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# Running a more complex experiment

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# The policy experiment

- All output subsidies on food in the EU will be removed
  - All export subsidies paid by the EU on food will be removed
  - All import tariffs on food imported into the EU will be removed
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- Check you are using the **ACOR3X3** aggregation
  - Check you are using the standard closure
  - Click on the **Shocks** tab
    - **Clear Shocks List**
  - Select *to* as a variable to shock
  - Elements to shock are “Food” and “EU”
  - Select **%target rate** as Type of Shock
  - Enter a shock value of zero
  - Click ‘**Add to Shock List**’
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# Adding the trade policy shocks

- Variable to shock **txs**
  - Elements to shock:
    - “food” “EU” “All REG”
    - Set “%target rate” to zero
    - Click on **Add to Shock List**
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- Variable to shock **tms**
  - Elements to shock:
    - “food” “All REG” “EU”
    - Set “%target rate” to zero
    - **Add to Shock List**
  
  - There should now be 3 lines of shocks
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- Click on the **Solve** tab
  - Check solution method and parameter file
  - Save this new experiment:
    - Click on **Save Experiment**
    - Provide a description  
    <food liberalisation in EU>
    - And file name <foodlib>
    - Click **OK**
    - Now Click on **Solve**
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# Discuss some aspects of the solution

- Sector output  $qo$
  - Trade flows
    - $qxs(\text{"food"}^{**})$
    - $qxs(\text{"Mnfcs"}^{**})$
  - Market prices  $pm$
  - Sectoral demands for factors
    - $qfe(*\text{Food}^*)$
  - Trade balances  $DTBALi$
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- World prices [pxwcom](#)
  - Private household demand
    - [qp](#)
    - [qpd](#)
    - [qpm](#)
  - Check the updated tax rates:
    - **View|Updated Data|Updated Tax Rates**
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# Welfare and its Decomposition

- Look at **EV**
  - Look at terms of trade **tot**
  - Look at export and import price indices
    - **psw** and **pdw**
  - Decomposition
    - **View|Updated Data|Welfare decomposition**
    - Click on line 1
    - Line 2
    - Line 3
    - Line 24
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# Creating Subtotals

- This is very useful in understanding your results
  - It allows you to apportion the total change in any endogenous variable among the various shocks
  - For example, how much of the welfare gain comes from tariff elimination?
  - How much due to elimination of export subsidies?
  - Several studies of Doha round show most of global gains due to market access, and very little to reform of export & domestic farm subsidies
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# How to get subtotals

- Keep the same shocks as before, and reload this experiment if necessary
  - Click on **Define Subtotal**
  - Select variable **to**
  - Enter the elements **Food** and **EU**
  - Click **Add variable to subtotal**
  - Click **OK**, and **OK** again
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- Click **Define Subtotal** again
  - Now select **txs** and enter required elements
  - Now do the same for **tms**
  - Three subtotal lines should now have been added to the shocks list
  - The “elements” in each should be identical to those in the Shock statements
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- Now click **Solve**
  - **Save Experiment** with a new name and description
  - Check Solution method and parameter file
  - Click the **Solve** button
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# Looking at the results

- Get results for  $p_w$
  - The world price of “food” has increased by 1.63%
    - Most of this rise (1.18%) is due to elimination of EU export subsidies
    - EU’s elimination of food output subsidies has increased world price by 0.43%
    - cuts to EU import tariff on food increased world price by only 0.02%
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# Look at $qo(*EU)$

- Food sector contracts, as expected, due mainly to changes in trade policies
  - But the expansion in the Mnfc sector is driven mainly by the EU elimination of export subsidies
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# Look at $qo(*SSA)$

- In SSA, the food sector expands by 4.75%
- Mainly due to increased access to the EU

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# Welfare changes

- Look at **EV**
  - ROW suffers welfare loss
    - Can see now it is due mainly to EU cuts in food export subsidies. Why?
    - Look at **pcif(\*\*food)**
    - Is the EU a major supplier of food to the ROW?
  - EU gains overall, but the tariff cut made a negative contribution (which is rather similar to EU welfare loss in the first experiment)
  - But EU tariff cut made positive contribution to welfare in SSA and ROW
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