

Applied Welfare Economics and Agricultural Policy

MSc Course, Humboldt-Universität zu Berlin

by

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in cooperation with

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supported by

Nana Künkel

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

Applied Welfare Economics and Agricultural Policy

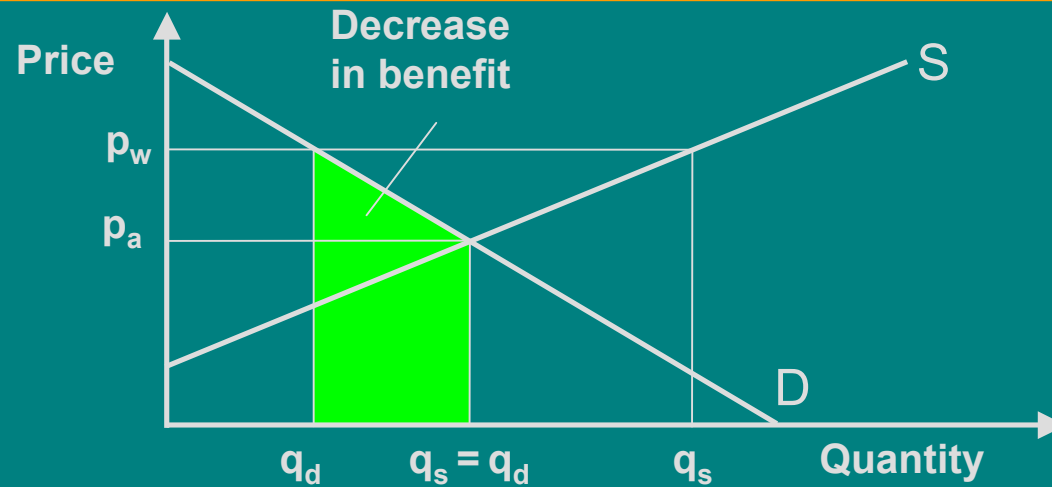
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Chapter 2

Price Policy I

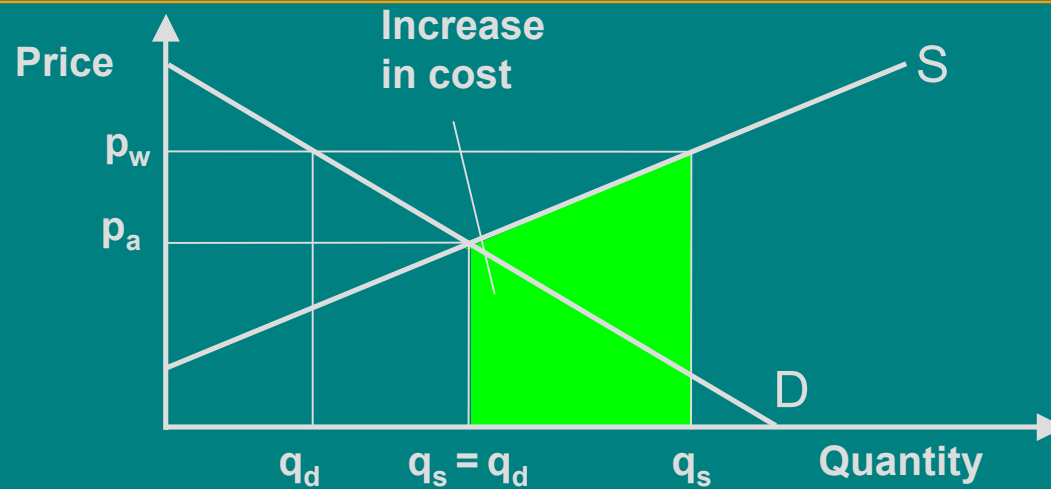
Theorem of Comparative Advantage

Export country



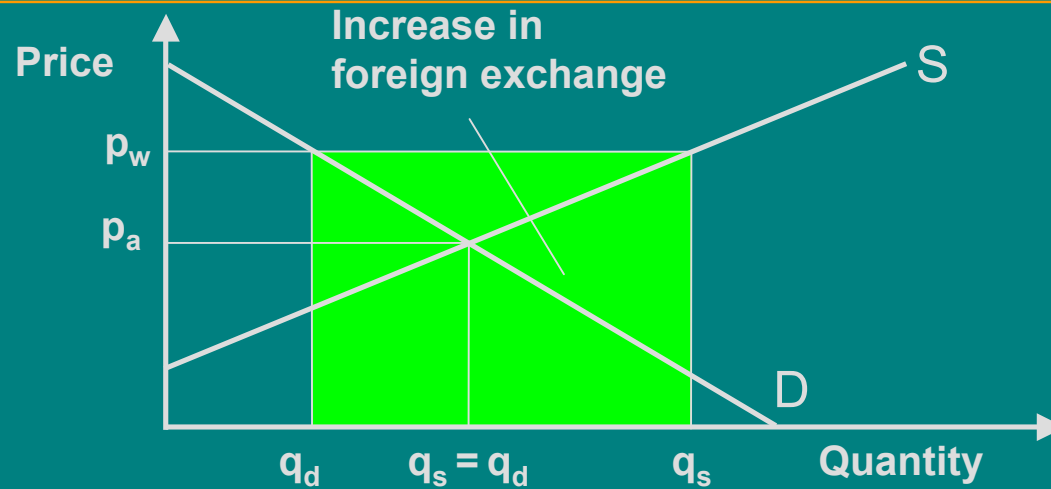
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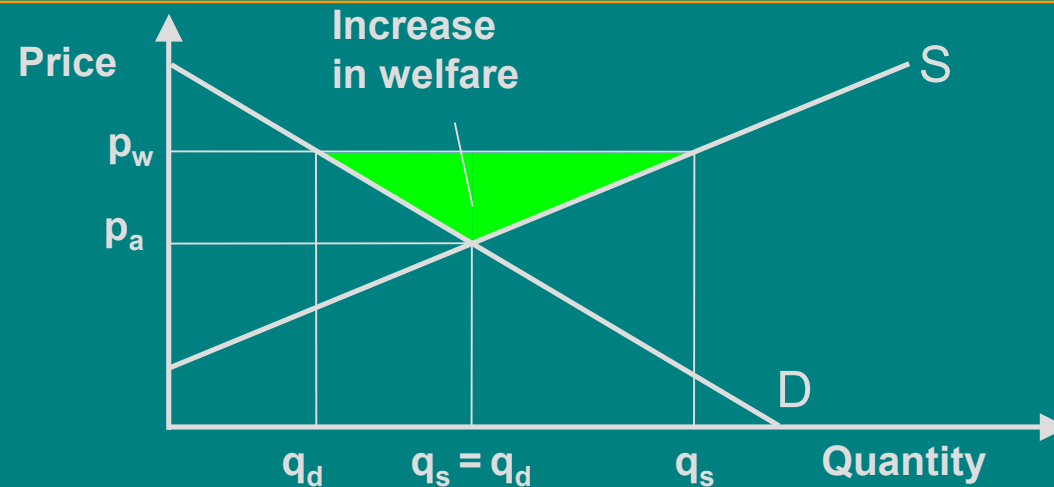
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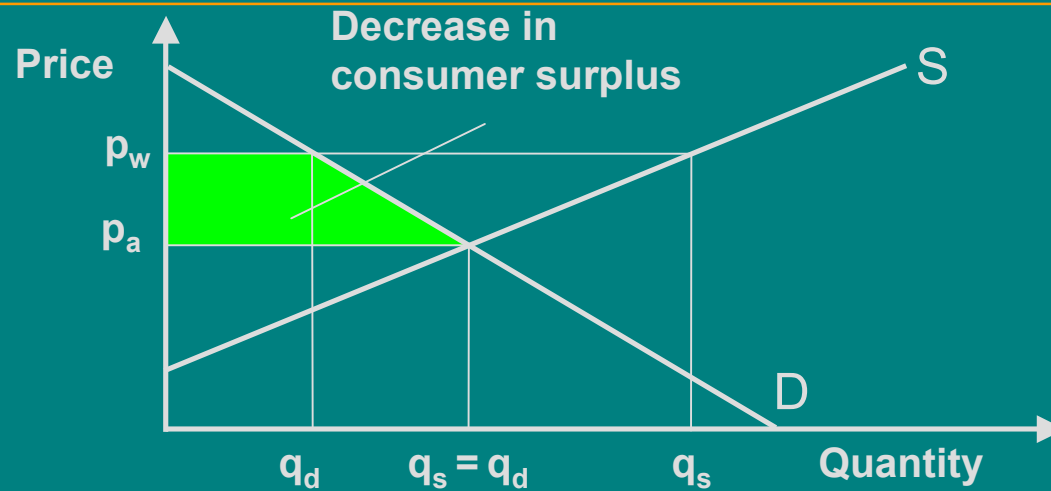


Note:

$$dWelfare (dW) = dBenefit (dB) - dCost (dC) + dForeign\ exchange (dFE)$$

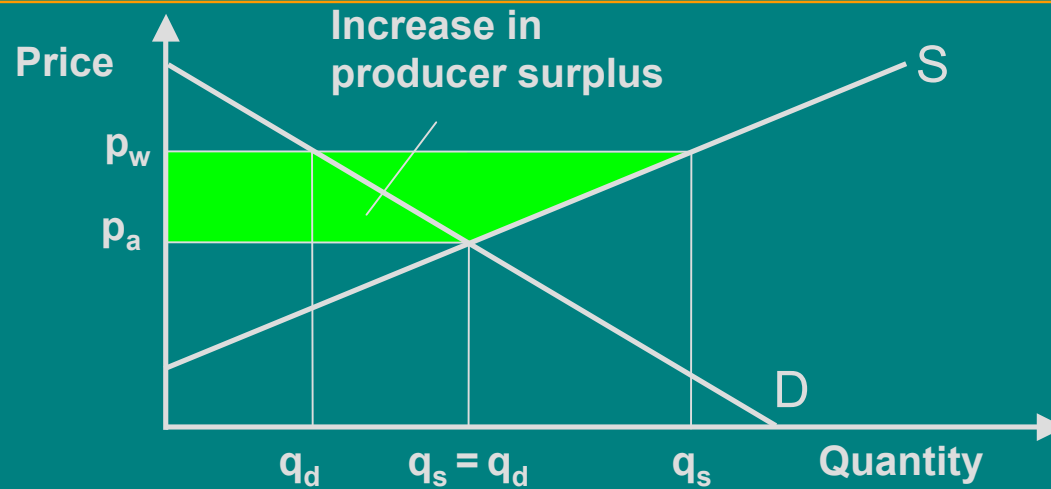
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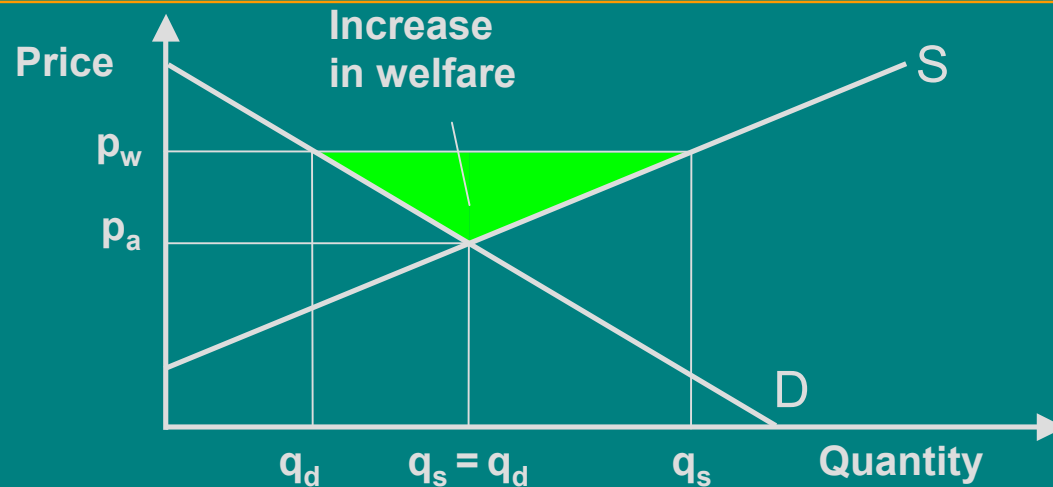
Theorem of Comparative Advantage

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Theorem of Comparative Advantage

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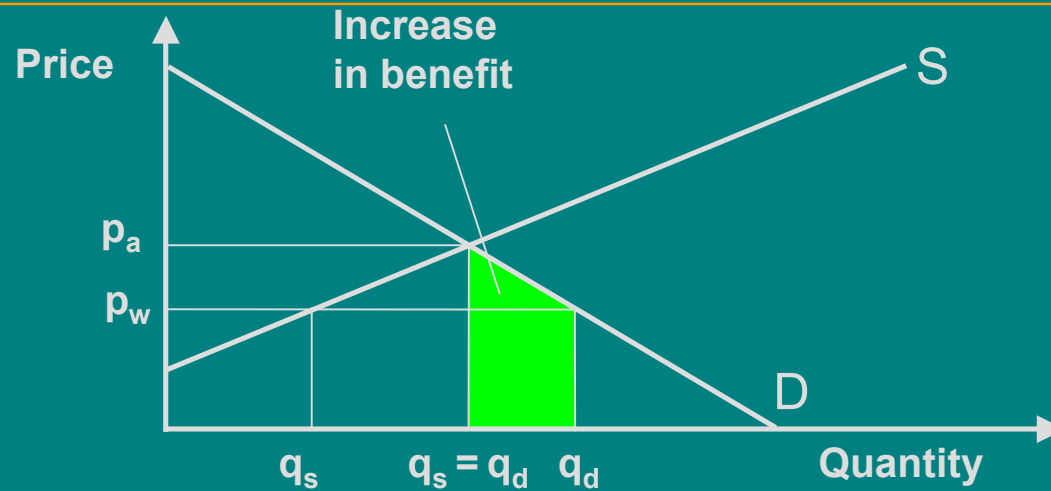
Note:

$$d\text{Welfare } (dW) = d\text{Benefit } (dB) - d\text{Cost } (dC) + d\text{Foreign exchange } (dFE)$$

$$d\text{Welfare } (dW) = d\text{Consumer surplus } (dCS) + d\text{Producer surplus } (dPS)$$

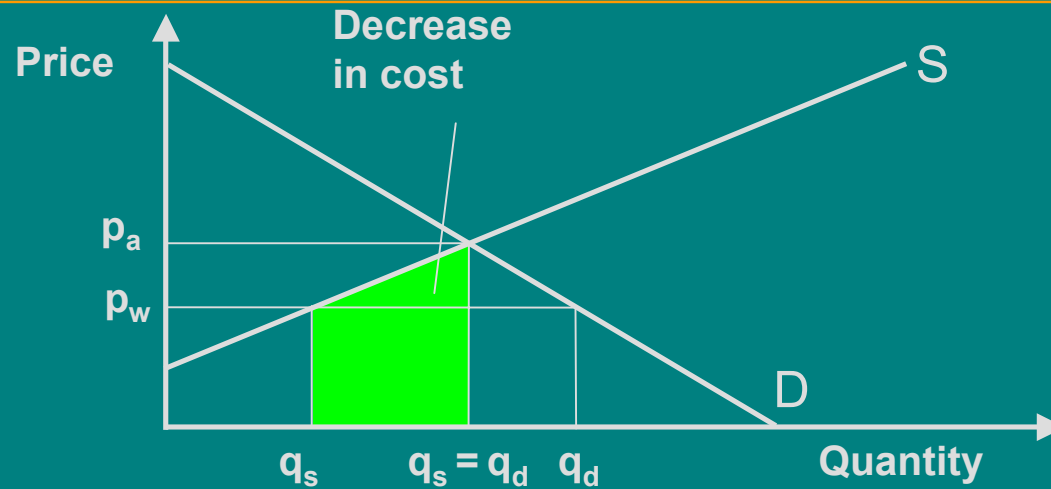
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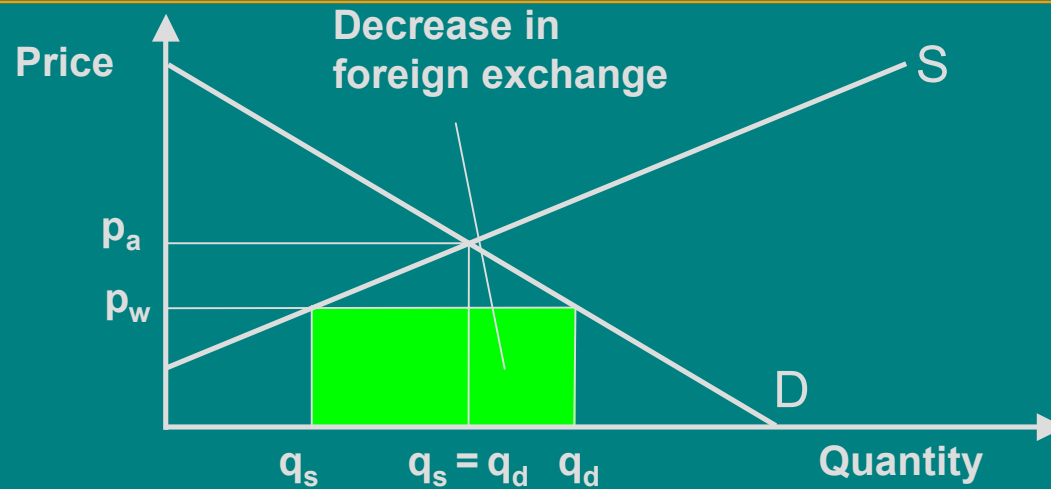
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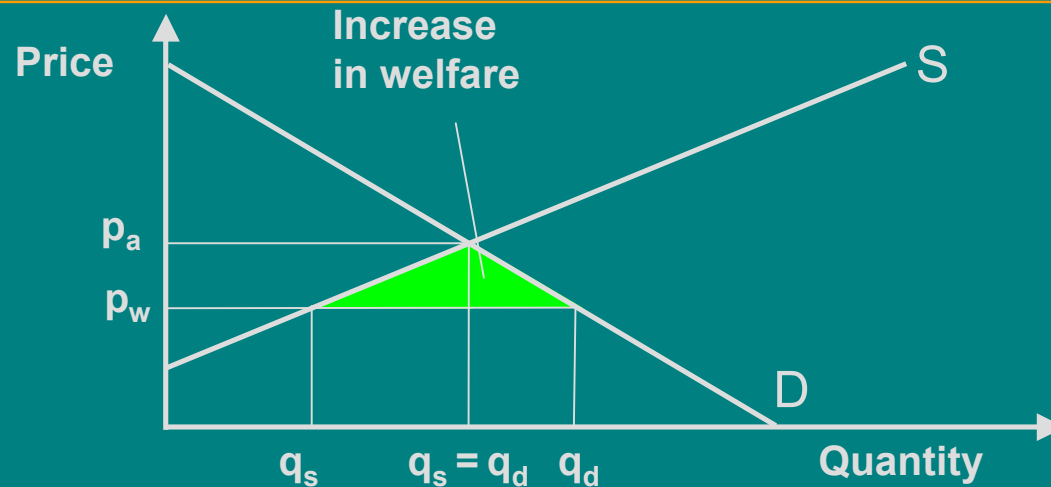
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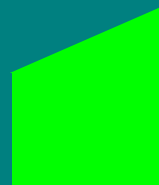
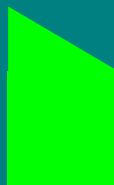
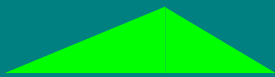
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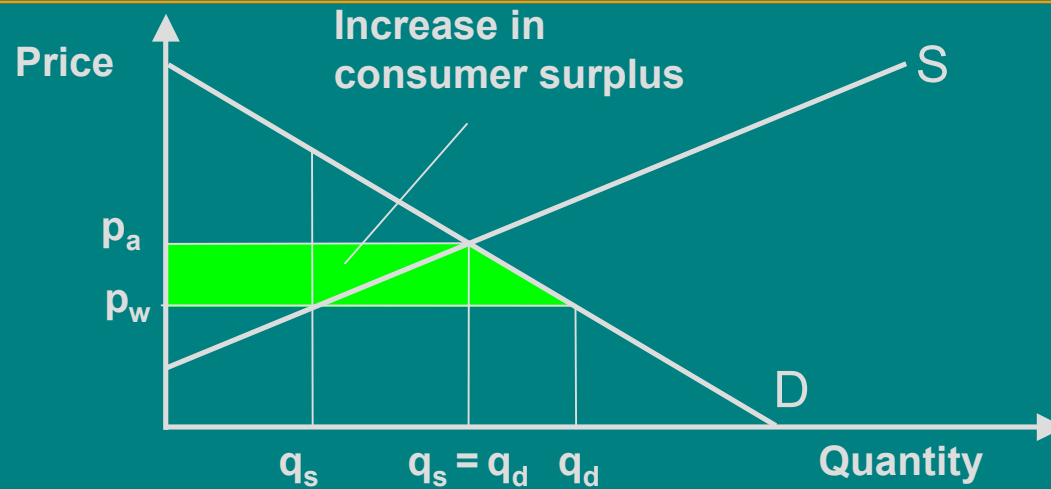
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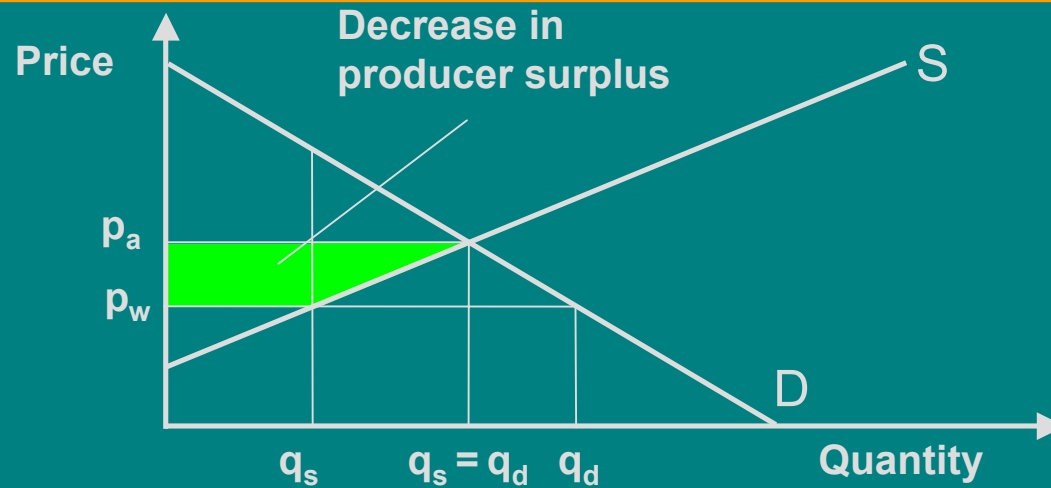
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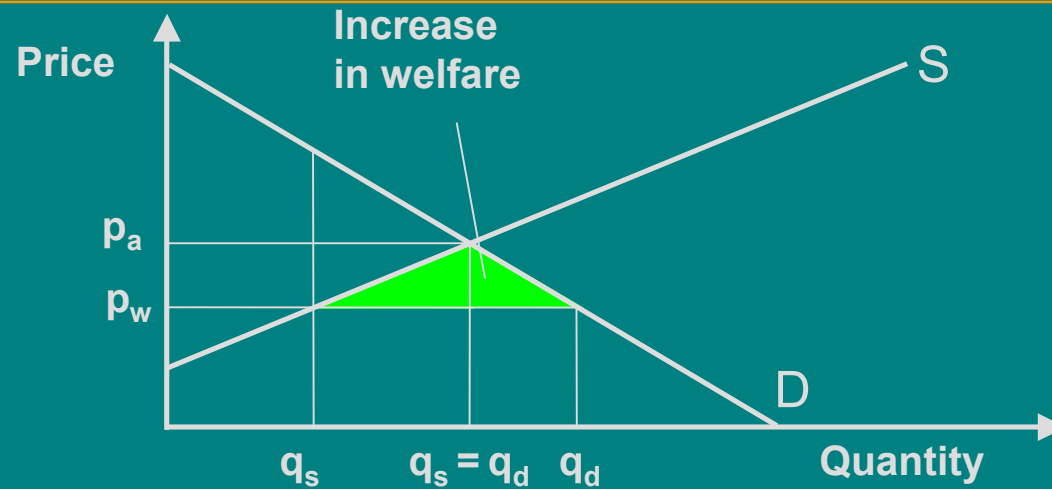
Theorem of Comparative Advantage

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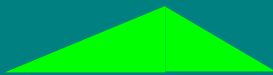
Theorem of Comparative Advantage

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Note:

$$d\text{Welfare (dW)} = d\text{Consumer surplus (dCS)} + d\text{Producer surplus (dPS)}$$



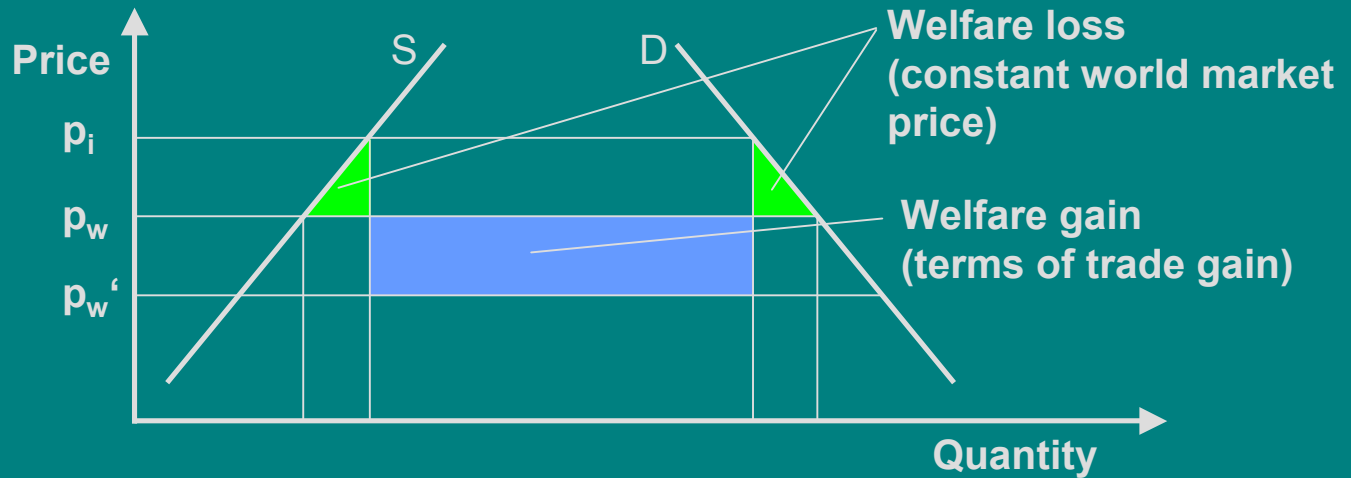
Theorem of Comparative Advantage

Some questions:

- Do world market prices exist?
- Do world market prices reflect production cost in main production regions?
- Can world market prices be considered as constant?
- How can unemployment due to trade be considered?

Large Country Case

Optimal tariff argument

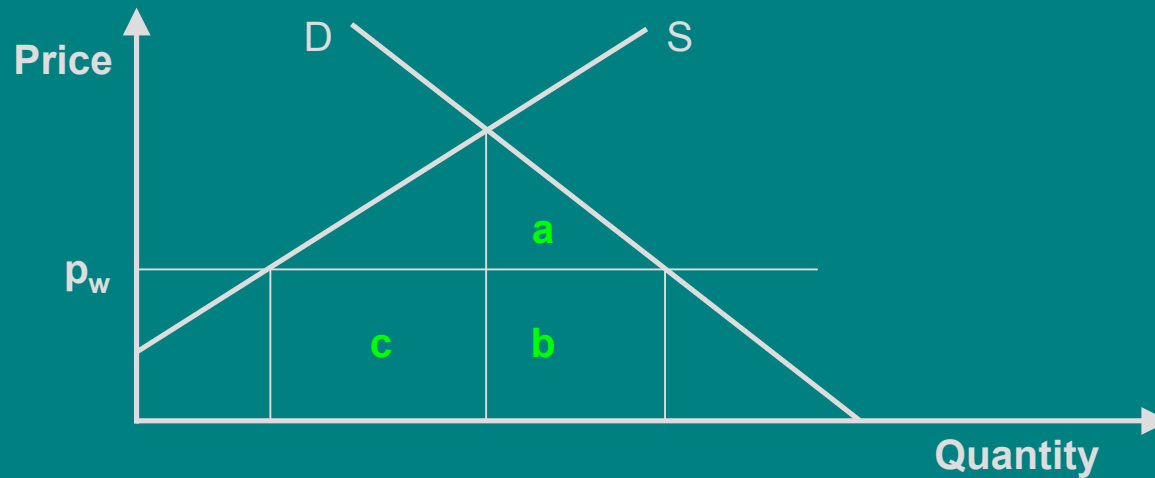


Note:

$$\begin{array}{rcccc} dW = & dCS & + & dPS & + & dG \\ (?) & (-) & & (+) & & (+) \end{array}$$

$$\begin{array}{rcccc} dW = & dB & - & dC & + & dFE \\ (?) & (-) & & (+) & & (+) \end{array}$$

Unemployment due to Liberalization



Note:

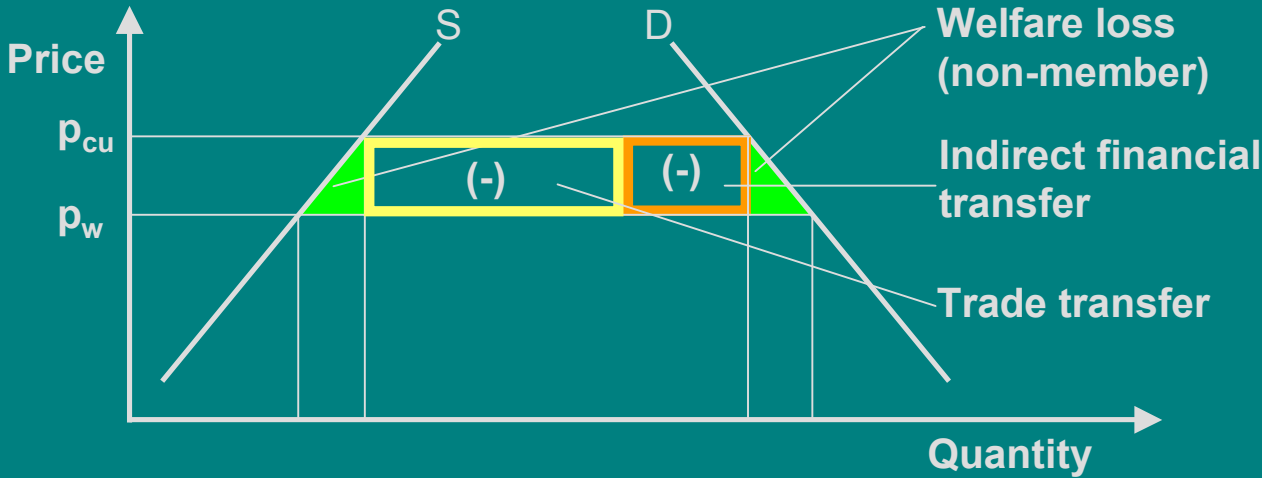
$$\begin{aligned}
 dW &= dB - dC + dFE \\
 &= (a+b) - [0] + (-b-c) \\
 &= a - c
 \end{aligned}$$

Some Dynamic Aspects on Trade and Comparative Advantage

- What if trade changes preferences?
- Can trade hamper domestic development?

Transfer Effects in a Customs Union

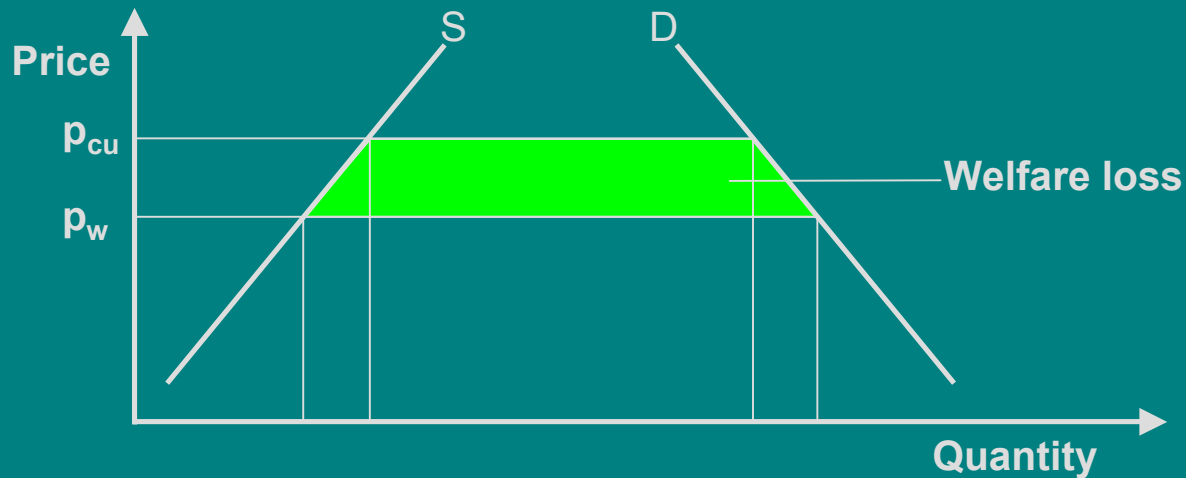
Importing member country market



S - Domestic supply curve
D - Domestic demand curve
CU - Customs union

Transfer Effects in a Customs Union

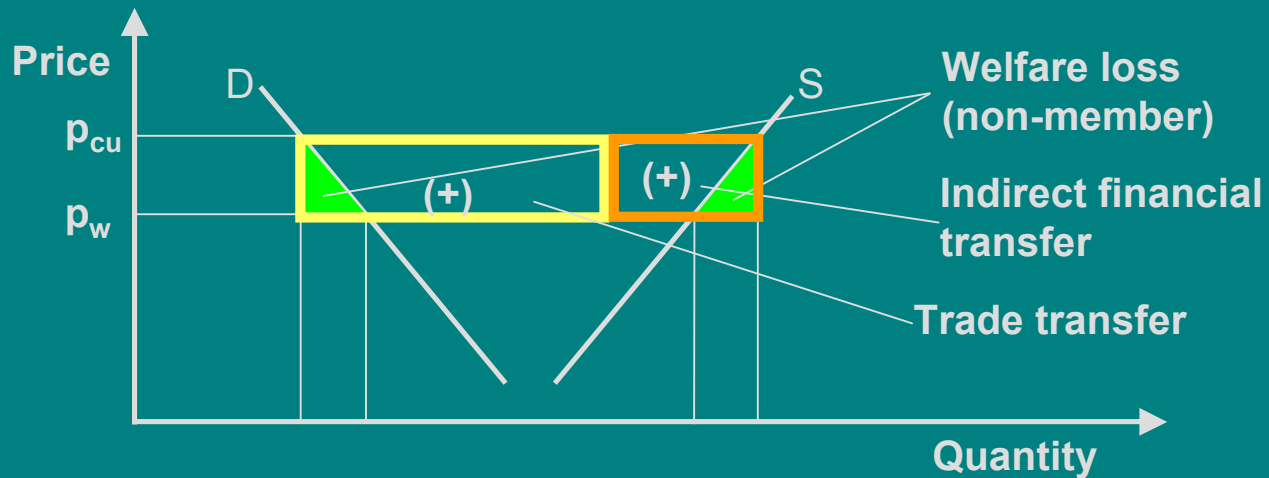
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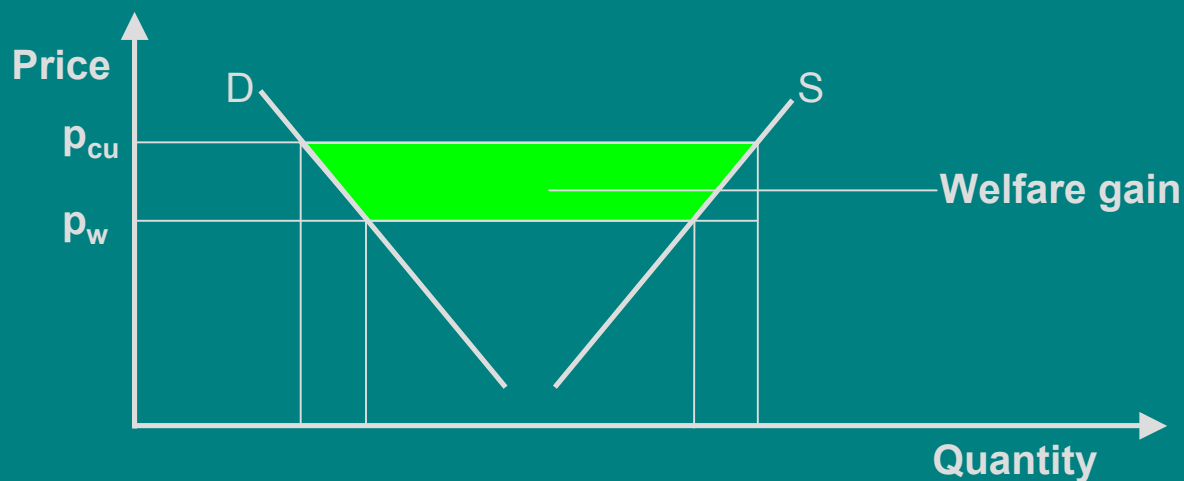
Exporting member country market



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Transfer Effects in a Customs Union

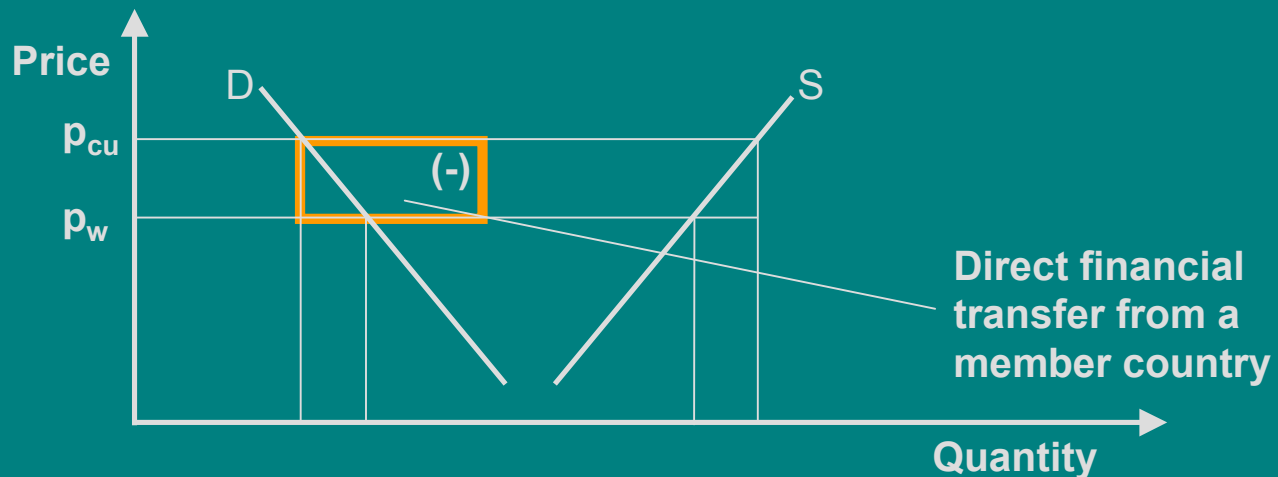
Exporting member country market



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Transfer Effects in a Customs Union

Customs union market



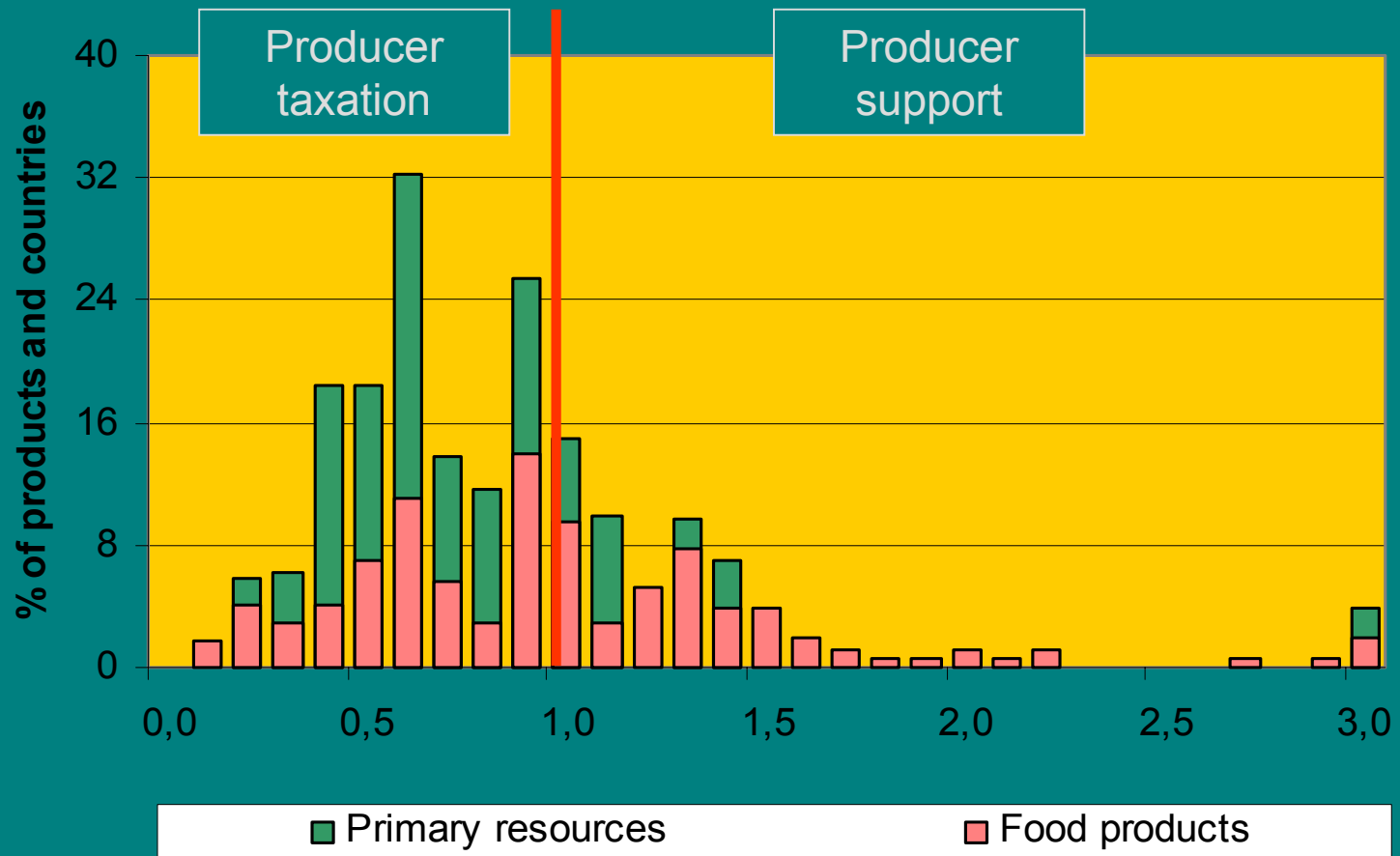
- S - Domestic supply curve
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Note:

Transfer for a member country = Trade transfer + Indirect financial transfer + Direct financial transfer

Nominal Protection Coefficients

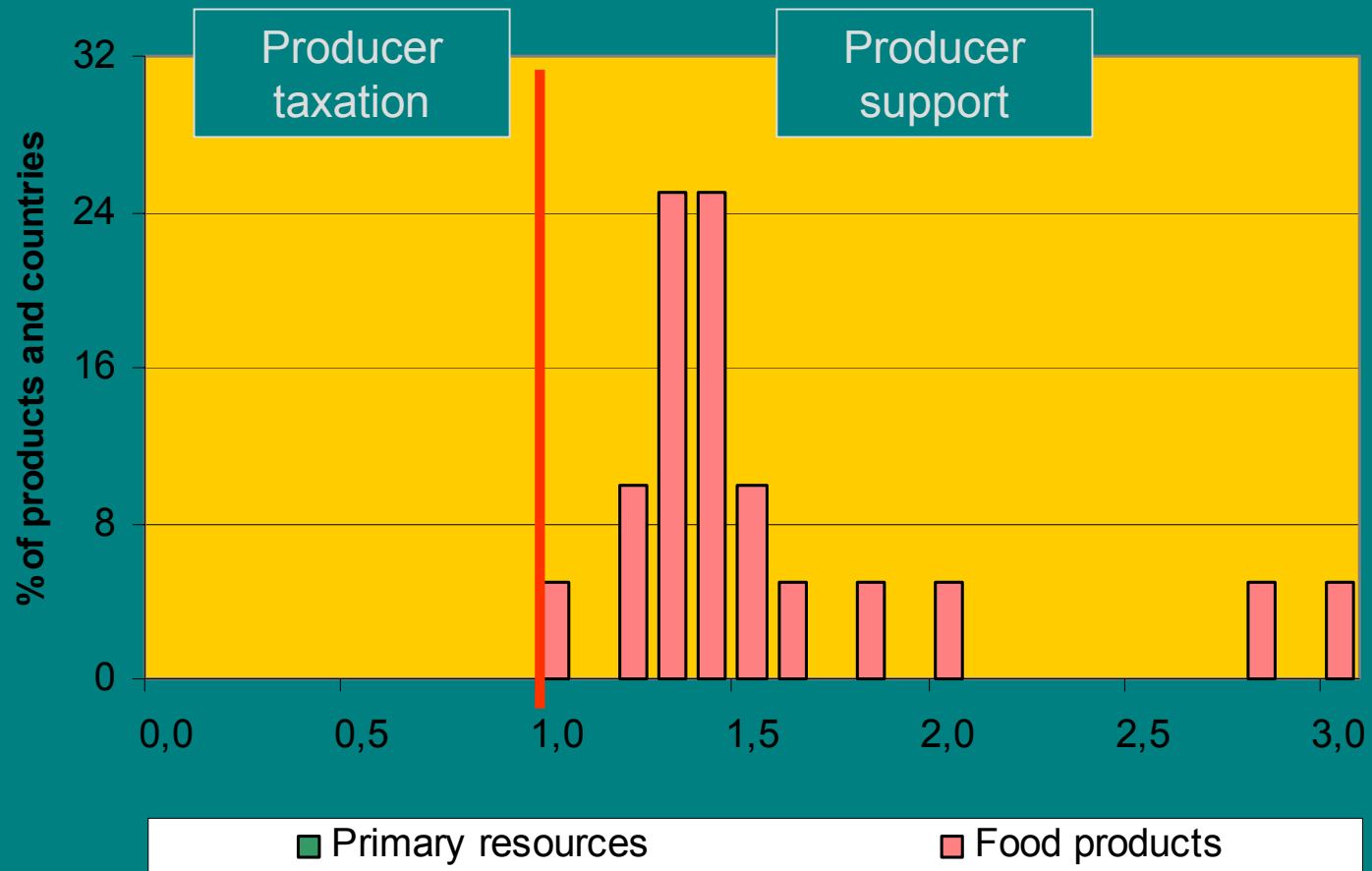
Developing countries



Source: World Bank (1986): World Development Report 1986. Washington D.C., p.13

Nominal Protection Coefficients

Industrial countries



Source: World Bank (1986): World Development Report 1986. Washington D.C., p.13

Note: Measuring Protection and Taxation in World Agriculture

- **Nominal protection / taxation**
- **Effective protection / taxation**
- **Producer (consumer) support estimate**
- **Indirect protection / taxation**

Producer Support Estimate

$$PSE_i = (P_i^d - P_i^w) Q_i + PP_i$$

or

$$\% PSE_i = \frac{PSE_i}{P_i^d * Q_i + PP_i} * 100$$

PSE_i - Producer support estimate for commodity i

P_i^d - Domestic price for commodity i

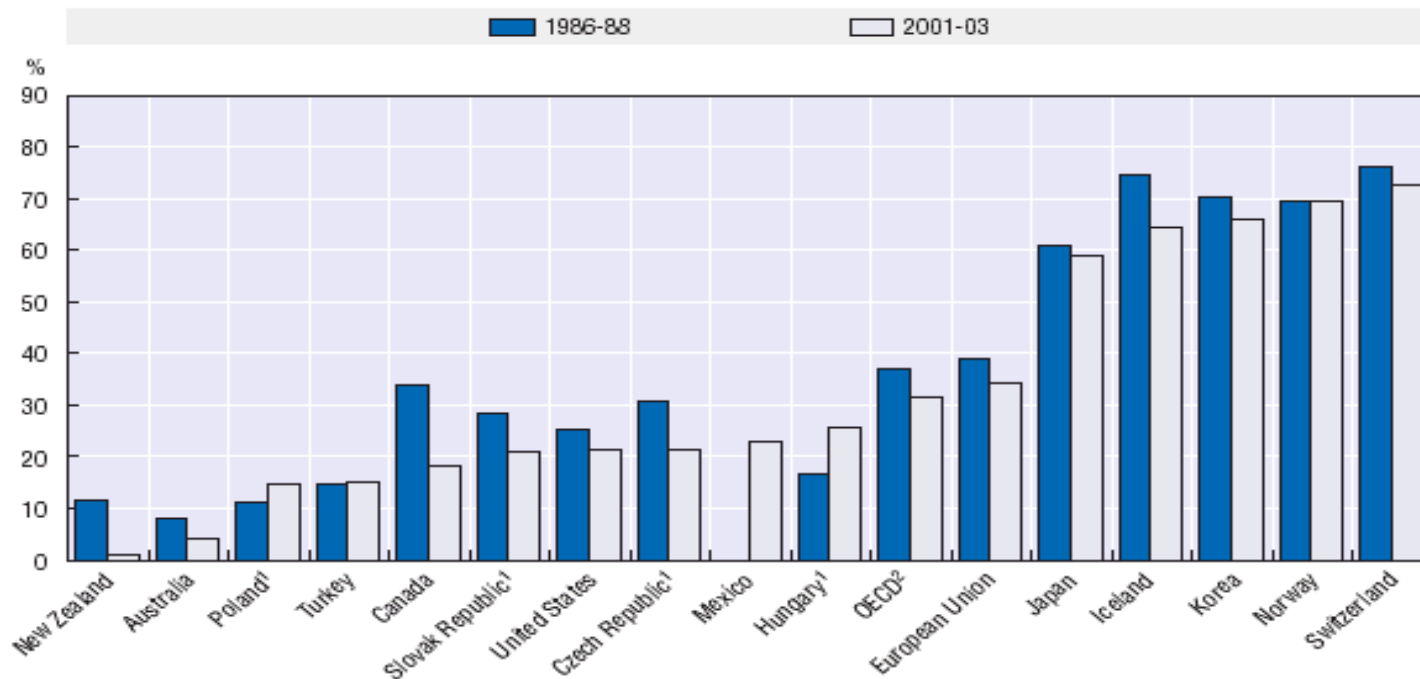
P_i^w - World market price for commodity i

Q_i - Production quantity of commodity i

PP_i - Payments from the government to producers of commodity i
(including tax reductions)

Producer Support Estimate by Country

(% of value of gross farm receipts)



Notes: Countries are ranked according to 2001-2003 levels. For more detail, see Table I.3.

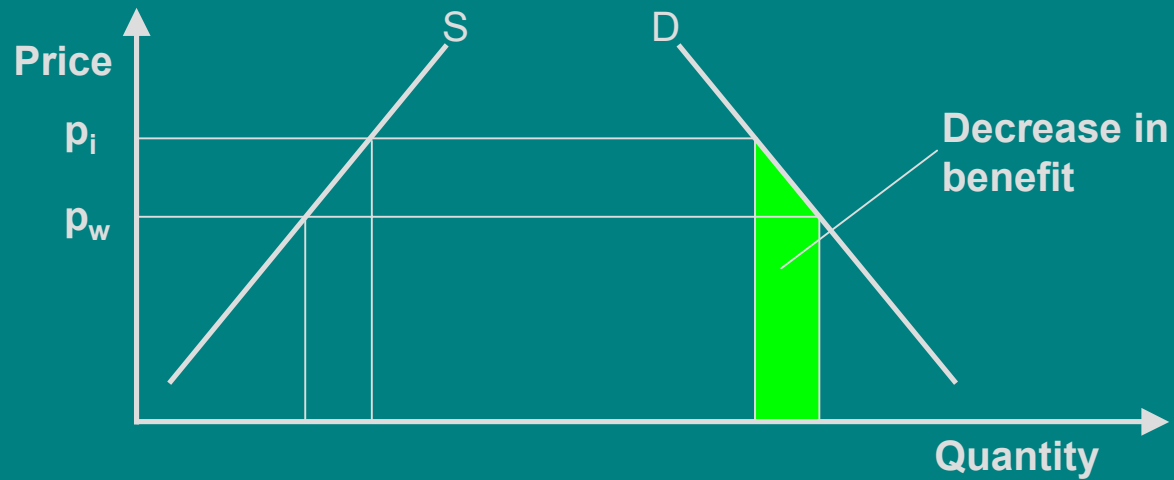
1. For the Czech Republic, Hungary, Poland and the Slovak Republic, 1986-88 is replaced by 1991-93.

2. For 1986-88, the Czech Republic, Hungary, Poland and the Slovak Republic are excluded.

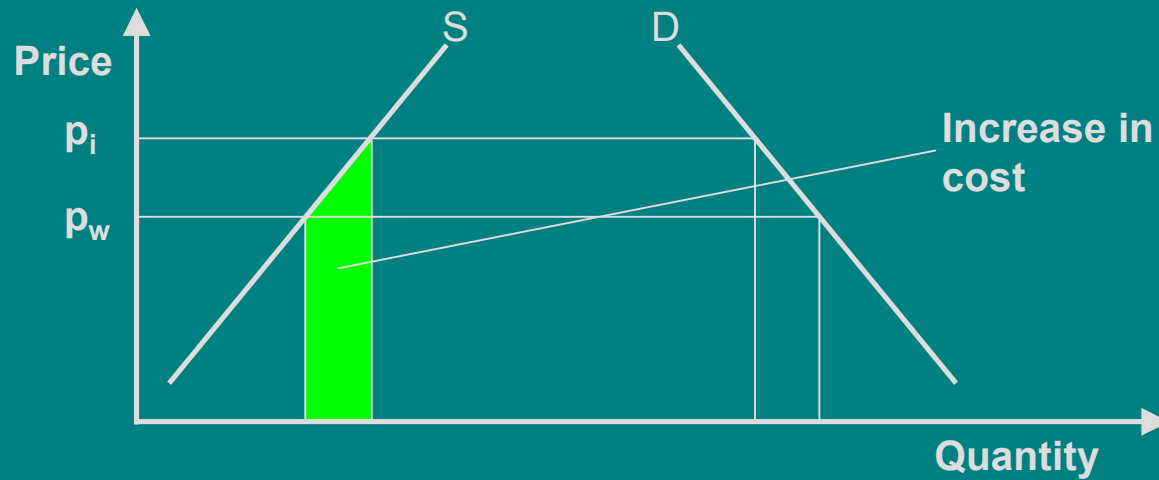
Source: OECD, PSE/CSE database, 2004.

Source: <http://www.oecd.org/dataoecd/63/54/32034202.pdf>, p. 20

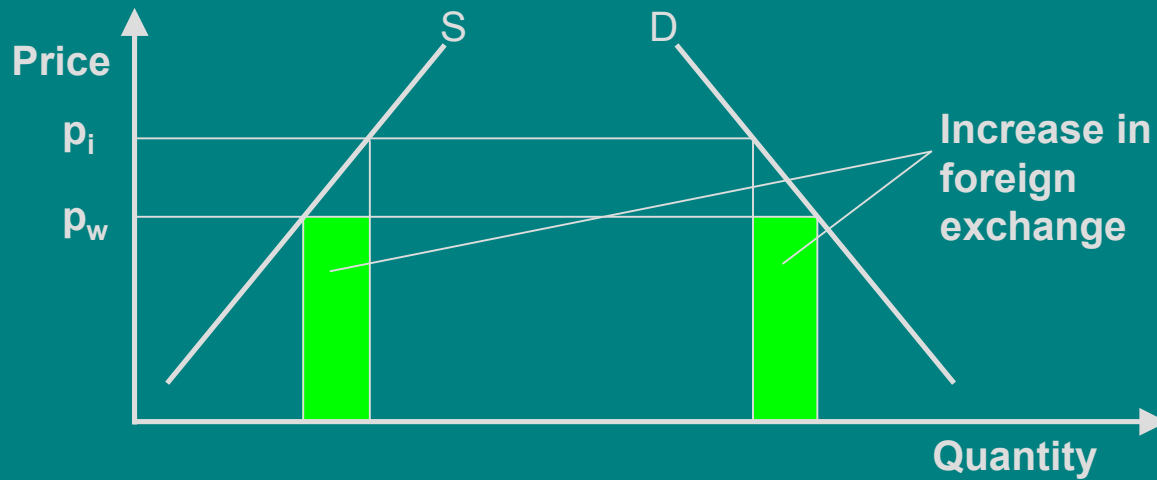
Implementing Protection Tariff



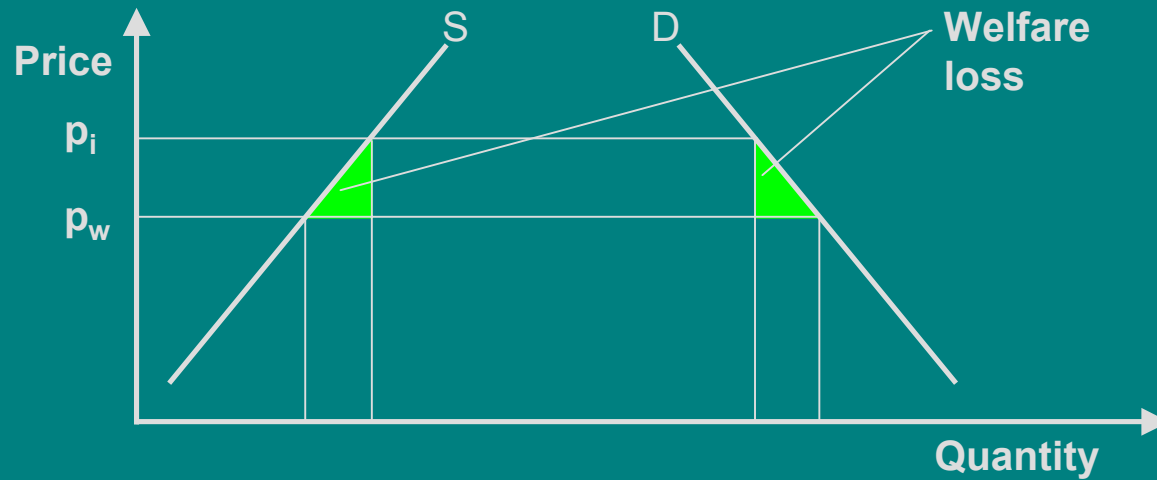
Implementing Protection Tariff



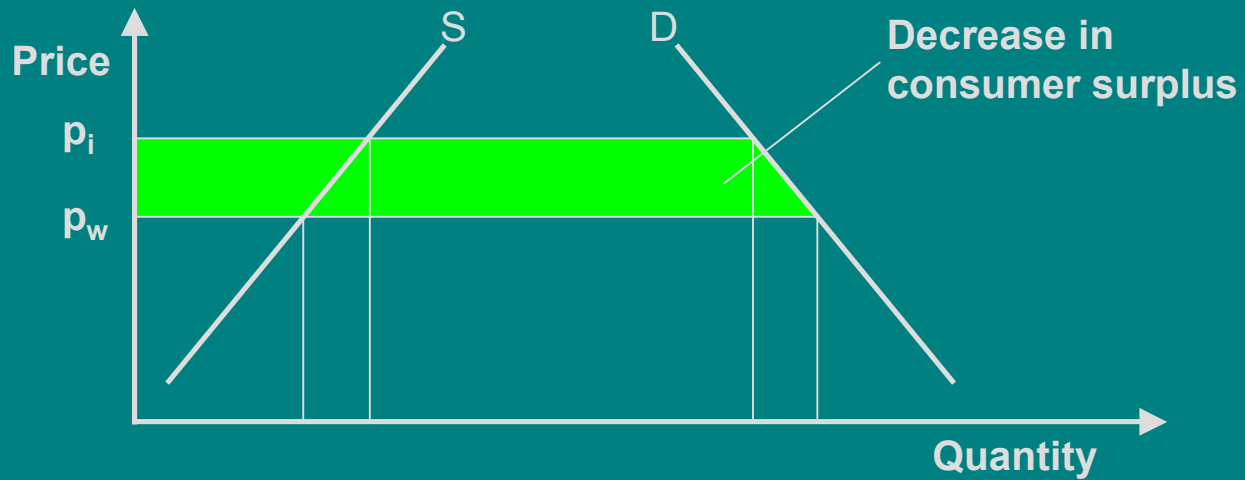
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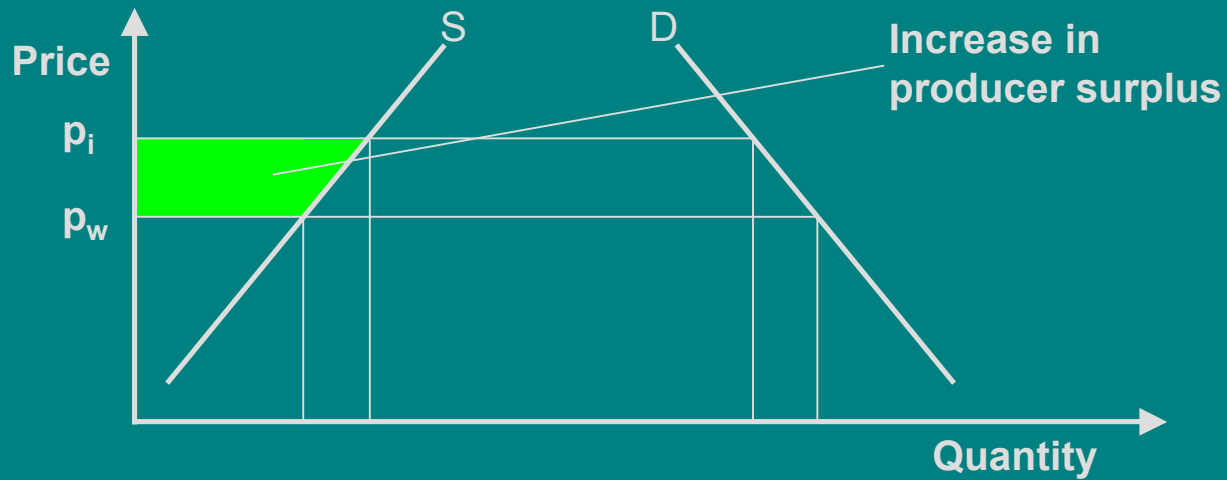
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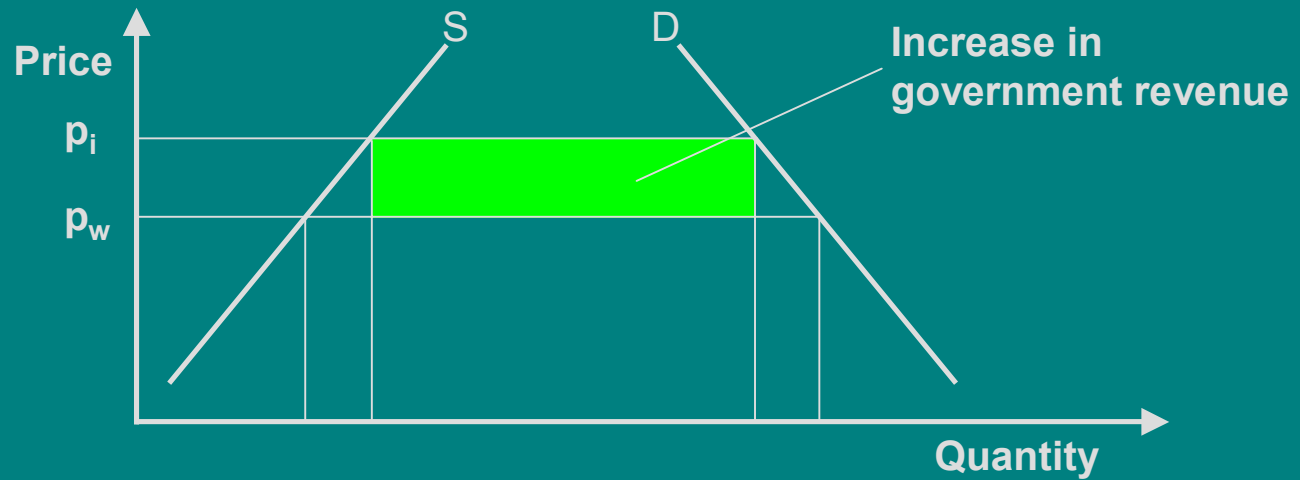
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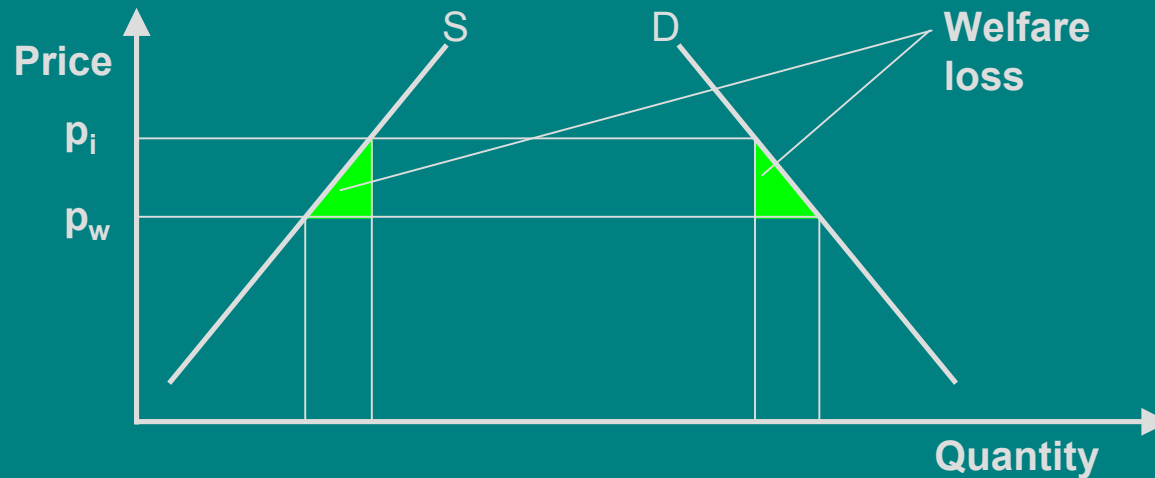
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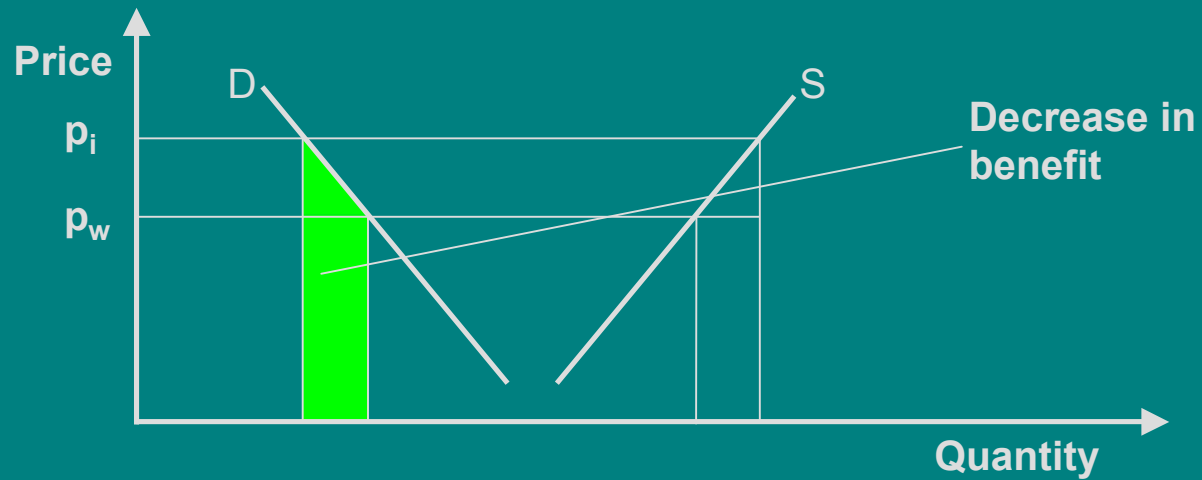


Note:

A tariff equals a producer subsidy plus a consumer tax.

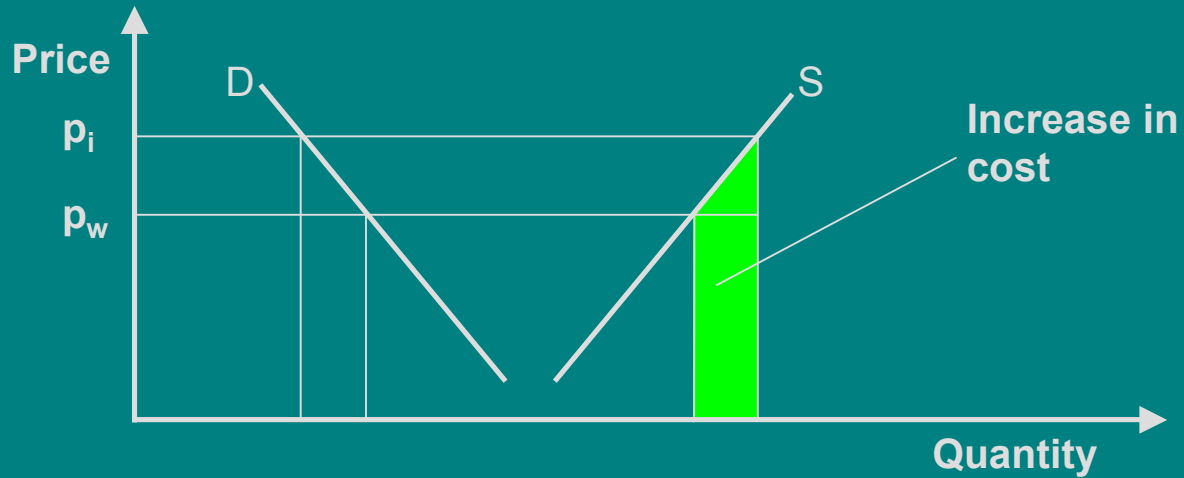
Implementing Protection

Export subsidy



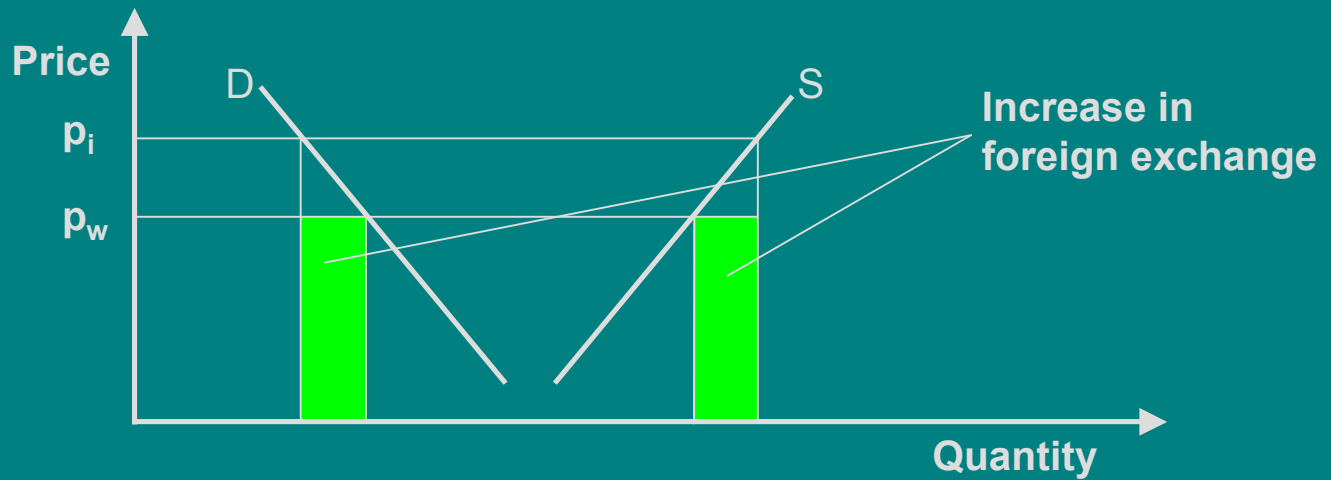
Implementing Protection

Export subsidy



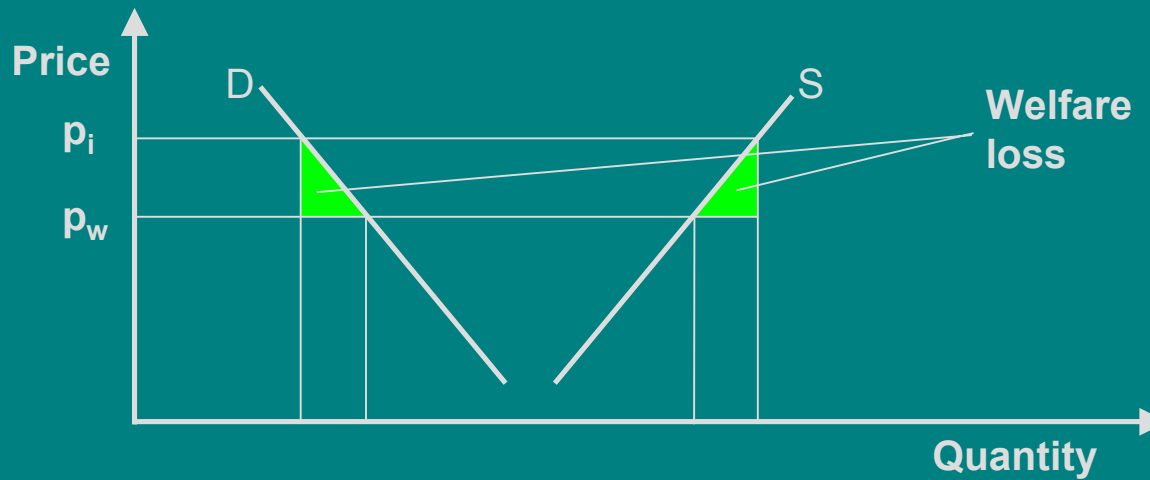
Implementing Protection

Export subsidy



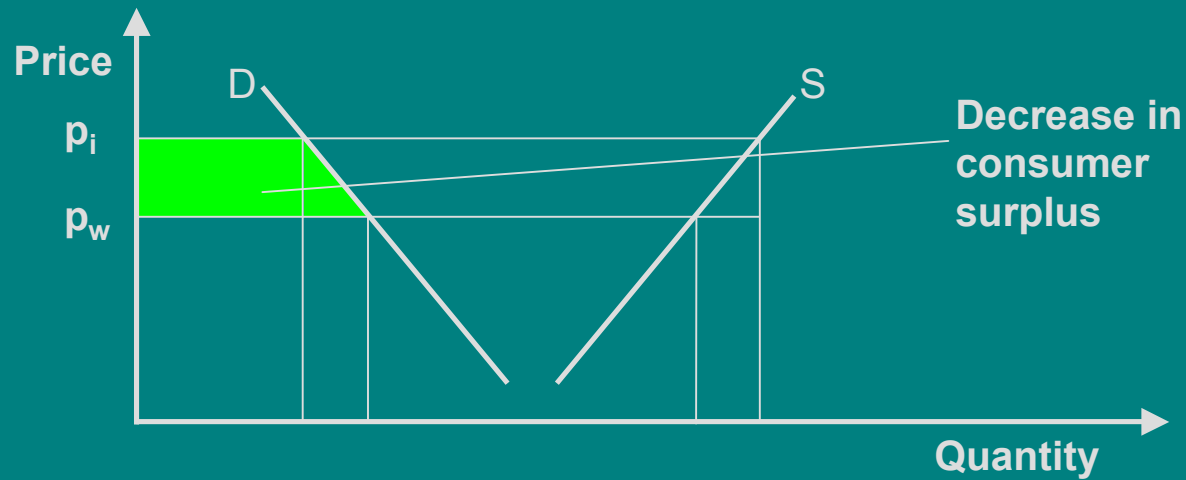
Implementing Protection

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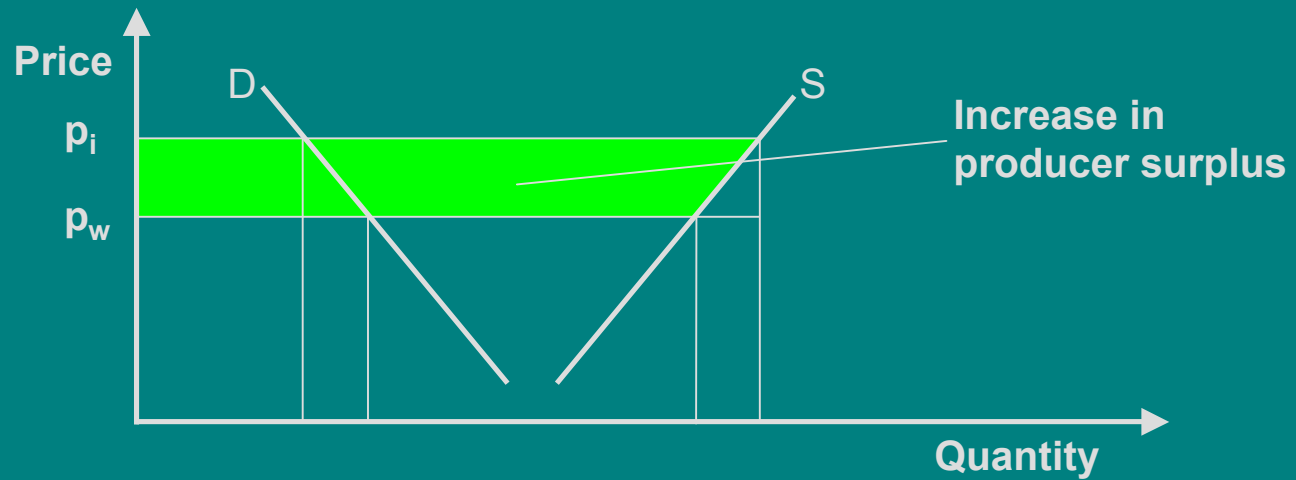
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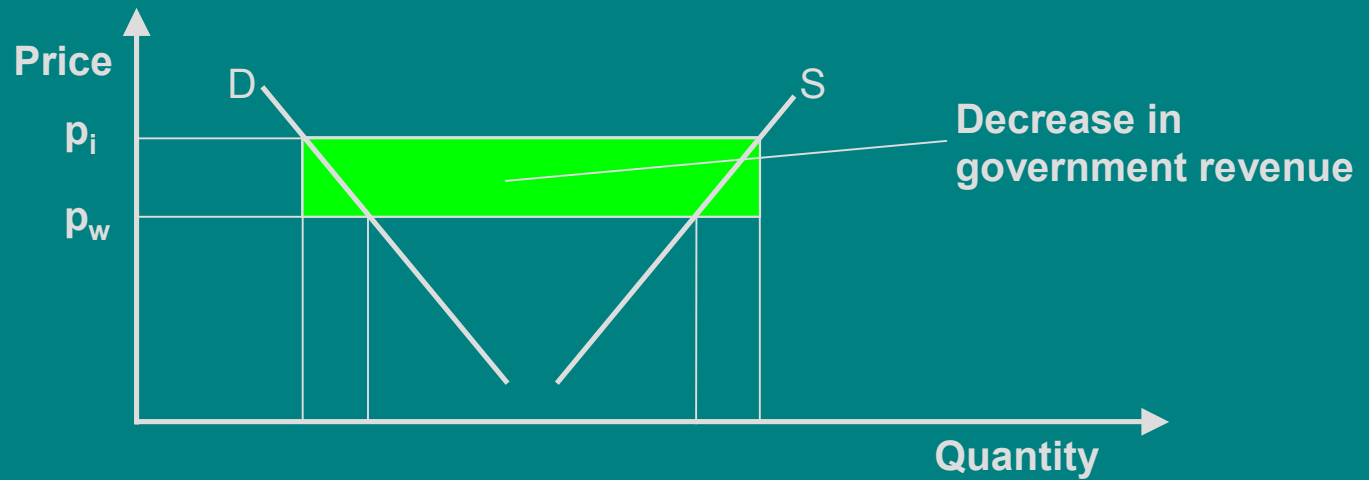
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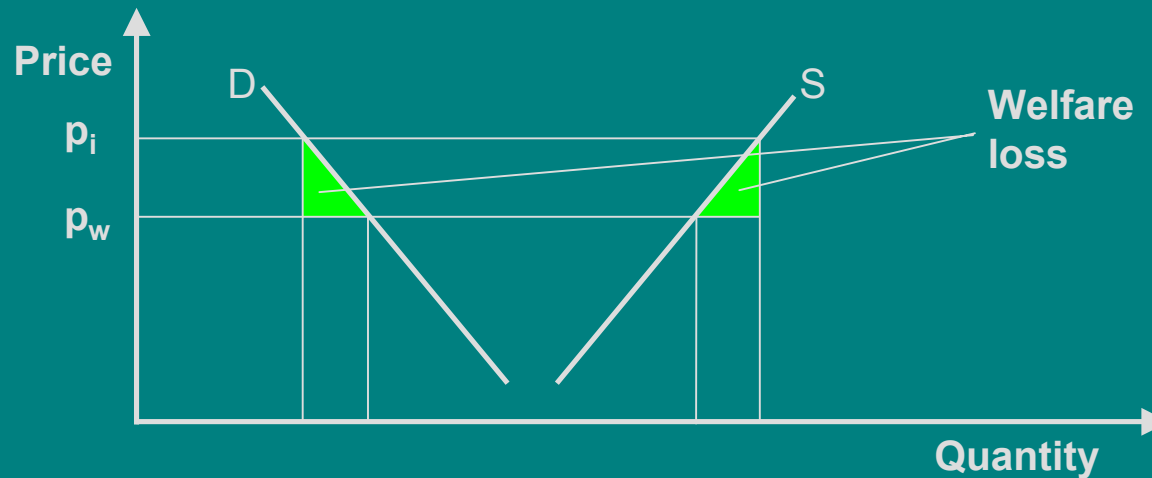
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Export subsidy



Implementing Protection

Export subsidy

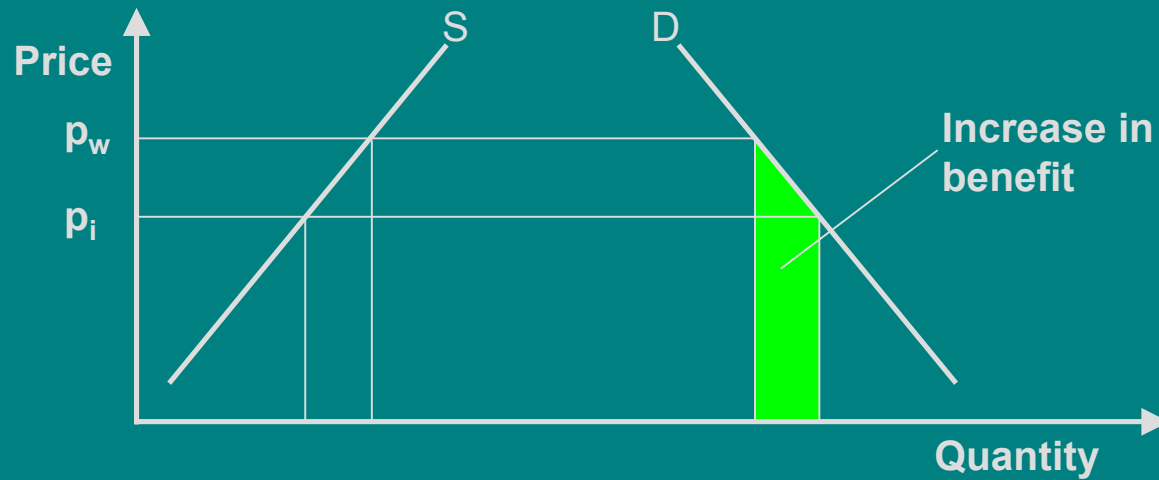


Note:

An export subsidy equals a consumer tax plus a producer subsidy.

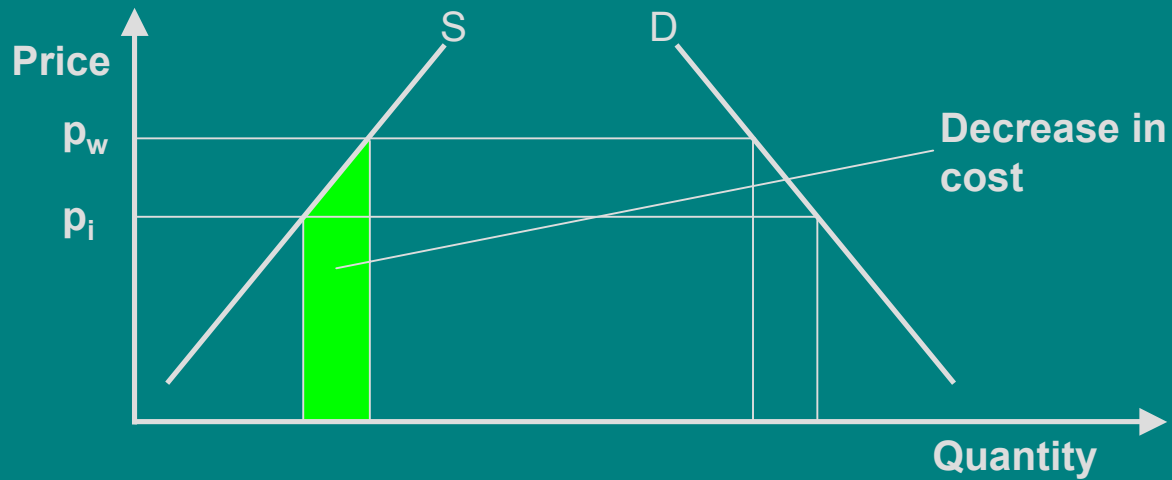
Implementing “Taxation”

Import subsidy



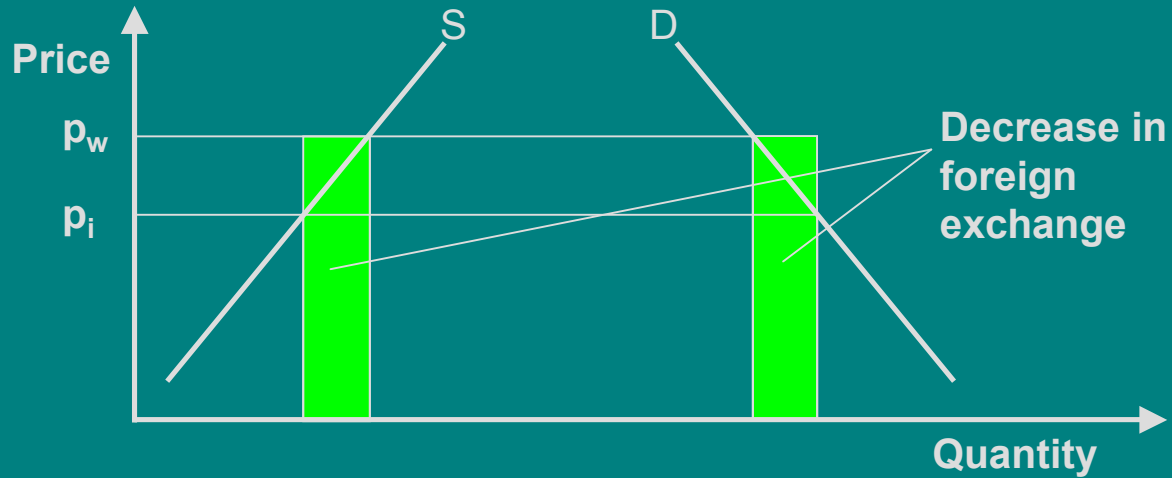
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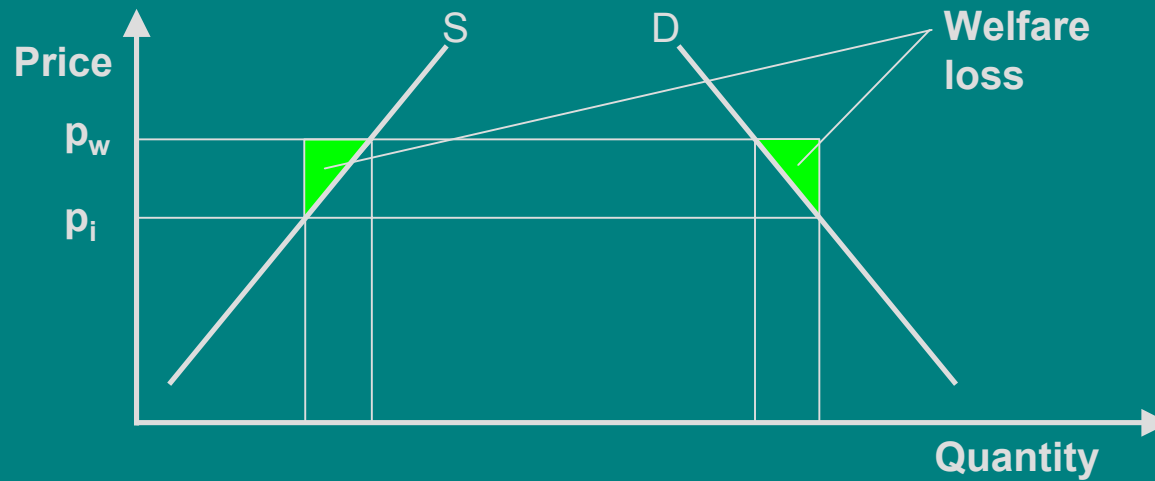
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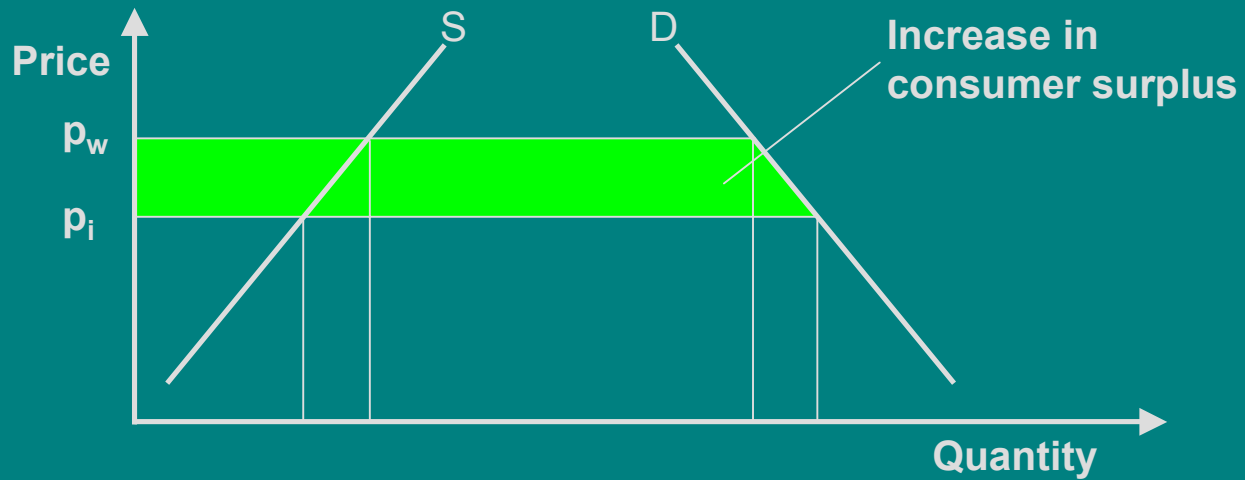
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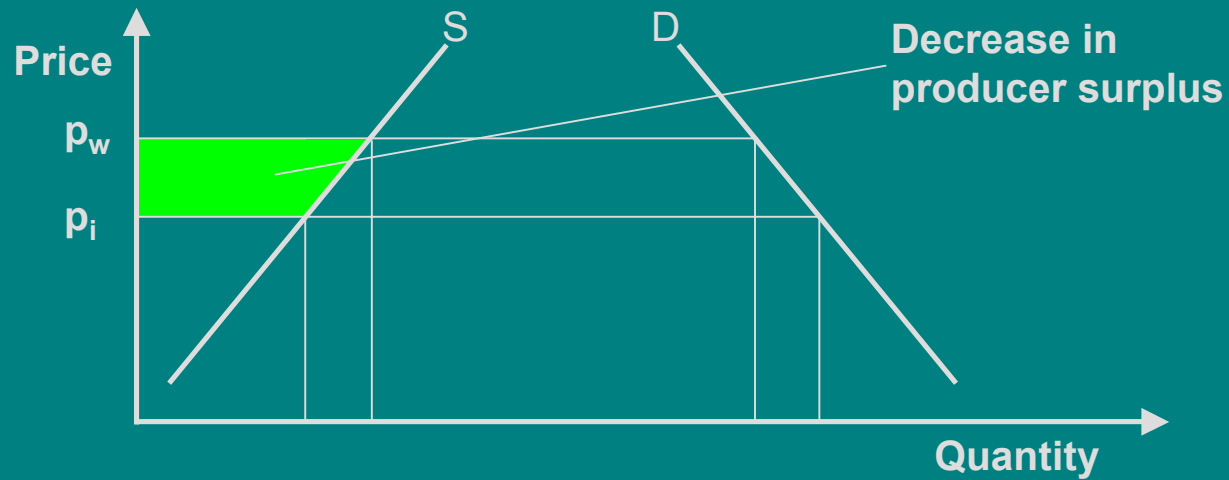
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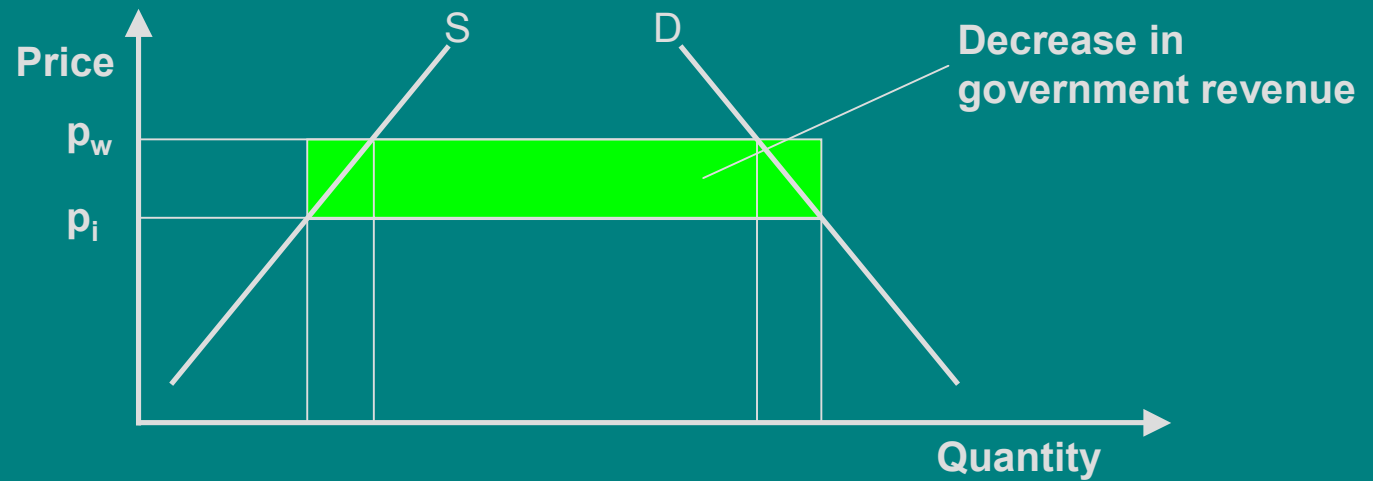


Implementing “Taxation”

Import subsidy

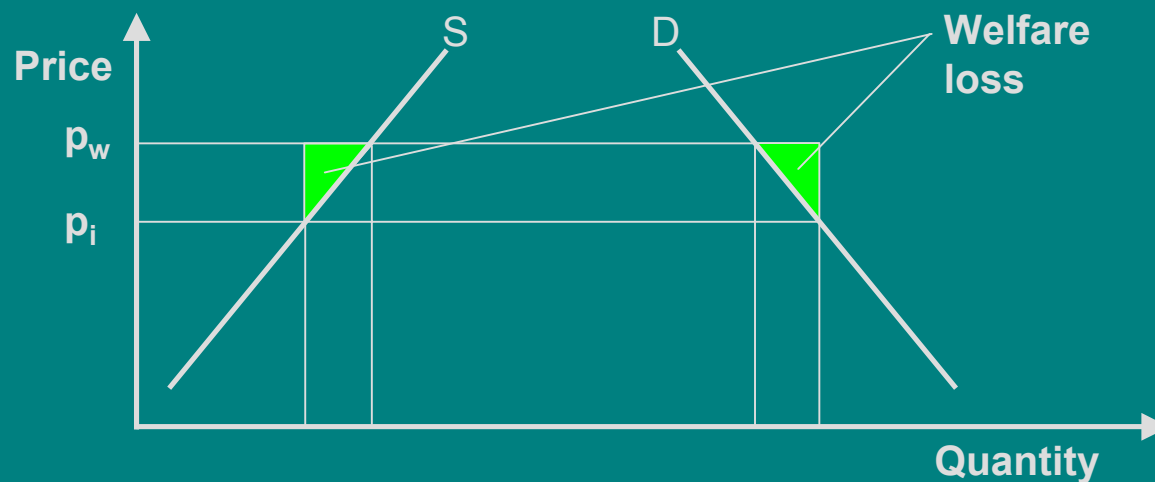


Implementing “Taxation” Import subsidy



Implementing “Taxation”

Import subsidy

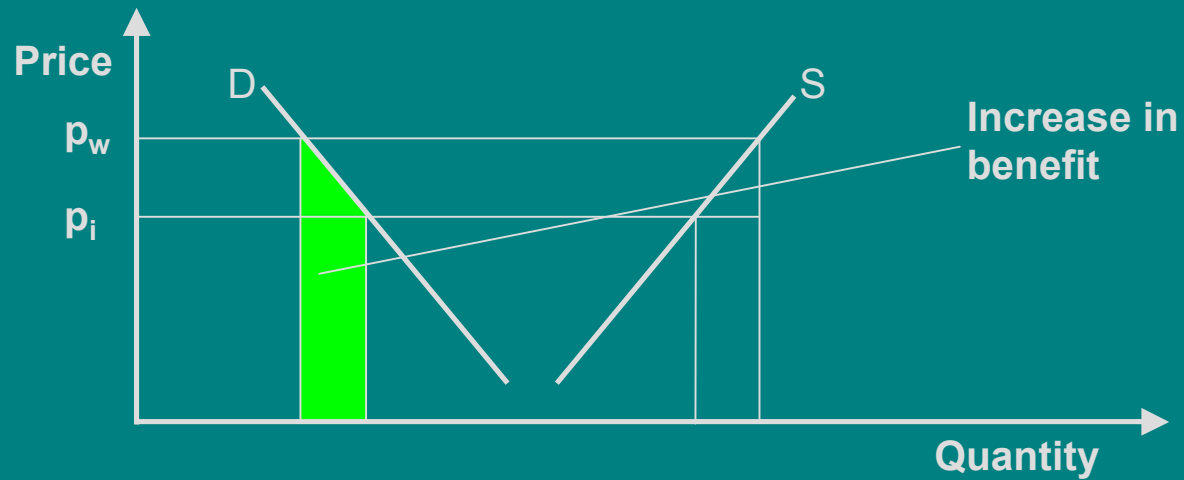


Note:

An import subsidy equals a producer tax plus a consumer subsidy.

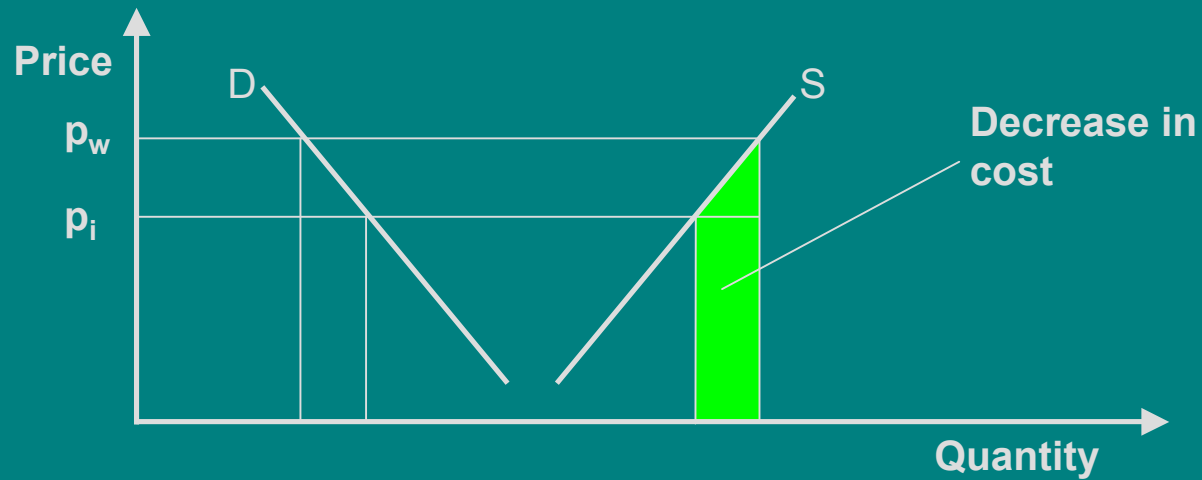
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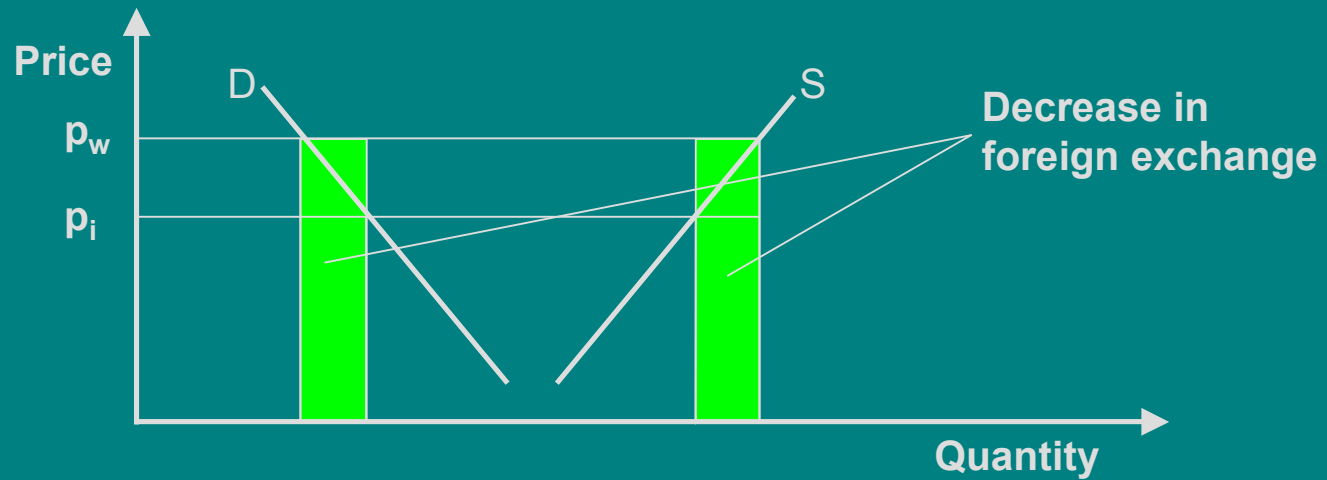
Implementing “Taxation”

Export tax



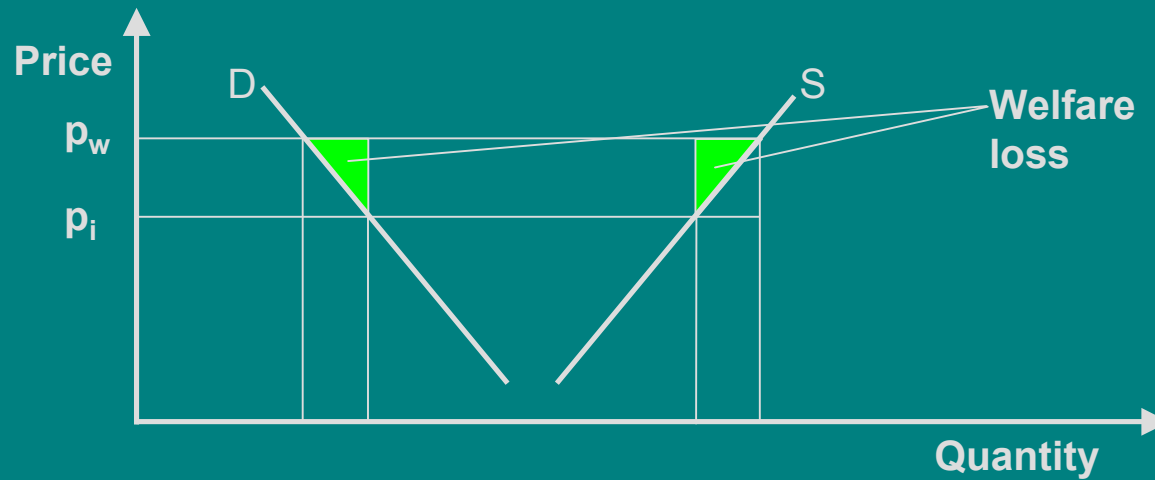
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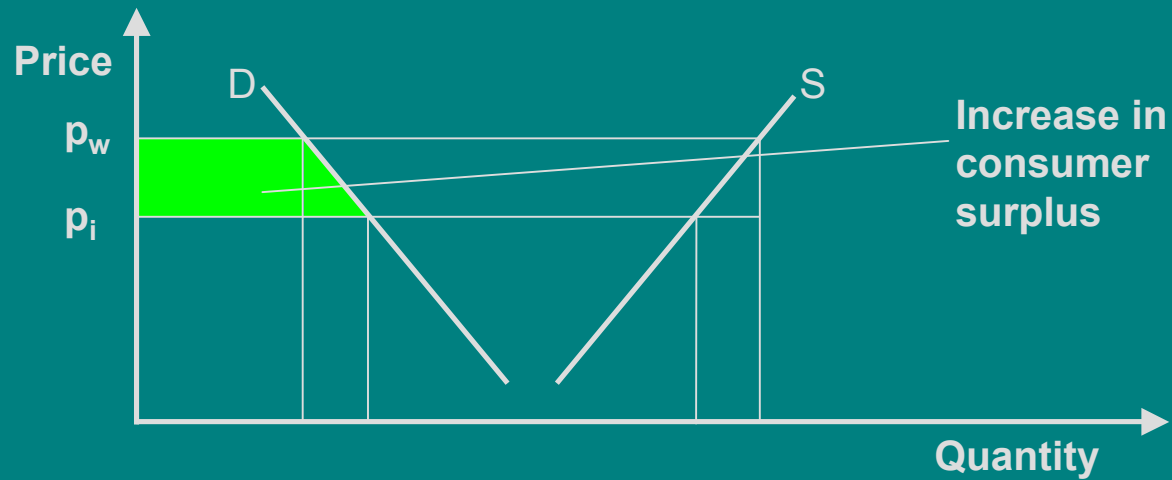
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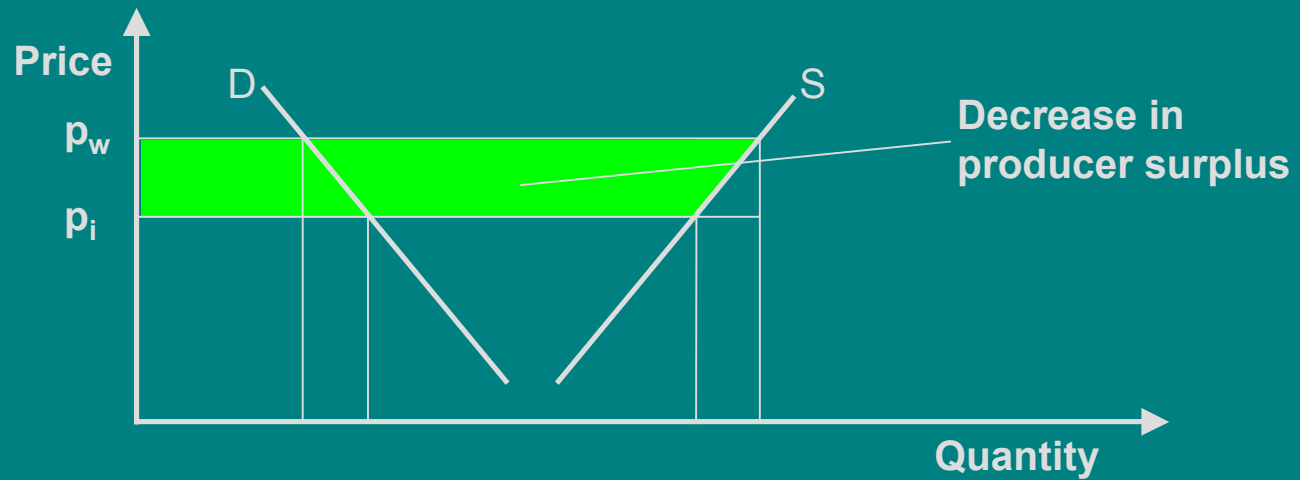
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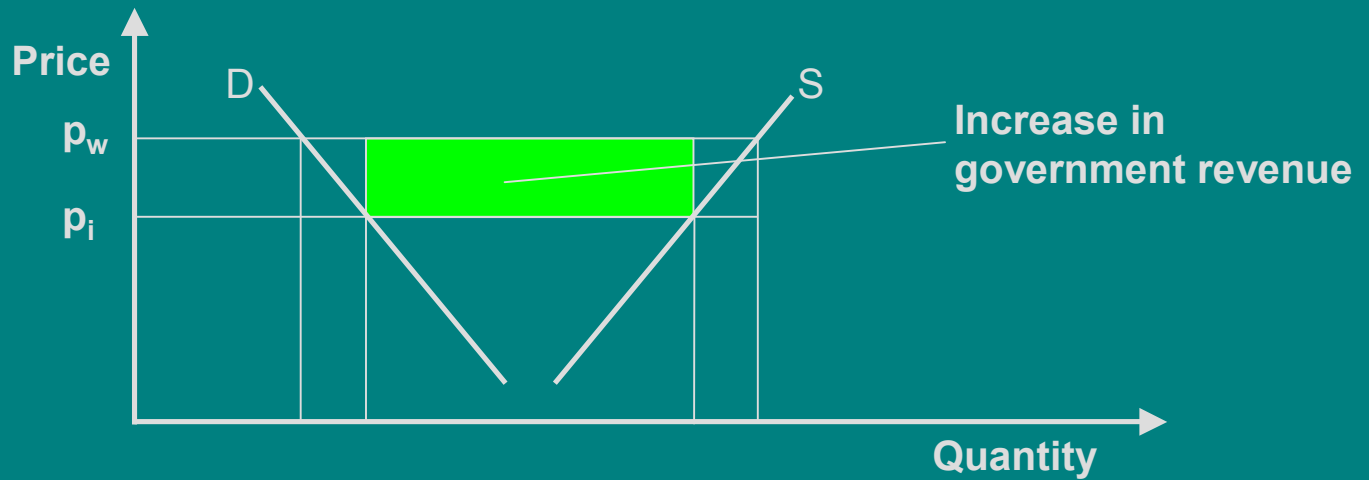
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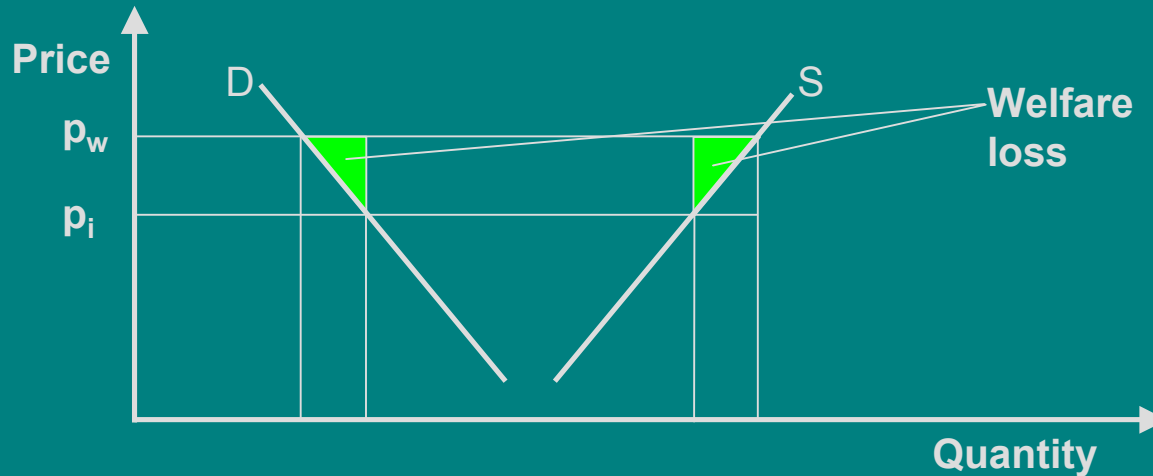
Implementing “Taxation”

Export tax



Implementing “Taxation”

Export tax



Note:

An export tax equals a consumer subsidy plus a producer tax.

Literature

*Houck, J.P. (1986): *Elements of Agricultural Trade Policies*. New York: Macmillan, pp. 20-28

*Krueger, A.O. (1992): *The Political Economy of Agricultural Pricing Policy*. Baltimore: The Johns Hopkins University Press, pp. 34-57

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Pindyck, R.S.; Rubinfeld, D.L. (1998): *Microeconomics*. 4th ed. Upper Saddle River: Prentice-Hall, pp. 358-366

Tsakok, I. (1990): *Agricultural Price Policy*. New York: Cornell University Press. pp. 158-199

Questions

1. Explain welfare and distributional effects of free trade as compared to autarky!
2. Explain how a protectionist price policy in a customs union leads to transfers!
3. Discuss the thesis of a global misallocation of resources in the agricultural sector!
4. How can protection be measured? Describe the different concepts!
5. How can protection be implemented in an import and an export situation?
6. How can taxation be implemented in an import and an export situation?