How significant are export subsidies to agricultural trade? trade and welfare implications of global reforms

by

Aziz Elbehri
Susan Leetmaa

Economic Research Service, USDA

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Export subsidies and WTO

- Doha WTO Meeting--“Development Round”
- Doha and Agriculture: Specific goals for Export subsidies
- Implications for developing countries:
  - Export subsidies affect net food import via world prices
  - Export subsidies handicap non-subsidizing exporters
Trade Reforms & Theory of Second Best

- Second Best Effect-- Well known theory

- Empirical demonstrations-- Few:
  - Loo and Tower (1990)
  - Anderson and Tyers (1993)
  - Martin and Hertel (2000)
Export subsidy Liberalization: A CGE trade and welfare analysis

• Comparative static GTAP (19x19 aggregation)

• Comprehensive multi-country Export subsidy rates

• Welfare analysis--direct and indirect effects:
  – Model scenarios: (1) Removal of all export subsidies; (2) removal of all distortions
  – Welfare decomposition approach
Welfare Decomposition in GTAP (Huff and Hertel)

Equivalent Variation =

Terms of Trade + Allocative Efficiency + Endowment change + Technical change
Welfare Decomposition in GTAP
(Huff and Hertel)

Equivalent Variation =

Terms of Trade

+ Tax/subsidy on primary factors
+ Tax/subsidy on intermediate inputs
+ Tax/subsidy on final goods
+ Tax/subsidy on final consumption
+ Tax/subsidy on exports
+ Tariff/subsidy on imports

Allocative Efficiency

Endowment change

Technical change
Effective export subsidy rates (1998)

<table>
<thead>
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<th>EU</th>
<th>Switzerland</th>
<th>Norway</th>
<th>USA</th>
<th>Hungary</th>
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Source: Authors’ calculations from WTO submissions and UN trade data.
Export subsidy removal: Global price and trade effects

<table>
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<th>(% change from base)</th>
<th>Removal of Export Subsidies</th>
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<td>Non-bovine meats</td>
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Source: authors' simulation results
# Export subsidy removal: Global price and trade effects

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Source: authors' simulation results
Export subsidy removal: Uneven welfare gains:

-4000 -3000 -2000 -1000 0 1000 2000 3000 4000

- MENA
- Japan
- Korea
- Brazil
- Argentina
- United States
- European Union

Total Welfare
Export subsidy removal: Uneven welfare gains: TOT vs efficiency

- MENA
- Japan
- Korea
- Brazil
- Argentina
- United States
- European Union

Terms of trade
Allocative efficiency
Total welfare
Welfare and Second Best Effects

Source: Authors's calculations
Import barriers are key to broader welfare gains

MENA
Japan
Argentina
Aust_NZ
USA
EU

Total welfare (US Millions)

-4000 -2000 0 2000 4000 6000 8000 10000 12000 14000 16000

XS removal
ALL distortions removal
With trade reforms, efficiency gains may outweigh TOT losses

Source: Authors's calculations
Conclusions

• Removing export subsidies by themselves may not be welfare improving for net food importers in the presence of import barriers

• Improving global welfare and extending the gains to a maximum of countries critically depends on tackling the far more significant import trade barriers

• Demonstrated the empirical significance of second best effects in welfare analysis of trade liberalization