Applied Welfare Economics and Agricultural Policy

MSc Course, Humboldt-Universität zu Berlin

by
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in cooperation with
Franz Heidhues and Jerzy Wilkin

supported by
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Applied Welfare Economics and Agricultural Policy

Introduction

1 Principles of applied welfare economics
2 Price policy I
3 Price policy II

4 EU agricultural policy and international framework

Applied Welfare Economics and Agricultural Policy

5 Agricultural policy in transition countries (Wilkin)
6 EU enlargement and accession (Wilkin)
7 Rural finance in development (Heidhues)
8 Structural adjustment policies (Heidhues)

9 Structural policy
10 Multiobjective policy analysis

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Chapter 3

Price Policy II

Price Policy in a Two-commodity Economy

The problem

Policy	Protection rate		Resource flow compared to free trade	
	Rice	Coffee	Rice	Coffee
Reference situation	50	10	↑↑	↓
Free trade in rice	0	10	↓	↑
Free trade in coffee	50	0	↑↑	↓↓
Free trade	0	0	./.	./.
Equal protection rates	30	30	./.	./.

Price Policy in a Two-commodity Economy

Second-best theorem

The pursuit of a policy to satisfy the optimum conditions in one part of the economy does not necessarily lead to an increase in welfare.

Price Policy in a Two-commodity Economy

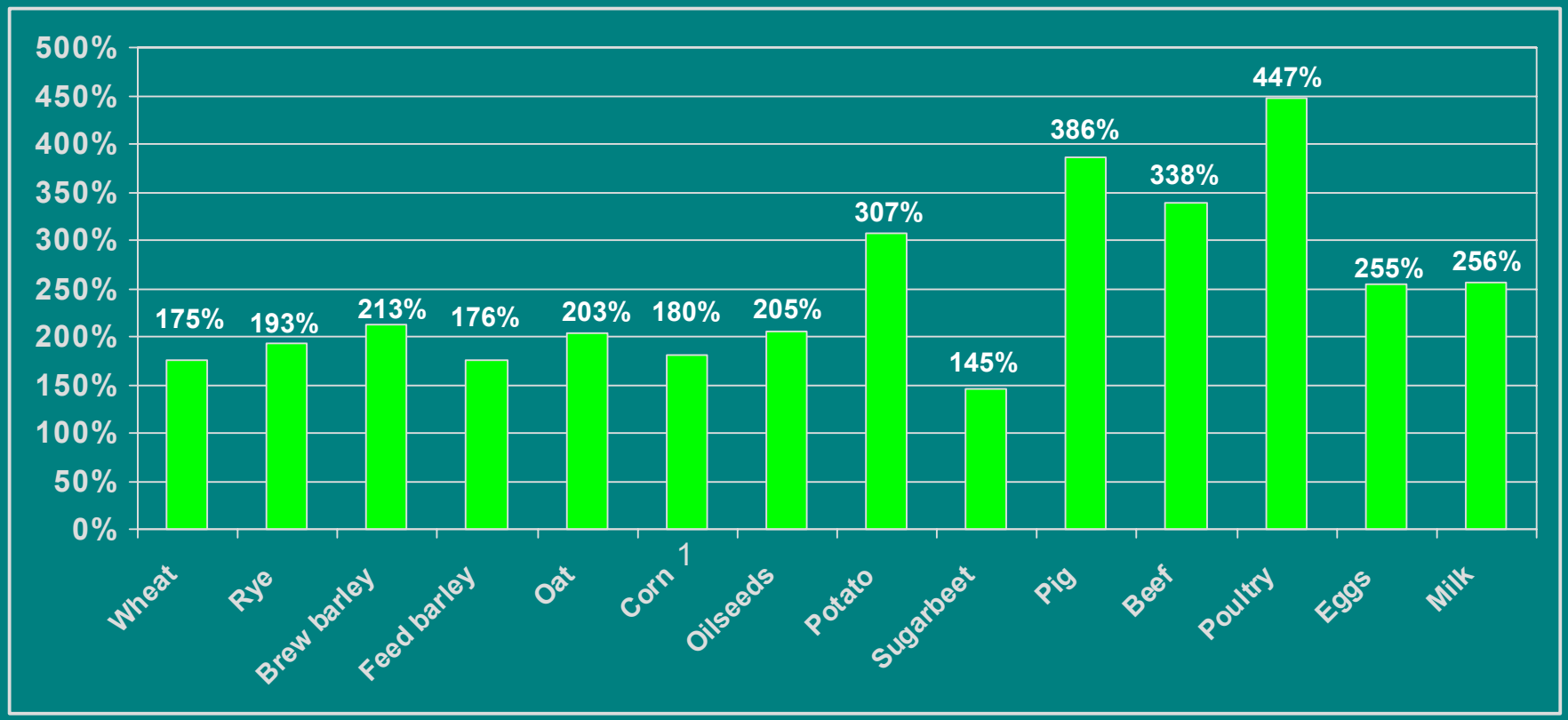
Absolute prices and price ratios

Note:

$$\frac{p_i^1}{p_i^2} = \frac{p_w^1\ (1+r^1)}{p_w^2\ (1+r^2)}$$

Price Ratios for Agricultural Products in the Former GDR

(GDR price* in % of sales revenue in FRG, 1988)



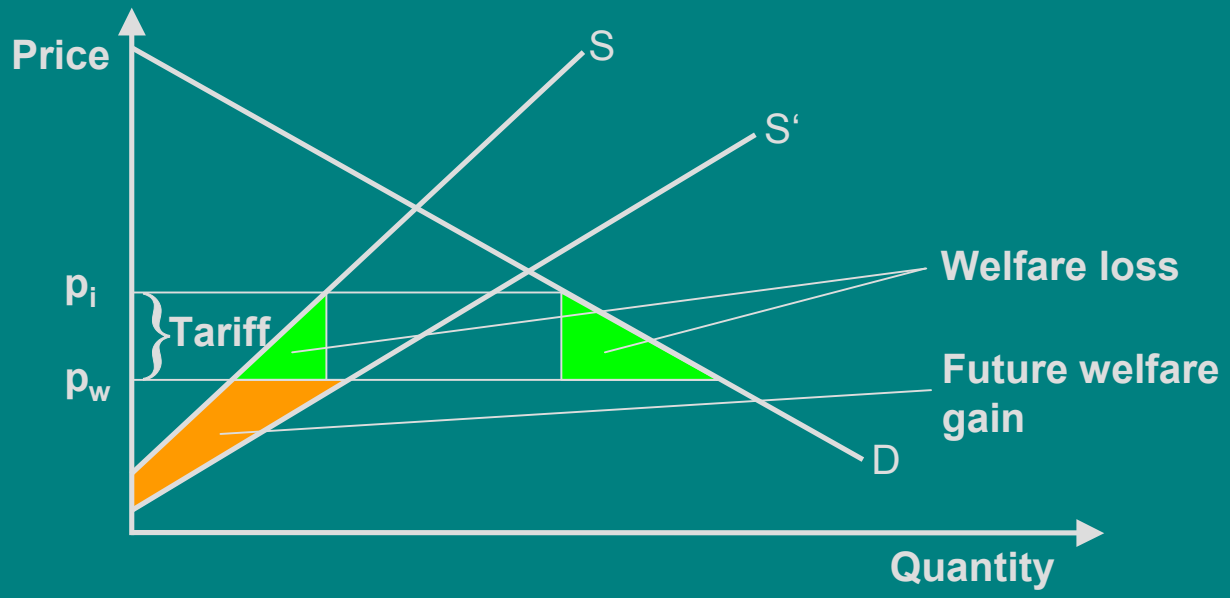
* Exchange rate 1 DM = 1 M

1 Including other cereals in the GDR.

Source: Koester and Brooks (1998)

Infant Industry Protection

The problem



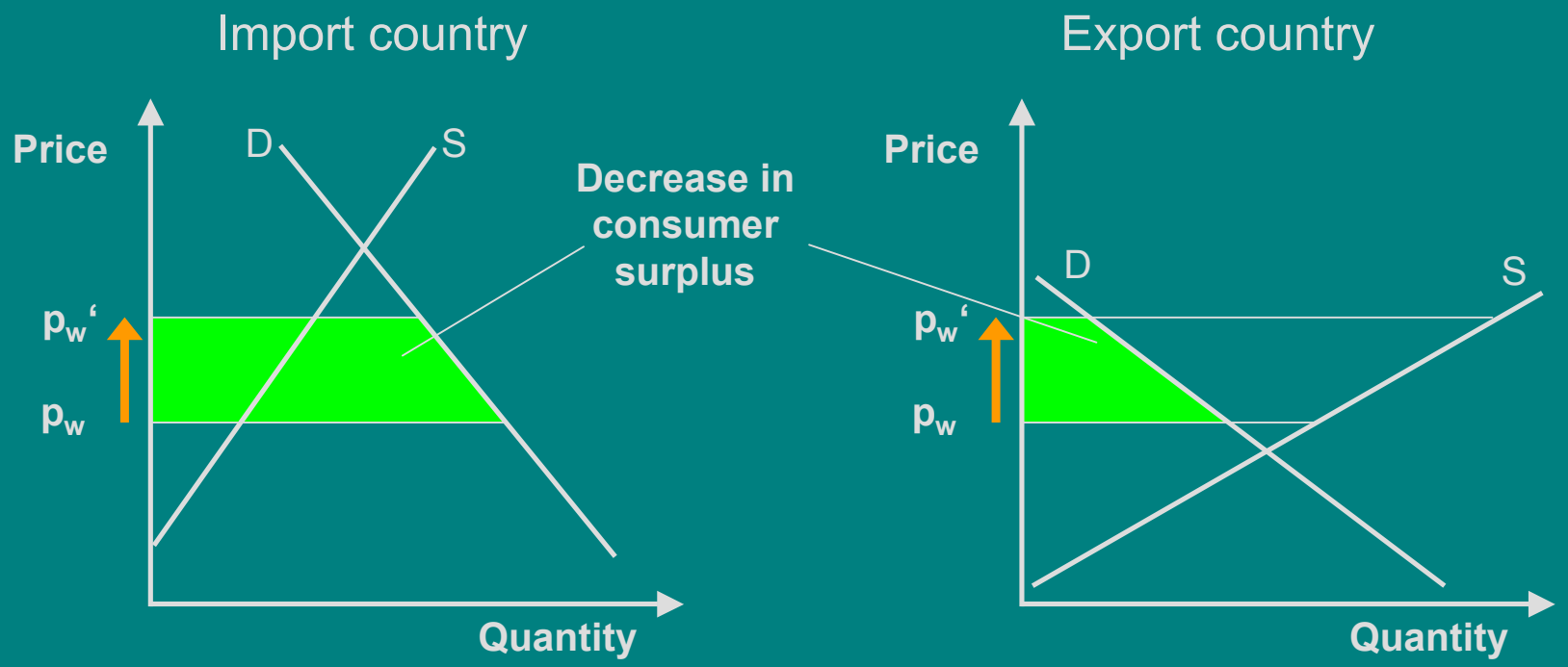
S - Domestic supply curve
D - Domestic demand curve

Infant Industry Protection

Some questions

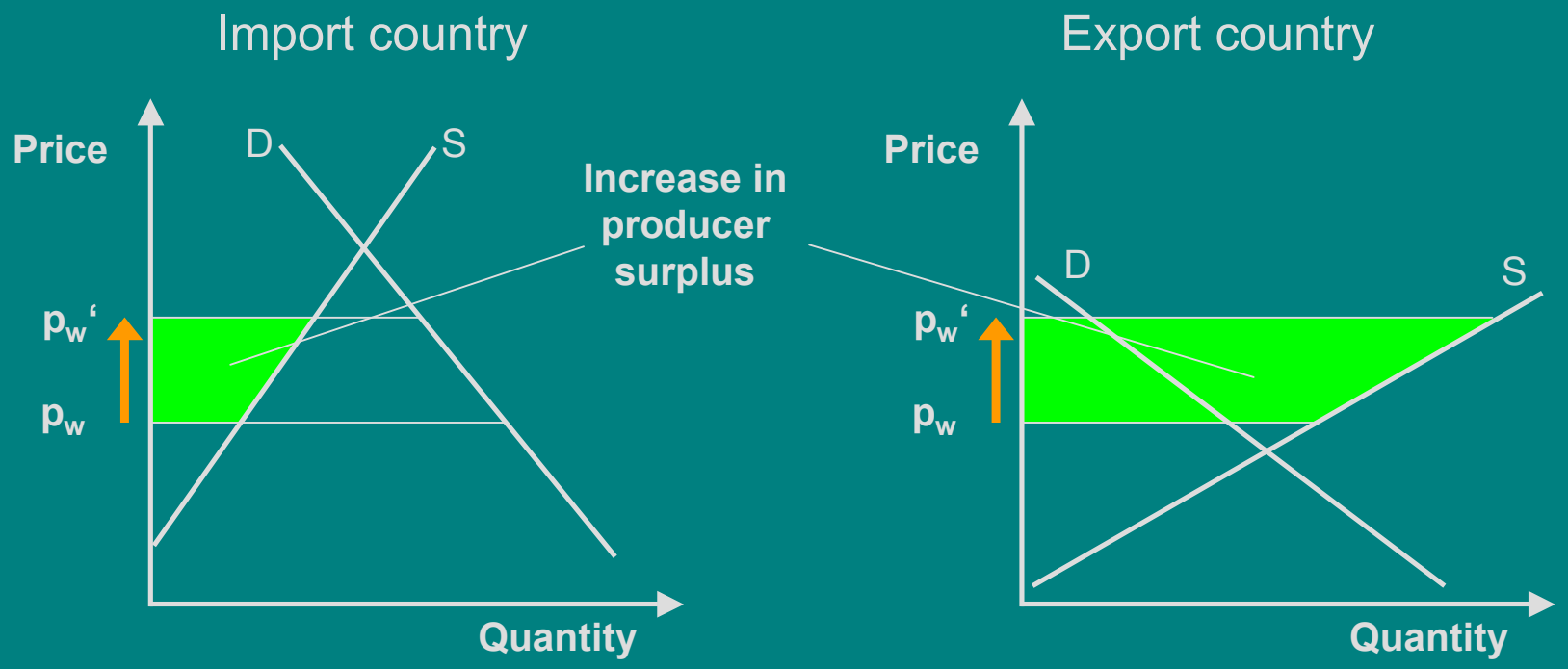
- What could be the causes of price-induced supply curve shifts?
- Are there better policies than protection?
- How can the trade-off between present loss and future gain be evaluated?
- What about the empirical relevance of infant industry protection?

Welfare Effects of a Devaluation



$$p^{€} = p^{\$} \cdot er^{€}_{\$}$$

Welfare Effects of a Devaluation



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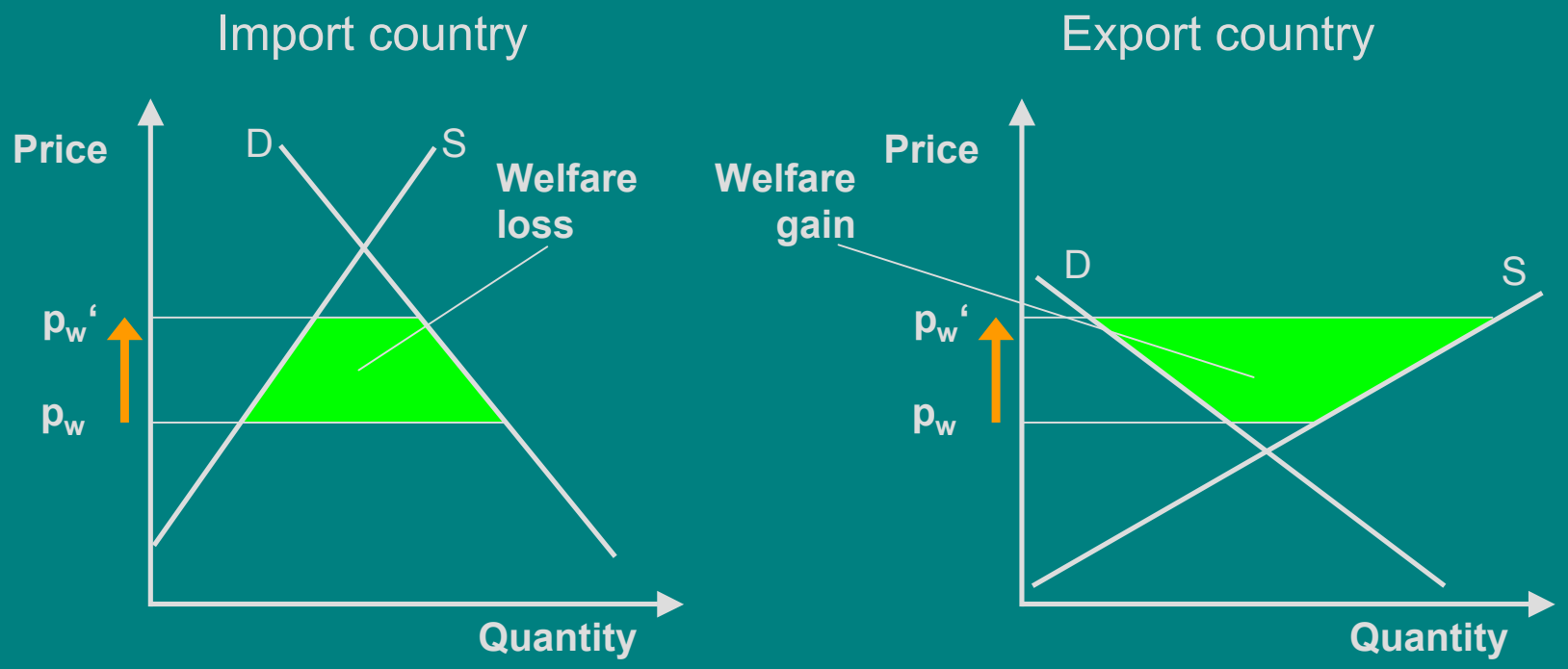
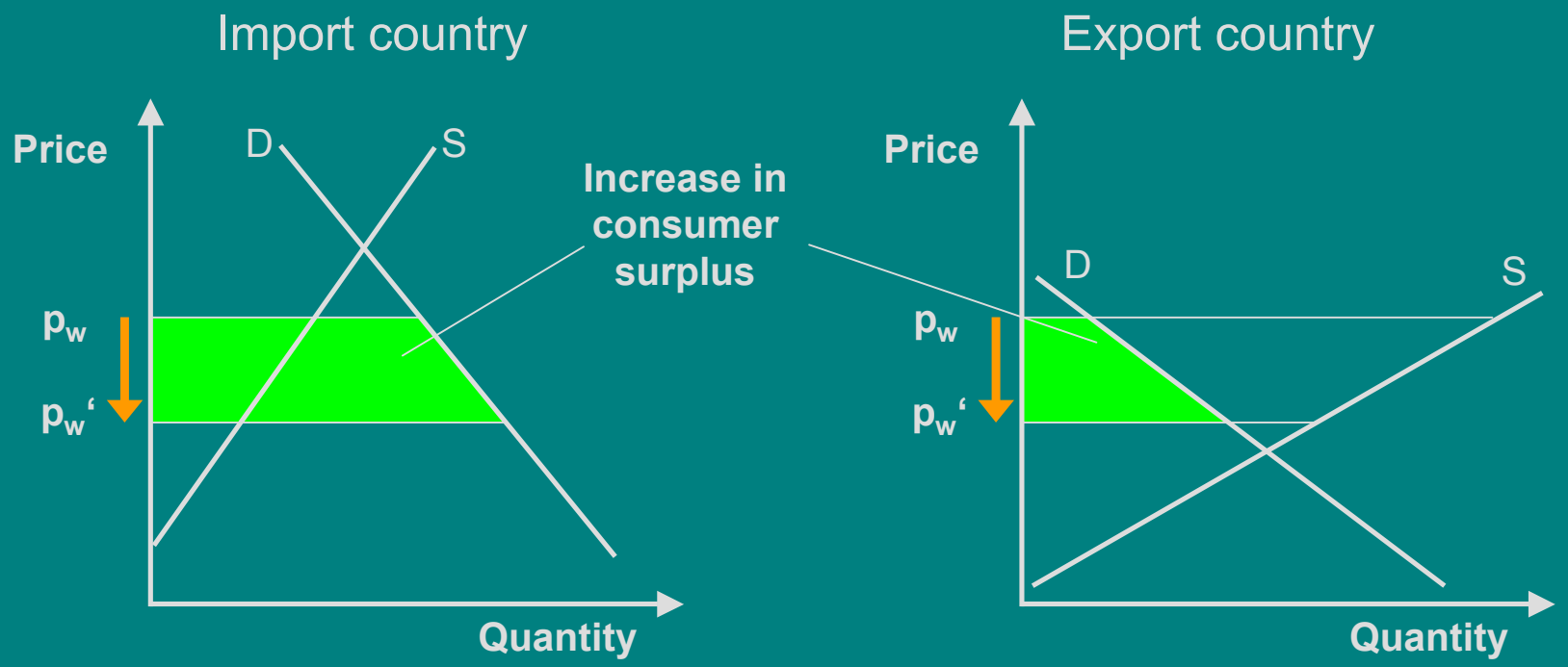


Welfare Effects of a Revaluation



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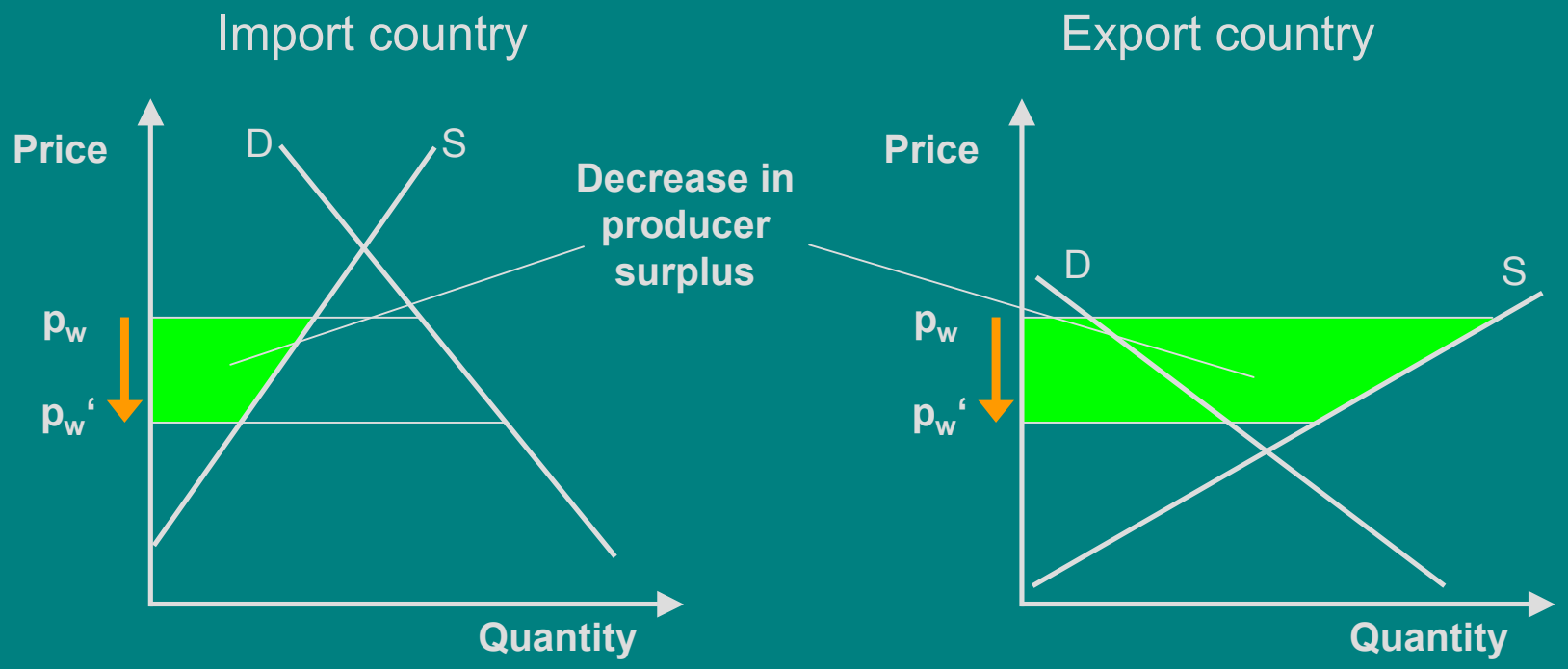

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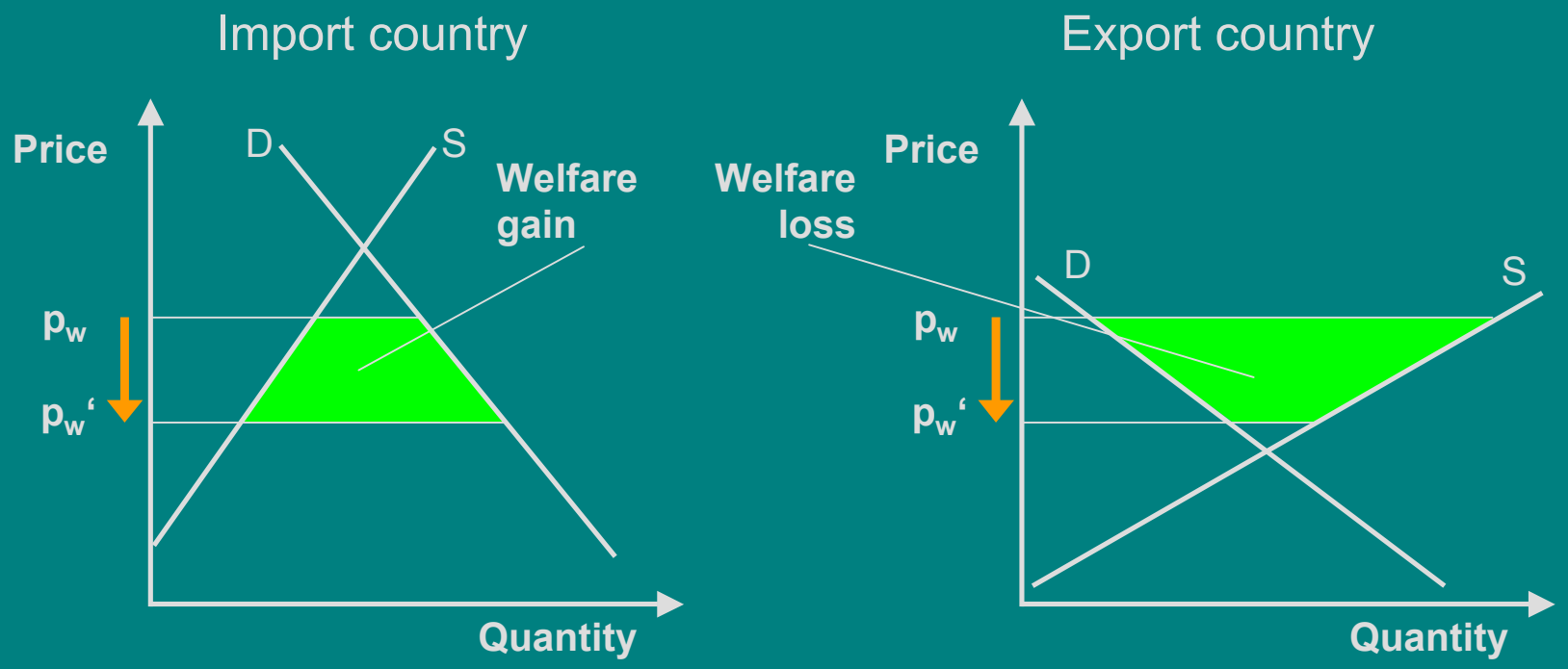
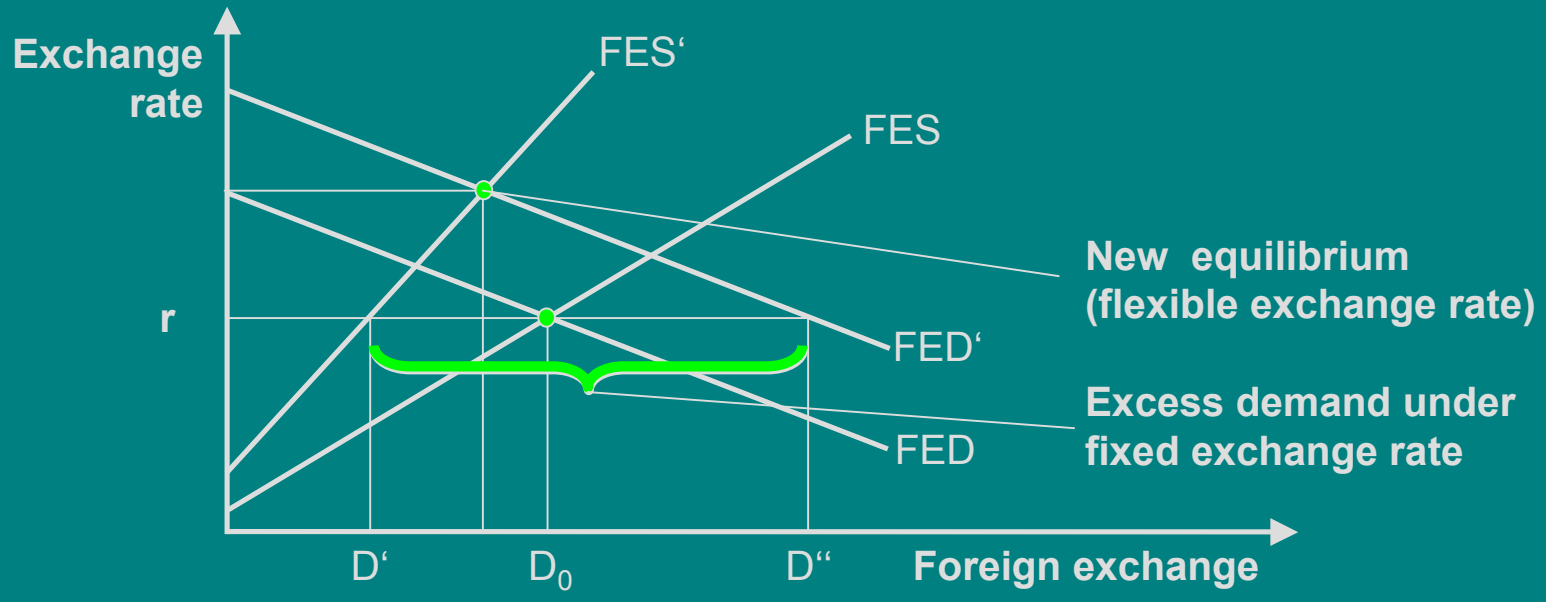


Overvalued Exchange Rate

Foreign exchange market

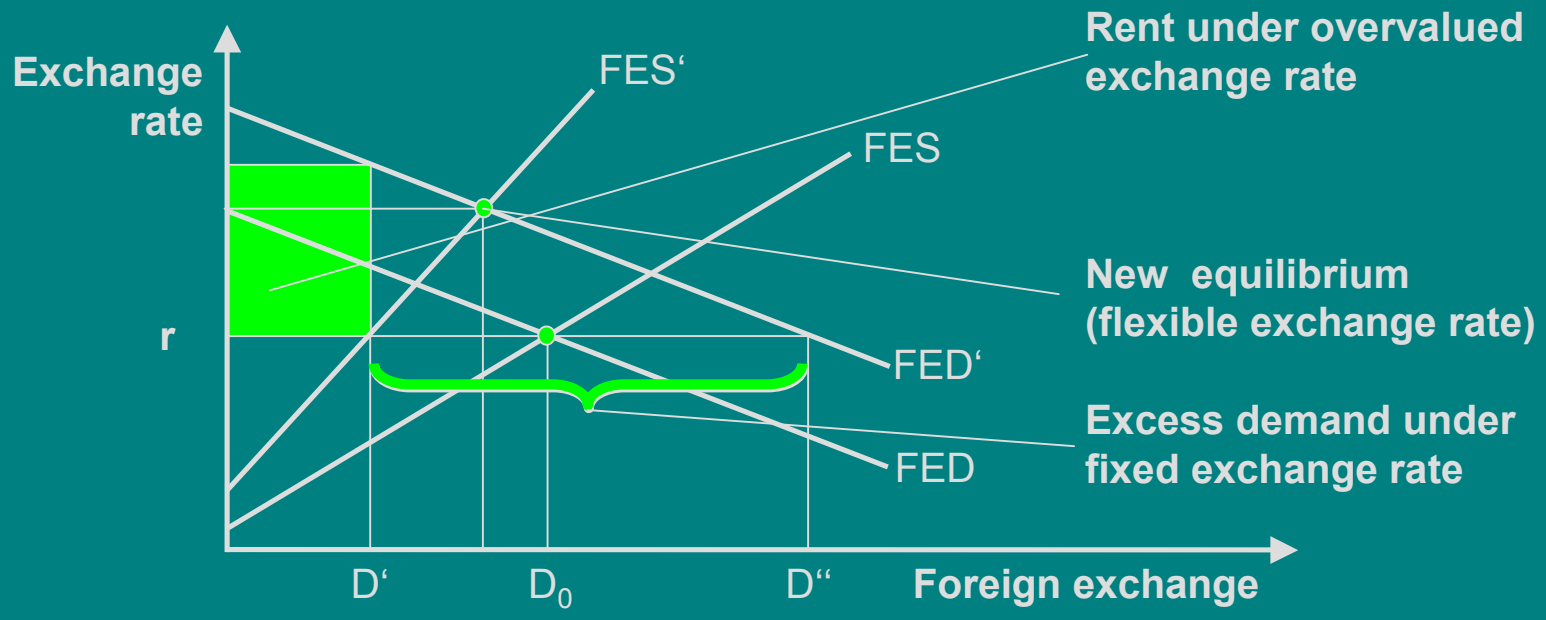


Note:

Foreign exchange supply (FES)	= Export + Transfer + Capital Import
Foreign exchange demand (FED)	= Import + Capital Export + Statistical Error

Overvalued Exchange Rate

Foreign exchange market



Note:

Foreign exchange supply (FES)	= Export + Transfer + Capital Import
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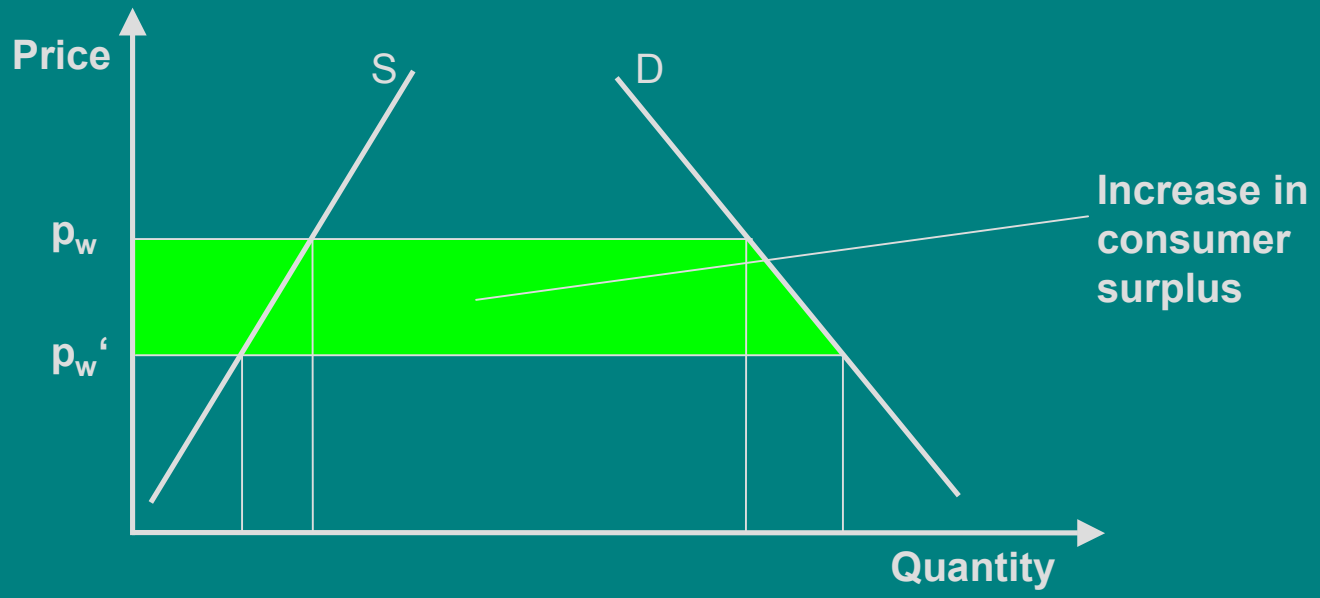
Overvalued Exchange Rate

Some questions

- Is foreign exchange a scarce good?
- Who gets the rent?

Overvalued Exchange Rate

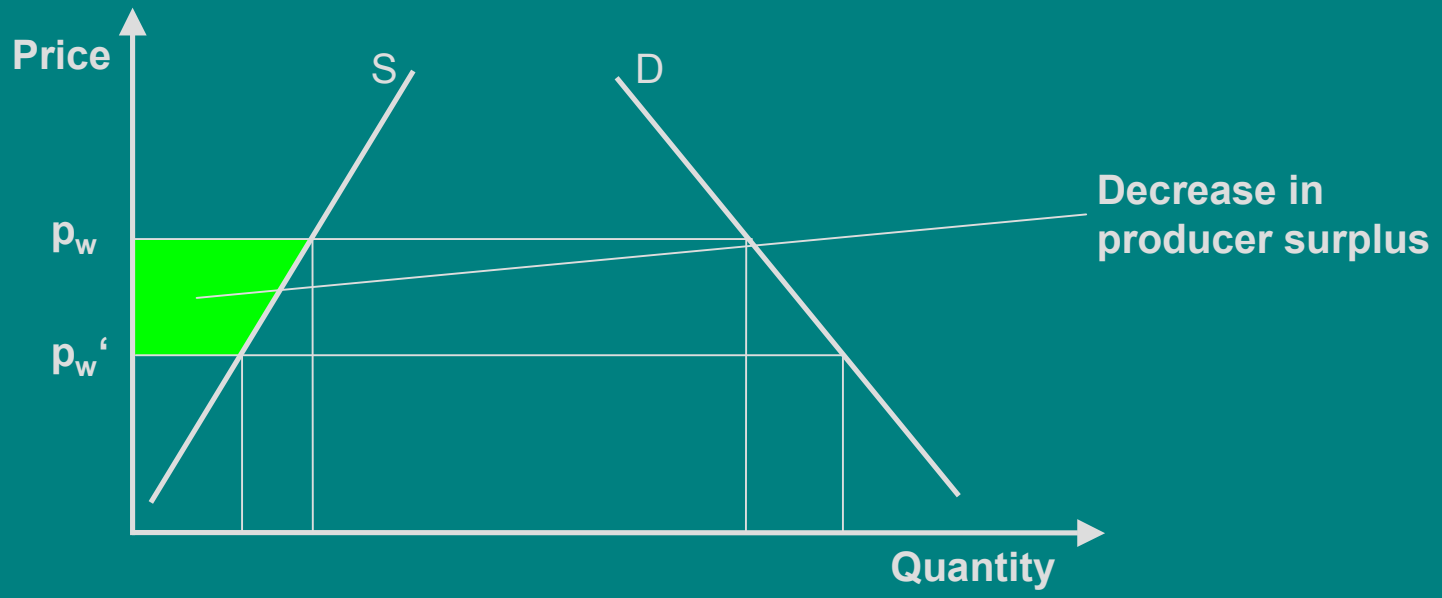
Welfare effects in an import country



S - Domestic supply curve
D - Domestic demand curve

Overvalued Exchange Rate

Welfare effects in an import country



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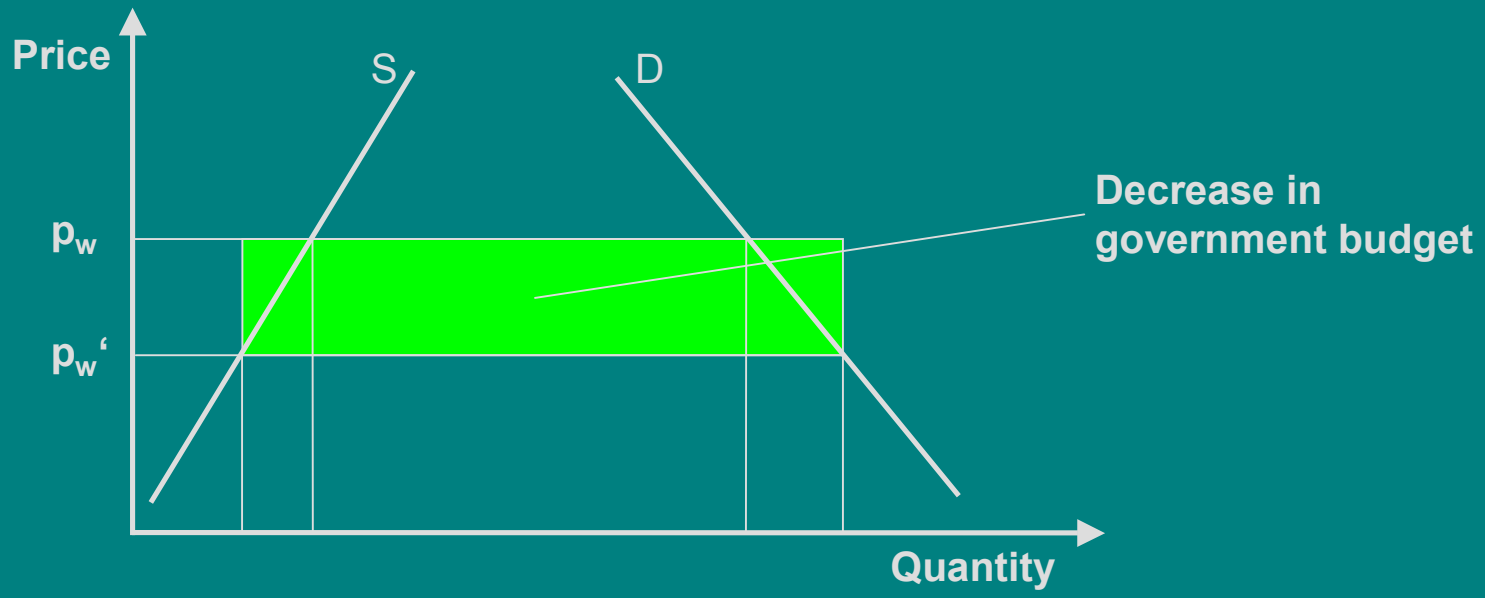

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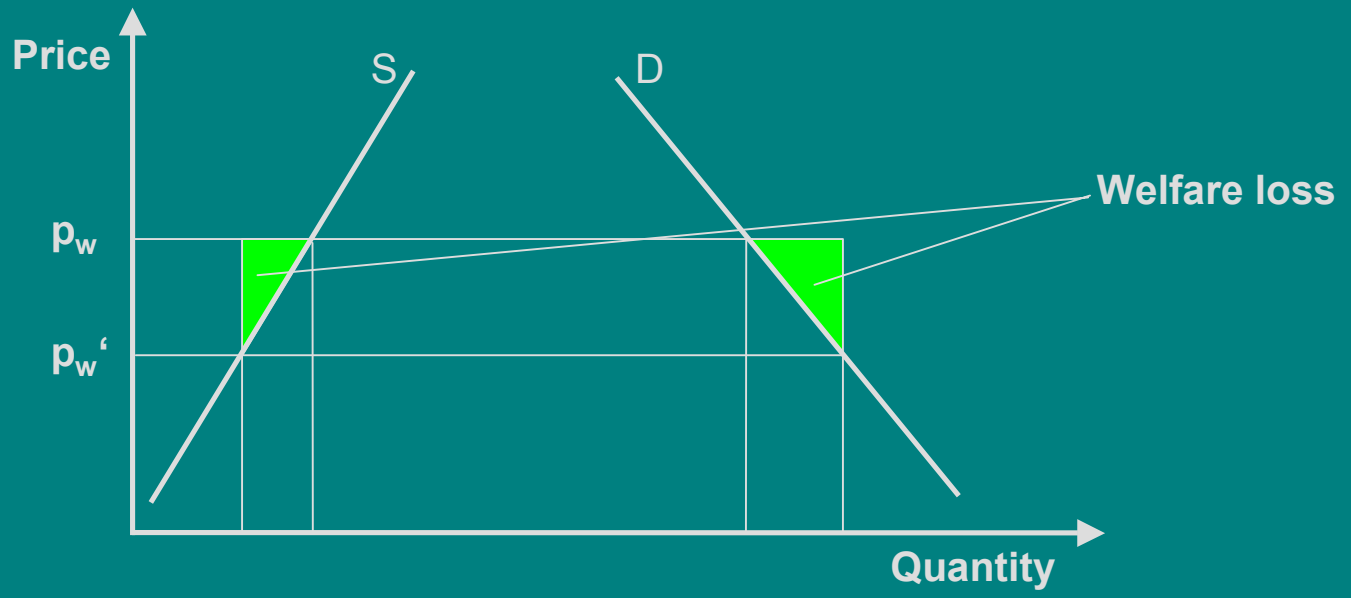
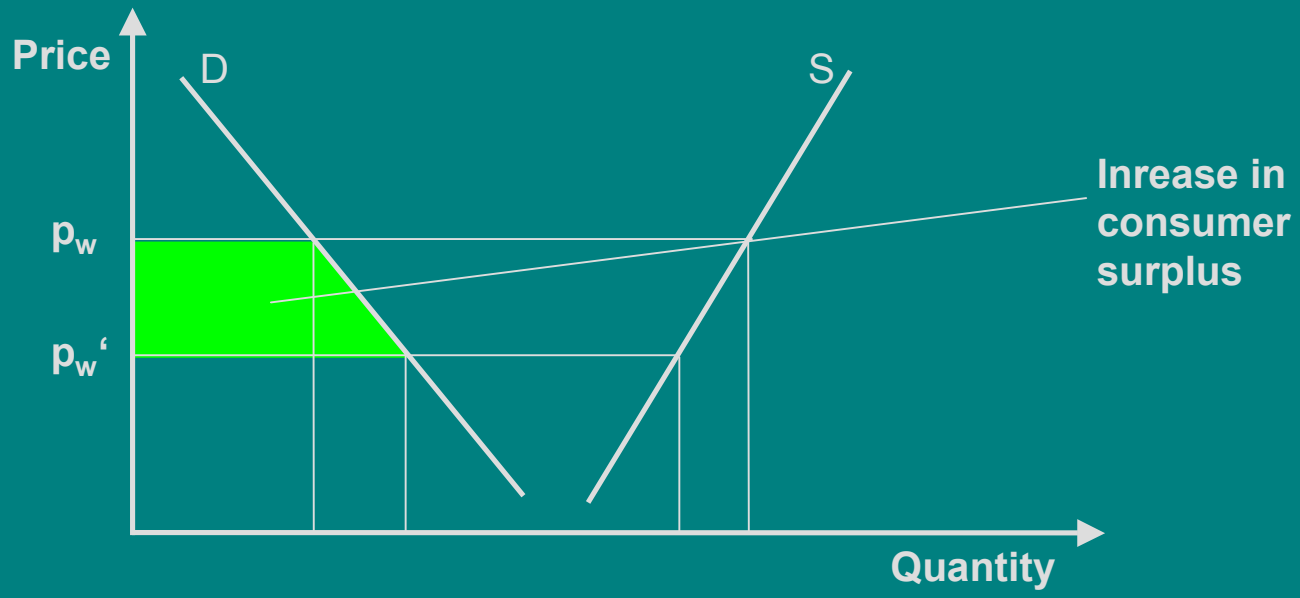


Note:

dW =	dCS	+	dPS	+	dG
	(-)		(+)		(-)	(-)

Overvalued Exchange Rate

Welfare effects in an export country



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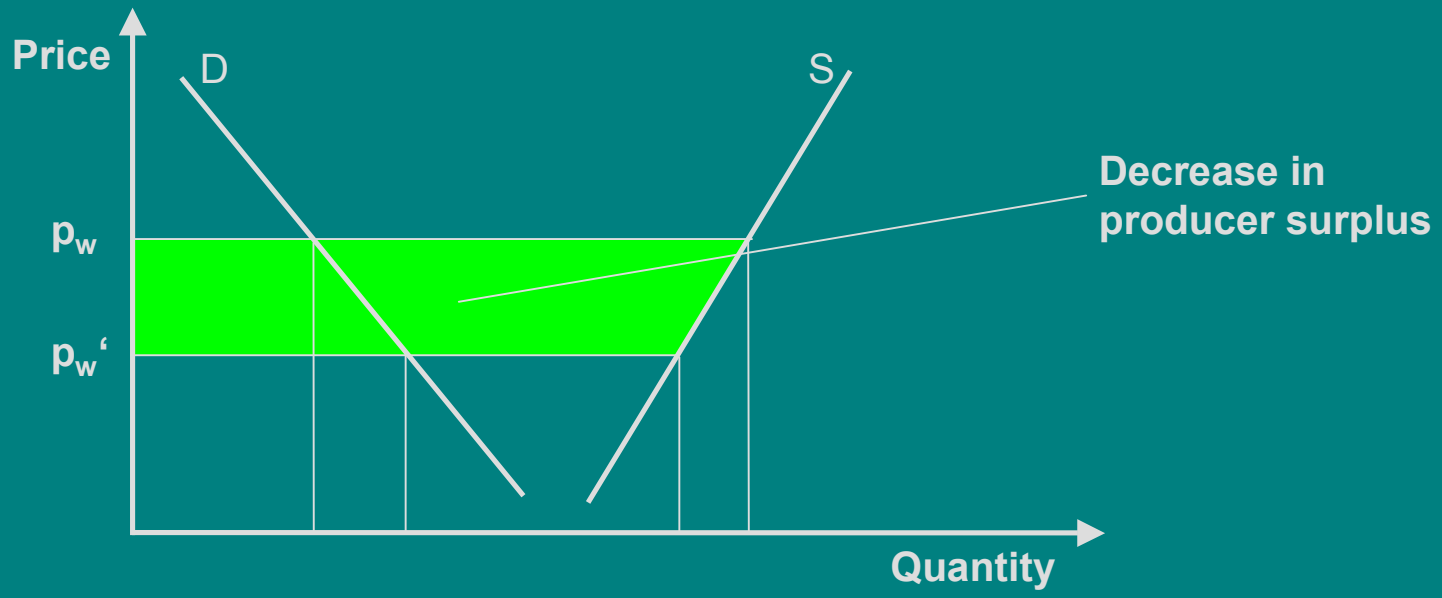
Overvalued Exchange Rate

Welfare effects in an export country



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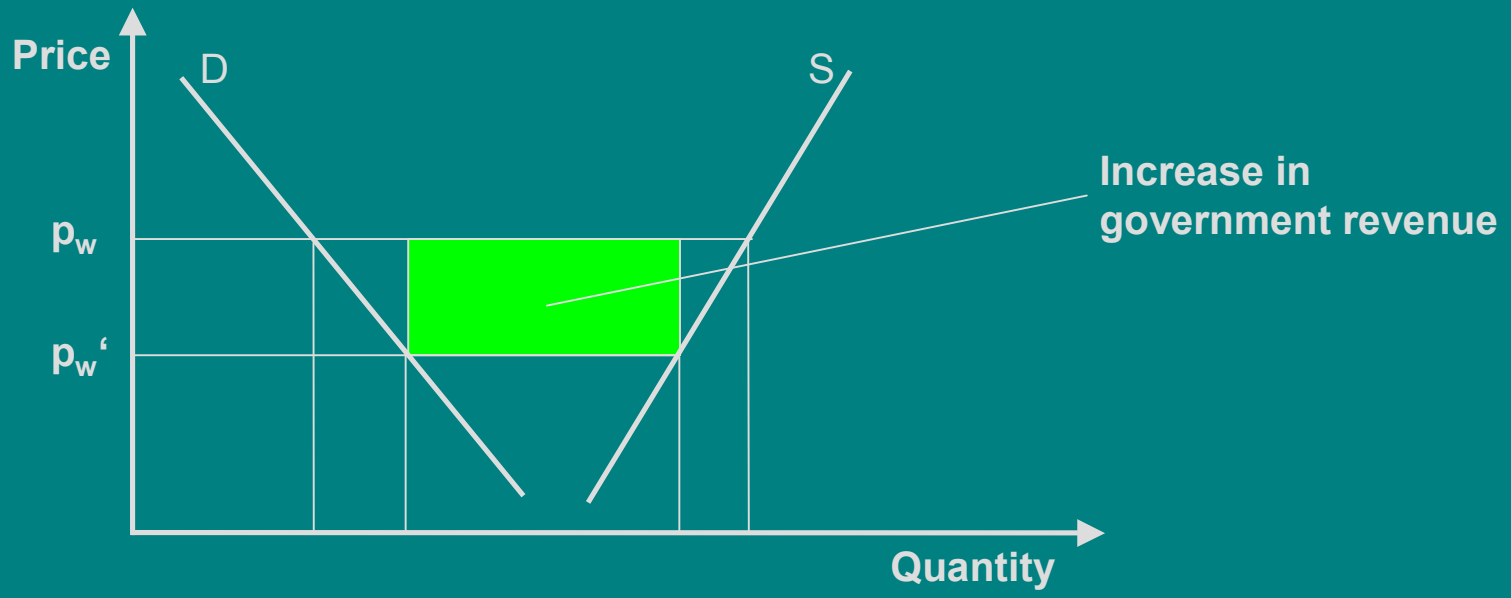
Overvalued Exchange Rate

Welfare effects in an export country



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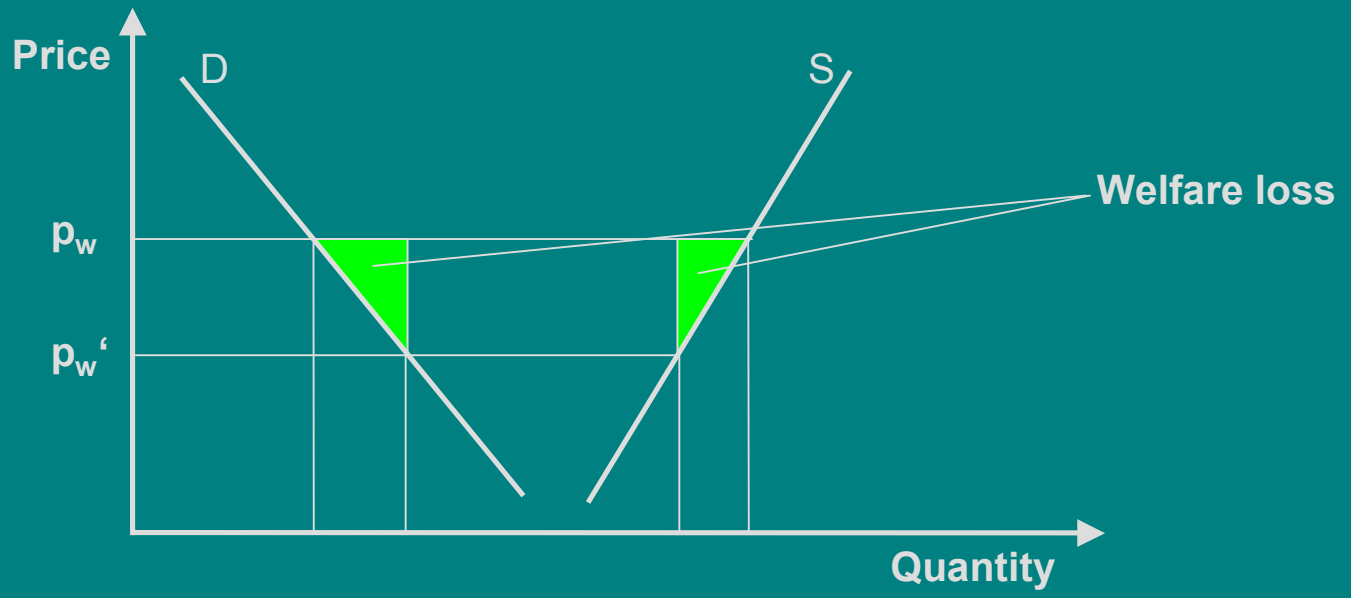

Note:

dW =	dCS	+	dPS	+	dG
(-)	(+)		(-)		(+)

Direct and Indirect Nominal Protection (%)

Imported food products

Country	Product	1980-84		
		Direct	Indirect	Total
Brazil	Wheat	- 7	-14	-21
Chile	Wheat	9	- 7	2
Colombia	Wheat	9	-34	-25
Côte d'Ivoire	Rice	16	-26	-10
Dominican Rep.	Rice	26	-19	7
Egypt	Wheat	-21	-14	-35
Ghana	Rice	118	-89	29
Korea	Rice	86	-12	74
Malaysia	Rice	68	-10	58
Morocco	Wheat	0	- 8	- 8
Pakistan	Wheat	-21	-35	-56
Philippines	Corn	26	-28	- 2
Portugal	Wheat	26	-13	13
Sri Lanka	Rice	11	-31	-20
Turkey	Wheat	- 3	-35	-38
Zambia	Corn	- 9	-57	-66
Average		21	-27	- 6

Source: Krueger, Schiff, and Valdés (1988)

Direct and Indirect Nominal Protection (%)

Exported food products

Country	Product	1980-84		
		Direct	Indirect	Total
Argentinia	Wheat	-13	-37	-50
Brazil	Soybeans	-19	-14	-33
Chile	Grapes	0	- 7	- 7
Colombia	Coffee	- 5	-34	-39
Côte d'Ivoire	Cocoa	-21	-26	-47
Dominican Rep.	Coffee	-32	-19	-51
Egypt	Cotton	-22	-14	-36
Ghana	Cocoa	34	-89	-55
Malaysia	Rubber	-18	-10	-28
Pakistan	Cotton	- 7	-35	-42
Philippines	Copra	-26	-28	-54
Portugal	Tomatoes	17	-13	4
Sri Lanka	Rubber	-31	-31	-62
Thailand	Rice	-15	-19	-34
Turkey	Tobacco	-28	-35	-63
Zambia	Tobacco	7	-57	-50
Average		-11	-29	-40

Source: Krueger, Schiff, and Valdés (1988)

Overvalued Exchange Rate
Some more questions

- How is resource allocation affected?
- What agricultural price policy should be applied?
- How is international development cooperation affected?
- Is an overvalued exchange rate sustainable?
- Is there a need for structural adjustment?

Literature

* **Knutson, R.D.; Penn, J.B.; Boehm, W.T. (1995): *Agricultural and Food Policy*. 3rd ed. New Jersey: Prentice-Hall , pp. 187-205**

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Questions

1. Explain a second-best price policy in a two commodity economy!
2. What is the reasoning of the "infant industry" argument to justify a protectionist price policy?
3. Compare welfare effects of a devaluation and a revaluation on a commodity market!
4. What are the reasons for changes in exchange rates and, in particular, what leads to overvalued exchange rates?
5. Explain the welfare effects of overvalued exchange rates!
6. How can the bias against agriculture in developing countries be measured?