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

by

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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

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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

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Welfare Decomposition in GTAP (Huff and Hertel)

Equivalent Variation =

Terms of Trade

+

Allocative Efficiency

+

Endowment change

+

Technical change

ERS

Welfare Decomposition in GTAP (Huff and Hertel)

Equivalent Variation =

Terms of Trade

+

Allocative Efficiency

- 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

+

Endowment change

+

Technical change

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Effective export subsidy rates (1998)

	EU	Switzer-land	Norway	USA	Hungary	Slovakia	Czchek	South Africa	Venezuela
Coarse grains	34.2			0.02					
Veg&fruits	0.8	65.6			2.3			1.0	1.7
Sugar	54.4					1.9		2.6	7.5
Dairy	24.2	80.1	97.3	18.6		26.7	28.0		
Bovine meats	27.1		32.6		0.5	45.2	65.4		
White meats	4.2		56.9	0.02	1.8				

Source: Authors' calculations from WTO submissions and UN trade data.

Export subsidy removal: Global price and trade effects

(% change from base)	Removal of Export Subsidies	
	World price	Global trade
wheat	0.3	-0.1
grain	1.4	-1.9
rice	0.6	-1.0
oilseeds	0.3	-0.2
fiber	0.2	0.1
oilseed products	0.2	-0.1
sugar	5.6	-8.4
dairy	4.3	-6.0
Bovine meat	1.5	-2.7
Non-bovine meants	0.9	-1.0

Source: authors' simulation results

Export subsidy removal: Global price and trade effects

(% change from base)	Removal of Export Subsidies		Removal of all Distortions	
	World price	Global trade	World price	Global trade
wheat	0.3	-0.1	9.8	21.7
grain	1.4	-1.9	5.8	11.6
rice	0.6	-1.0	1.2	73.1
oilseeds	0.3	-0.2	3.5	14.8
fiber	0.2	0.1	-0.1	5.9
oilseed products	0.2	-0.1	0.4	17.8
sugar	5.6	-8.4	5.7	32.2
dairy	4.3	-6.0	6.4	25.6
Bovine meat	1.5	-2.7	4.5	24.6
Non-bovine meants	0.9	-1.0	0.5	28.6

Source: authors' simulation results

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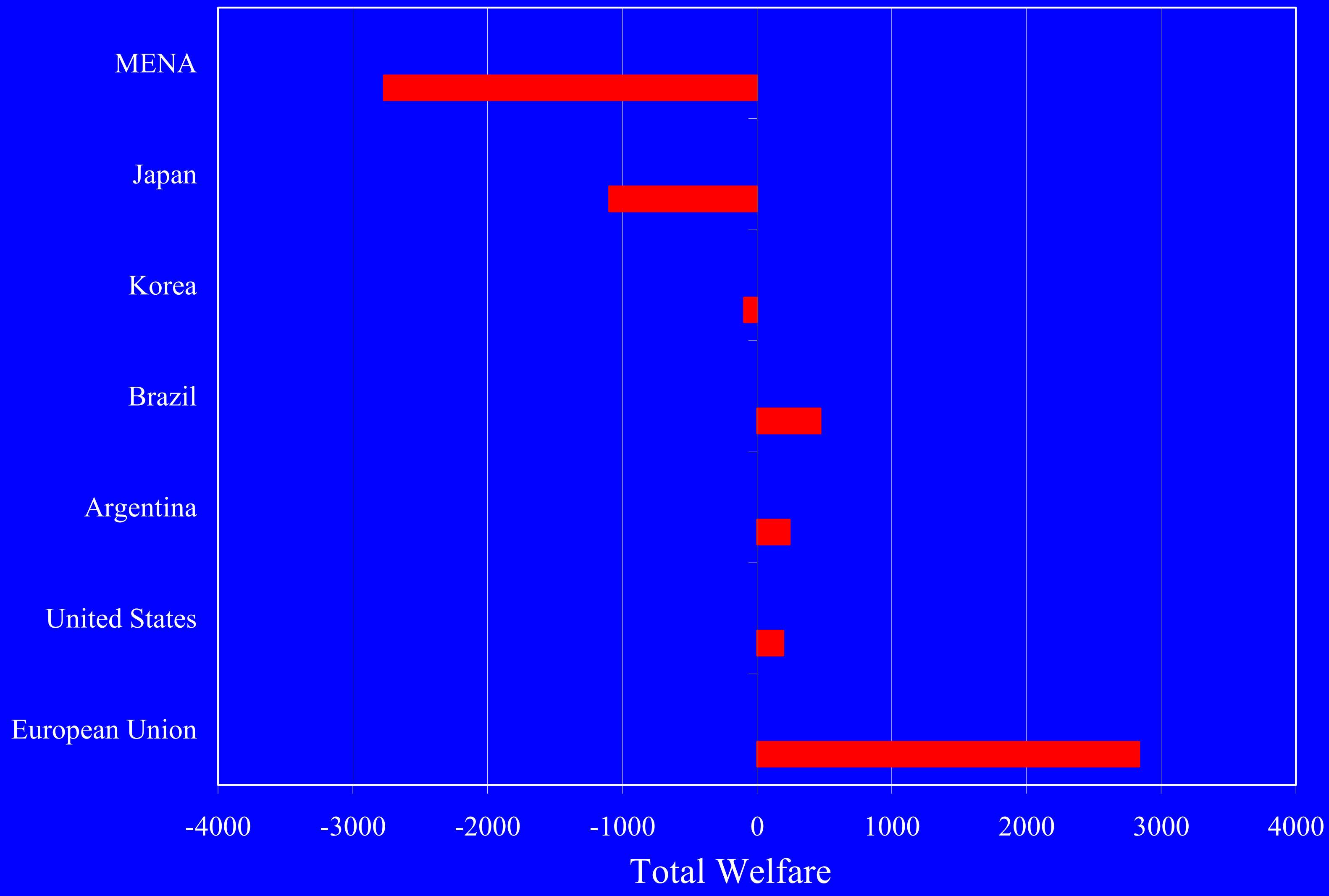
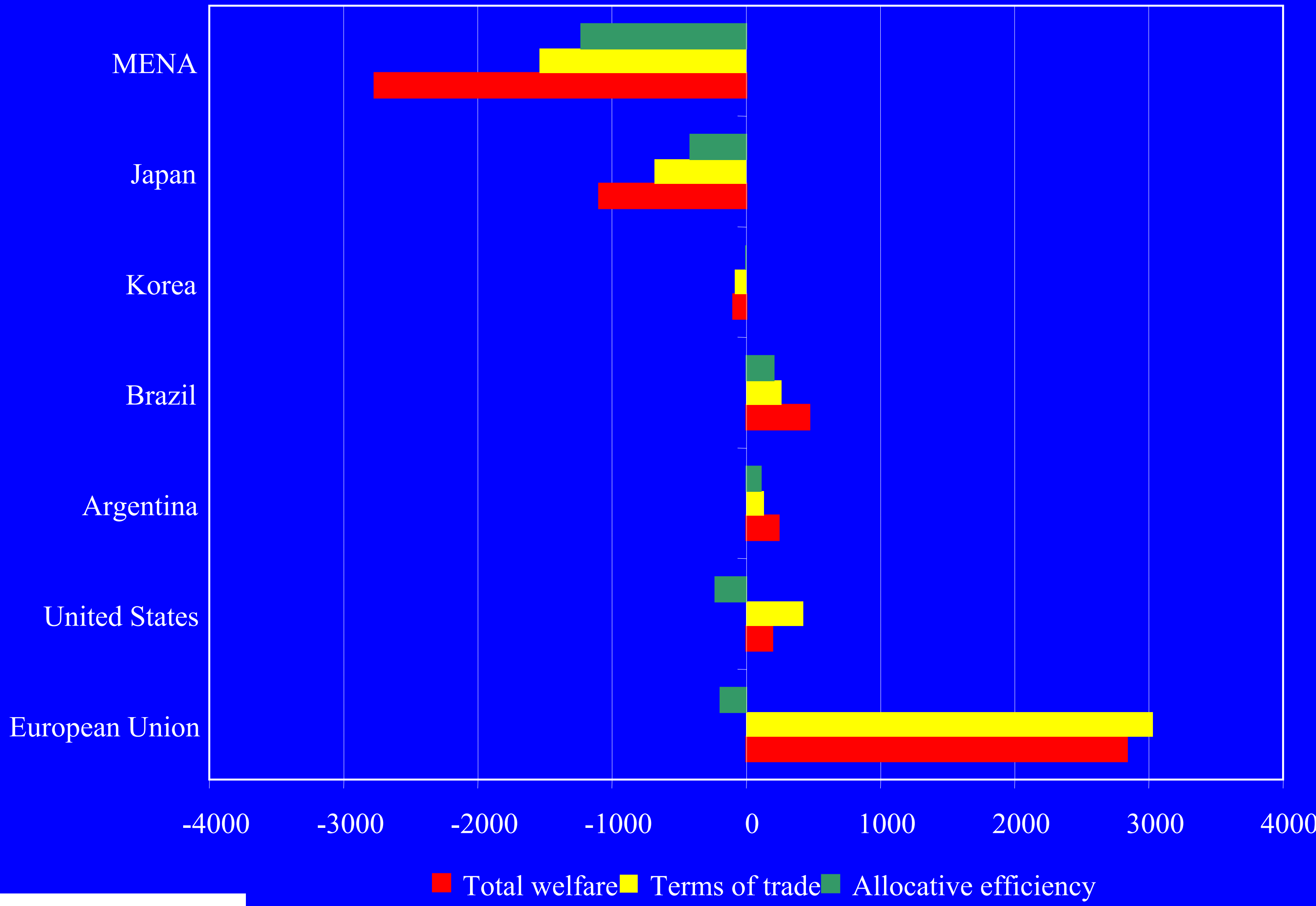
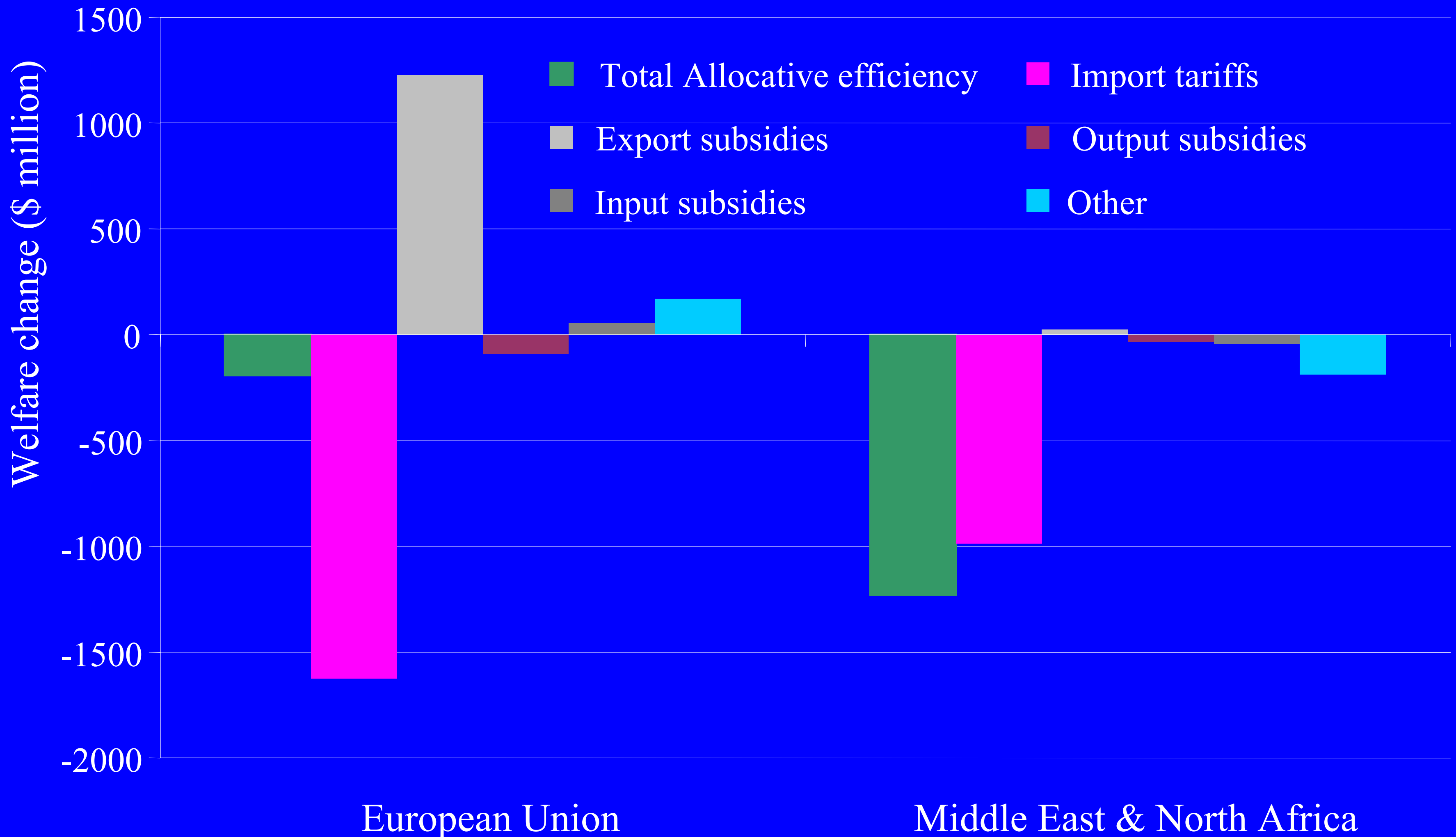
Export subsidy removal: Uneven welfare gains:



Export subsidy removal: Uneven welfare gains: TOT vs efficiency

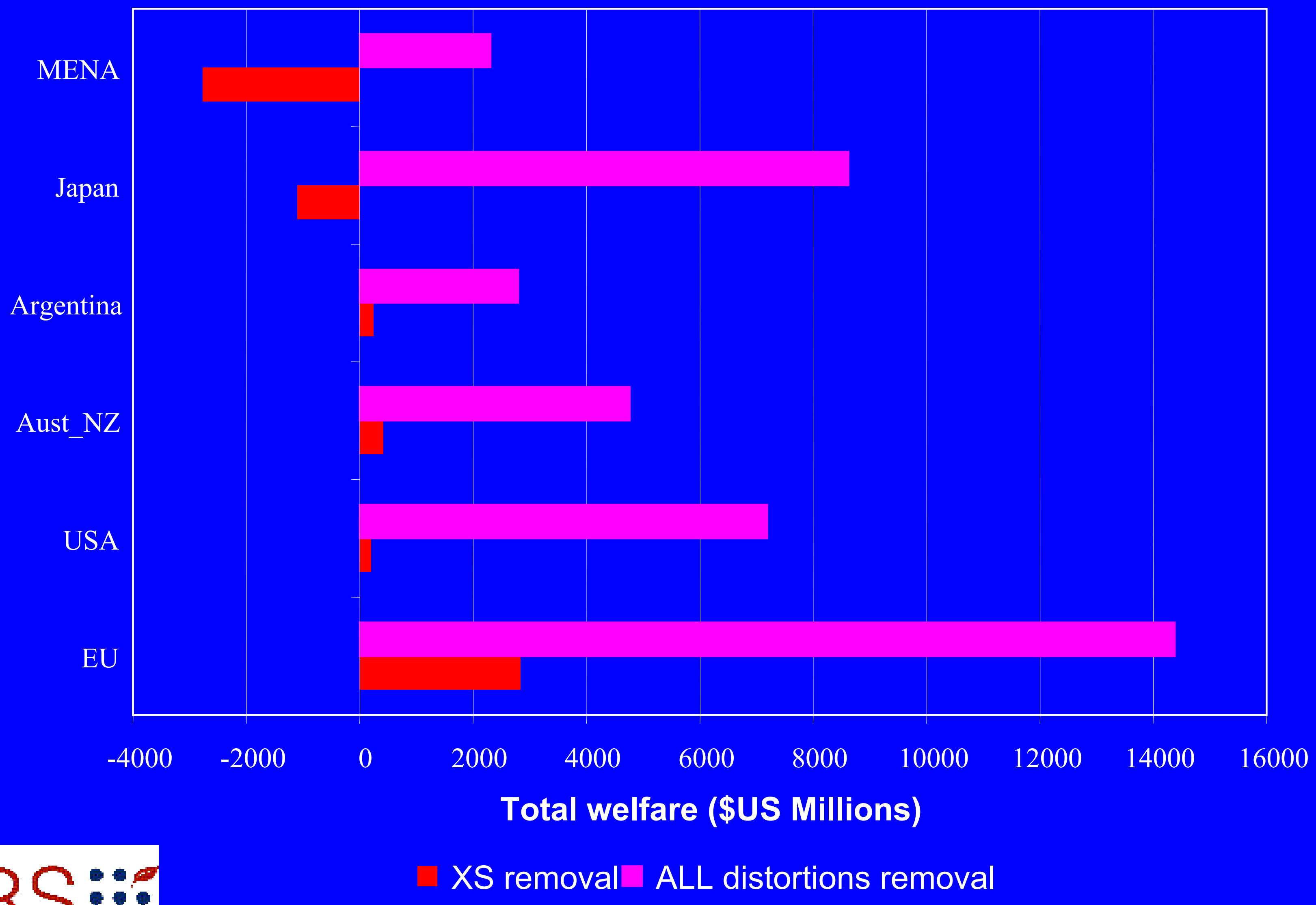


Welfare and Second Best Effects

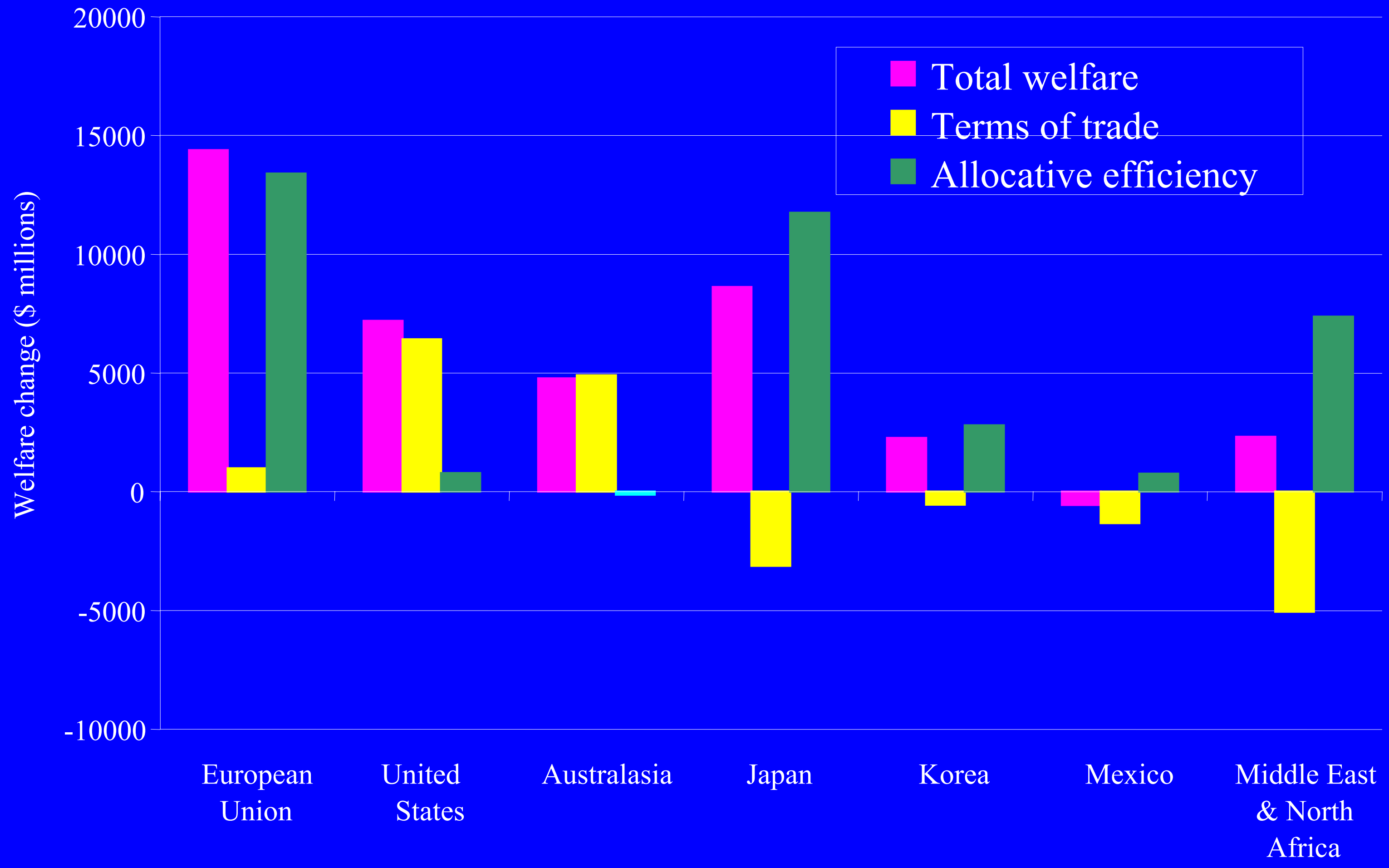


Source: Authors's calculations

Import barriers are key to broader welfare gains



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