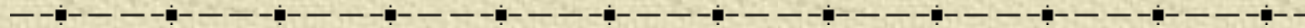


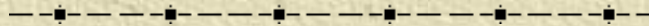
# Module 3.

## WTO Rules/Disciplines on Subsidies: Analyzing Subsidies and Domestic Support



ECN330

Analyzing Economic Integration and  
Multilateral Trade Liberalization



2023

# Glossary of abbreviations

- ✦ **AD** – anti-dumping duties
- ✦ **AMS** – aggregate measure of support
- ✦  **$\Delta$ CS** – change in consumer surplus
- ✦ **CS** – consumers surplus
- ✦ **CSE** – consumer support equivalent
- ✦ **CVM** – countervailing measures
- ✦  **$\Delta$ D** – change in demand
- ✦ **DS** – domestic support
- ✦ **DSM** – dispute settlement mechanism
- ✦ **DWL** – dead-weight loss
- ✦ **Eqibm** - equilibrium
- ✦ **ED** – excess demand, import demand
- ✦ **ES** – excess supply; export subsidy
- ✦  **$\Delta$ ED** – change in excess demand
- ✦ **GATT** – general agreement on trade and tariffs
- ✦ **MA** – market access
- ✦ **MFN** – most favored nation
- ✦  **$P_B$**  – border price
- ✦  **$P_D$**  – domestic price
- ✦  **$P_W$**  – world price
- ✦ **PS** – producer surplus
- ✦  **$\Delta$ PS** – change in producer surplus
- ✦ **PSE** – producer support equivalent
- ✦ **P-s** – price support
- ✦  **$Q_D$**  – quantity demanded
- ✦  **$Q_M$**  – quantity imported
- ✦  **$Q_S$**  – quantity supplied
- ✦  **$Q_T$**  – quantity traded
- ✦  **$Q_X$**  – quantity exported
- ✦ **S** – supply
- ✦  **$\Delta$ S** – change in supply
- ✦ **SMB** – Social marginal benefit
- ✦ **SMC** – Social marginal cost
- ✦ **Y-s** – income support
- ✦  **$\tau$**  - tax, tariff

# 1. WTO Treatment of Subsidies

## 1.1 Multilateral treatment of subsidies before UR-GATT

- ✦ No definition of subsidy
- ✦ Development of a subsidy rule
  - ◆ 1960: “Illustrative list of practices” of 2-priced systems
  - ◆ 1970s: “Subsidy Code” – limited acceptance
  - ◆ 1980s: Subsidy wars

# WTO Treatment of Subsidies, continued . . .

## 1.2 Subsidies under the GATT structure of WTO

### ✦ Agreements of Subsidies and CVMs, and Agriculture

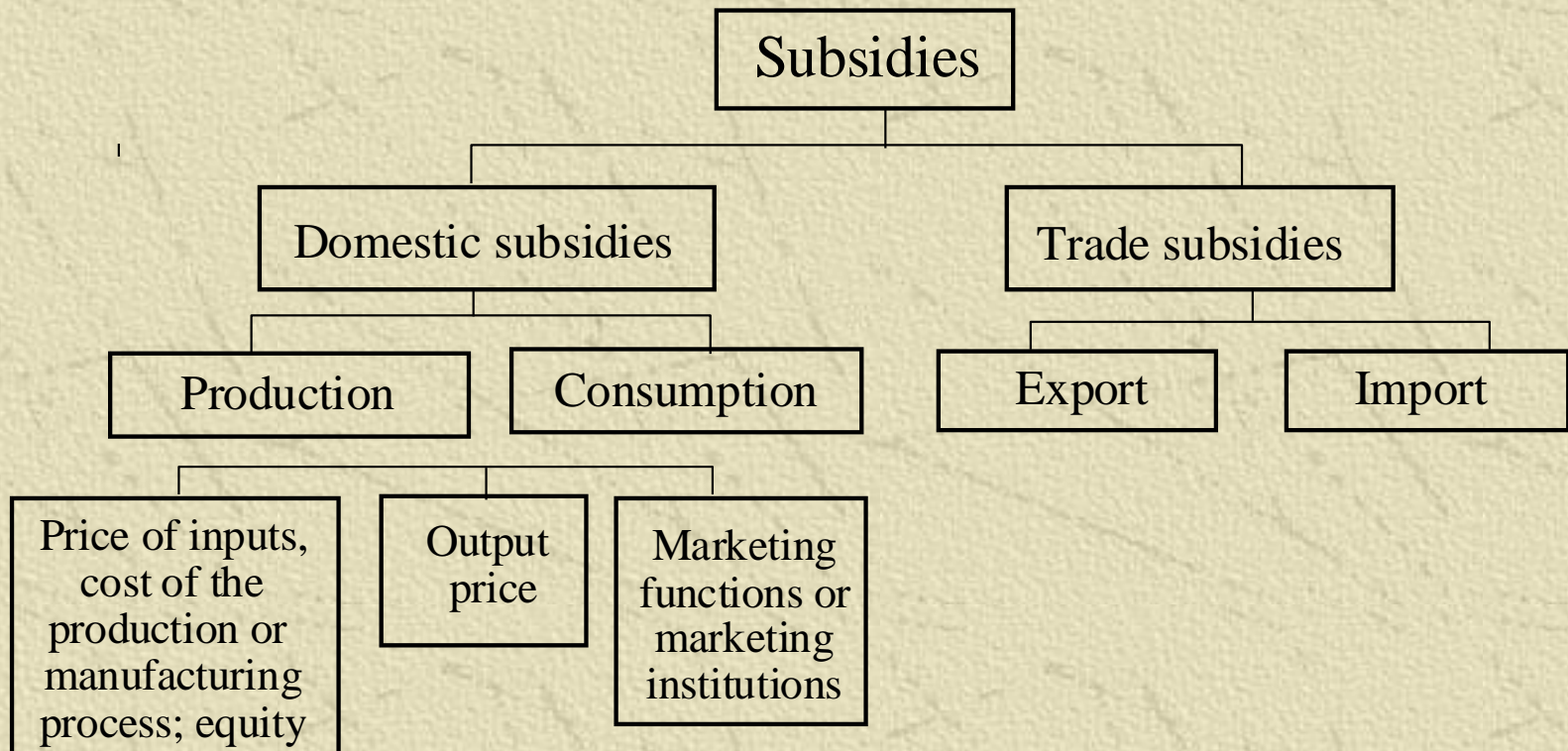
	<b>Rules and disciplines on subsidies and domestic support on ag products</b>
<b>Basic principles</b>	GATT
Additional details	Agreements and Annexes
<b>Specific issues or sectors</b>	<b>* Subsidies &amp; Countervailing Measures</b> <b>* Agreement on Agriculture</b>
Market access commitments	Schedule of Commitments
<b>Country-specific requirements</b>	<b>Agricultural support notifications:</b> <b>* Support measures by commodity</b> <b>* Aggregate measure of support</b>

# WTO Treatment of Subsidies, continued . . .

## ✦ WTO legal definition of a subsidy

- ◆ Elements of a subsidy
- ◆ Specificity condition

## ✦ Types of subsidies or support programs



# WTO Treatment of Subsidies, continued . . .

## ✦ WTO rules/disciplines on subsidy/support

- ✦ Industrial good: red light (prohibited); green light (allowable)
- ✦ Agricultural good: domestic support and export subsidy
  - DS types: green, blue, amber box – classified by trade distortion
  - ES in value and volume
  - Bound rates and reduction commitments

	Developed countries	Developing countries
Phase-in period	1995-2000	1995-2004
Domestic support value based on 1986-88 base period avg		
Cuts in total DS value	-20%	-13%
Export subsidy value/volume based on 1986-90 base period avg		
Cuts in total ES value	-36%	-24%
Cuts in ES volume	-21%	-14%

## ✦ Subsidies and basic principles

# WTO Treatment of Subsidies, continued . . .

- ✦ Example of a subsidy dispute – industrial good
  - ◆ *US Foreign Sales Corporation (FSC) Act allowed exporters tax exemption on profits of 15%* by funneling sales *through offshore shell companies* . . . Firms can also allocate a share of income to foreign sources, reducing domestic tax obligations
  - ◆ EU challenged FSC Act at the WTO in 1997
    - 1999-2000 WTO judgment: *special tax breaks* offered *to Microsoft Corp., Boeing Co.* and hundreds of other US exporters *amounted to an illegal subsidy* that discriminates in favor of US products
    - EU officials argued. . . the *US has* the *responsibility of bringing its tax regime into line* with WTO rules.

# WTO Treatment of Subsidies, continued . . .

- ◆ Desai and Hines (2000) studied US firms' sensitivity to export incentives and corporate income tax under FSC by examining change in FSC and EU complaint at WTO
  - FSC-1984 reduced the tax exemption on profits from 25% to 15%, resulting a 3.1% decrease in US manu exports
  - EU complaint at WTO resulted in a 0.5% decrease in the share price of the average affected exporter on the day of the WTO ruling against the US
- ◆ EU granted the right to impose sanctions worth \$4 bn in damages, then the largest award in WTO history
  - Mar 2004: EU phased-in tariffs at 5% initially, increasing by 1% each month
  - Rates hit 12% when the US finally repealed the FSC

Sources: *A History of the Extraterritorial Income and Foreign Sales Corporation Export Tax-Benefit Controversy*, CRS Report for Congress, 9 Nov 2004, D. L. Brumbaugh; and *Economist*, "Economics focus: Going too far in support of trade", 14 Dec 2000

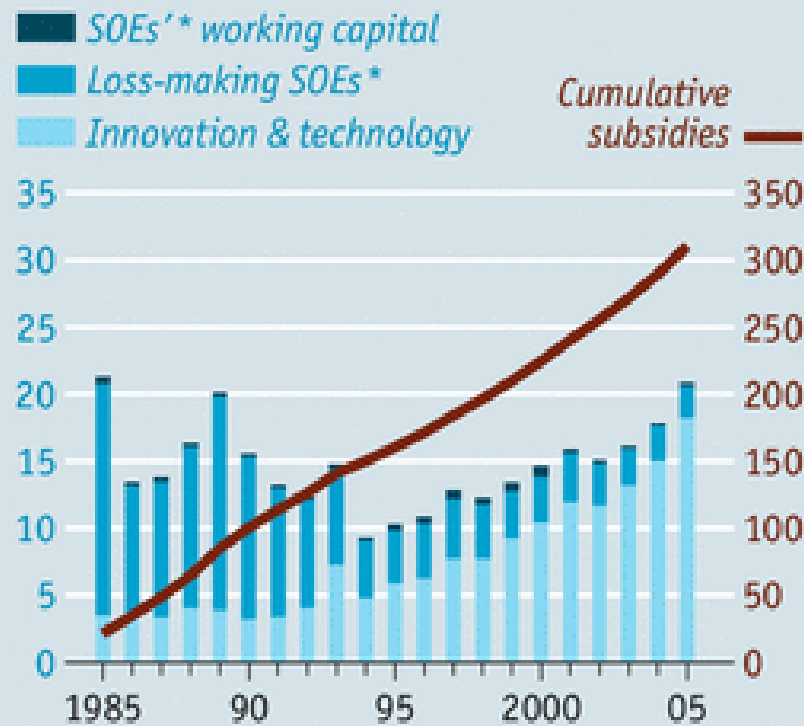


# WTO Treatment of Subsidies, continued . . .

## ✦ Suspected illegal subsidies in China's SOEs

### Helping handout 1

Subsidies to Chinese industry, \$bn



Source: Usha Haley and George Haley

\*State-owned enterprises

### The "private" sector 2

Subsidies for selected private-sector Chinese firms 2011

Company	Subsidy as % of net profit	Subsidy, \$m
Geely Automobile	51.3	141
China Yurun Food	36.1	84
Uni-President	18.2	9
Sihuan Pharmaceutical	14.5	19
Wuxi PharmaTech	12.2	10
Want Want China	11.3	47
Hengan International	10.3	36
Gome	9.2	27
China Shanshui Cement	7.6	28
China Gas Holdings	7.2	7

Sources: GK Dragonomics; Fathom China

# WTO Treatment of Subsidies, continued . . .

## 1.3 EU definition of subsidy

### ✦ State aid

- ◆ Disallowable support
- ◆ Allowable (national) support
- ◆ Possibly allowable support

### ✦ EU warned Italy over Alitalia cash injection

- ◆ Italy warned not to allow **proposed €300m capital infusion for Alitalia** by state-owned postal services group.
- ◆ Brussels needed to **assess whether it complied with EU rules**
- ◆ **EC has power to force companies to repay illegal state aid**
- ◆ A **capital injection** not on **same terms as a private investor** is classed as state aid and is subject to Brussels' approval.

# WTO Treatment of Subsidies, continued . . .

## ✦ Covid fiscal stimuli and post-covid industrial policy

### ◆ Covid fiscal stimulus (ignoring monetary policy, QE)

- US:
  - ◆ \$500bn in lending to companies; \$349bn loan/grant small firms
  - ◆ Unemployment benefits and stimulus checks to households
- EU
  - ◆ Suspension of state aid rules (country-specific supports)
  - ◆ EU-wide stimulus: €800bn temporary economic recovery

### ◆ Post-covid industrial policy

- US:  $(G-T) = 10\%$  of GDP
  - ◆ 2021: \$1.9trn fiscal package
  - ◆ 2022: Inflation Reduction Act (\$500bn), Chips and Science Act (\$280bn)
- EU:
  - ◆ Next Generation EU - €750bn one-time stimulus, mutual debt
  - ◆ \$2trn stimulus to build greener, more digital and resilient future 11

# WTO Treatment of Subsidies, continued . . .

## ✦ Post-covid response



Even though smaller countries get more as a % of GDP the larger economies get more in €bn. The EU RRF is disbursed as loans and grants (mutually backed).

This fiscal solidarity was a response to each member state providing subsidies for green transition or other initiatives.

*Financial Times*, “Can the EU keep up with the US on green subsidies?”, 2 Feb 2023, p. 15.

*Economist*, “The EU’s covid-19 recovery funds changed how Europe spends”, 26 May 2022.

[www.economist.com](http://www.economist.com)

## 2. Economics of Subsidies: DS and ES

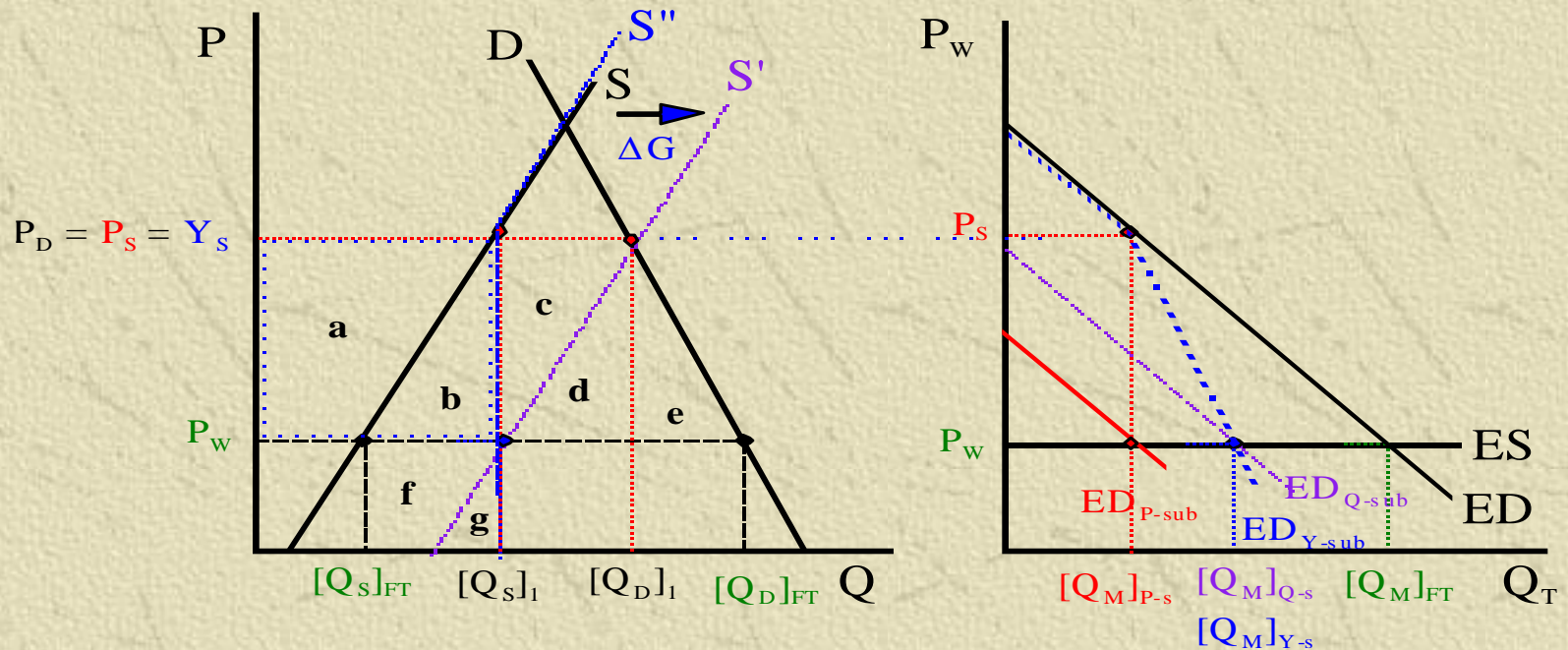
### 2.1 Tax-subsidy equivalent of MA restriction

### 2.2 Analyzing non-equivalence of support by program

✦ Price support

✦ Production subsidy (e.g., input price support)

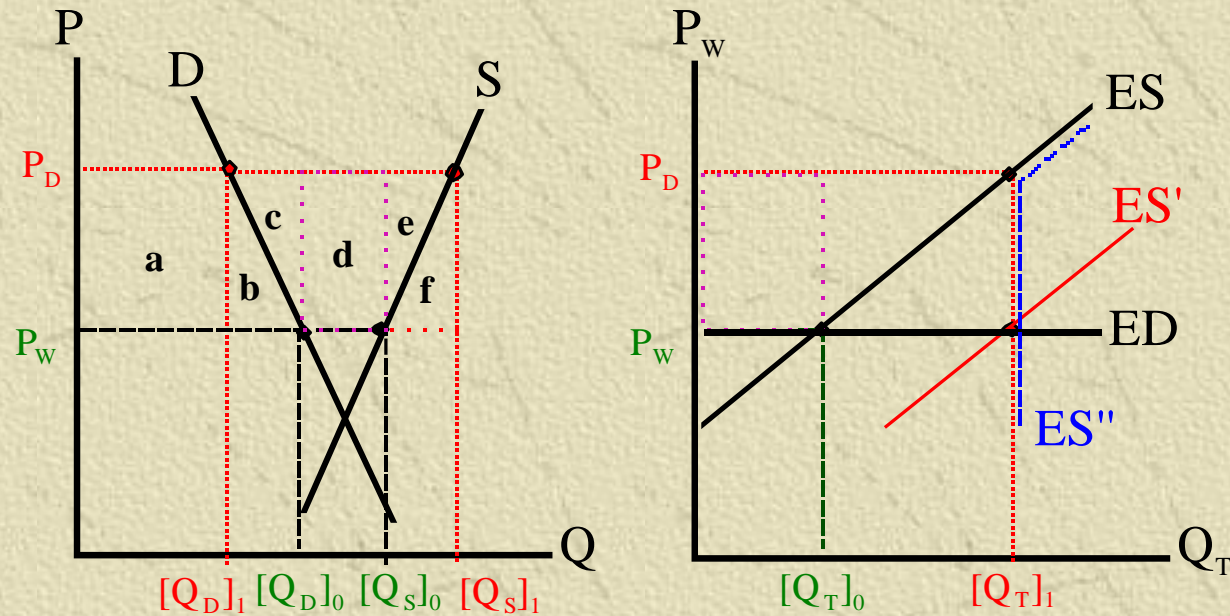
✦ Income support



# Economics of Subsidies: DS and ES, continued ...

## 2.3 Export subsidy

### ✦ Types, objectives, and effects of an ES



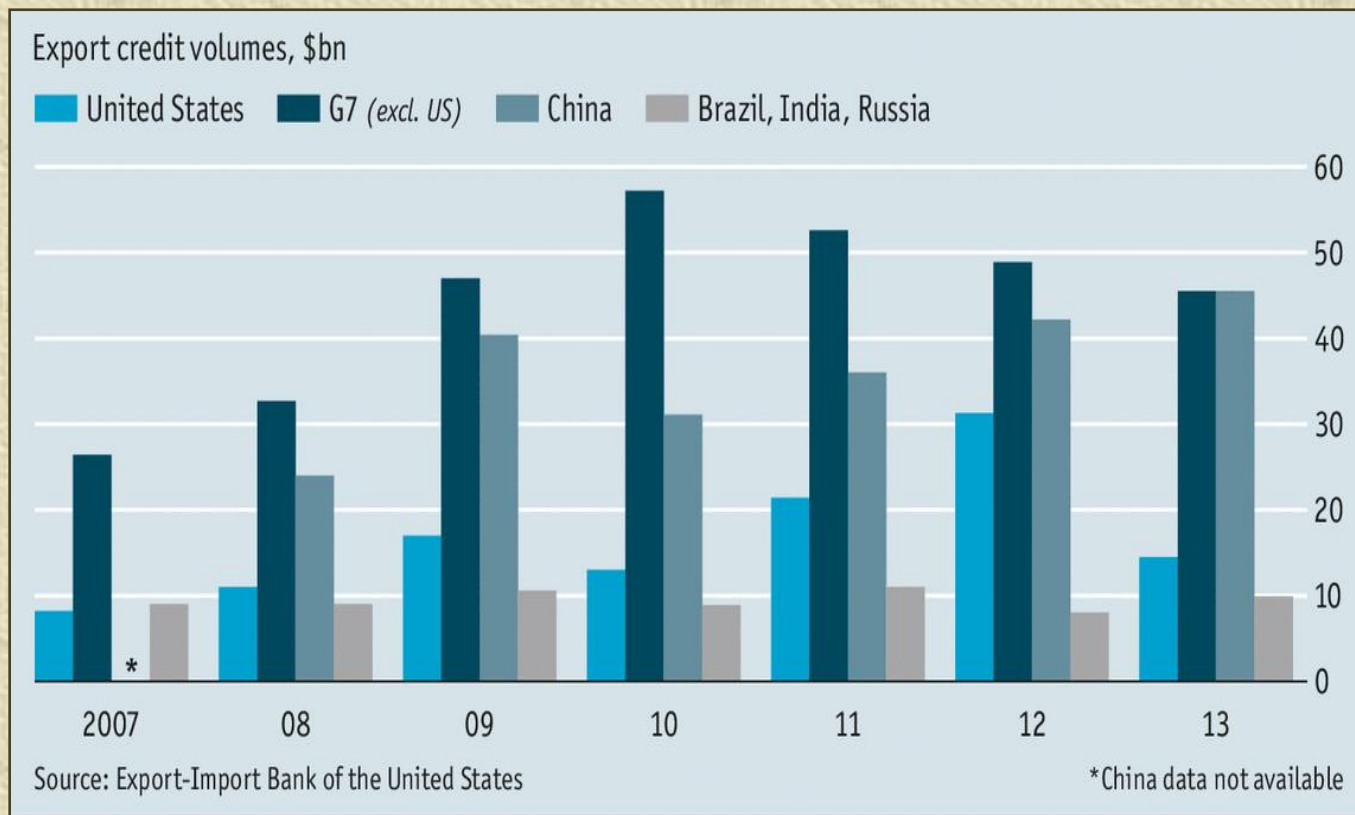
### ✦ Economics and politics of ES (for given $\uparrow X$ )

- ◆ Additionality and graduation conditions
- ◆ Beneficiaries and spillover effects
- ◆ Implementation and interplay with other measures

# WTO Treatment of Subsidies, continued . . .

✦ Example of ES usage: grey areas of an export subsidy

◆ Export credit and guarantees –disciplines in 2015 Bali



Measures that:

- Directly finance support (credit, finance or lower interest rate)
- Cover risk (guarantees)
- Involve gov't-to-gov't credit agreements on all ag trade
- Give any other form of support

Support cannot last more than 18 months, and the programs must be self-financing and cover the long-term operating costs

# WTO Treatment of Subsidies, continued . . .

- ◆ “GE flexes muscles over [removal of] tax and export credits”, *Fin Times*, 17 Sep 2015, p. 15
  - General Electric benefitted from tax credits for wind power and fuel efficiency stds for aircraft engines
  - US gov’t closed Ex-Im Bank (agency administering US X credit programs)
  - GE vice-chairman: “no choice” but to offshore some production
    - ◆ France: a country with functioning gov’t-backed export finance
    - ◆ Connecticut, where GE’s HQ is located, complains
  - Example of a large firm exerting pressure on a gov’t to continue benefits that increase its profits, creates unfair competition for firms that do not benefit from such loans, and playing off state gov’ts against each other



# WTO Treatment of Subsidies, continued . . .

- ◆ “GE switches 500 jobs to France in blow for US manufacturing”, *Fin Times*, 16 Sep 2015, p. 1
  - GE reignited a political debate over US global competitiveness and the future of its Export-Import Bank by announcing a shift of 500 manu jobs to France
  - Boeing planned to cut hundreds of jobs from its satellite manufacturing business in part because of the failure to renew Ex-Im
  - Boeing was largest beneficiary of the bank in 2013 and GE the 2<sup>nd</sup> largest in terms of the value of loans and loan guarantees provided
  - Critics of the Ex-Im Bank say it perpetuates crony capitalism, providing benefits to a small number of large, politically well-connected firms

# WTO Treatment of Subsidies, continued . . .

## ◆ Special economic zones



## ✦ Non-equivalence of DS and ES programs for some level of production, $[Q_S]_1$

*Economist*, “Special economic zones: Political priority, economic gamble”, 4 Apr 2015, p. 59-60

# 3. Agricultural Subsidies and DS Commitments

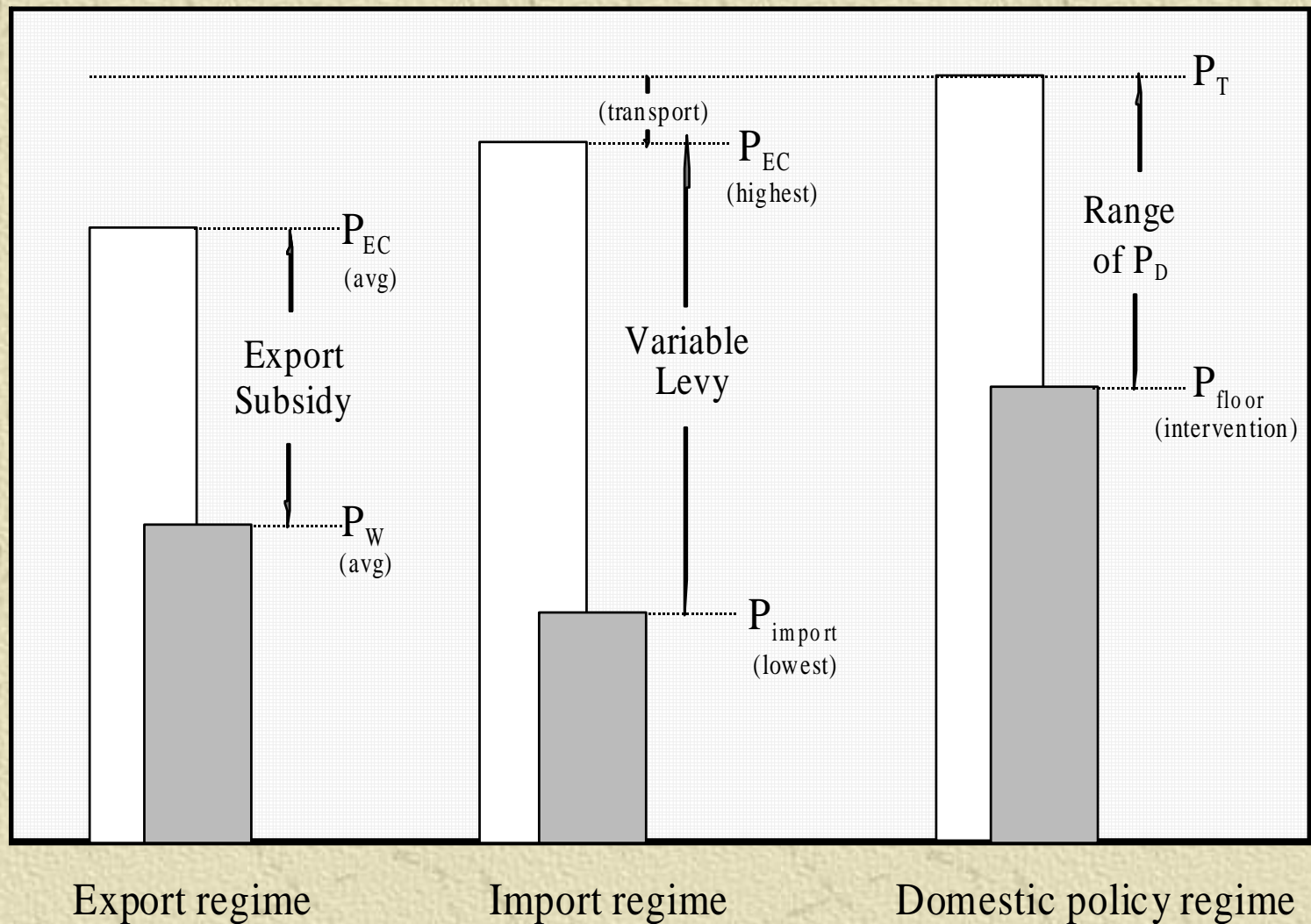
## 3.1 Agricultural policy backgrounder, pre-UR-GATT

### ✦ Comparison of US and EC ag policy/programs

US: case of a net ag-exporter		EU: case of a net ag-importer	
Period	Policies + DS programs	Policies + DS programs	Period
Pre-1970s	P-supports with: - tariffs or thru VERs - set-aside programs Loan rate program	P-support + high tariffs - intervention stocks - variable levies - production quotas	CAP under the EC-6 thru EC-9
1970s thru 1995	P-supports Loan rate program <b>Y-supports (blue box)</b>		
WTO country-specific commitments, bindings and cuts, base period 1986-88			
1995-2000	P-support w/ tariff/TRQ Loan rate <b>Y-support (green box)</b>	P-support w/ tariff/TRQ - ↓ amber as % AMS <b>Y-support (blue box)</b> - set-aside required	CAP under EC-15

# Ag Subsidies and DS Commitments, continued . . .

## ✦ CAP intervention, case of wheat, 1986-89



# Ag Subsidies and DS Commitments, continued . . .

## 3.2 DS rules and commitments: green box

- ✦ Green box defined and economic rationale
- ✦ Examples of green box in schedules, table DS:1

## DS: measures exempt from the reduction commitment, green box

Type of measure as defined in criteria in Annex 2	Country-specific commitments		
	US	EU	Norway
"General services", total	9,214	5,636	4,217
- Research and development			
- Pest and disease control			
- Marketing and promotion			
- Training services			
- Extension and advisory			
- Inspection			
- Infrastructure			
"Public stockholding for food security"	0	18	<b>716</b>
"Domestic food aid"	<b>33,916</b>	243	0
"Decoupled income support"	<b>4,100</b>	166	0
"Payments for relief from natural disasters"	1,421	399	28
"Structural adjustment assistance"	1,730	<b>6,249</b>	1,554
"Environmental programs"	291	<b>5,519</b>	364
"Regional assistance programs"	0	<b>2,420</b>	1,555
" <b>Other</b> : Vacation and sickness support"	-	-	<b>1,323</b>

Source: WTO; values in million \$US, 2001; million €, 2001/02; million NOK 2001

# Ag Subsidies and DS Commitments, continued . . .

## 3.3 DS rules and commitments: blue box measures

- ✦ Definition and economic rationale

- ✦ Types of blue box measures

Direct payments based on:

- ◆ Fixed area and yields

- ◆ 85% or less of the base level of production

- ◆ Fixed number of head of livestock

- ✦ Commitments specified in Supplementary table DS:3  
(country-specific comparisons of blue box use)

# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:3, Direct payments – exempt direct payments		
Measure type	Name and description of measure with reference to criteria in Article 6:5	Value of measure
US, 2001-02	<b>None.</b> Program eliminated after 1995	\$ 0.0
EU, 2001-02		€ mln
Payments based on fixed area and yields		
	Per ha compensatory payments, maize	1,613.6
	Per ha compensatory payments, cereals	10,717.9
	Set-aside compensation, cereals	1,893.3
	Per ha compensatory payments, oilseeds	1,846.2
Payments based on 85% or less of the base level of production		
	None.	0.0
Livestock payments made on a fixed number of head		
	Payments to producers of suckler cows	1,959.2
	Special premium, beef and veal	1,748.4
<b>Total blue box exempt payments, all products</b>		<b>€23,725.9</b>

Source: www.wto.org; notification docs, country specific, G/AG/N/USA/51 and G/AG/N/EEC/51



# Ag Subsidies and DS Commitments, continued . . .

## ✦ Illustration of blue box support, for same $Q$ , $[Q_S]_1$

Base period, 1986-88:

$$Q_D = Q_S = Q_0$$

$$\tau_0 = [P_D]_0 - P_W$$

WTO commitments:

(1) MA requirement:  $\downarrow \tau$

$$\tau_1 = [P_D]_1 - P_W; [P_D]_1 = P_S$$

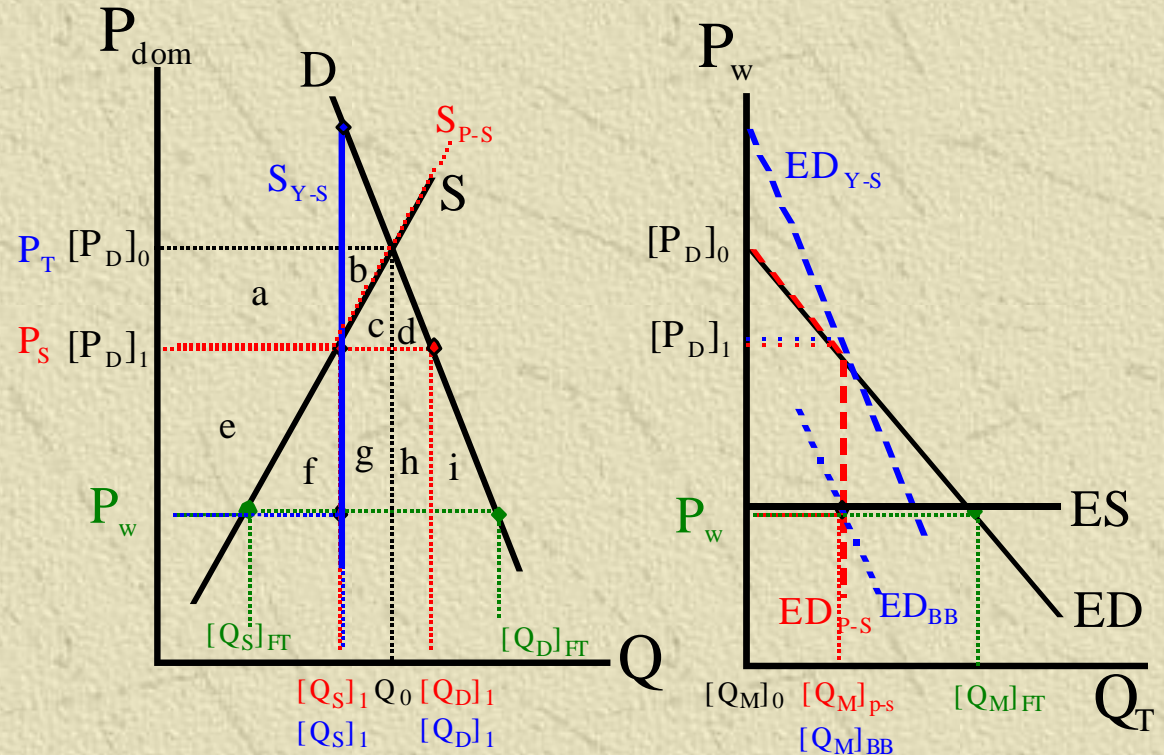
Admin P set at  $P_S$

(2) DS requirement for blue box

$\downarrow Q$  from  $Q_0$  to  $[Q_S]_1$

Admin P set at  $P_T = [P_D]_0$

BB Y-support =  $P_T - [P_D]_1$



$ED_{Y-S} - ED$  just income support       $S_{Y-S} - S$  under income support  
 $ED_{BB} - ED$  blue box with Y-s and  $\tau_1$   
 $ED_{P-S} - ED$  price support or  $\tau_1$        $S_{P-S} - S$  under price support

Result: BB allowed compensation for  $\downarrow Q$  but limited the payment to eligible production.

If  $\tau$  protection was not allowed with BB support, it would be less trade distorting!

# Ag Subsidies and DS Commitments, continued . . .

## 3.4 DS rules and commitments: amber box measures

### ✦ Amber box subsidies defined and economic rationale

#### ◆ Product-specific support

- Market price support
- Input price support
- Coupled income support
- Product-specific equivalent support

#### ◆ Non-product-specific support

#### ◆ Measures subject to reduction commitments

### ✦ Commitments specified in Supporting tables DS:5-9

- ◆ Policy reform in US and EU before / after UR-GATT
- ◆ US and EU comparisons

# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:5, product-specific AMS, market price support

Product	Measure type	Applied admin price	External reference price	Eligible prodn	Fees/levies	Total mkt price support
US, 2001/02:		\$/ton	\$/ton	mln ton	\$ mln	\$ mln
Dairy	P-support under prodn quotas	218.26	159.83	76.726		4,483.2
Sugar		374.79	230.82	7.167		1,031.7
Peanuts		672.41	413.16	1.198		310.6
<b>Total, all</b>						<b>\$5,822.6</b>
EU, 2001/02:		€/ton	€/ton	mln ton	€ mln	€ mln
Milk powder	Price supports	2,055.2	684.7	1.000		1,370.5
Sugar		631.9	193.8	14.145	476.8	5,720.1
Butter		3,282.0	943.3	1.900		4,443.5
Beef		3,013.0	1,729.8	7.566		9,708.7
<b>Total, all</b>						<b>€27,518.8</b>

Source: www.wto.org; notification docs, country specific, G/AG/N/USA/51 and G/AG/N/EEC/51

# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:6, product-specific AMS, non-exempt payments						
Product	Measure type	Eligible prodn	Price-related payments	Other non-price payments	Fees/levies	Total direct payments
US, 2001-2	Loan deficiency payments; marketing loan gain/payment in corn/cotton	mln ton	\$ mln	\$ mln	\$ mln	\$ mln
Barley				16.0		16.0
Corn				1,193.4		1,193.4
Cotton				2,723.0		2,723.0
<b>Total, all</b>						<b>\$8,434.7</b>
EU, 2001-2	Direct aid in sugar and bananas; prodn aid in milk; premium payment for tobacco	€/ton	€/ton	mln ton	€ mln	€ mln
Milk				317.2		317.2
Sugar				212.2		212.2
Bananas				212.3		212.3
Tobacco				951.6		951.6
<b>Total, all</b>						<b>€2,404.9</b>

Source: www.wto.org; notification docs, country specific, G/AG/N/USA/51 and G/AG/N/EEC/51

# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:8, product-specific equivalent measure of support

Product	Measure type(s)	Applied admin price	Eligible prodn	Equivalent measure of support	Fees/levies	Value of equivalent support
US, 2001-02:	n/a	\$/ton	mln ton	\$ mln	\$ mln	\$ mln
None.						0.0
EU, 2001-02:	Aid for storage, distilling in wine; guide price in cotton; price support	€/ton	mln ton	€ mln	€ mln	€ mln
Wine						891.6
Cotton			1,584.4		575.1	575.1
Apples		568	8,653.3		2,059.5	2,059.5
Table grapes		546	2,264.3		216.7	216.7
Tomatoes		1,126	6,524.2		1,944.2	1,944.2
Tomatoes for process		88.05	8,425.1		366.9	366.9
<b>Total, all</b>						<b>€9,183.9</b>

Source: www.wto.org; notification docs, country specific, G/AG/N/USA/51 and G/AG/N/EEC/51  
 note: n/a is not applicable; Table DS 7 is combination of Tables DS5 and DS6.

# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:9, Non-product-specific AMS				
Program type(s)	Non-product-specific budgetary outlays	Other non-product-specific support	Fees/levies	Total non-product-specific support
US: 2001-02	\$ mln	\$ mln	\$ mln	\$ mln
Water subsidy		300.0		300.0
Grazing, livestock	83.692		18.3	65.4
Insurance	2,958.074		1,187.7	1,770.4
Credit programs	48.806			48.8
Marketing assist	4,639.822			4,639.8
<b>Total, all types</b>	3.741			<b>\$6,828.2</b>
EU: 2001-02	€ mln	€ mln	€ mln	€ mln
Insurance	278.4			278.4
Interest rate concessions	295.1			295.1
<b>Total, all types</b>				<b>€573.5</b>

Source: www.wto.org; notification docs, country specific, G/AG/N/USA/51 and G/AG/N/EEC/51

# Ag Subsidies and DS Commitments, continued . . .

## 3.5 Aggregate measure of support (AMS)

### ✦ Computing current total AMS

- ◆ Sum over all types of amber box domestic support
- ◆ Subtract value that qualifies as *de minimus* support
- ◆ Total is Current Total AMS (CTAMS)

### ✦ Current and bound AMS and reduction commitments:

- ◆ AMS computations – Supporting table DS:4
- ◆ Comparison of bound and applied rates over time
- ◆ Compliance with 20% reduction in bound AMS

# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:4, Calculation of the current total AMS, 2001						
Selected products affected	Type of AMS		Production value		AMS	
	Product specific	Equivalent	Total	5%	De min	Current total AMS
EU commitments, € million						
Wheat	1,236.6		8,984	449.2		1,236.6
Grains	8.2		23,429	1,171.5	8.2	0.0
Barley	1,640.4		4,963	248.2		1640.4
Sugar, white	5,732.1		8,938	446.9		5,732.1
Milk	212.2		40,134	2,006.7	212.2	0.0
Beef	9,708.7		20,671	485.4		9,708.7
Apples		2,059.5	4,334	216.7		2,059.5
<b>Total, all</b>	29,934.9	9,183.9			289.8	
Non-product-specific		573.5	246,418	12,320.9	573.5	0.0
<b>Total AMS</b>					863.3	<b>39,281.3</b>
<b>Current total bound AMS</b>						<b>67,159.0</b>



# Ag Subsidies and DS Commitments, continued . . .

Supporting Table DS:4, Calculation of the current total AMS, 2001						
Selected products affected	Type of AMS		Production value		AMS	
	Product-specific	Equivalent	Total	5%	De min	Current total AMS
US commitments: \$ million						
Beef	0.00		29,293.24	1,464.66		0.00
Corn	1,269.66		18,888.39	944.42		1,269.66
Cotton	2,810.11		3,789.20	189.46		2,810.11
Dairy	4,483.33		24,893.99	1,244.70		4,483.33
Soybeans	3,610.04		12,605.72	630.29		3,610.04
Sugar	1,060.96		2,028.35	101.42		1,060.96
Wheat	189.39		5,440.22	272.01	189.39	0.00
<b>Total, all</b>	14,627.63	0.00	198,502.75	9,925.14	214.58	<b>\$14,413.06</b>
Non-product-specific		6,828.15			6,828.15	0.00
<b>Current total AMS</b>					\$7,042.73	\$14,413.06
<b>Current total bound AMS</b>						\$19,103.00

Source: www.wto.org; notification docs, country specific, G/AG/N/USA/51 and G/AG/N/EEC/51

# Ag Subsidies and DS Commitments, continued . . .

Table DS:1, Total AMS commitments (excludes green and blue boxes)						
Base 86-88	1995- 00	2000	2006	2007-17	2018	Compliance
<b>US AMS commitments, \$ million</b>						
23 879	21 093	19 103	19 103	19 103	19 103	Bound
-	10 401	16 843	7 742	4 980	13 085	Applied
<b>EU-15 and EU-27 AMS commitments, € million</b>						
83 949	72 916	67 159	72 244	72 378	72 378	Bound
-	48 242	43 654	26 632	7 752	5 137	Applied
<b>Norway, AMS commitments, million kr</b>						
14 311	12 641	11 449	11 449	11 449	11 449	Bound
-	10 468	10 293	10 766	10 373	10 106	Applied
Source: www.wto.org; entire DS document series of G/AG/N/USA/; G/AG/N/EEC; and G/AG/N/NOR						

**Bound value and ↓ AMS by 20% over 6 yrs**

## 4. Export Subsidy Use and Commitments

### 4.1 Multilateral rules on ES

### 4.2 ES rights negotiated by WTO members

#### ✧ ES by country

Countries negotiating the right to use export subsidies						
	Developed		Emerging Mkts		Developing	
	Country	No. of lines	Country	No. of lines	Country	No. of lines
Selected members	EU-15	20	Bulgaria	44	Venezuela	72
	US	13	Poland	17	S Africa	62
	Norway	11	Slovakia	17	Turkey	44
	Canada	11	Czech Rep	16	Colombia	18
	Switzerland	5	Hungary	16	Brazil	16
Sub-totals	8 members	68	10 members	183	7 members	177
Total	<b>25 members</b> negotiated right to use ES on <b>428 product lines</b>					

Source: [www.wto.org](http://www.wto.org); *Agriculture – Negotiations Backgrounder*, Dec 2004

# Export Subsidy Use and Commitments, continued . . .

## ◆ Application of ES by country

Summary of export subsidy usage	
<b>Countries having negotiated the right to apply export subsidies</b>	<b>Application of export subsidies</b>
Latin America (7), S. Africa, New Zealand, Australia, Cyprus, Iceland, Switzerland	Export subsidies were not applied to any significant extent or not at all
Canada	Applied on dairy
US	Applied on dairy, poultry
<b>EU-15/28; Norway</b>	Applied on nearly all or most line items negotiated

# Export Subsidy Use and Commitments, continued . . .

## ✦ ES bindings and commitments: US, EU and Norway

Table ES:1; Budgetary outlays (value) and reduction commitments

Base <b>86-90</b>	Sum '95-00	1995- 2000	2000	2001-10	2011-18	2021
<b>US ES commitments, \$ million</b>						
Bound	5 283.4	880.6	594.4	594.4	594.4	
Outlay	501.5	83.6	15.3	86.6	0.0	
<b>EU-15 and EU-27 ES commitments, € million</b>						
Bound	<b>57 539</b>	9 590	7 448.4	7 705.5	7 963.0	
Outlay	<b>28 524</b>	4 754	2 763.2	1 653.5	0.0	
<b>Norway, ES commitments, million kr</b>						
Bound	<b>4 313.7</b>	862.4	493.2	493.2	493.2	493.2
Outlay	<b>3 738.0</b>	505.3	393.2	288.2	<b>177.5</b>	0.0
Source: www.wto.org; entire ES document series of G/AG/N/USA/; G/AG/N/EEC; and G/AG/N/NOR						

**Bound ceilings and ↓ value and vol by 36% and 21%, respectively, over 6 yrs**

# Export Subsidy Use and Commitments, continued . . .

- ◆ ES volume usage, avg over **1995-00**, **2001-10**, and **2016-2020**

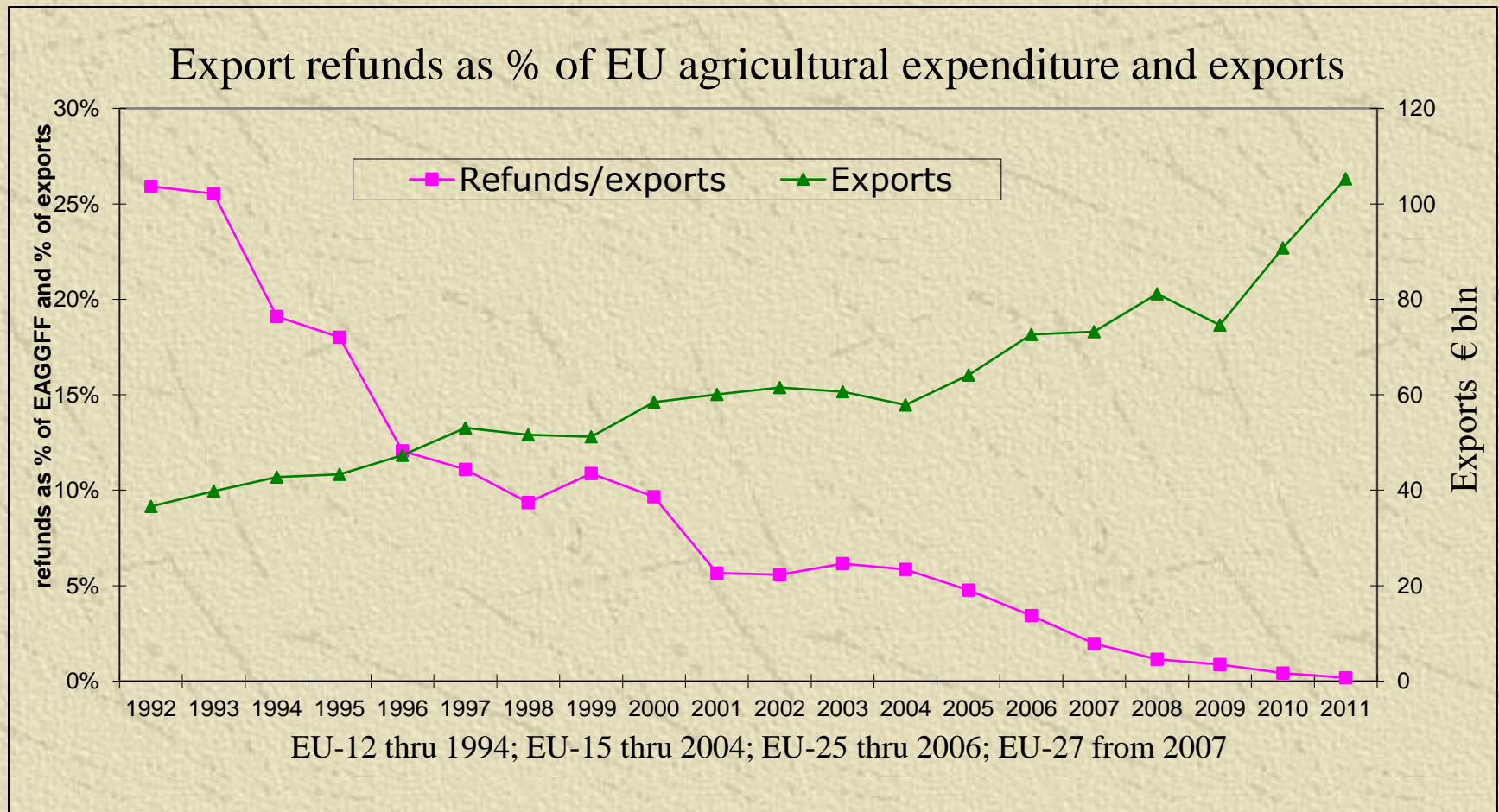
Selected products, in tons	EU-15 and -27*		US		Norway**	
	Use, avg %	Bound vol	Use, avg %	Bound vol	Use, avg %	Bound vol
Wheat, mln	<b>82/20</b>	14.4	0	14.5		-
Grain, mln	<b>100/20</b>	18.4	0	1.6		-
Sugar, mln	<b>94/83</b>	1.4		-		-
Cheese, 000	<b>100/64</b>	322.0	<b>96/36</b>	3.0	<b>100/91/54</b>	16.2
Other milk, 000	<b>100/55</b>	958.0	<b>100/39</b>	63.7		-
Beef, 000	<b>100/26</b>	822.0	0	17.6	<b>91/20/0</b>	1.5
Pork, 000	<b>92/23</b>	444.0	0	0.4	<b>70/41/90</b>	3.8
Chicken, 000	<b>100/60</b>	286.0	17/4	28.0	0	0.0
Sheep, 000		-		-	<b>58/35/0</b>	0.7

Source: own calculations based on WTO ES notification documents

\* membership increased EU bound vol; \*\*Bali Ministerial (2015) phase out ES: Norway used ES until 2020, ended in 2020 as per Bali [Bali limit reduced bound vol; usage rate reflects lower rate]

# Export Subsidy Use and Commitments, continued . . .

## ◆ Decline in EU use of export subsidies



# Export Subsidy Use and Commitments, continued . . .

- ◆ Import vs export quotas, negotiated

Norway's usage of import and export quota, meats						
	<b>Import quota</b> under the tariff-rate quota			<b>Export quota</b> (for export subsidy, bound volume)		
	Volume	Fill rates, %		Volume	Fill rates, %	
		1995-2000	2001-11		1995-2000	2001-2011
Beef	1 084	49	93	1 497	91	20
Pork	1 381	68	33	3 791	70	41
	983	56	68			
Lamb/sheep	206	78	78	681	58	35
Chicken	221	4	25	22	0	0
	145	0	0			

Source: WTO notification documents; own calculations



## 5. Incoherence between WTO rules and theory

### 5.1 WTO's measure of producer support AMS

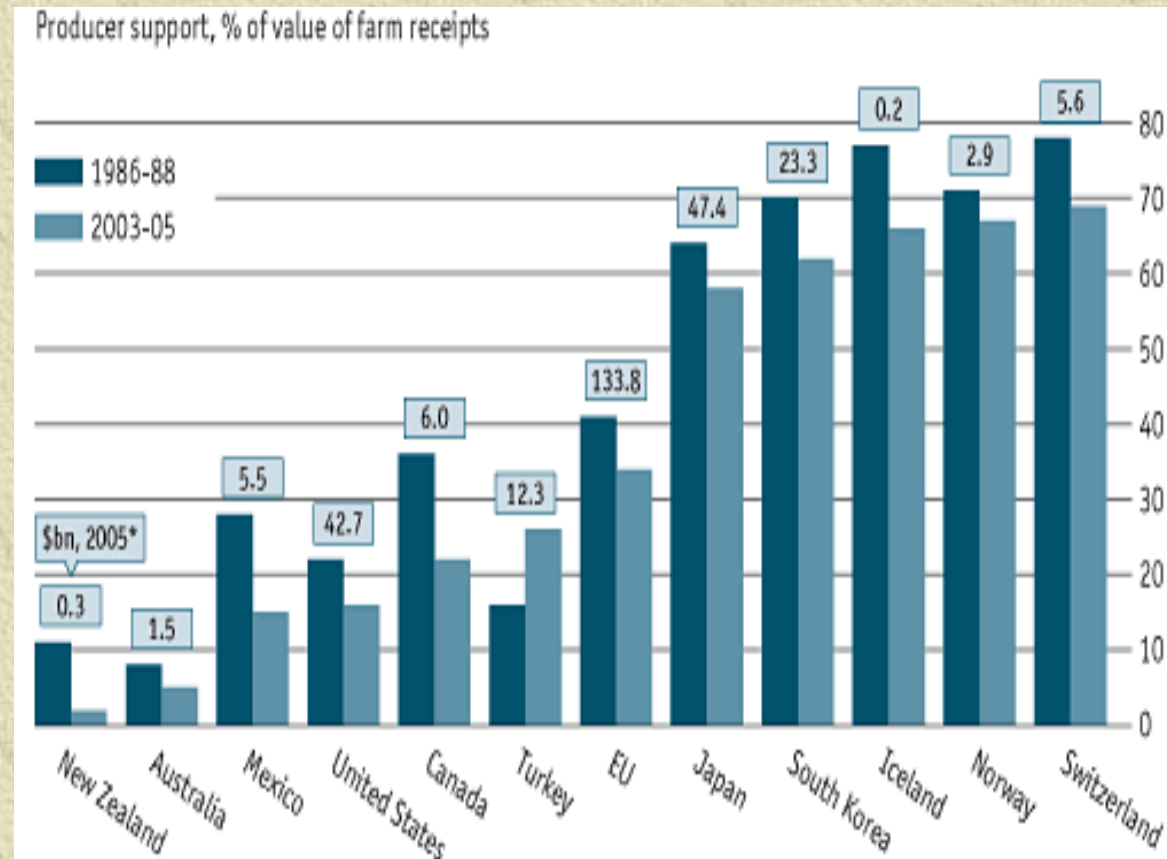
- ✦ Not theoretically consistent with welfare analysis
- ✦ OECD producer support estimate (PSE) for Norway
  - Value/share of farm revenue in the form of a transfer
  - Support categorized by the nature of the transfer (whether it affects production directly) and not on trade distortion

Composition of PSE	1995-00	2001-04	2005	2006	2007
Total PSE [support/total value]	68%	70%	66%	65%	59%
Share of support base on:					
Price (output and input)	66%	61%	58%	57%	53%
Area/head/return (current)	34%	31%	28%	30%	34%
Area/head/return (non-curr)	0%	8%	14%	13%	14%

Source: OECD database, 2009

# Incoherence between WTO rules and theory

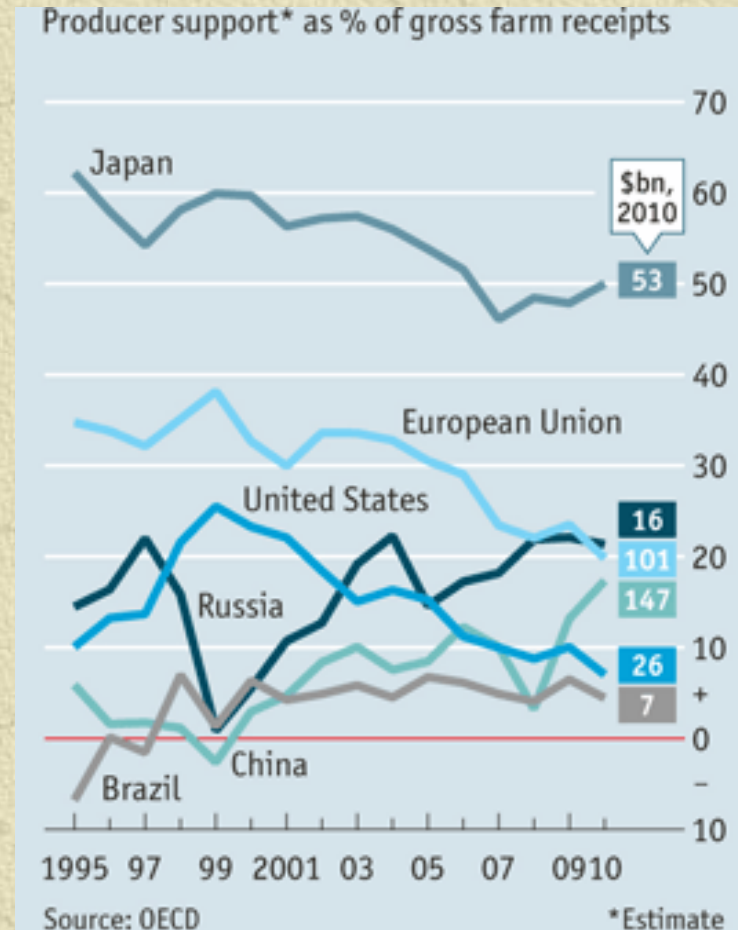
- ◆ PSE using OECD's categories of support



*Economist*, "Agricultural subsidies", 22 Sep 2012, p. 91

# Incoherence between WTO rules and theory

- ◆ OECD's PSE: 1995-2011, selected WTO member states



Source: *Economist*, "Economic and Financial Indicators: Agricultural Subsidies", 24 Sep 2011, p. 103

# Incoherence between WTO rules and theory

## 5.2 WTO treats MA and DS as if separate

- ✦ Inter-play between MA, DS and ES
- ✦ Ignoring inter-play weakens disciplines

## 5.3 Problem with market price support

- ✦ MPS computation is flawed (admin P, ref P, eligible Q)
- ✦ Members overstated AMS bound rates

## 5.4 Subsidy under WTO rules and theory

- ✦ Specificity condition vs targeted subsidy program
- ✦ Categories based on trade distortion

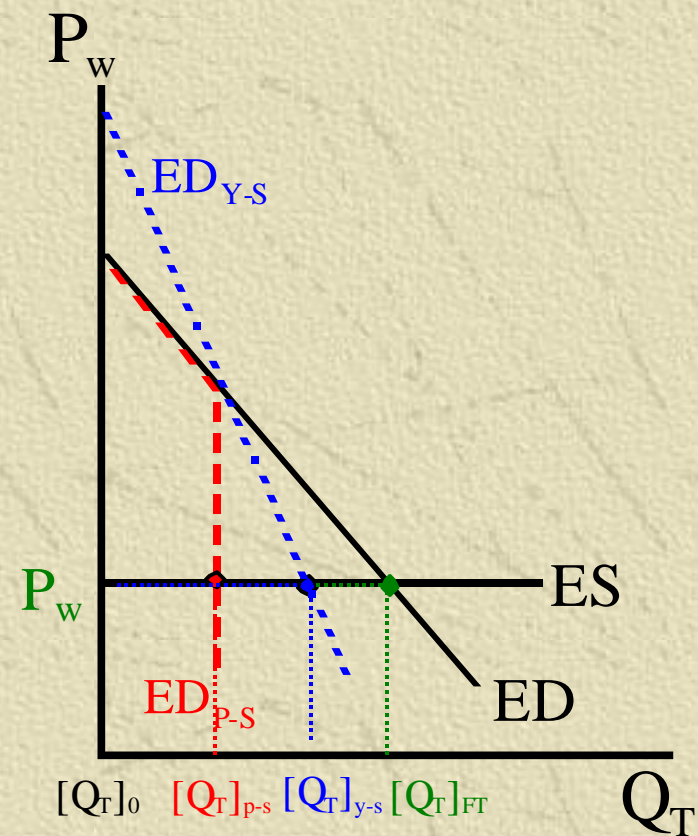
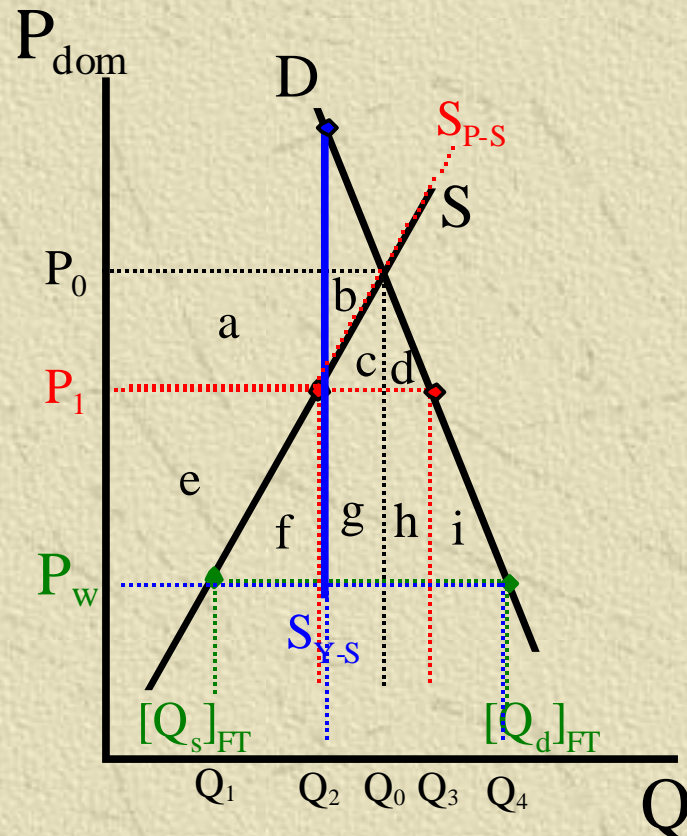
## 6. Analyzing income and price support

Comparing coupled and semi-decoupled support at  $P_1$

✦ MA:  $\downarrow \tau$  from  $\tau_0$  to  $\tau_1$

✦ DS: P-support:  $[P_1] - [P_w]$  based on new bound tariff

Y-support: Tariff protection not needed; eligible  $Q = Q_2$



# Analyzing income and price support

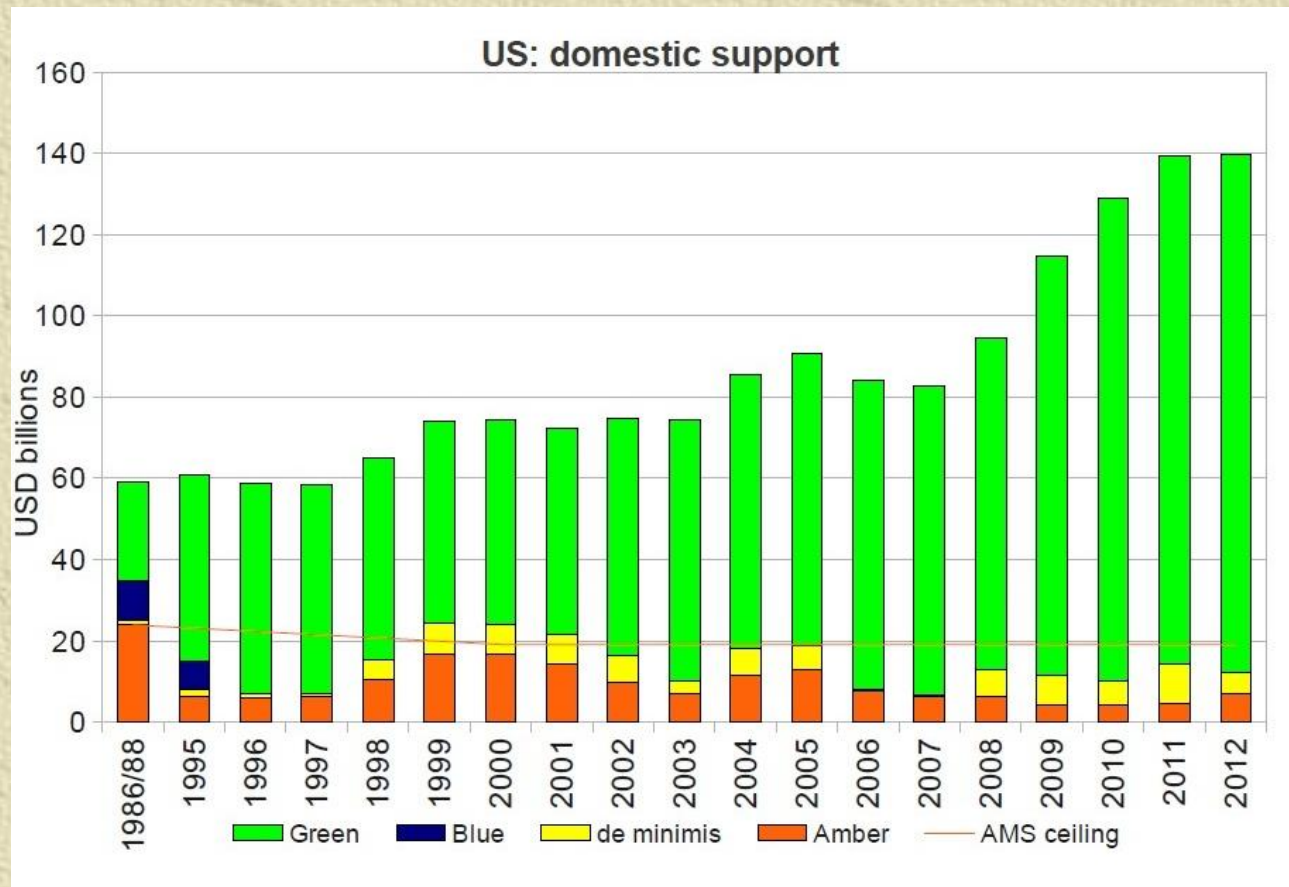
Comparing MA and DS under amber and blue box				
Policy alternatives	Description of a policy scenario supporting producers at $[P_D]_1$ and production at $[Q_S]_1$			
Amber box	Price support is set at a rate of $\{[P_D]_1 - P_W\}$ per unit which requires tariff protection, $\tau$ , such that $\tau_1 = \{[P_D]_1 - P_W\}$ .			
Blue box	Income support is $\{[P_D]_1 - [P_W]\}$ per unit in exchange for reduced production. Absence of P-support means tariff protection is not needed, i.e., tariff, $\tau_{bb} = 0$ .			
Economic factors	Amber box	> <	Blue box	Interpretation
Price	$[P_D]_{ab}$	>	$[P_W]$	Amber box has P-support
Prodn	$[Q_S]_{ab}$	=	$[Q_S]_{bb}$	By policy design
Consume	$[Q_D]_{ab}$	<	$[Q_D]_{bb}$	P-support is a consumer tax
Trade	$[Q_M]_{ab}$	<	$[Q_M]_{bb}$	Amber box is more distorting
Trade policy	$[\tau]_{ab}$	>	$[\tau]_{bb}$	BB does not require tariff

# 7. Doha, post-Doha DS Disciplines

## 7.1 Trends in US and EU ag policy

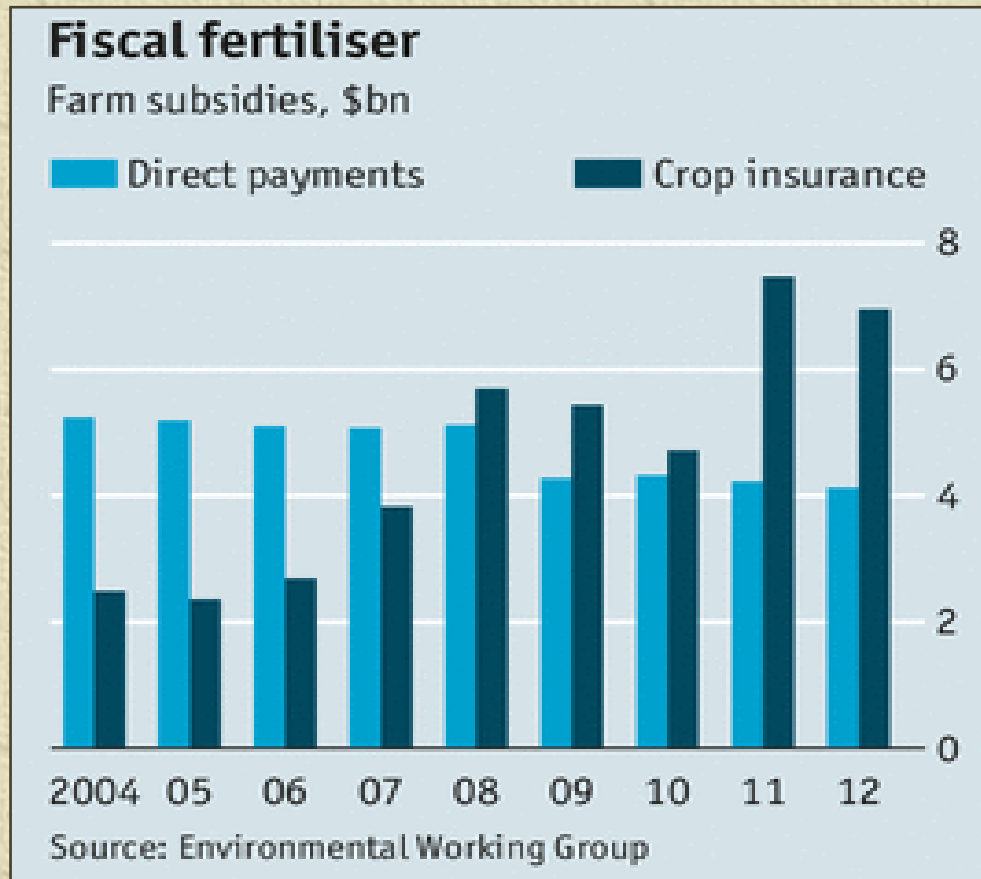
### ✧ US domestic support

#### ◆ Composition of support



# Doha, post-Doha DS Disciplines, continued . . .

- ◆ Direct payments (green box) vs crop insurance (yellow box)



2014 US farm bill cost \$1trn over 10 yrs  
Benefits are a mix that go to poor (80% are food subsidies) and big share of producer subsidies that go to rich (largest farms)

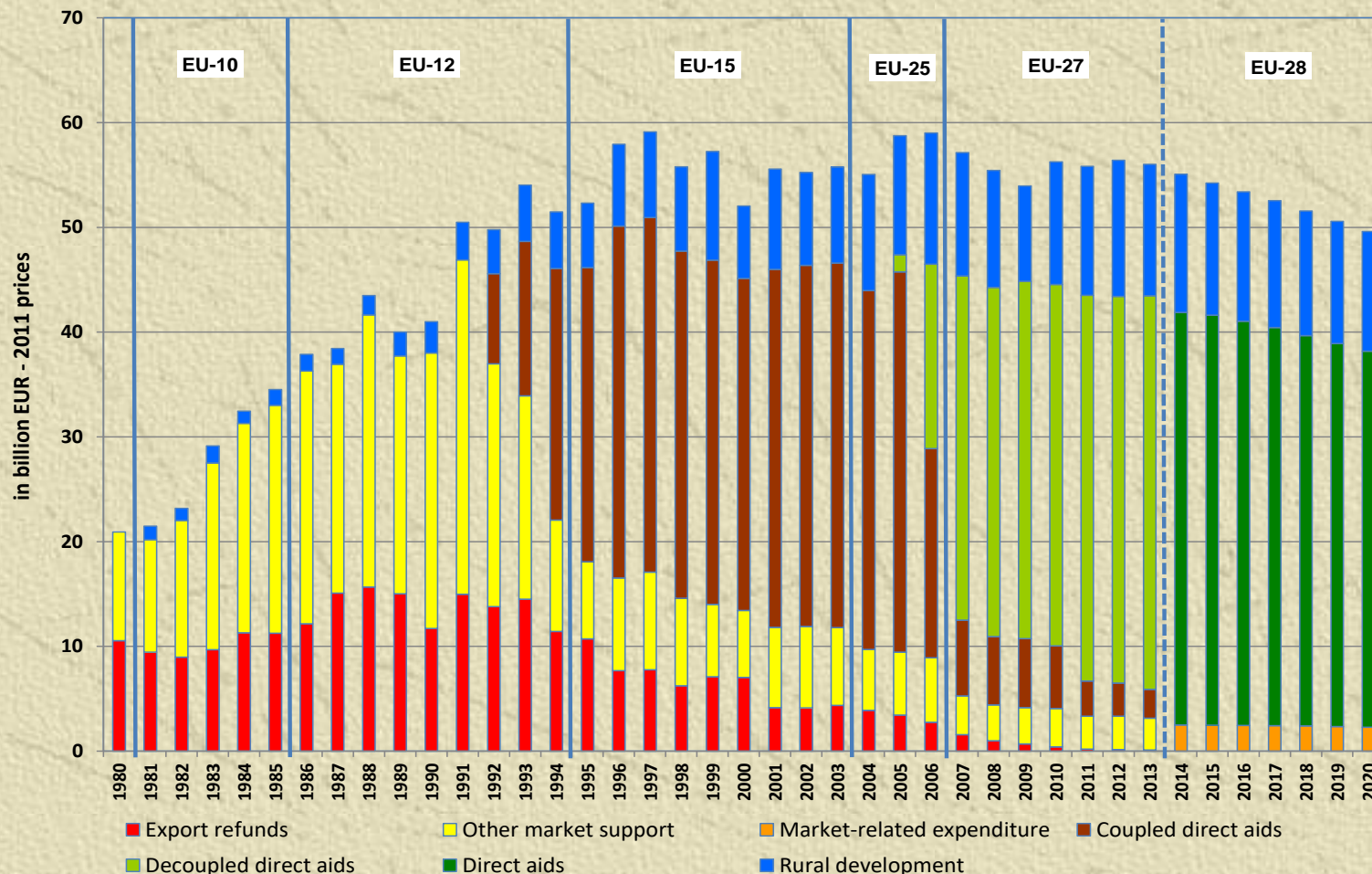
- Avg farm subsidy exceeds avg household income by 25%
- 75% of subsidies received by top 10%
- Mean annual crop insurance subsidy to top 1% is \$227 000; to bottom 80% it is \$5 000

*Economist*, "Agriculture: At the trough", 1 Jun 2013; and "The farm bill: A trillion in the trough", 8 Feb 2014, p. 33-4.



# Doha, post-Doha DS Disciplines, continued . . .

✦ CAP reform: expenditures 1980-2020 (2011 prices)



2020: 80% of EU ag support goes to 20% of farmers

Source: EU, DG Agriculture and Rural Development

*Economist*, “Charlemagne: How farmers rule Europe”, 29 May 2021, p. 27.

CAP before reforms:		MacSharry Reform 1992; 1995-00 WTO commitments	Subsequent reforms:	
1962 - 1980s	UR-GATT 1986-88 base years		Agenda 2000 Two pillars	Fischler 2003: single pay. scheme
			Doha round negotiations	
Insulated EC market through inter-related policy measures: - import barriers - domestic intervention - export subsidies		Greater market orientation: ↑ market access		
		Shift producer support toward direct payments	↑ coupled, direct support	Shift to decoupling
Self-sufficiency Overproduction Stock accumulation		Support tied to production; limit on production	↓ price support	Less production requirement
		EU created	EU enlargement	
Export subsidies to dispose surpluses		Environment/rural develop ↓ export subsidies		
PSE: trade distorting	92%	63%		29%
NPC	1.71	1.33		1.07

# Doha, post-Doha DS Disciplines, continued . . .

## 7.2 Comparison of green box and blue box

### ✦ Changes since Doha

	1995-00	2001-05	2006-10	2011-18
<b>US, \$ billion</b>				
Green box, total	49.8	<b>62.6</b>	<b>97.2</b>	<b>122.5</b>
Food aid	35.1	<b>42.2</b>	<b>74.3</b>	<b>102.7</b>
Income support	4.6	3.5	6.0	2.9
Blue box	0.0	0.0	0.0	0.0
<b>EU-15 and -28, € billion</b>				
Green box, total	<b>20.3</b>	<b>25.6</b>	<b>62.6</b>	<b>66.5</b>
Income support	0.4	<b>3.0</b>	<b>31.7</b>	<b>30.9</b>
Blue box	<b>20.9</b>	22.8	5.4	3.7
<b>Norway, NOK billion</b>				
Green box, total	<b>4.1</b>	4.5	6.8	7.9
Environmental	0.2	<b>0.9</b>	<b>4.1</b>	4.6
Vacation scheme	1.4	1.3	1.2	1.3
Blue box	<b>7.5</b>	<b>6.7</b>	<b>4.0</b>	<b>5.1</b>

Source: www.wto.org, WTO DS notification documents

# Doha, post-Doha DS Disciplines, continued . . .

## ✦ Assessing Norway's green and blue box programs

Programs listed as green box (GB) measures	1995-00	2001-04	2005	2011-19
	Official notifications, mill NOK			
Research, advisory, training	560	467	337	443
Grain stockholding	<b>666</b>	<b>611</b>	<b>7</b>	0
Investment aid	<b>772</b>	<b>752</b>	720	620
<b>Vacation/sickness support*</b>	<b>1 388</b>	<b>1 323</b>	1 183	1 294
<b>Environment</b>	<b>198</b>	<b>281</b>	-	-
<b>Acreage/cultural land. / Environmental programs</b>	-	-	<b>3 395</b>	<b>4 682</b>
All other GB support	816	979	351	968
<b>Total green box support</b>	<b>4 178</b>	<b>4 130</b>	<b>5 865</b>	<b>8 017</b>

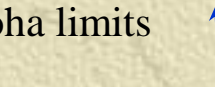
\*Note: “refund for additional farm operating expenses during holidays . . .”

# Doha, post-Doha DS Disciplines, continued . . .

- ◆ Blue box program suspected of box shifting
  - Acreage/cultural landscape program converted to environmental program under GB without any real programming change
  - Blue box support ↓ from +NOK7bln to < NOK4bln – box shifting?

Programs listed as blue box measures	1995-00	2001-04	2005	2006-11	2011-19
	Official notifications, million NOK				
<b>Acreage/cultural landscape</b>	<b>3 219</b>	<b>2 993</b>	<b>0</b>	<b>0</b>	0
Structural income support	1 436	1 218	1 067	1 038	1 386
Deficiency payment, milk	438	408	409	454	536
Deficiency payment, meat	507	534	564	565	593
Headage support	1 895	2 261	1 874	2 026	2 636
<b>Total blue box support</b>	<b>7 494</b>	<b>7 414</b>	<b>3 915</b>	<b>4 084</b>	<b>5 227</b>

Sources: WTO notifications

Proposed Doha limits on blue box 

# Doha, post-Doha DS Disciplines, continued . . .

## 7.3 Relationship between AMS and MPS

✦ MPS largest component of AMS: ↓ MPS → ↓AMS

	1995-2000	2001-05	2006-10	2011-18
<b>US \$ billion</b>				
Bound AMS	21.1	19.1	19.1	19.1
AMS	10.4	11.1	5.7	5.8
MPS	5.9	5.8	4.9	2.5
<b>EU-15 and -27, € billion</b>				
Bound AMS	72.9	67.2	72.4	72.4
AMS	48.4	31.7	13.6	6.4
MPS	45.0	28.5	11.0	5.7
<b>Norway, NOK billion</b>				
Bound AMS	12.6	11.4	11.4	11.4
AMS	10.6	10.7	10.5	10.3
MPS	10.8	11.3	11.4	11.3
Source: WTO DS notification documents				

# Doha, post-Doha DS Disciplines, continued . . .

## 7.4 Proposed Doha commitments: OTDS, AMS, BB

### ✦ Computation of OTDS and ↓ AMS (1995-00 base)

- ✦ Total trade-distorting support: bound AMS + 5% value of ag prodn + higher of 5% prodn value or of blue box value

Draft modalities, last version			
Overall total trade-distorting domestic support, OTDS		Final bound total AMS (amber box)	
Range of value of OTDS	Proposed % cuts	Range of value of AMS	Proposed % cuts
> \$60 bln	80	> \$40 bln	70%
\$10-60 bln	70	\$15-40 bln	60%
< \$10 bln	55	< \$15 bln	45%
Additional cut if BB is 40% of AMS (Norway)			7,5%

Source: WTO document, Dec 2008

# Doha, post-Doha DS Disciplines, continued . . .

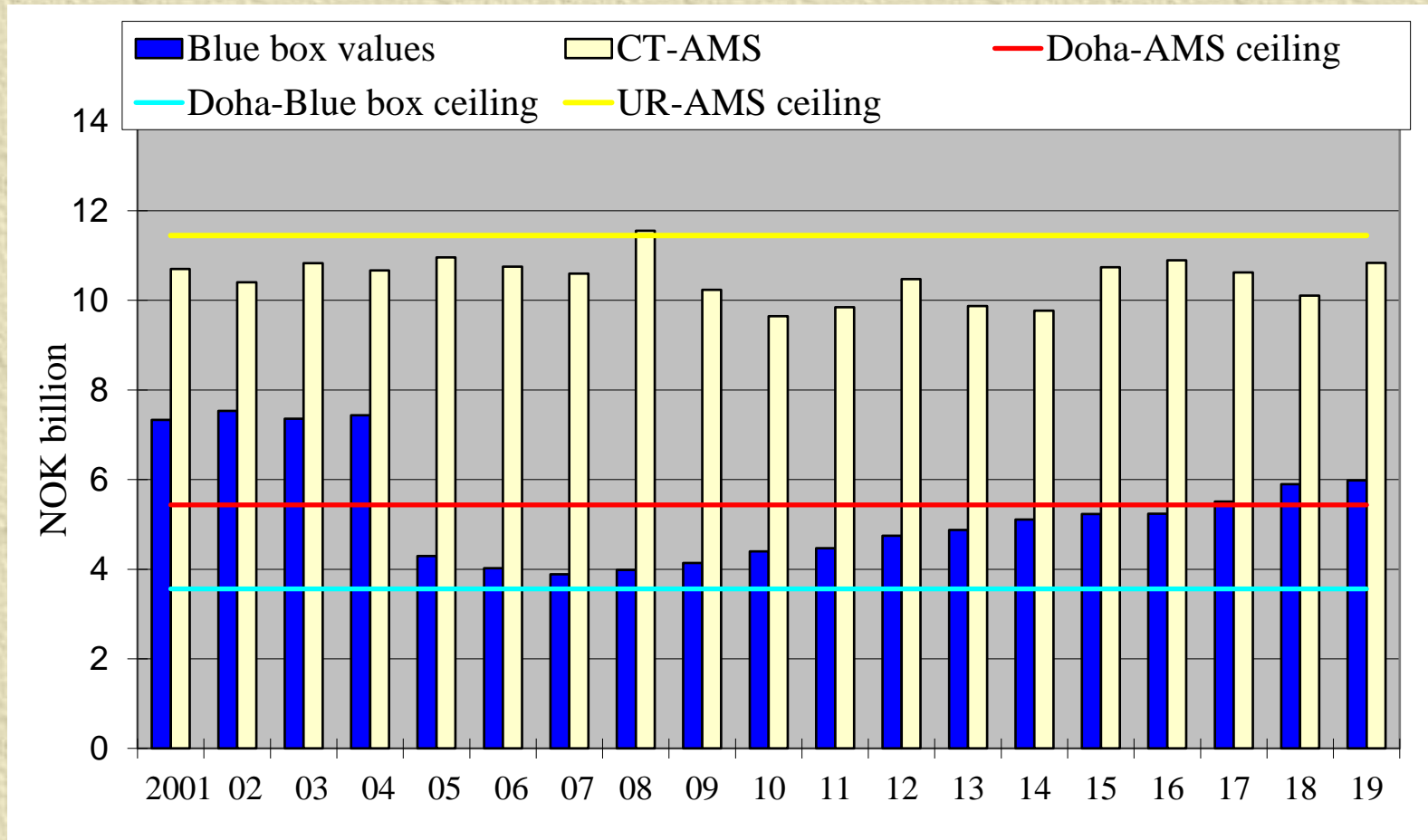
## ✦ Current status: Blue box

- ◆ Total blue box shall not exceed 2,5% of avg total value of ag prodn, 1995-2000 base year.
- ◆ Where BB was 40% of total value of trade-distorting support, 1995-2000, (i.e., Norway), the limit is equal to the reduction in AMS or 52,5%



# Doha, post-Doha DS Disciplines, continued . . .

- ✦ Norway's compliance with Doha proposals
  - ◆ New limits on AMS and blue box - policy reform?



# Doha, post-Doha DS Disciplines, continued . . .

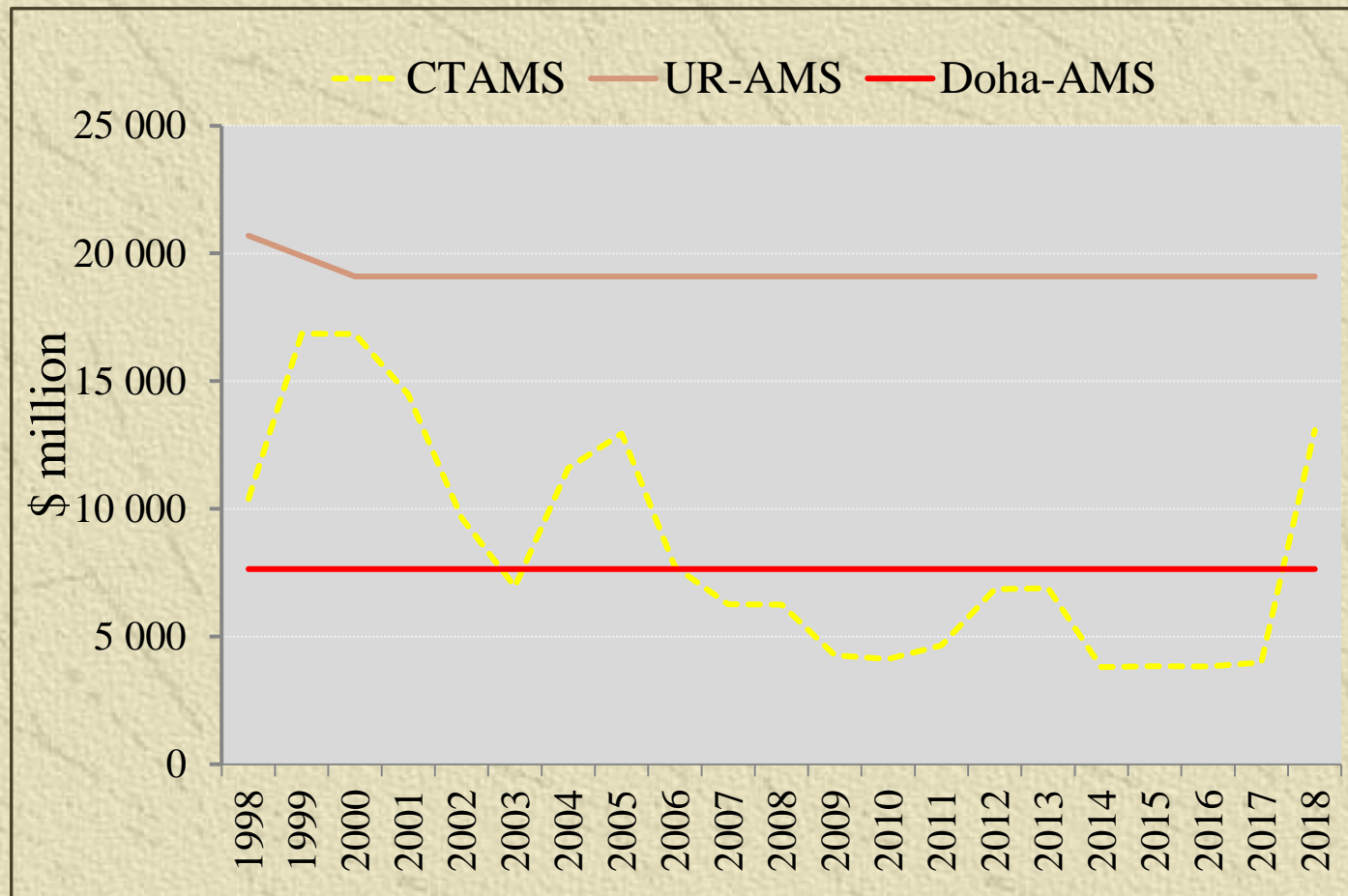
- ◆ Complying with new AMS limit - ↓ MPS (thru the elimination of the admin price)
  - 2007: MPS on poultry cut to 0.0 from NOK1.0bn
  - 2009: MPS on beef cut, from NOK2.6bn to NOK15mln and 0 in 2010
  - 2013: MPS on lamb/sheep meat cut

	2006	2007	2008	2009		2014-19
	AMS reduction: Official notifications on MPS, NOK mln					
				1 <sup>st</sup> half	2 <sup>nd</sup> half	
Beef	2 136.7	2 120.2	2 598.2	1 276.9	14.7	0.0
Poultry	1 023.7	0.0	0.0	2.7		0.0
Lamb/sheep	822.0	881.0	1 033.0	830.0		0.0
Pork	1 989.0	2 018.0	2 320.0	2 268.0		<b>2 920.0</b>
Source: WTO DS notification docs						

# Doha, post-Doha DS Disciplines, continued . . .

✦ Doha AMS limit and the effect on US ag programs

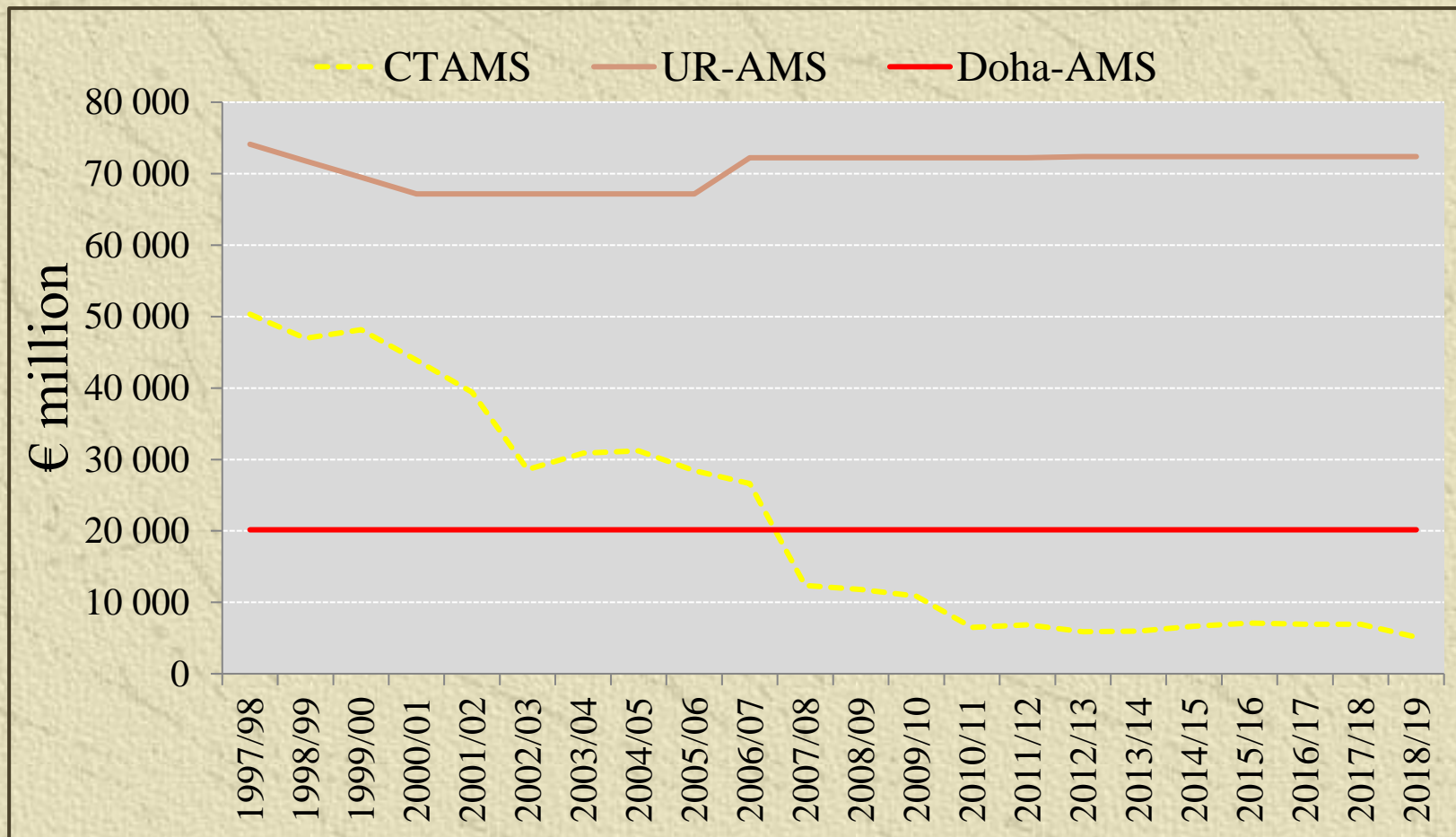
Current total AMS, UR and Doha final bound rates



Source: WTO DS notification documents

# Doha, post-Doha DS Disciplines, continued . . .

- ✦ Doha AMS limit and the effect on EU ag programs
- Current total AMS, UR and Doha final bound rates



Source: WTO DS notification documents

## 8. Multifunctionality, non-trade concerns and risk

### 8.1 Multifunctionality of agriculture

- ✦ Ag prodn and links to other activities
- ✦ Non-trade concerns (NTCs): trade objectives vs other social policy objectives

### 8.2 Risk and uncertainty

- ✦ Types of risk:
  - ◆ Individual / society
  - ◆ P, Q in absolute or relative terms
- ✦ Implications
  - ◆ Inefficiency and sub-optimal decisions
  - ◆ Mkt failure, gov't intervention

# Multifunctionality, NTCs and Risk, continued . . .

## 8.3 Agricultural risk/uncertainty requires a response

### ✦ Risk management responses

- ◆ DS: green, amber or blue box measures
- ◆ MA restrictions or use of ES
- ◆ Private sector initiatives or institutional / regulatory responses
  - Self-regulation
  - Public regulatory agency

### ✦ Source of the risk?

- ◆ Domestic marketing channel
- ◆ International supply chain

# Multifunctionality, non-trade concerns and risk

## Mapping of ag risks and risk management responses

Type of risk or concern	Risk to whom or risk of what	Risk management responses		
		DS programs or State-owned enterprises	MA policies, ES or state-trading enterprise (STE)	Private initiatives or institutional/ responses (regs)
1. Destruction/ deterioration of physical product	Farmer: losses in production or ↓ yields	Disaster relief; subsidize crop insurance or input subsidy	Trade policy is inappropriate as a response to correct for yield or production losses or handling problems (TBT or SPS regs)	Private crop insurance; yield futures contracts input suppliers
	Handler: can't move volume or losses too high from storage/transport	Subsidize on-farm storage or insurance; state takes on storage function		Private insurance for storage/transport; food safety regs
2. Farm income or agricultural prices too low	Farmer/exporter: discourages prodn and the process of specialization	Price floor, income support with a storage subsidy	Tariffs, export subsidy, or dumping through a STE	Forward contract, futures marketing, or a marketing board
3. Food price increases in poor, net food importing countries	Food inaccessible to consumers or too expensive for handlers/users	Price ceiling; consumption subsidy; buffer stocks; strategic reserves	Import subsidy to private or state importing firms; export tax or restrictions	Forward contracts, futures marketing or a marketing board; safety net programs

# Multifunctionality, non-trade concerns and risk

Type of risk or concern	Risk to whom or risk of what	Risk management responses		
		DS programs or State-owned enterprises	MA policies, ES or state-trade exporters	Private initiatives or institutional responses
4. Price and/or income instability	Macroeconomic instability from unstable development	Stabilize price or income through price/ income support; buffer stock; strategic reserve program	Tariff, import controls as a means to support price; ES; export credit/promotion programs; state commodity agreements or marketing boards	Price discovery system with merchandising strategies include forward/futures contracting, cooperatives, etc
	Ag sector pursues a strategy to diversify rather than specialize			
	Failure in ag credit markets	State rural credit or credit subsidy	Private ag lending firms; micro-credit	
5. Instability in production or on the market	Uncertainty affects commodity handlers	Storage subsidy or state-owned reserves; buffer stocks or strategic reserve	Variable levy or other import restriction; ES	Forward/futures contracting
	Food insecurity			Diversify import sources
	Market failure: insufficient public goods provided	Green box measures to target landscape, environment, etc; amber for P-support	MA restrictions to protect production levels	Market cannot supply enough public goods without regulation; if quotas used, then make tradable



# Multifunctionality, non-trade concerns and risk

- ✦ Example: instability in production and food security
  - ◆ What is the appropriate policy response?
    - Domestic market instability
    - Foreign market instability
  - ◆ Waugh-Oi-Massel model
  - ◆ WTO compliance, self-sufficiency, and food security

# Multifunctionality, non-trade concerns and risk

## ✦ Public stockholding for food security: Bali notifications

Name of crop	Unit	Year 1	Year 2	Year 3
Opening balance of stocks				
Annual purchases/releases under programme				
Purchases (value, volume)				
Releases (value, volume)				
Purchase prices				
Release prices				
End-year stocks				
Total production (value, volume)				
Info on beneficiaries (national, sub-national)				
Number of beneficiaries				
Quantity released to the beneficiaries				
Government aid in support of private storage				
Trade statistics				
Total import (value, volume)				
Total export (value, volume)				

Source: WTO, Bali ministerial decision on “Public stockholding”, document WT/MIN(13)/W/10, dated 6 Dec 2013.

## 9. Concluding Comments on Subsidies

### 9.1 Working definition is adequate if imperfect

- ✦ Pragmatic but raises problems
- ✦ DS categories have economic meaning, but:
  - ◆ Treating MA as if separate weakened disciplines
  - ◆ Economic efficiency of income support is weakened in the presence of tariff protection (price support)

### 9.2 Industry: treat subsidy on sector-specific basis?

- ✦ Improve coherence of good/bad subsidy
- ✦ Discipline use during recession or financial crisis

# Concluding Comments on Subsidies, continued . . .

## 9.3 Doha and developing countries

- ✦ Doha limits pose no constraint for biggest DS users
  - ◆ No liberalization, no reform
  - ◆ Box shifting, dropping administered prices and sensitive sectors designation means reform avoidance
  
- ✦ If DCs avoid ag reform why should LDCs commit to limit use of MA, DS and constrict their policy space?
  - ◆ Food security and dependence
  - ◆ Development, import substitution, export promotion
  - ◆ Why give up bargaining chips and open up manu and service sectors?