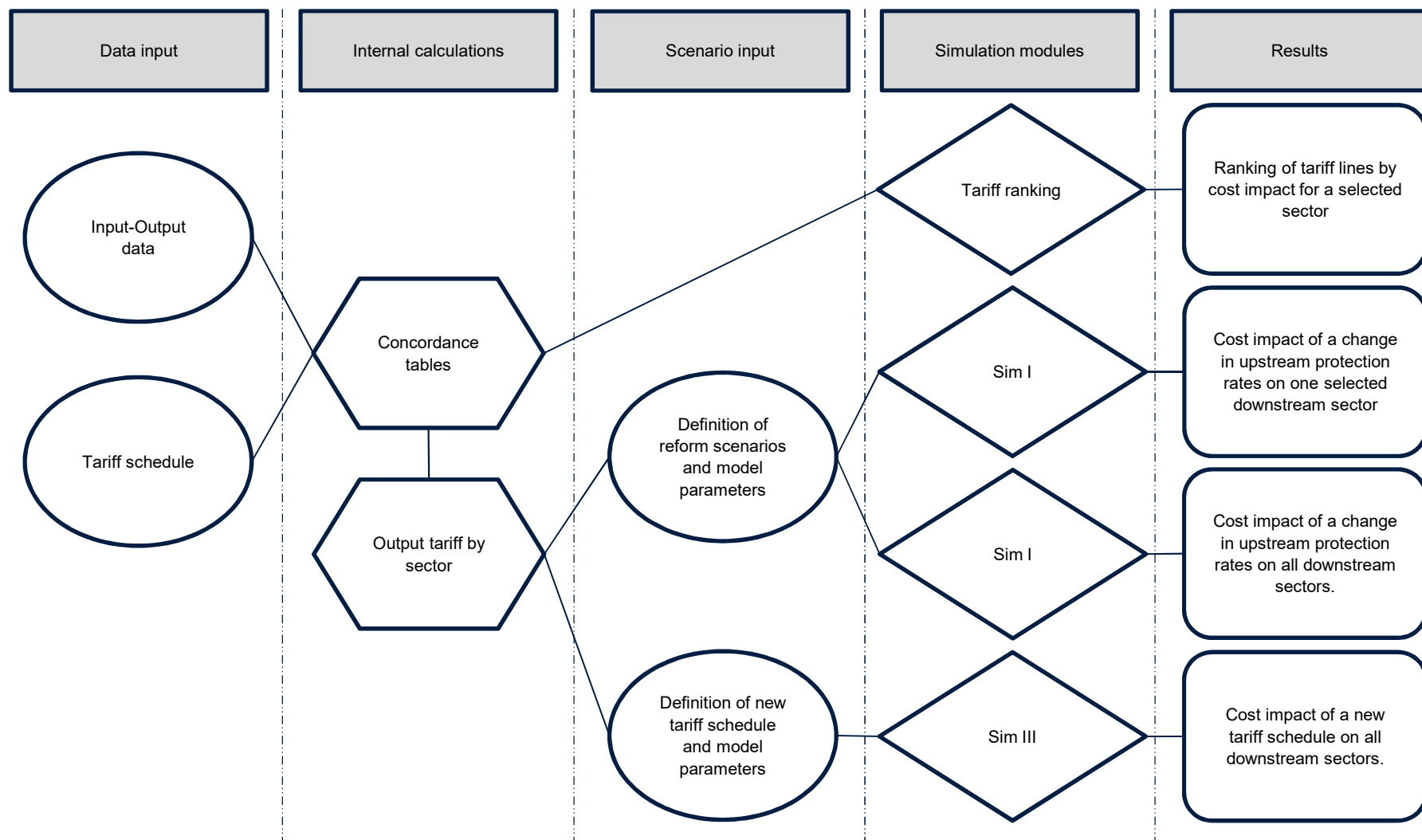
Flexible enough to respond to changes in trade policy scenarios and to incorporate different input-output

- Allows for easy switching between different input-output tables and benchmark against production structures in other countries.
- As long as data is available, any policy scenarios can be incorporated.
- Results are available immediately.

Simple, transparent and allows for the incorporation of local knowledge

- UTAS is set up in excel, all formulas and steps taken are visible to users
- Simple and intuitive modeling and assumptions that can be adjusted as deemed fit (e.g. different pass-through assumptions).

Structure of the tool



2 - Data preparation and formatting

Data input requirements

UTAS requires two sets of data:

- An Input/Output (I/O) table in either ISIC, NAICS, GTAP sector classification
- Baseline tariff schedule at HS 10, 8, or 6-digit disaggregation

Optional data:

- Tariff-reform scenario(s) at HS 10, 8, or 6-digit disaggregation

Formatting of I/O table

The I/O matrix needs to follow the specified format and should have J columns (one for each sector) and J+3 rows, as shown below.

<div>Output Sector</div> <div>Input Sector</div>	Output sector 1	Output sector 2	...	Output sector N
Input sector 1	IC_{11}	IC_{21}	...	IC_{N1}
Input sector 2	IC_{12}	IC_{22}	...	IC_{N2}
...
Input Sector J	IC_{1J}	IC_{2J}	...	IC_{NJ}
Total intermediate consumption	$IC_1 = \sum_{j=1}^J IC_{1j}$	$IC_2 = \sum_{j=1}^J IC_{2j}$	...	$IC_N = \sum_{j=1}^J IC_{Nj}$
Total value added	VA_1	VA_2	...	VA_N
Total industry input	$Output_1$	$Output_2$	...	$Output_N$

Formatting of I/O sectors

The input and output sectors need to be defined using either of the following three sector classification systems: GTAP, NAICS or ISIC. The following screenshots show how the respective sector codes need to be formatted depending on which classification system is chosen.

Format of ISIC codes

	A	B	C	D	E	F	G
1	ISIC	"0111"	"0112"	"0113"	"0121"	"0122"	"XXXX"
2	"0111"	0.1	0.6	0.5	0.5	89	...
3	"0112"	0	0.004	0.9	0.007	0.7	...
4	"0113"	0.7	0.2	0	20	5	...
5	"0121"	0.03	0.01	0.0003	0.2	90	...
6	"0122"	0.002	0.03	0.06	50	0.4	...
7	"XXXX"	...	...	...	...	...	...

Format of GTAP codes

	A	B	C	D	E	F	G
1	GTAP	1 pdr	10 oap	11 rmk	12 wol	13 frs	"XXXX"
2	1 pdr	0.211	0.52	0	0.113	0.002	...
3	10 oap	0.006	0.503	0	0.002	0	...
4	11 rmk	0.043	0.018	0.063	23	0.016	...
5	12 wol	0	0.007	0	0.122	0.001	...
6	13 frs	0.001	0.002	0	109.1	0.928	...
7	"XXXX"	...	...	...	...	...	...

Format of NAICS codes

	A	B	C	D	E	F	G
1	NAICS	"1111A0"	"1111B0"	"111200"	"111300"	"111400"	"XXXXXX"
2	"1111A0"	0.04	0.4	89	0.8	0.3	...
3	"1111B0"	87	0.004	8	0.4	0.006	...
4	"111200"	0	8	3	0.4	0	...
5	"111300"	8	56	29	54	0.3	...
6	"111400"	3	0.05	0	7	3	...
7	"XXXXXX"	...	...	...	...	...	...

Formatting of tariff schedules

To define the tariff-schedule, users need to take into account the following:

- Needs to be specified at HS 10, 8, or 6-digits.
- HS codes should follow "XXXX.XXXXXX" "XXXX.XXXX" "XXXX.XX" format.
- Tariffs in percentage points.
- Tariffs should (ideally) reflect actually collected tariffs, not statutory tariffs.

	A	B
1	"0101.2100"	7
2	"0101.2900"	3
3	"0101.3000"	0
4	"0101.9000"	5
5	"0102.2110"	0
6	"0102.2120"	5
7	"0102.2130"	10
8	"XXXX.XXXX"	...

3 - Importing data into UTAS

UTAS control panel

Once the data has been brought into to the appropriate format, we can import it into UTAS. The first time UTAS is launched, the following screen will appear:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	UTAS - Upstream Tariff Simulator													
6	Dataset Information				Control Panel				Help					
7	Country		Not Set											
8	Year		Not Set											
9	HS Version		Not Set											
11	Input-Output Table - Sectors' Nomenclature		Not Set											
12	Number of Tariff Lines		Not Set											
13	Number of Sectors		Not Set											
15	Status of data imports				Simulator I								Update	
16	Input-Output Matrix		Incomplete		Simulation Framework		Not Set							
17	Baseline tariffs		Incomplete		Sector		Not Set							
18	Tariff reform scenarios		Incomplete		Simulator II								Update	
19					Simulation Framework		Not Set							
20	Output Tariff Calculations								Simulator III				Update	Delete Scenario
21	Elasticities								Simulation Framework		Not Set			
22	Elasticity of Supply		10		Update				Tariff reform scenario		Not Set			
23	Elasticity of Substitution		3						Not Set		Not Set			

Data importing

To start with the importing process, click on the 'Control Panel' button

UTAS - Upstream Tariff Simulator

Dataset Information	
Country	Not Set
Year	Not Set
HS Version	Not Set

Input-Output Table - Sectors' Nomenclature	
Number of Tariff Lines	Not Set
Number of Sectors	Not Set

Status of data imports	
Input-Output Matrix	Incomplete
Baseline tariffs	Incomplete
Tariff reform scenarios	Incomplete

Output Tariff Calculations	
Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Simulator I	
Simulation Framework	Not Set
Sector	Not Set

Simulator II	
Simulation Framework	Not Set

Simulator III	
Simulation Framework	Not Set
Tariff reform scenario	Not Set

Control Panel

Click here

Control Panel

Import Data ...and here

Input-Output Matrix	Incomplete
Baseline tariffs	Incomplete
Tariff reform scenarios	Incomplete

Reset UTS simulation file

Start by importing the I/O table by clicking on 'Input-Output Matrix.'

Data importing – IO Table

The following screen appears:

Instructions:

- 1) Select and copy the entire I/O matrix from source spreadsheetselect
- 2) Select the green cell in A2 and paste the matrix.
- 3) Provide details of the country for which this analysis is being conducted.
- 4) Provide year of the I/O table (optional).
- 5) Then press the "Import Matrix" button in the message box.

Reminder:
The I/O matrix needs to follow the specified format and should have J columns (one for each sector) and J+3 rows. See separate instructions for further details.

Click here and paste the data

Import Input Matrix

Paste the Matrix according to the specified format, then fill the form and press the button "Import Matrix"

* Country

Year

Import Matrix

Next, open the file with the formatted I/O Matrix, select the entire table and copy it.

Then select the green cell and paste the data.

Data importing – IO Table

Instructions:

- 1) Select and copy the entire I/O matrix from source spreadsheets.
- 2) Select the green cell in A2 and paste the matrix.
- 3) Provide details of the country for which this analysis is being conducted.
- 4) Provide year of the I/O table (optional).
- 5) Then press the "Import Matrix" button in the message box.

Reminder:
The I/O matrix needs to follow the specified format and should have J columns (one for each sector) and J+3 rows. See separate instructions for further details.

Add country name and year

Import Input Matrix

Paste the Matrix according to the specified format, then fill the form and click on the "Import Matrix" button.

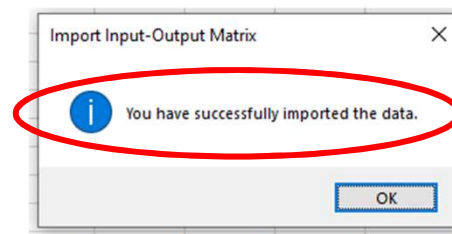
* Country

Year

Import Matrix

sector	1 pdr	2 wht	3 gro	4 v_f	5 osd	6 c_b	7 pfb	8 ocr	9 ctl	10 oap	11 rmk	12 wol	13 frs	14 fsh	15 coa	16 oil	17 gas	18 omn	19 cmt	20 omt	21 vol	22 mil	23 pcr
1 pdr	0.211	0.52	0	0.113	0.002	0.001	0.002	0.006	119	40.11	469.71	8.529	0	9.24	0	0	0	0	3.559	0.425	0.254	29.95	5042.1
2 wht	0.006	0.503	0	0.002	0	0.002	0.019	0	356.24	118.03	1406.5	25.565	0	0	0	0	0	0	3.354	0.395	0.004	30.739	0.3
3 gro	0.043	0.018	0.063	23	0.016	18.13	0.011	0.002	3.197	5.572	6.871	0.21	0.004	0.005	0	0	0.002	0	1.367	1.677	8.075	12.598	302
4 v_f	0	0.007	0	0.122	0.001	0.01	0.017	0	0.003	0.006	0.129	0.001	0.002	7.24	0	0	0	0	0.003	0.004	0.384	0.059	0.3
5 osd	84.76	0.173	0	100.9	93	288.6	37.86	0	0	0	0	0	0	0	0	0.02	0	0	7.171	8.602	518	64.587	13
6 c_b	0.192	0.001	0	28.71	22.41	75.6	18.8	0.001	0.003	0	0	0	0	0	0	0	0	0	30.236	7.463	0.029	277.001	0.4
7 pfb	0.003	11.64	0.003	0.003	0.003	0.009	0.006	0.024	69.04	68.1	273.4	5.77	0.001	0.004	0	0	0	0	0.083	0.094	4.062	0.76	148
8 ocr	0	0	0.008	0.02	0.017	0.02	0.005	0.337	0.007	0.031	0.002	0	2.469	0	0	0	0	0	2.76	0.119	41.756	0.332	0.0
9 ctl	0.011	0.153	0.344	0.011	0.073	0.119	0.073	0.042	1.447	0.512	0.027	0.314	1.638	0	0	0.006	1.226	1.932	26.957	5.493	0.13	0.1	0.1
10 oap	0	0.005	0.005	0.005	0.063	0.001	0.018	0.002	0.062	0.002	0	8.361	0	0	0	0	0	0.022	0.003	142	11.137	0.0	
11 rmk	0	0.005	0	0.005	0.009	0.005	0.004	0.002	0.008	0.009	0	0.307	0	0	0	0	0	0.006	0.001	5.274	0.015	0.0	
12 wol	0.001	0.185	0.018	0.115	0.17	0.01	0.019	0.18	0.139	0.002	0.401	0.058	0	0	0	90.76	0.067	0.003	0.013	0.416	0.0	0.0	
13 frs	0	0	0	0.002	0.006	0	0.001	0	0	0	0	0.147	0	0	0	0	0.014	0.003	0.002	0.008	0.0	0.0	
14 fsh	0	0	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.064	0	0.008	0	0.0	
15 coa	0	0.028	0.002	0.004	0.057	0	0	0	0	0	0	0.027	0	0	0	0	0	0.147	0	0.008	0	0.0	
16 oil	0	0.001	0.001	0	0.001	0	0	0	0	0	0	0	0.008	0	2.27	1.72	1.62	0.001	0	0.213	0.013	1	
17 gas	0.002	0.002	0.01	0.005	0.005	0.001	0.001	0.001	0.005	0	0	0	0	0	108.283	986.3	368.04	0.353	0	0.001	0.002	0.0	
18 omn	0.004	0	0	0	0	0	0	0.002	0.008	0.01	0	5.438	0	0	0	0	0	0.233	0.178	92.302	0.189	0.0	
19 cmt	0	0	0	0.135	0	14.6	0.009	0.001	0.189	0.035	0.074	0.026	1.029	0	0	0	0	0.123	0.625	25.136	0.617	0.0	
20 omt	0.003	0.003	0	0.002	0.03	0.007	0.044	0.001	40.7	41.4	131.8	2.027	0	3.56	0	0	0	0	121.1	38.9	0.843	1109	0.0
21 vol	0	0.001	0	0.001	0	0.11	0	0.001	0.001	0.006	0	20.087	0	0	0	0	0	0.005	0.001	341.57	5.653	0.0	
22 mil	0	0	0	0	0	0	0	1.41	1.461	4.581	0.071	0	13.144	0	0	0	4.211	1.363	0.012	38.681	0.2	0.2	
23 pcr	0.002	0	0	0.025	0	0	0	0.003	0.001	0.031	0	3.267	0	0	0	0	0	0	0.009	0.186	8.4	8.4	
24 sgr	0.051	0.024	0.001	0.035	0.082	0.04	0.177	0.007	4.678	6.151	17.628	0.248	0.008	8.53	0	0	0.002	0.113	0.108	86.22	65.26	201.2	
25 ofd	0	0.001	0	0	0	0.003	0	0.001	0.001	0.006	0	0.344	0.887	0.08	0.996	0.246	0.386	0.002	0	5.932	0.047	6.1	
26 b_t	0.005	0.036	0.002	0.02	0.012	0.004	81	0.005	0.705	0.817	1.972	0.121	0.001	0.031	0	0	0.003	6.39	2.589	1730	49.3	3	
27 tex	0.048	0.039	0	0.023	0.006	0.006	0.004	0.003	0.002	0.003	0.027	0.001	0.004	11.481	0.001	0.002	0.001	0.02	0.003	0.001	9.822	0.035	258.0
28 wap	0.002	0	0	0.001	0.001	0	0.001	0	0	0.008	0.003	0	0.002	0.009	0.001	0.002	0.001	0.016	0.005	0	0.001	0.006	0.0
29 lea	0.001	0.004	0	0.036	0.002	0.001	0.001	0	0.002	0.001	0.011	0	0.002	0.015	0	0	0.009	0	0	0.001	0.015	0.0	
30 lum	0.003	0.008	0	0.143	0.002	0.007	0.006	0.005	0.004	0.009	0.005	0	3.76	1.66	0.024	1.173	0.138	2.352	0.035	0.033	87.5	1.008	92
31 ppp	2.49	3.98	0.219	2.205	1.368	0.555	1.99	0.062	0	0.003	0	0.043	17.36	0	0	0	10.63	0.002	0	1.211	0.012	6.8	
32 p_c																							

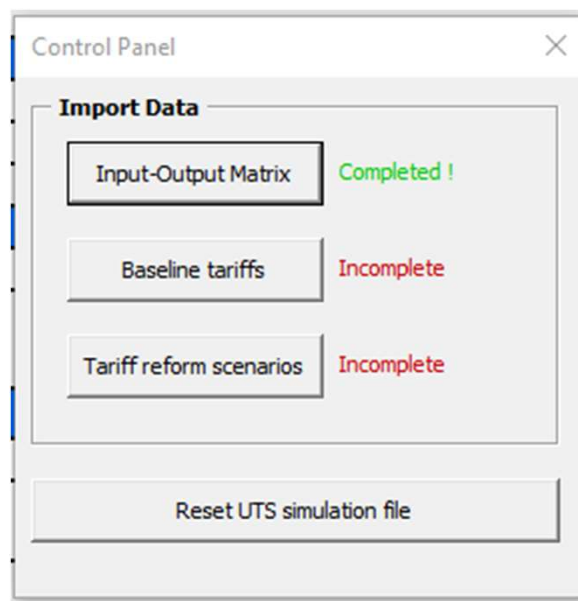
Now, fill-in the country name and the data year (optional). Click on the 'Import matrix' button. After a few seconds, the following message should appear:



Done!

Data importing – IO Table

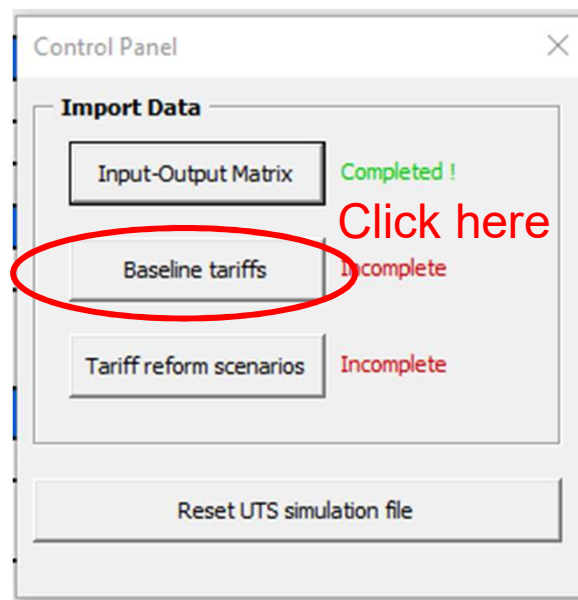
Click 'OK' on the earlier message. UTAS will return to the home screen and now the Control Panel window will look like this:



We are now ready to import the data for the tariff schedule.

Data importing – Baseline tariff schedule

To do so, click on 'Baseline tariffs' to upload the baseline tariffs



Data importing – Baseline tariff schedule

The following screen appears:

Instructions:

- 1) Select and copy the tariff schedule from source spreadsheet
- 2) Select the green cell in A2 and paste the matrix.
- 3) Provide details on the HS nomenclature revision used in the data (optional).
- 4) Then press the "Import Tariffs" button in the message box.

Reminder:

The tariff schedule can be specified at the 10, 8, or 6 digit level but needs to follow the specified format: "XXXX.XXXXXX" for 10 digits, "XXXX.XXXX" for 8 digits, and "XXXX.XX" for 6 digits. See separate instructions for further details.

Click and paste here

Import Base Tariffs

Paste all tariffs on this Sheet and then press "Import Data"

Hs Version

Import Data

Open the file containing the formatted tariff data, select the entire table, and copy it.

Return to UTAS, select the green cell and paste the data.

Data importing – Baseline tariff schedule

It should look like this after pasting the data.

Make sure
you insert
the correct
format!

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Instructions: 1) Select and copy the tariff schedule from source spreadsheetselect 2) Select the green cell in A2 and paste the matrix. 3) Provide details on the HS nomenclature revision used in the data (optional). 4) Then press the "Import Tariffs" button in the message box.												
	Reminder: The tariff schedule can be specified at the 10, 8, or 6 digit level but needs to follow the specified format: "XXXX.XXXXXX" for 10 digits, "XXXX.XXXX" for 8 digits, and "XXXX.XX" for 6 digits												
1													
2	"0101.2100"	7.78701709											
3	"0101.2900"	3											
4	"0101.3000"	0											
5	"0101.9000"	4.71551178											
6	"0102.2110"	0											
7	"0102.2120"	4.99999998											
8	"0102.2130"	0											
9	"0102.2190"	0											
10	"0102.2910"	0											
11	"0102.2920"	5.00000059											
12	"0102.2930"	0											
13	"0102.2990"	0											
14	"0102.3100"	0											
15	"0102.3900"	0											
16	"0102.9000"	0											
17	"0103.1000"	0											
18	"0103.9100"	0											

Import Base Tariffs

Paste all tariffs on this Sheet and then press "Import Data"

Hs Version

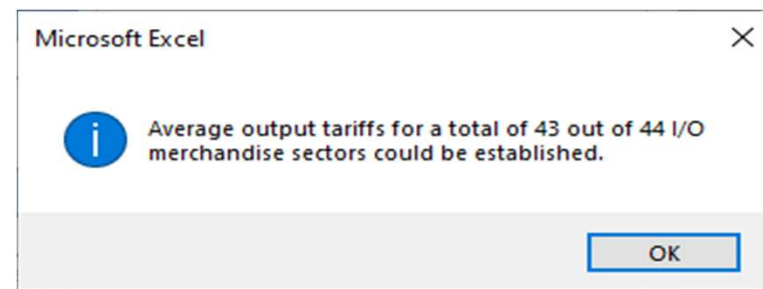
Import Data

Next, provide the HS version in the 'Import Base Tariff' window (optional).

Click on the 'Import Data' button to load the data into UTAS.

Data importing – Baseline tariff schedule

After clicking 'Import data', two messages will appear:



UTAS will tell you the number of tariff lines that could not be matched with one of the I/O sectors. Unmatched tariff lines will be disregarded.

UTAS will also inform you whether there were any merchandise sectors in the I/O table for which no tariff was found in the imported tariff schedule. UTAS will assign an output tariff of zero to these sectors.

Data importing – Baseline tariff schedule

By returning to the home screen we can verify the progress in importing the data.

Details of data imported so far

Pakistan data, IO table from the year 2007 and HS version

Control Panel

Help

Dataset Information	
Country	Pakistan
Year	2007
HS Version	2002
Input-Output Table - Sectors' Nomenclature	
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports	
Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	Incomplete

Output Tariff Calculations

Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Update

Simulator I

Simulation Framework	
Sector	

Simulator II

Simulation Framework	
----------------------	--

Simulator III

Simulation Framework	
Tariff reform scenario	Not Set

Control Panel

Import Data

Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	Incomplete
Reset UTS simulation file	

Update

Delete Scenario

UTAS reports that the minimum data requirements have now successfully been imported into the tool.

Data importing – Baseline tariff schedule

Optionally, we can also import one or several tariff reform scenarios

UTAS - Upstream Tariff Simulator

Dataset Information	
Country	Pakistan
Year	2007
HS Version	2002

Input-Output Table - Sectors' Nomenclature	
Input-Output Table - Sectors' Nomenclature	GTAP
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports	
Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	Incomplete

Output Tariff Calculations	
Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Update

Control Panel

Simulator I

Simulation Framework	
Sector	

Simulator II

Simulation Framework	
----------------------	--

Simulator III

Simulation Framework	
Tariff reform scenario	Not Set

Control Panel

Import Data

Input-Output Matrix Completed !

Baseline tariffs Completed !

Tariff reform scenarios Incomplete

Reset UTS simulation file

Delete Scenario

To do this you need to click on the button 'Tariff reform scenario'.

Data importing – Tariff reform scenarios

Similarly to the baseline data, open the data file and copy it. Then, click on the green cell and paste it.

The screenshot shows a spreadsheet with a yellow header area containing instructions and a reminder. Below this, a green cell in column A, row 2 is highlighted with a red circle. To the right of the spreadsheet, a 'New Scenario' dialog box is open, prompting the user to paste tariffs and press 'Import Data'.

Instructions:

- 1) Select and copy the tariff schedule from source spreadsheetsselect
- 2) Select the green cell in A2 and paste the matrix.
- 3) Provide details on the HS nomenclature revision used in the data (optional).
- 4) Then press the "Import Tariffs" button in the message box.

Reminder:

The tariff schedule can be specified at the 10, 8, or 6 digit level but needs to follow the specified format: "XXXX.XXXXXX" for 10 digits, "XXXX.XXXX" for 8 digits, and "XXXX.XX" for 6 c details.

Click here and paste the data

New Scenario

Paste all tariffs on this Sheet and then press "Import Data"

* Name:

Description:

Data importing – Tariff reform scenarios

After pasting the data, choose a name and a description (optional).

Instructions:

- 1) Select and copy the tariff schedule from source spreadsheet
- 2) Select the green cell in A2 and paste the matrix.
- 3) Provide details on the HS nomenclature revision used in the data (optional).
- 4) Then press the "Import Tariffs" button in the message box.

Reminder:

The tariff schedule can be specified at the 10, 8, or 6 digit level but needs to follow the specified format: "XXXX.XXXXXX" for 10 digits, "XXXX.XXXX" for 8 digits, and "XXXX.XX" for 6 digits.

"0101.2100"	7.78701709
"0101.2900"	3
"0101.3000"	0
"0101.9000"	4.71551178
"0102.2110"	0
"0102.2120"	4.99999998
"0102.2130"	0
"0102.2190"	0
"0102.2910"	0
"0102.2920"	5.00000059
"0102.2930"	0
"0102.2990"	0
"0102.3100"	0
"0102.3900"	0
"0102.9000"	0
"0103.1000"	0
"0103.9100"	0
"0103.9200"	0
"0104.1000"	4.99958741

Create a name and, optionally, a description for the scenario

Make sure you insert the correct format!

New Scenario

Paste all tariffs on this Sheet and then press "Import Data"

Name: Budget proposal

Description: Scenario for the budget proposal in the

Import Data

Then, click on 'Import Data'. A message window will appear to tell you for how many tariff lines of the baseline scenario are covered in by the scenario. Click ok.

Data importing – Tariff reform scenarios

The control panel should now show display that one scenario has been imported

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	UTAS - Upstream Tariff Simulator													
3														
5														
6														
7														
8														
9														
10														
11														
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24														
25														
26														
27														

Dataset Information	
Country	Pakistan
Year	2007
HS Version	2002

Input-Output Table - Sectors' Nomenclature	GTAP
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports	
Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Output Tariff Calculations	
Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Update

Control Panel

Help

Simulator I		
Simulation Framework	Not Set	Update
Sector	Not Set	

Simulator II		
Simulation Framework	Not Set	Update

Simulator III			
Simulation Framework	Not Set		Update
Tariff reform scenario	Not Set	Not Set	

Delete Scenario

Data importing – Additional scenarios

More reform scenarios can be added by clicking in control panel again

UTAS - Upstream Tariff Simulator

Dataset Information	
Country	Pakistan
Year	2007
HS Version	2002
Input-Output Table - Sectors' Nomenclature	GTAP
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports	
Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Output Tariff Calculations	
Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Update

Simulator I	
Simulation Framework	Not Set
Sector	Not Set

Update

Simulator II	
Simulation Framework	Not Set

Update

Simulator III	
Simulation Framework	Not Set
Tariff reform scenario	Not Set

Update Delete Scenario

Click here

Then click here, and repeat the steps outlined above

Control Panel

Import Data

Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Reset UTS simulation file

4 – Using the simulation modules

Customizing simulations

After you have added all scenarios, you can start customizing the simulations

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	UTAS - Upstream Tariff Simulator													
6	Dataset Information								Control Panel		Help			
7	Country		Pakistan											
8	Year		2007											
9	HS Version		2002											
11	Input-Output Table - Sectors' Nomenclature		GTAP											
12	Number of Tariff Lines		7229											
13	Number of Sectors		57											
15	Status of data imports								Simulator I					
16	Input-Output Matrix		Completed !						Simulation Framework		Not Set		Update	
17	Baseline tariffs		Completed !						Sector		Not Set			
18	Tariff reform scenarios		1 Imported Scenario											
20	Output Tariff Calculations								Simulator II					
21	Elasticities								Simulation Framework		Not Set		Update	
22	Elasticity of Supply		10											
23	Elasticity of Substitution		3						Simulator III					
24									Simulation Framework		Not Set		Update	
25									Tariff reform scenario		Not Set		Delete Scenario	

1 – Choose simulation framework and sector (for SIM I)

2 – Choose simulation framework (for SIM II)

3 – Choose simulation framework and tariff scenarios (for SIM III)

4 – Adjust elasticities for the estimations (only relevant for when choosing 'Product Differentiation' as simulation framework)

Settings for Simulator I

For Simulator I, two settings need to be chosen: the simulation framework and sector. To do this, click on the corresponding 'Update' button:

UTAS - Upstream Tariff Simulator

Dataset Information

Country	Pakistan
Year	2007
HS Version	2002

Input-Output Table - Sectors' Nomenclature

GTAP	
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports

Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Output Tariff Calculations

Elasticities

Elasticity of Supply	10
Elasticity of Substitution	3

Simulator I

Simulation Framework	Not Set	Update
Sector	Not Set	

Simulator II

Simulation Framework	Not Set	Update
----------------------	---------	--------

Simulator III

Simulation Framework	Not Set	Update	
Tariff reform scenario	Not Set	Not Set	Delete Scenario

SIM_I Menu

Select Data

Simulation framework: ☐ Homogeneity ☐ Differentiation

Sector:

Apply

Using Simulator I

We are now ready to analyze results for SIM I. Click on the 'SIM_I' tab (on the lower, left side of the UTAS Excel file). UTAS will display the upstream tariff rates, output tariff rates, and effective protection rates for the selected downstream sector under the baseline scenario.

Our chosen settings: Note that they can be changed from here as well, by clicking on the 'Change data' button.

Baseline results

Gross output composition: Intermediate consumption (goods and services as inputs) and Value Added			
Goods (inputs)	5.6%		
Services (inputs)	33.8%		
Value Added	60.6%		

	<u>BASILENE SCENARIO</u>	<u>SIMULATED SCENARIO</u>	<u>CHANGE IN P.P.</u>
Upstream tariff as % of gross output	0.3%	0.3%	0.0%
Upstream tariff as % of total inputs cost	0.7%	0.7%	0.0%
Upstream tariff as % of total goods inputs cost	4.6%	4.6%	0.0%
Output tariff (average tariff on CMT - Bovine meat prods)	3.2%	3.2%	0.0%
Rate of Effective Protection	4.9%	4.9%	0.0%

Composition of upstream tariff by largest contributing sectors			
#	Sector in NAICS	Baseline contribution to upstream tariff	Baseline Tariff
1	VOLE - Vegetable oils and fats	49%	5%

SIM_I sheet

Using Simulator I

You can now consider a new tariff on one or several key input sector for the selected downstream sectors (Bovine and meat products in the example below) by modifying the values in column I.

Use the reset button to re-establish the baseline values in each input sector

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3				Sector		CMT - Bovine meat prods			Change Data			
4												
5				Modelling Framework		Product Homogeneity						
19				Upstream tariff as % of gross output		0.3%			0.3%		0.0%	
21				Upstream tariff as % of total inputs cost		0.7%			0.7%			
23				Upstream tariff as % of total goods inputs cost		4.6%			4.6%			
24												
25												
26				Output tariff (average tariff on CMT - Bovine meat prods)		3.2%			3.2%			
27				Rate of Effective Protection		4.9%			4.9%			
28												
29				Composition of upstream tariff by largest contributing sectors						Reset		
30												
31				#	Sector in NAICS	Baseline contribution to upstream tariff	Baseline Tariff	Share in input cost structure (US)	Simulated Tariff	Change in p.p.		
32				1	VOL - Vegetable oils and fats	49%	5%	6%	5%	0%		
33				2	CRP - Chemical, rubber, plastic products	27%	9%	2%	9%	0%		
34				3	TEX - Textiles	7%	14%	0%	14%	0%		
35				4	PFB - Plant-based fibers	5%	1%	3%	1%	0%		
36				5	WHT - Wheat	5%	18%	0%	18%	0%		
37				6	OSD - Oil seeds	2%	4%	0%	4%	0%		
38				7	PDR - Paddy rice	1%	4%	0%	4%	0%		
39				8	PCR - Processed rice	1%	3%	0%	3%	0%		
40				9	GRO - Cereal grains n.e.c.	1%	7%	0%	7%	0%		
41				10	CTL - Bovine cattle, sheep and goats, horses	1%	3%	0%	3%	0%		

Modify the
baseline tariff
here.

Using Simulator I

UTAS will now display the upstream tariff, output tariff, and effective protection rates for the simulated scenario and show the percentage point (p.p.) difference between baseline and simulated scenario.

1	A	B	C	D	E	F	G	H	I	J	K
2											
3	Sector				CMT - Bovine meat prods			Change Data			
4											
5	Modelling Framework				Product Homogeneity						
15											
16	Upstream and output tariffs										
17					BASELINE SCENARIO			SIMULATED SCENARIO		CHANGE IN P.P.	
19	Upstream tariff as % of gross output				0.3%			0.1%		-0.2%	
21	Upstream tariff as % of total inputs cost				0.7%			0.2%		-0.5%	
23	Upstream tariff as % of total goods inputs cost				4.6%			1.1%		-3.5%	
24											
25											
26	Output tariff (average tariff on CMT - Bovine meat prods)				3.2%			3.2%		0.0%	
27	Rate of Effective Protection				4.9%			5.2%		0.3%	
28											
29	Composition of upstream tariff by largest contributing sectors										
30											
31	#	Sector in NAICS			Baseline contribution to upstream tariff	Baseline Tariff	Share in input cost structure (US)	Simulated Tariff	Change in p.p.		
32	1	VOL - Vegetable oils and fats			49%	5%	6%	0%	5%		
33	2	CRP - Chemical, rubber, plastic products			27%	9%	2%	0%	9%		
34	3	TEX - Textiles			7%	14%	0%	14%	0%		
35	4	PFB - Plant-based fibers			5%	1%	3%	1%	0%		
36	5	WHT - Wheat			5%	18%	0%	18%	0%		
37	6	OSD - Oil seeds			2%	4%	0%	4%	0%		
38	7	PDR - Paddy rice			1%	4%	0%	4%	0%		

Results according to simulated input tariffs.

Percentage point differences between baseline and simulated scenario

Modified tariffs

Settings for Simulator II

Similarly, for Simulator II, choose the simulation framework by clicking the corresponding 'Update' button:

The screenshot displays the 'UTAS - Upstream Tariff Simulator' interface. On the left, there are several data input sections: 'Dataset Information' (Country: Pakistan, Year: 2007, HS Version: 2002), 'Input-Output Table - Sectors' Nomenclature' (GTAP, 7229 tariff lines, 57 sectors), 'Status of data imports' (Completed), and 'Output Tariff Calculations' (Elasticities: 10 and 3). The 'Simulator II' section shows 'Simulation Framework' set to 'Not Set' with an 'Update' button. A red arrow points from this 'Update' button to a 'SIM_II Menu' dialog box. The dialog box has a 'Select Data' section with radio buttons for 'Homogeneity' and 'Differentiation', where 'Differentiation' is selected. Below the dialog, text instructs to 'Choose one and click 'Apply''. The World Bank Group logo is in the bottom right corner.

UTAS - Upstream Tariff Simulator

Dataset Information

Country	Pakistan
Year	2007
HS Version	2002

Input-Output Table - Sectors' Nomenclature

Input-Output Table - Sectors' Nomenclature	GTAP
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports

Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Output Tariff Calculations

Elasticities

Elasticity of Supply	10
Elasticity of Substitution	3

Simulator I

Simulation Framework	Not Set	Update
Sector	Not Set	

Simulator II

Simulation Framework	Not Set	Update
----------------------	---------	--------

Simulator III

Simulation Framework	Not Set	Update
Tariff reform scenario	Not Set	Not Set

SIM_II Menu

Select Data

Simulation framework: ☐ Homogeneity ☒ Differentiation

Apply

Choose one and click 'Apply'

Results for Simulator II

We can now go to the 'SIM_II' tab, which will display output tariff, upstream tariff and effective protection rates for all sectors of the I/O table as per the baseline tariff schedule.

	C	D	E	F	G	H	I	J	K
1	Modelling Framework						Product Homogeneity		
2							Change Framework		
3									
4									
5									
6							Reset		
7									
8									
9									
10									
11									
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100									

SIM_II sheet

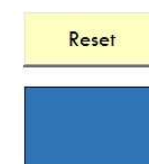
Results for Simulator II

You can now consider modify the baseline tariffs in each sector column J.

Use the reset button to re-establish the baseline values in each input sector

	C	D	E	F	G	H	I	J	K
1									
2	Modelling Framework						Product Homogeneity		
3							Change Framework		
4									
6							Reset		
7	BASELINE SCENARIO								
8									
9									
10	Sector	Output Tariff	Upstream Tariff (% gross output)	Upstream Tariff (% total input cost)	Upstream Tariff (% input goods cost)	Rate of Effective Protection	Simulated Tariff	Change in p.p.	
11	PDR - Paddy rice	4.2%	4.3%	8.7%	8.7%	-0.3%	4.2%	0.0%	
12	WHT - Wheat	18.2%	2.3%	8.5%	8.6%	21.8%	18.2%	0.0%	
13	GRO - Cereal grains n.e.c.	7.1%	3.2%	5.1%	8.7%	10.8%	7.1%	0.0%	
14	V_F - Vegetables, fruit, nuts	10.5%	2.0%	4.2%	7.9%	15.9%	10.5%	0.0%	
15	OSD - Oil seeds	3.7%	2.2%	4.9%	8.6%	2.8%	3.7%	0.0%	
16	C_B - Sugar cane, sugar beet	0.0%	3.0%	8.4%	8.5%	-4.7%	0.0%	0.0%	
17	PFB - Plant-based fibers	1.3%	3.5%	8.5%	8.5%	-3.7%	1.3%	0.0%	
18	OCR - Crops n.e.c.	6.0%	0.9%	5.0%	8.3%	6.3%	6.0%	0.0%	
19	CTL - Bovine cattle, sheep and goats, horses	2.6%	4.9%	9.0%	11.0%	-4.8%	2.6%	0.0%	
20	OAP - Animal products n.e.c.	3.4%	2.8%	5.7%	8.5%	1.4%	3.4%	0.0%	
21	RMK - Raw Milk	0.0%	4.7%	9.7%	11.5%	-9.1%	0.0%	0.0%	
22	WOL - Wool, silk-worm cocoons	2.4%	5.0%	6.3%	7.0%	-12.7%	2.4%	0.0%	
23	FRS - Forestry	5.2%	1.1%	4.7%	9.6%	5.4%	5.2%	0.0%	
24	FSH - Fishing	2.6%	1.3%	2.8%	5.6%	2.4%	2.6%	0.0%	
25	COA - Coal	4.0%	2.8%	3.0%	4.0%	18.2%	4.0%	0.0%	

Modify the
baseline tariffs
here.



Results for Simulator II

UTAS will now display the upstream tariff, output tariff, and effective protection rates for the simulated tariff scenario and show the percentage point (p.p.) difference between baseline and simulated scenario for each sector

Results according to simulated input tariffs and percentage point difference between baseline and simulated scenario.

Sector	Simulated Tariff	Change in p.p.	Upstream Tariff (% gross output)	Change in p.p.	Upstream Tariff (% total input cost)	Change in p.p.	Upstream Tariff (% goods cost)	Change in p.p.	Rate of Effective Protection	Change in p.p.
10										
11 PDR - Paddy rice	4.2%	0.0%	4.3%	0.0%	8.7%	0.0%	8.7%	0.0%	-0.3%	0.0%
12 WHT - Wheat	0.0%	-18.2%	2.3%	0.0%	8.5%	0.0%	8.6%	0.0%	-3.1%	-24.9%
13 GRO - Cereal grains n.e.c.	7.1%	0.0%	3.2%	0.0%	5.1%	0.0%	8.7%	0.0%	10.8%	0.0%
14 V_F - Vegetables, fruit, nuts	10.5%	0.0%	2.0%	0.0%	4.2%	0.0%	7.9%	0.0%	15.9%	0.0%
15 OSD - Oil seeds	3.7%	0.0%	2.2%	0.0%	4.9%	0.0%	8.6%	0.0%	2.8%	0.0%
16 C_B - Sugar cane, sugar beet	0.0%	0.0%	3.0%	0.0%	8.4%	0.0%	8.5%	0.0%	-4.7%	0.0%
17 PFB - Plant-based fibers	0.0%	-1.3%	3.5%	0.0%	8.5%	0.0%	8.5%	0.0%	-5.9%	-2.2%
18 OCR - Crops n.e.c.	6.0%	0.0%	0.9%	0.0%	5.0%	0.0%	8.3%	0.0%	6.3%	0.0%
19 CTL - Bovine cattle, sheep and goats, horses	2.6%	0.0%	1.0%	-3.9%	1.8%	-7.2%	2.2%	-8.7%	3.6%	8.4%
20 OAP - Animal products n.e.c.	0.0%	-3.4%	1.1%	-1.7%	2.2%	-3.5%	3.3%	-5.2%	-2.1%	-3.4%
21 RMK - Raw Milk	0.0%	0.0%	0.9%	-3.8%	1.8%	-7.9%	2.2%	-9.4%	-1.7%	7.4%
22 WOL - Wool, silk-worm cocoons	0.0%	-2.4%	1.7%	-3.3%	2.1%	-4.2%	2.4%	-4.6%	-8.3%	4.4%
23 FRS - Forestry	5.2%	0.0%	1.1%	0.0%	4.7%	0.0%	9.6%	0.0%	5.4%	0.0%
24 FSH - Fishing	2.6%	0.0%	1.3%	0.0%	2.8%	0.0%	5.6%	0.0%	2.4%	0.0%
25 COA - Coal	4.0%	0.0%	2.8%	0.0%	3.0%	0.0%	4.0%	0.0%	18.2%	0.0%
26 OIL - Oil	1.5%	0.0%	2.2%	0.0%	2.6%	0.0%	4.3%	0.0%	-3.7%	0.0%
27 GAS - Gas	2.5%	0.0%	2.2%	0.0%	2.8%	0.0%	4.2%	0.0%	1.4%	0.0%
28 OMN - Minerals n.e.c.	3.8%	0.0%	0.8%	0.0%	1.4%	0.0%	7.2%	0.0%	6.9%	0.0%

Modified tariffs

Settings for Simulator III

Choose the simulation framework and the relevant tariffs scenario from the drop-down list:

UTAS - Upstream Tariff Simulator

Dataset Information	
Country	Pakistan
Year	2007
HS Version	2002
Input-Output Table - Sectors' Nomenclature	
Number of Tariff Lines	7229
Number of Sectors	57
Status of data imports	
Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario
Output Tariff Calculations	
Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Control Panel **Help**

Simulator I

Simulation Framework	Not Set	Update
Sector	Not Set	

Simulator II

Simulation Framework	Not Set	Update
----------------------	---------	--------

Simulator III

Simulation Framework	Not Set	Update	Delete Scenario
Tariff reform scenario	Not Set	Not Set	

Click here

SIM_III Menu

Select Data

Simulation framework: ☒ Homogeneity ☐ Differentiation

Scenarios:

Apply

Choose a framework, a scenario, and click 'Apply'

Results for Simulator III

We can now go to sheet SIM_III_OUT. Results are presented for both the baseline scenario and the selected tariff reform scenario. The output tariff in column D corresponds to the output tariff as per the baseline schedule. The output tariff in column J corresponds to the output tariff as per the selected tariff reform scenario.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2			Modelling Framework									
3												
4												
5												
6												
7												
8												
9												
10												
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24												

BASELINE SCENARIO							SIMULATION INPUT	
#	Sector	Output Tariff	Upstream Tariff (% gross output)	Upstream Tariff (% total input cost)	Upstream Tariff (% input goods cost)	Rate of Effective Protection	Output Tariff	Change in p.p.
1	PDR - Paddy rice	4.2%	4.3%	8.7%	8.7%	-0.3%	0.6%	-3.6%
2	WHT - Wheat	18.2%	2.3%	8.5%	8.6%	21.8%	18.2%	0.0%
3	GRO - Cereal grains n.e.c.	7.1%	3.2%	5.1%	8.7%	10.8%	7.1%	0.0%
4	V_F - Vegetables, fruit, nuts	10.5%	2.0%	4.2%	7.9%	15.9%	11.0%	0.5%
5	OSD - Oil seeds	3.7%	2.2%	4.9%	8.6%	2.8%	3.7%	0.0%
6	C_B - Sugar cane, sugar beet	0.0%	3.0%	8.4%	8.5%	-4.7%	0.0%	0.0%
7	PFB - Plant-based fibers	1.3%	3.5%	8.5%	8.5%	-3.7%	0.8%	-0.5%
8	OCR - Crops n.e.c.	6.0%	0.9%	5.0%	8.3%	6.3%	6.5%	0.4%
9	CTL - Bovine cattle, sheep and goats, horses	2.6%	4.9%	9.0%	11.0%	-4.8%	2.6%	0.0%
10	OAP - Animal products n.e.c.	3.4%	2.8%	5.7%	8.5%	1.4%	3.6%	0.1%
11	RMK - Raw Milk	0.0%	4.7%	9.7%	11.5%	-9.1%	0.0%	0.0%
12	WOL - Wool, silk-worm cocoons	2.4%	5.0%	6.3%	7.0%	-12.7%	2.4%	0.0%
13	FRS - Forestry	5.2%	1.1%	4.7%	9.6%	5.4%	5.1%	-0.2%
14	FSH - Fishing	2.6%	1.3%	2.8%	5.6%	2.4%	2.6%	0.0%

Output tariffs as per baseline scenario.

Output tariffs as per reform scenario.

Results for Simulator III

The respective upstream tariff, output tariff, and effective protection rates as per the reform scenario, as well as the corresponding percentage point differences between baseline and reform scenario rates, are displayed in columns M to T.

	B	C	J	K	L	M	N	O	P	Q	R	S	T
1													
2		Modelling Framework											
3													
4													
5													
6													
7			BASELINE	SIMULATION	INPUT								
8													
9													
10	#	Sector	Output Tariff	Change in p.p.		Upstream Tariff (% gross output)	Change in p.p.	Upstream Tariff (% total input cost)	Change in p.p.	Upstream Tariff (% goods cost)	Change in p.p.	Rate of Effective Protection	Change in p.p.
11	1	PDR - Paddy rice	0.6%	-3.6%		4.70%	0.4%	9.4%	0.8%	9.4%	0.8%	-8.2%	-7.9%
12	2	WHT - Wheat	18.2%	0.0%		2.48%	0.2%	9.3%	0.7%	9.3%	0.7%	21.5%	-0.3%
13	3	GRO - Cereal grains n.e.c.	7.1%	0.0%		3.53%	0.3%	5.5%	0.4%	9.5%	0.8%	10.0%	-0.8%
14	4	V_F - Vegetables, fruit, nuts	11.0%	0.5%		2.14%	0.2%	4.6%	0.3%	8.6%	0.6%	16.6%	0.7%
15	5	OSD - Oil seeds	3.7%	0.0%		2.35%	0.2%	5.4%	0.4%	9.3%	0.7%	2.4%	-0.3%
16	6	C_B - Sugar cane, sugar beet	0.0%	0.0%		3.27%	0.3%	9.1%	0.7%	9.2%	0.7%	-5.1%	-0.4%
17	7	PFB - Plant-based fibers	0.8%	-0.5%		3.81%	0.3%	9.3%	0.8%	9.3%	0.8%	-5.1%	-1.4%
18	8	OCR - Crops n.e.c.	6.5%	0.4%		0.95%	0.1%	5.5%	0.4%	9.1%	0.7%	6.7%	0.4%
19	9	CTL - Bovine cattle, sheep and goats, horses	2.6%	0.0%		4.64%	-0.2%	8.6%	-0.4%	10.5%	-0.5%	-4.3%	0.5%
20	10	OAP - Animal products n.e.c.	3.6%	0.1%		2.68%	-0.1%	5.5%	-0.1%	8.3%	-0.2%	1.8%	0.4%
21	11	RMK - Raw Milk	0.0%	0.0%		4.47%	-0.2%	9.3%	-0.5%	11.0%	-0.5%	-8.6%	0.4%
22	12	WOL - Wool, silk-worm cocoons	2.4%	0.0%		4.84%	-0.2%	6.1%	-0.2%	6.7%	-0.3%	-11.8%	0.9%
23	13	FRS - Forestry	5.1%	-0.2%		1.25%	0.1%	5.2%	0.6%	10.8%	1.2%	5.0%	-0.4%
24	14	FSH - Fishing	2.6%	0.0%		1.44%	0.1%	3.1%	0.2%	6.0%	0.4%	2.2%	-0.2%
25	15	COA - Coal	4.0%	0.0%		2.72%	-0.1%	2.9%	-0.1%	3.9%	-0.1%	19.7%	1.5%
26	16	OIL - Oil	1.5%	0.0%		2.13%	0.0%	2.6%	0.0%	4.2%	-0.1%	-3.5%	0.2%
27	17	GAS - Gas	1.0%	-1.5%		2.16%	-0.1%	2.7%	-0.1%	4.1%	-0.1%	-5.8%	-7.3%
28	18	OMN - Minerals n.e.c.	3.7%	-0.2%		0.84%	0.1%	1.5%	0.1%	7.7%	0.6%	6.3%	-0.5%
29	19	CMT - Bovine meat prods	3.2%	0.0%		0.27%	0.0%	0.7%	0.0%	4.7%	0.1%	4.9%	0.0%

5 – Adjusting simulation parameters

Adjusting elasticities

When using the 'Product Differentiation', results will depend on pre-set elasticities of supply and substitution. You can modify the pre-set values by clicking on the 'Update' button in the control panel as shown below.

UTAS - Upstream Tariff Simulator

Dataset Information	
Country	Pakistan
Year	2007
HS Version	2002
Input-Output Table - Sectors' Nomenclature	GTAP
Number of Tariff Lines	7229
Number of Sectors	57

Status of data imports	
Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Output Tariff Calculations	
Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Click the update button

Simulator I	
Simulation Framework	Not Set
Sector	Not Set

Simulator II	
Simulation Framework	Not Set

Simulator III	
Simulation Framework	Not Set
Tariff reform scenario	Not Set

Update Elasticities

Set the new elasticities values and press "Apply"

Elasticities

Elasticity of Supply: 10

Elasticity of Substitution: 3

Change the defaults and click 'Apply'

Apply

Sector-specific elasticities

Alternatively, you can also specify sector-specific elasticities in the sheet OUTPUT_TARIFF_CALCULATIONS. To do this, set the pre-set elasticities to 1 and specify a specific elasticity for each sector in columns G and H.

	A	B	C	D	E	F	G	H	I
1							Elasticity of Supply	Elasticity of substitution	
2							1	1	
3			Output tariffs				Elasticities		Domestic consu
4	Sector classification		Baseline	SIM_I Tariff	SIM_II Tariff	SIM_III Tariff	Elasticity of supply	Elasticity of substitution	Share
5	PDR - Paddy rice	1 pdr	4%	4%	4%	1%	1	5.05	0.5
6	WHT - Wheat	2 wht	18%			%	1	4.45	0.5
7	GRO - Cereal grains n.e.c.	3 gro	7%			%	1	1.3	0.5
8	V_F - Vegetables, fruit, nuts	4 v_f	10%			%	1	1.85	0.5
9	OSD - Oil seeds	5 osd	4%			%	1	2.45	0.5
10	C_B - Sugar cane, sugar beet	6 c_b	0%			%	1	2.7	0.5
11	PFB - Plant-based fibers	7 pfb	1%	1%	0%	1%	1	2.5	0.5
12	OCR - Crops n.e.c.	8 ocr	6%	6%	6%	6%	1	3.25	0.5
13	CTL - Bovine cattle, sheep and goats, horses	9 ctl	3%	3%	3%	3%	1	2	0.5
14	OAP - Animal products n.e.c.	10 oap	3%	3%	0%	4%	1	1.3	0.5
15	RMK - Raw Milk	11 rmk	0%	0%	0%	0%	1	3.65	0.5
16	WOL - Wool, silk-worm cocoons	12 wol	2%	2%	0%	2%	1	6.45	0.5
17	FRS - Forestry	13 frs	5%	5%	5%	5%	1	2.5	0.5
18	FSH - Fishing	14 fsh				3%	1	1.25	0.5
19	COA - Coal	15 coa				4%	1	3.05	0.5
20	OIL - Oil	16 oil				2%	1	5.2	0.5
21	GAS - Gas	17 gas				1%	1	17.2	0.5
22	OMN - Minerals n.e.c.	18 omn				4%	1	0.9	0.5
23	CMT - Bovine meat prods	19 cmt	3%	3%	3%	3%	1	3.85	0.5
24	OMT - Meat products n.e.c.	20 omt	6%	6%	6%	7%	1	4.4	0.5
25	VOL - Vegetable oils and fats	21 vol	5%	0%	5%	5%	1	3.3	0.5
26	MIL - Dairy products	22 mil	38%	38%	38%	43%	1	3.65	0.5
27	PCR - Processed rice	23 pcr	3%	3%	3%	3%	1	2.6	0.5
28	SGR - Sugar	24 sgr	19%	19%	19%	21%	1	2.7	0.5
29	OFD - Food products n.e.c.	25 ofd	21%	21%	21%	24%	1	2	0.5

Set pre-set elasticities to 1

Define elasticities for each sector

OUTPUT_TARIFF CALCULATIONS sheet



WORLD BANK GROUP
Macroeconomics, Trade & Investment

Domestic consumption shares

On this tab, you can also modify the domestic consumption shares for each sector. This information matters for calculation of effects when choosing the 'Product Differentiation' framework. Domestic consumption shares are generally available in countries with I/O tables, but you may need to request them separately from the respective statistics agency responsible for preparing the I/O table you are working with.

	A	B	C	D	E	F	G	H	I
1							Elasticity of Supply	Elasticity of substitution	
2							10	1	
3			Output tariffs				Elasticities		Domestic consu
4	Sector classification		Baseline	SIM_I Tariff	SIM_II Tariff	SIM_III Tariff	Elasticity of supply	Elasticity of substitution	Share
5	PDR - Paddy rice	1 pdr	4%	4%	4%	1%	1	5.05	0.5
6	WHT - Wheat	2 wht	18%	18%	0%	18%	1	4.45	0.5
7	GRO - Cereal grains n.e.c.	3 gro	7%	7%	7%	7%	1	1.3	0.5
8	V_F - Vegetables, fruit, nuts	4 v_f	10%	10%	10%	11%	1	1.85	0.5
9	OSD - Oil seeds	5 osd	4%	4%	4%	4%	1	2.45	0.5
10	C_B - Sugar cane, sugar beet	6 c_b	0%	0%	0%	0%	1	2.7	0.5
11	PFB - Plant-based fibers	7 pfb	1%	1%	0%	1%	1	2.5	0.5
12	OCR - Crops n.e.c.	8 ocr	6%	6%	6%	6%	1	3.25	0.5
13	CTL - Bovine cattle, sheep and goats, horses	9 ctl	3%	3%	3%	3%	1	2	0.5
14	OAP - Animal products n.e.c.	10 oap	3%	3%	0%	4%	1	1.3	0.5
15	RMK - Raw Milk	11 rmk	0%	0%	0%	0%	1	3.65	0.5
16	WOL - Wool, silk-worm cocoons	12 wol	2%	2%	0%	2%	1	6.45	0.5
17	FRS - Forestry	13 frs				5%	1	2.5	0.5
18	FSH - Fishing	14 fsh				3%	1	1.25	0.5
19	COA - Coal	15 coa				4%	1	3.05	0.5
20	OIL - Oil	16 oil				2%	1	5.2	0.5
21	GAS - Gas	17 gas				1%	1	17.2	0.5
22	OMN - Minerals n.e.c.	18 omn				4%	1	0.9	0.5
23	CMT - Bovine meat prods	19 cmt				3%	1	3.85	0.5
24	OMT - Meat products n.e.c.	20 omt				7%	1	4.4	0.5
25	VOL - Vegetable oils and fats	21 vol	5%	0%	5%	5%	1	3.3	0.5
26	MIL - Dairy products	22 mil	38%	38%	38%	43%	1	3.65	0.5
27	PCR - Processed rice	23 pcr	3%	3%	3%	3%	1	2.6	0.5
28	SGR - Sugar	24 sgr	19%	19%	19%	21%	1	2.7	0.5
29	OFD - Food products n.e.c.	25 ofd	21%	21%	21%	24%	1	2	0.5

Domestic consumption shares can be modified here.

6 – Using the Tariff-Ranking module

Tariff-Ranking module

Finally, you can generate a ranking of tariffs with the greatest upstream impact in a particular sector.

Important disclaimer: We recommend using this module *only* when the I/O sector disaggregation is high (e.g. NAICS or ISIC based I/O tables). Running this tool on the basis of relatively aggregated I/O such as GTAP may produce misleading results.

	A	B	C	D	E	F	G	H	I
1	Product Inputs by Sector								
2									
3	Sector (Select)					Change Data	Run Input-Output Calculations		
4									
5									
6	Description	HS6 Code	Position						
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									

The first time you use the Tariff-Ranking tool you will need to click here.

TARIFF_RANKING sheet

Tariff-Ranking module

Next, click on the 'Change Data' button and select the sector and the number of top ranked tariff lines you want UTAS to display.

The screenshot displays the Tariff-Ranking module interface. It features a spreadsheet with columns A through J and rows 1 through 23. Row 1 is labeled 'Product Inputs by Sector'. Row 2 is a header row. Row 3 is labeled 'Sector (Select)'. Row 4 is a header row. Row 5 is a header row. Row 6 is labeled 'Description', 'HS6 Code', and 'Position'. Row 7 is a header row. Row 8 is a header row. Row 9 is a header row. Row 10 is a header row. Row 11 is a header row. Row 12 is a header row. Row 13 is a header row. Row 14 is a header row. Row 15 is a header row. Row 16 is a header row. Row 17 is a header row. Row 18 is a header row. Row 19 is a header row. Row 20 is a header row. Row 21 is a header row. Row 22 is a header row. Row 23 is a header row.

On the right side of the spreadsheet, there are two buttons: 'Change Data' and 'Run Input-Output Calculations'. The 'Change Data' button is highlighted with a red box and an arrow pointing to it with the text 'Click here'.

A dialog box titled 'Select sector' is open in the foreground. It contains a 'Select Data' section with a 'Sector:' dropdown menu and a 'Top:' dropdown menu. The 'Sector:' dropdown menu is highlighted with a red oval and an arrow pointing to it with the text 'Select the sector and the number of HS top ranked tariff lines you want UTAS to display.'.

Results for the Tariff-Ranking module

A ranking of tariff lines with the greatest cost impact on the selected upstream sector will be displayed, as shown below.

	A	B	C	D
1	Product Inputs by Sector			
2				
3	Sector (Select)	CRP - Chemical, rubber, plastic products		
4				
5		20		
6	Description	HS6 Code	Position	
7	Furniture; plastic	"9403.70"	1	
8	Furniture; wooden, other than for office, kitchen or	"9403.60"	2	
9	Furniture; wooden, for bedroom use	"9403.50"	3	
10	Furniture; metal, other than for office use	"9403.20"	4	
11	Paper, cigarette; (other than in rolls of a width not e	"4813.90"	5	
12	Wallpaper and similar wall coverings and window tr	"4814.90"	6	
13	Wallpaper and similar wall coverings; consisting of p	"4814.30"	7	
14	Wallpaper and similar wall coverings; ingrain paper	"4814.10"	7	
15	Paper, cigarette; in rolls of a width not exceeding 5c	"4813.20"	9	
16	Wallpaper and similar wall coverings; coated or cove	"4814.20"	10	
17	Furniture; materials n.e.s. in heading no. 9403, inclu	"9403.80"	11	
18	Furniture; wooden, for office use	"9403.30"	12	
19	Furniture; wooden, for kitchen use	"9403.40"	13	
20	Furniture; parts	"9403.90"	14	
21	Lamps, electric; floor-standing or for table, desk or b	"9405.20"	15	
22	Illuminated signs, name plates and the like	"9405.60"	16	
23	Seats; of a kind used for motor vehicles	"9401.20"	17	
24	Furniture; metal, for office use	"9403.10"	18	
25	Vehicles; with only spark-ignition internal combusti	"8703.24"	19	
26	Seat; parts	"9401.90"	20	

7 – Resetting UTAS

Resetting UTAS

If, for any reason, you would like to start over, you can do it by clicking the 'Reset UTS simulation file' in the Control Panel. This will delete all data and scenarios you have previously

The screenshot shows the UTAS - Upstream Tariff Simulator interface. The 'Control Panel' button is circled in red. A red arrow points from this button to the 'Reset UTS simulation file' button in the 'Control Panel' dialog box. Another red arrow points from the 'Reset UTS simulation file' button to the 'Reset Worksheet' dialog box. The 'Reset Worksheet' dialog box contains a text input field with the word 'Reset' entered, and the 'OK' button is circled in red.

UTAS - Upstream Tariff Simulator

Dataset Information

Country	Pakistan
Year	2007
HS Version	2002

Input-Output Table - Sectors' Nomenclature: GTAP
Number of Tariff Lines: 7229
Number of Sectors: 57

Status of data imports

Input-Output Matrix	Completed !
Baseline tariffs	Completed !
Tariff reform scenarios	1 Imported Scenario

Output Tariff Calculations

Elasticities	
Elasticity of Supply	10
Elasticity of Substitution	3

Simulator I

Simulation Framework	Not Set	Update
Sector	Not Set	

Simulator II

Simulation Framework	Not Set	Update
----------------------	---------	--------

Simulator III

Simulation Framework	Not Set	Update
Tariff reform scenario	Not Set	Delete Scenario

Control Panel

Import Data

Input-Output Matrix: Completed !

Baseline tariffs: Completed !

Tariff reform scenarios: 1 Imported Scenario

Reset UTS simulation file

Reset Worksheet

You are about to reset the Worksheet. This operation will delete all imported data. In order to proceed we require you to write the word 'Reset'

OK Cancel

Reset

This message appears in order to avoid mistakes

Write 'Reset' and click 'OK' to proceed. Done!