CHAPTER 6 TRADE RESTRICTIONS

- Tariffs barriers
- Non-tariffs barriers

Tariffs

TYPE OF TARIFFS

PARTIAL EQUILIBRIUM COSTS & BENEFITS OF TARIFF

RATE OF EFFECTIVE PROTECTION

Non-Tariffs Barriers (presentation by group of students)

TYPES

ARGUMENTS FOR & AGAINST PROTECTION

WTO

TRADE RESTRICTIONS & TARIFFS

- **Theory**: free trade can maximize world output & benefits all nation
- **Practical**: all nations impose some restrictions
- **Type of restrictions**: Tariff & non-Tariff
- **Defn tariff**: tax or duty levied on traded commodity as it crosses a national boundary
  - Defn **import tariff**: a duty on imported commodity
  - Defn **export tariff**: a duty on imported commodity
  - Import tariff more important than export tariff
- **Important note**:
  - Export tariff are prohibited in US but applied in developing countries to get better prices & ↑ in revenue
    - Eg: Ghana for cocoa, Brazil for coffee
  - Import tariff only to protect certain industry (L-intensive)

TYPE OF TARIFFS

- European countries rely mainly on ad valorem tariff
- US used both ad valorem & specific tariff
- Tariff sharply reduced after WWII
- Tariff higher in developing nations
- Agricultural commodities relatively high trade barriers

Type	Ad valorem	Specific	Compound
Definition	Expressed as a **fixed %** of the value of traded commodity	Expressed as a **fixed sum** per physical unit of traded commodity	**Combination** of ad valorem & specific tariff
Example	**10%** on a bicycle which is $100 per unit = $10	**$10** for any imported value	**5% & $10** of a $100 of a bicycle = $15

Empirical evidence

Tariff on non-agricultural product in developed countries

- **Average < 4%**
- **Highest on imports of clothing, textiles, leather products, fish & fish product, transport equipment**

	United States	European Union	Japan	Canada
Fish and fish products	1.0	10.5	5.5	0.9
Minerals and metals	1.7	2.0	1.0	1.0
Petroleum	1.4	2.0	0.6	0.5
Chemicals	2.8	4.6	2.2	1.0
Wood, paper, etc.	0.5	0.9	0.8	1.1
Textiles	7.9	6.6	5.5	4.3
Clothing	11.7	11.5	9.2	16.9
Leather, footwear, etc.	3.9	4.2	9.0	4.3
Nonelectric machinery	1.2	1.9	0.0	0.5
Electric machinery	1.7	2.8	0.2	1.1
Transport equipment	3.0	4.3	0.0	5.8
Other manufactures	2.4	2.7	1.2	2.9
Average	3.3	4.0	2.5	2.6

Tariff on non-agricultural product in other countries

- **Average between 7.7% to 14.2%**
- **Much higher than developed countries**

	China	India	Brazil	Russia	Korea	Mexico
Fish and fish products	10.9	29.8	10.0	12.2	16.1	16.6
Minerals and metals	7.4	7.5	10.1	10.0	4.6	3.8
Petroleum	4.8	3.8	0.2	5.0	4.1	0.1
Chemicals	6.6	7.9	8.3	6.4	5.7	2.6
Wood, paper, etc.	4.4	9.1	10.7	13.2	2.2	5.5
Textiles	9.6	14.7	23.2	11.0	9.1	13.9
Clothing	16.0	13.4	35.0	11.8	12.6	30.0
Leather, footwear, etc.	13.2	10.2	15.7	8.6	7.9	8.8
Nonelectric machinery	8.0	7.3	12.7	3.4	6.0	3.1
Electric machinery	8.3	7.2	14.1	7.4	6.2	4.0
Transport equipment	11.5	20.7	18.1	11.1	5.5	9.6
Other manufactures	11.9	8.9	15.3	11.3	6.7	5.7
Average	8.7	10.1	14.2	8.9	6.6	7.1

PARTIAL EQUILIBRIUM ANALYSIS OF A TARIFF

- Help in analysing the effects on production, consumption, trade & welfare
  - Use dd & ss curves
  - Recall on consumer surplus, producer surplus & dead weight loss
- Effect of tariff by a small nation is too small to affect world price by its trading

RECALL DEFINITION

Term	Definition
Consumer surplus (CS)	• Difference between what consumers are willing to pay for a specific amount of a commodity and what they actually pay for it
Producer surplus (PS)	• Extra payment received by producers above what needed to have been paid to cause them to produce the commodity.
Government revenue (T)	• Tax collected through tariff imposed ✔ (Tax amount) X (qt import)
Dead weight loss (DWL)	• Loss of economic efficiency that can occur when equilibrium for a good or service • Also known as **excess burden** or **allocative inefficiency** ✔ People who would have **more marginal benefit** than marginal cost are **not buying** the product ✔ People who have **more marginal cost** than marginal benefit are **buy**ing the product

PARTIAL EQUILIBRIUM EFFECTS OF A TARIFF

Assumptions:

- Nation 2 is small country (small industry)
- Before trade, ē : P = 3, Qx = 30
- Showed by red dotted line

Free trade

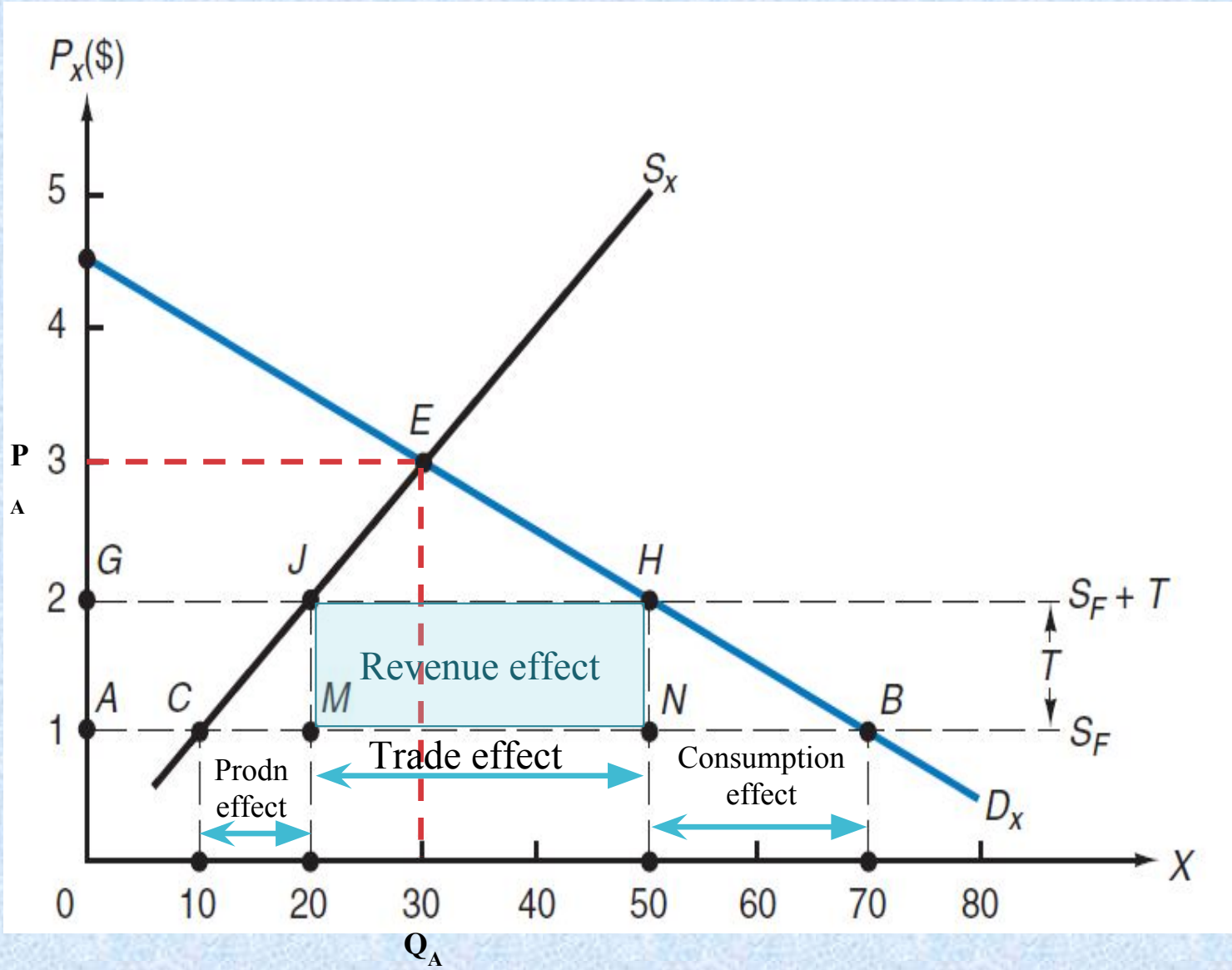
- S_F: Foreign ss
- Price cheaper: P = 1, Qd = 70X, Qs = 10X, M = 60X

Free trade with tariff (ad valorem 100%)

- S_F + T: Foreign ss with tariff
- Price ↑: P = 2, Qd = 50X, Qs = 20X, M = 30X
- Consumption effect: dom dd ↓ (20X : BN)
- Prodn effect: dom ss ↑ (10X : CM)
- Trade effect: M ↓ (30X: BN + CM)
- Revenue effect (tax collected): $30 ($1 tariff x 30X)

Important !!

- Flatter dd curve, greater effect on C
- Flatter ss curve, greater effect on prodn
- More elastic both dd & ss curve, more reduction in M & smaller revenue effect



EFFECT OF TARIFF ON CONSUMER & PRODUCER SURPLUS

Effect of tariff

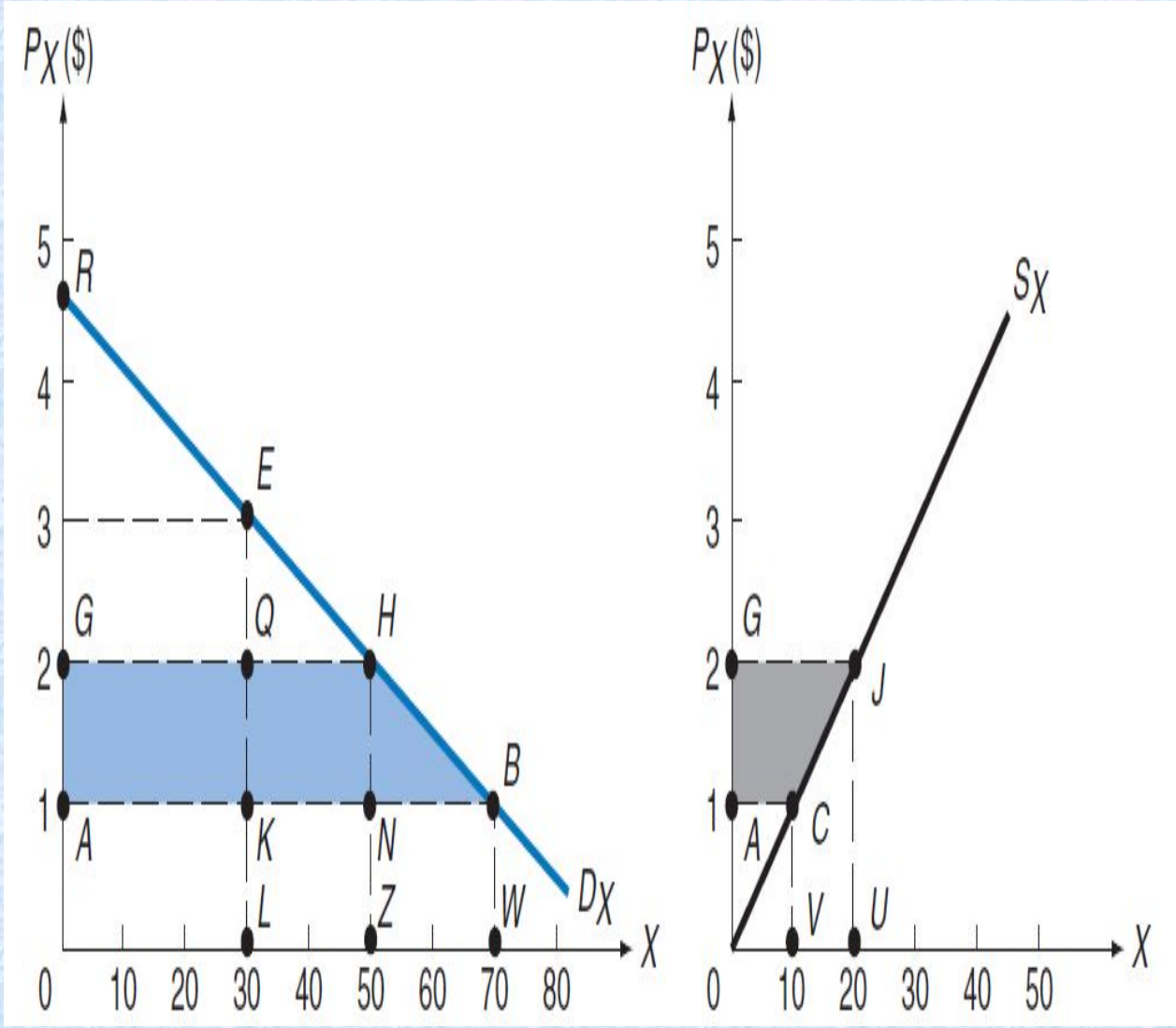
- CS ↓ & PS ↑

Loss of CS

- CS area before tariff: ARB
- CS area after tariff: GRH
  - Loss area: AGHB = $60

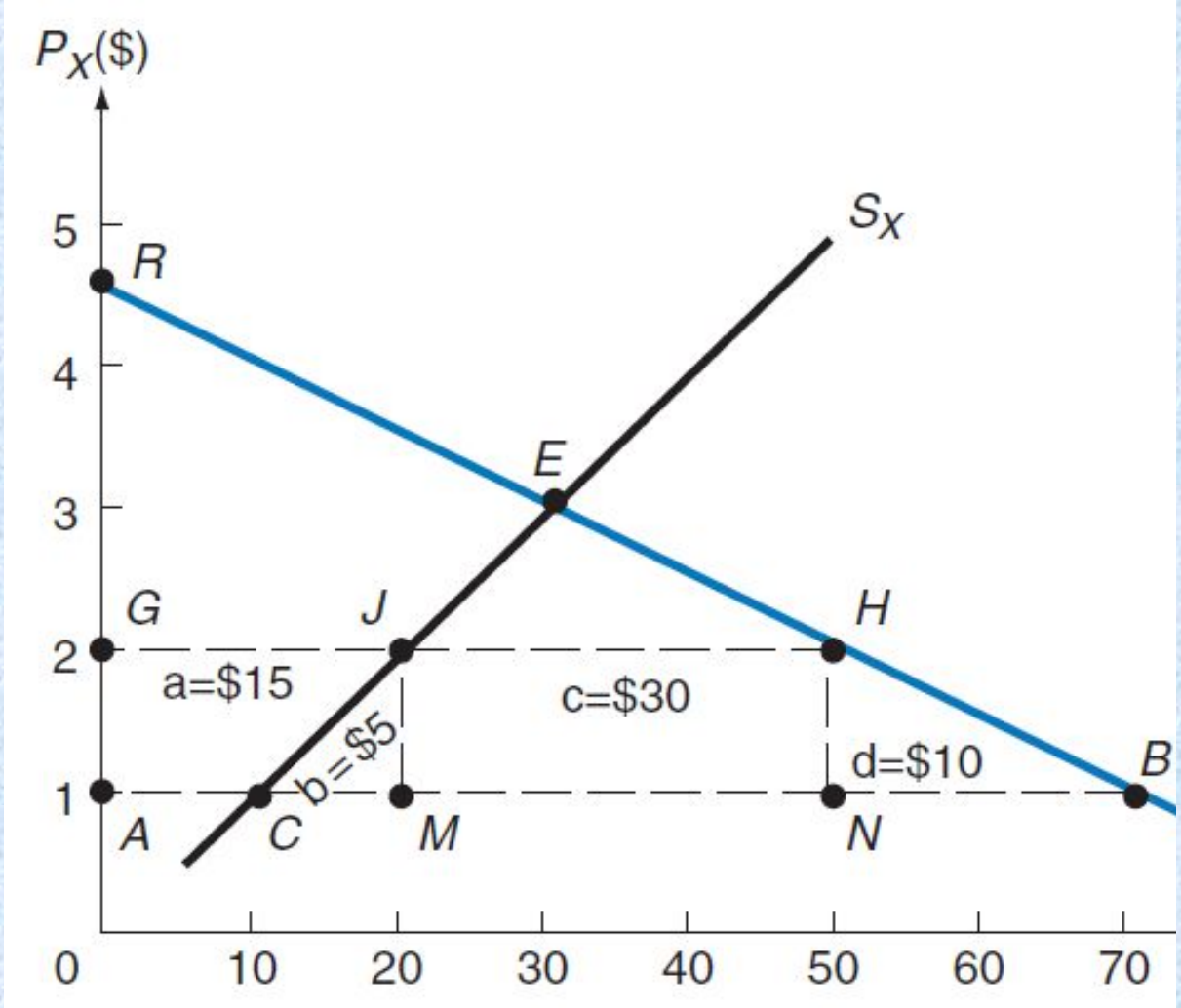
Increase in PS

- Before tariff: TR = $10 (produce at P= $1, Qs = 10X)
- With tariff: TR = $40 (produce at P= $2, Qs = 20X)
  - Increase in cost = $15 (area VCJU)
  - Payment that need not to be made in LR to supply additional 10X with tariff
  - Sometimes referred as subsidy effect
- Gain area: AGJC = $15



COSTS & BENEFITS OF TARIFF

- ↓ in **CS area** = a + b + c + d
- ↑ in **PS area** = a
- **Govt revenue area** = c
- **DWL area** = b + d
  - DWL area **b**: less efficient in **production** because of tariff artificially increase Px in relation to Py & distorts the pattern of C
  - DWL area **d**: increase in Px lead to reduction in **consumption**
- **Effect of tariff**:
  - Redistributes income from dom consumers to dom producers
  - Redistribute nation's abundant factor to nation's scarce factor
  - Lead to DWL
  - Know as **protection cost**
    - Cost per dom job saved: loss of CS divide by jobs saved in industry because of tariff



SUMMARY OF THE EFFECT OF TARIFF

Group	Effect	Explanation
Importing country consumers	• C decrease • CS decrease	• Consumers of the product in the importing country are worse-off as a result of the tariff. • The increase in the domestic price of both imported goods and the domestic substitutes reduces consumer surplus in the market.
Importing country producers	• Production increase (Import falls) • PS increase	• Producers in the importing country are better-off as a result of the tariff. • The increase in the price of their products increases producer surplus in the industry. • The price increases also induces an increase in output/production of existing firms (and perhaps the addition of new firms), an increases in employment, and an increase in profits
Importing country government	• Tariff revenue goes to gov	• The government receives tariff revenue as a results of the tariff. • Who will benefit from the revenue depends on how the government spends it. • These funds help support diverse government spending programs, therefore someone within the country will be likely recipient of these benefits.
Importing country-DWL		• The aggregate welfare effects for the country is found by summing the gains and losses to consumers, producers and government. • The losses known as deadweight losses.

RATE OF EFFECTIVE PROTECTION

2 type of protection:

- Tariff on input
  - Purpose: to encourage dom prodn & secure dom employment
- Tariff on output (final product)

Difference between nominal & effective tariff rate

- **Nominal tariff**: important to consumer, indicates how much price of final product increase because of increase in tariff
- **Effective tariff**: important to producer, indicates how much protections actually provided to dom producer
- Basically, effective tariff > nominal tariff
- Formula:

$$g = \frac{t - a_i t_i}{1 - a_i}$$

where g = the rate of effective protection to producers of the final commodity
t = the nominal tariff rate on consumers of the final commodity
a_i = the ratio of the cost of the imported input to the price of the final commodity in the absence of tariffs
t_i = the nominal tariff rate on the imported input

HOW TO CALCULATE RATE OF EFFECTIVE PROTECTION

$$g = \frac{t - a_i t_i}{1 - a_i}$$

Case

Suppose that **$80** of imported wool goes into domestic production of a suit. Suppose also that the free trade of the suit is **$100** but the nation imposes a **10 per cent** nominal tariff on each imported suit

Conclusion from the above statement

- Nominal tariff on consumer = 10%
- Ratio = 80/100
- Nominal tariff on input = 0%

What can u conclude on the relationship between g & t_i?

If nominal tariff on input = 0%
Effective tariff = 50% • Represents much degree of protection • Dom producer involves in prodn

What if nominal tariff on input = 10%
Effective tariff = 10% • Represents less degree of protection • Dom producer not interested to involve in prodn

What if nominal tariff on input = 20%
Effective tariff = -30%

Non-Tariffs Barriers (presentation by group of students)

Types

- Import quota
- VERs
- Domestic content requirement
- Export subsidies
- Technical, admin & other regulations
- Antidumping duties
- Cartel

Arguments for & against protection

- Job protection
- Infant-industry argument
- Maintaining standard of living
- Protection against unfair competition/cheap labor
- Non-economic arguments

WTO

- History of formation
- Objectives
- Achievements
- Trade dispute
- Important issues related to WTO

Sem	Quest #	Question	Marks
Jun 2019	Q3 a)	With example define an import quota. By using a diagram, analyse the partial equilibrium effects of an import quota on price, domestic production, consumption, imports and government revenue of a country.	10
Dec 2018	Q3 a)	Distinguish briefly between tariffs and non-tariff barriers. Discuss two (2) arguments for trade protectionism.	10
June 2018	Q3 a)	Tariffs increase domestic production and employment at the cost of greater inefficiency and higher prices, hence creating deadweight loss. Using a diagram and a partial equilibrium analysis, examine the statement above.	10
	Q3 b)	Assume that the final price of a unit of rubber wood furniture is RM500 but requires RM300 of imported inputs. if Malaysia imposes a nominal tariff rate of 20 per cent for imported furniture and 15 per cent on imported inputs, compute the effective rate of protection for furniture manufacturers.	5
Jan 2018	Q3 a)	Using numerical examples, explain the difference between ad valorem, specific and compound tariff.	6
	Q3 b)	Describe one example of nontariff barrier.	4

Questions to Ponder