

Doha Study

Group 3

Patrick Tomberger
Ashraf Ali Mahate

Research Motivation

- Does trade liberalisation have an impact on factor endowment productivity?
- Background to the Study
 - Export subsidies lead to allocative and technical inefficiencies,
 - Increased trade leads to technology transfer spillover effects,
 - Increased competition leads process innovation and hence productivity improvement

Approach

Our approach was as follows:

1. To re-run the original study to understand the impact on the various sectors. This is our baseline case as per the Doha Agreement
2. To simulate a unilateral removal of import levies (i.e. tms) and export subsidies (i.e. txs). This is our policy implementation;
3. To stimulate productivity gains (i.e. aoall) by 2% (based on prior literature). This is our impact case which we wish to analyse.

Unilateral Case

Aspect	Expected	Actual
Change in Output (DQO)	-	US\$ -370.74 m
Exports (qxw \ DQXS)	-	4 %to 41% \ USD 88.6m
Imports (qim \ VIMS)	+	-9% (Fibers) to130% (pfbev) USD23,553m
Price of Land (pfe)	-	-9% (agg) to 2.5% (CGDS)
Price of Unskilled Labour (pfe)	-	-0.8%
Price of Skilled Labour (pfe)	-	0.2%
Price of Capital (pfe)	-	0.7%
Welfare (EV)	+	USD -30 m
Allocative Efficiency (EV)	+	USD 530 m
Terms of Trade (EV)	-	-370

The Results

- Allocative efficiency has improved
- Terms of trade has worsened thus substantially increasing imports
- EU is the main beneficiary of tariff reductions
- Demand for factor endowments has fallen thus reducing their prices
- Low value sectors output has fallen while the opposite is the case for high value sectors
- Some sectors such as pfbv have suffered substantially from imports as this was the most heavily protected sector
- Total welfare has fallen by a small amount but allocative efficiency has improved substantially

Productivity Shocks

Aspect	Expected	Actual
Change in Output (DQO)	+	USD 3,300.6 m
Exports (qxw \ DQXS)	+	5% to 41% \ USD 548 m
Imports (qim \ VIMS)	-	9% (Fibers) 130% (ptbev) \ USD 599 m
Price of Land (pfe)	+	-9% (wheat) to -2.3% (transport)
Price of Unskilled Labour (pfe)	+	-0.8%
Price of Skilled Labour (pfe)	+	0.02
Price of Capital (pfe)	+	-0.7%
Welfare (EV)	+	USD 3,315.5
Allocative Efficiency	+	USD 31.1 m
Technical Efficiency (EV)	+	USD2,920.9m

The Results

- Productivity has made a tremendous improvement to output
- Exports have increased more than imports
- Price of factor endowments has not changed implying the same level of usage with higher yields
- Allocative and technical efficiency has increased especially for the latter
- There has been an improvement in the terms of trade compared to the unilateral scenario.

Tariff and Productivity Shocks

Aspect	Expected	Actual
Change in Output (DQO)	+	USD 2,921.85 m
Exports (qxw \ DQXS \ VXWD)	+	5% to 41% \ UDS 636 m
Imports (qim \ VIMS)	-	-9% (Fibers) 130% (ptbev) \ USD 24,152 m
Price of Land (pfe)	+	-9% (wheat) to -2.3% (transport)
Price of Unskilled Labour (pfe)	+	-0.8%
Price of Skilled Labour (pfe)	+	0.02
Price of Capital (pfe)	+	-0.7%
Welfare (EV)	+	USD 3,285.5 m
Allocative Efficiency	+	USD 561.1 m
Technical Efficiency (EV)	+	USD2,920.9m
Terms of Trade (EV)	+	-101.2

Overall Findings

- A unilateral removal of tariffs does not negatively affect all industries equally and some actually benefit through increased exports.
- Unilateral removal of tariffs reduces the demand for factor endowments and hence their price.
- Productivity shocks can offset any welfare loss from tariff removals and substantially increase exports

Project Conclusions

The low Armington elasticities decreases welfare. Welfare is sensitive to elasticity changes while output is not.

In full employment case welfare gains are lower. If you want to protect a sector by increasing average tariffs, GDP declines and total welfare effect is negative.

The.

The reduction or removal of tariffs and export subsidies have positive externalities such as productivity improvements.