

# Intra-Industry Trade Theories

- The Linder, Hotelling-Lancaster and Dixit-Stiglitz hypothesis on trade and demand

# The Grubel-Loyd index of ITT trade

$$B_j = \frac{(X_j + M_j) - |X_j - M_j|}{X_j + M_j}$$

- $(X_j + M_j)$  is the value of gross bilateral trade
- $|X_j - M_j|$  is the absolute value of inter-industry trade
- The index may vary between  $0 \leq B_j \leq 1$  and may also be written as

$$B_j = 1 - \frac{|X_j - M_j|}{X_j + M_j}$$

Table 26.1 *Average levels of IIT at 3-digit level in the UK: selected years*

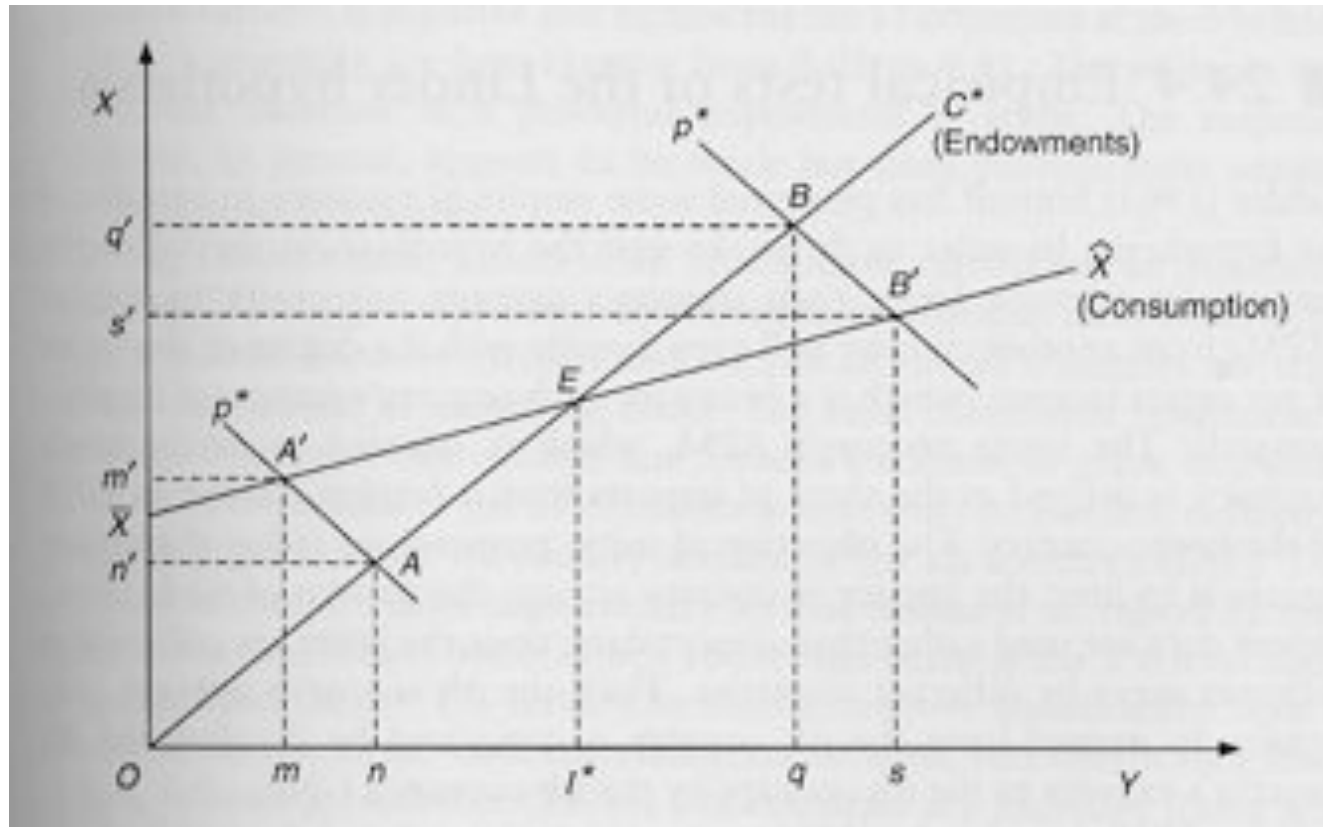
<i>SITC</i>	<i>1959</i>	<i>1964</i>	<i>1970</i>	<i>1977</i>	<i>1979</i>
2. Crude materials	0.18	0.19	0.36	0.40	0.38
3. Mineral fuels	0.30	0.35	0.26	0.58	0.74
4. Animal and vegetable oils	0.41	0.29	0.25	0.50	0.41
5. Chemicals	0.42	0.56	0.59	0.69	0.72
6. Manufactured goods	0.44	0.52	0.56	0.69	0.69
7. Machinery & transport equipment	0.38	0.51	0.60	0.69	0.70
8. Miscellaneous manufactured goods	0.66	0.75	0.79	0.80	0.75

*Source:* Greenaway and Milner (1986).

# Per capita income as a source of international trade

Hunter and Markusen (1988) analyse the role differences in per capita income have in international trade

They assume that consumer preferences are similar but not homothetic



Country A exports  $mn$  of the “luxury good

Country B exports  $q's'$  of the “necessity good

# The Linder Hypothesis

Linder (1961) suggests that the range of goods a country exports depends on the domestic pattern of demand

The range of exportable goods depends on “representative demand” (representative consumer)

Every good that is available in the international market is a candidate for import as long as domestic demand exists

Domestic demand for “differentiated” goods generates “potential” international trade

# The Linder Hypothesis

Trade intensity between two countries increases with similarity in domestic demand structure

Per capita income level determines demand structure

Since “differentiated” goods exist, similar income levels make international trade more intensive because the range of good demand in the two countries overlaps

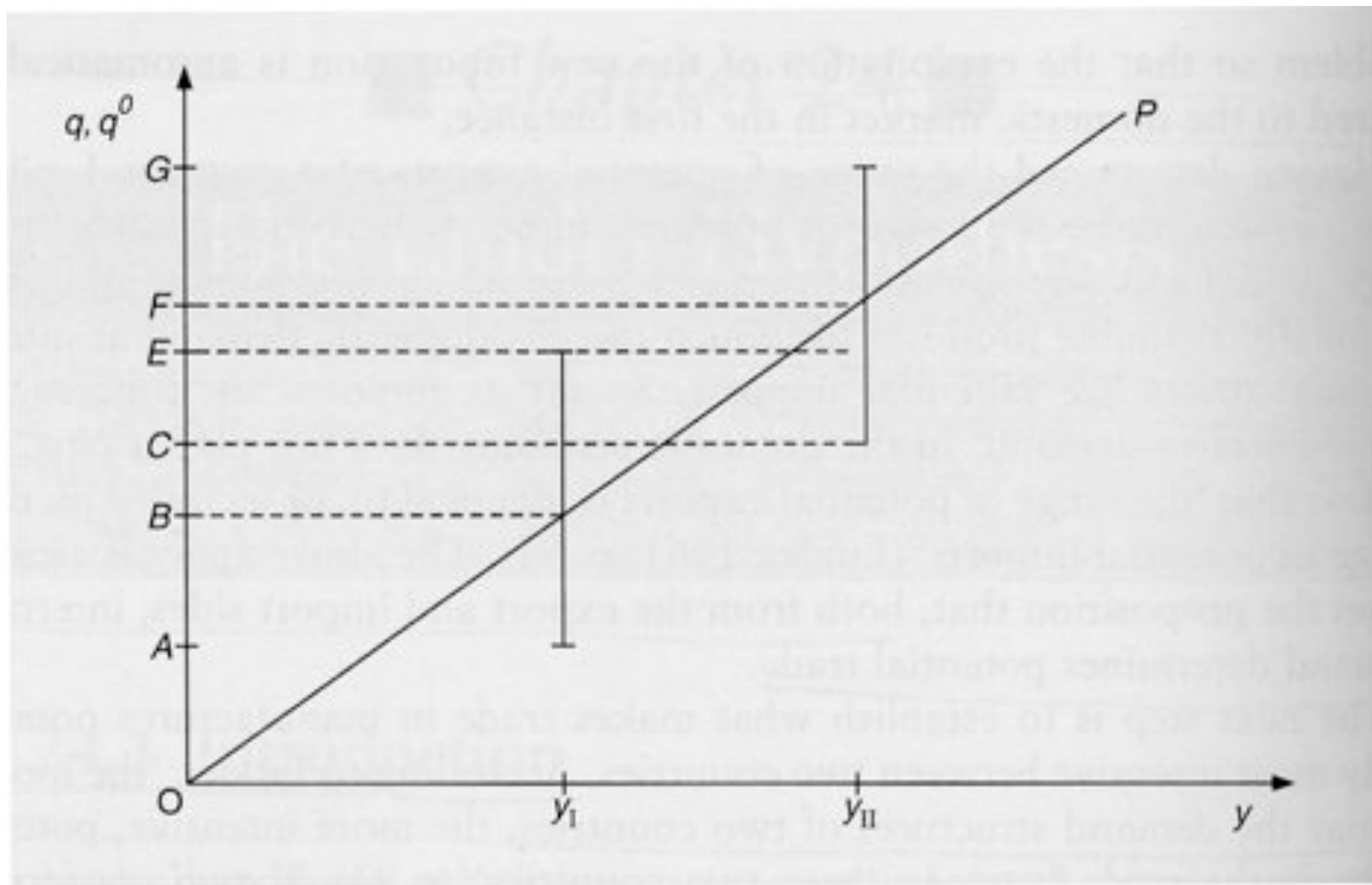
# The Linder Hypothesis di Linder

When per-capita income increases, more superior-quality goods are produced

An uneven income distribution widens the range of importable and exportable goods

Demand for capital goods does not strictly depend upon income but capital good quality does (demand increases)





# Demand for “differentiated” goods

Two types of product differentiation:

1) “horizontal” differentiation:

- goods have the same quality but different “external attributes” (color, form etc.)

2) “vertical” differentiation

- goods have different intrinsic quality (e.g: small city cars vs big suv)

# Horizontal differentiation

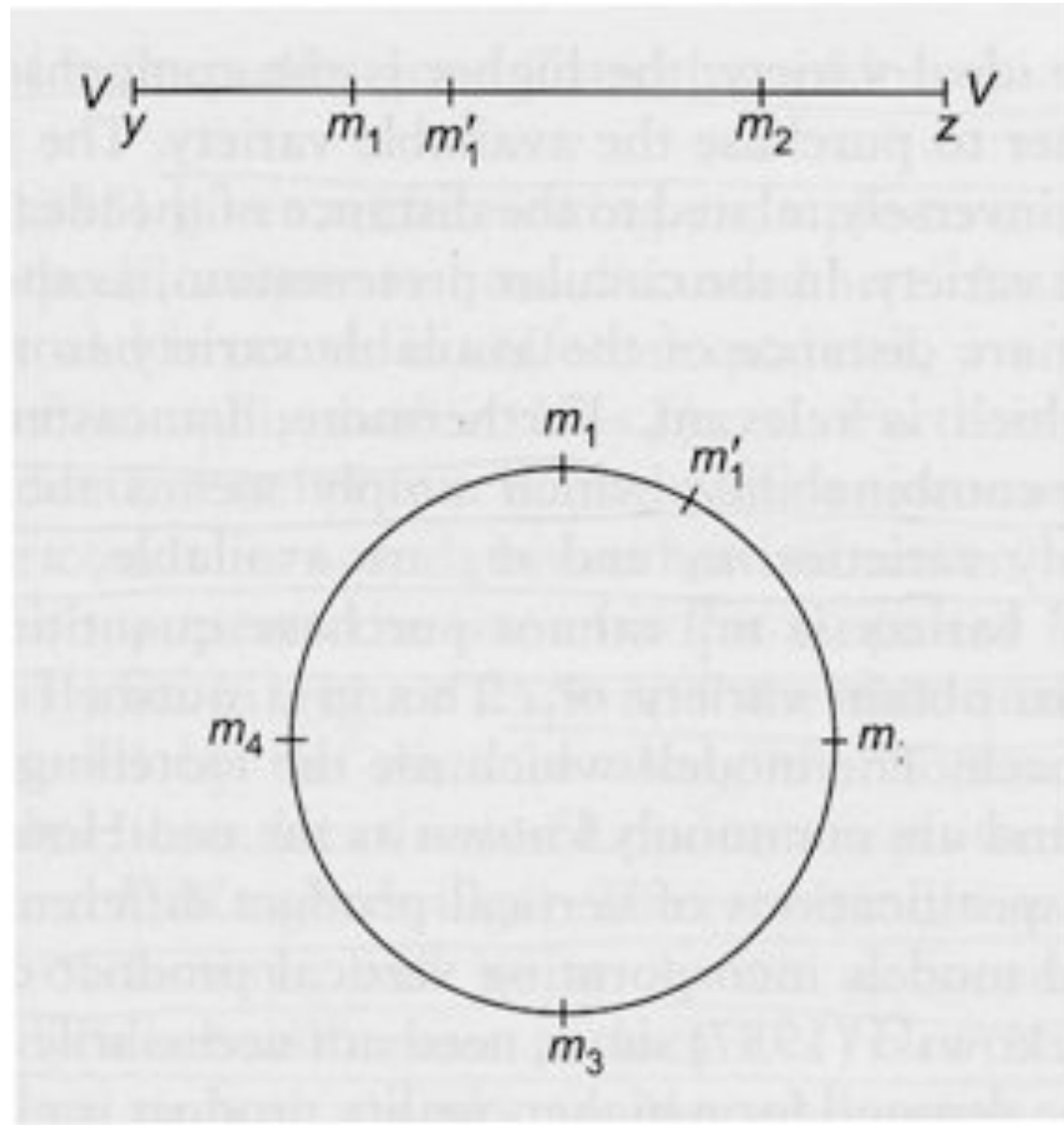
The Dixit-Stiglitz approach:

- all type of goods enter the utility function : consumers love “variety”

The Hotelling-Lancaster approach:

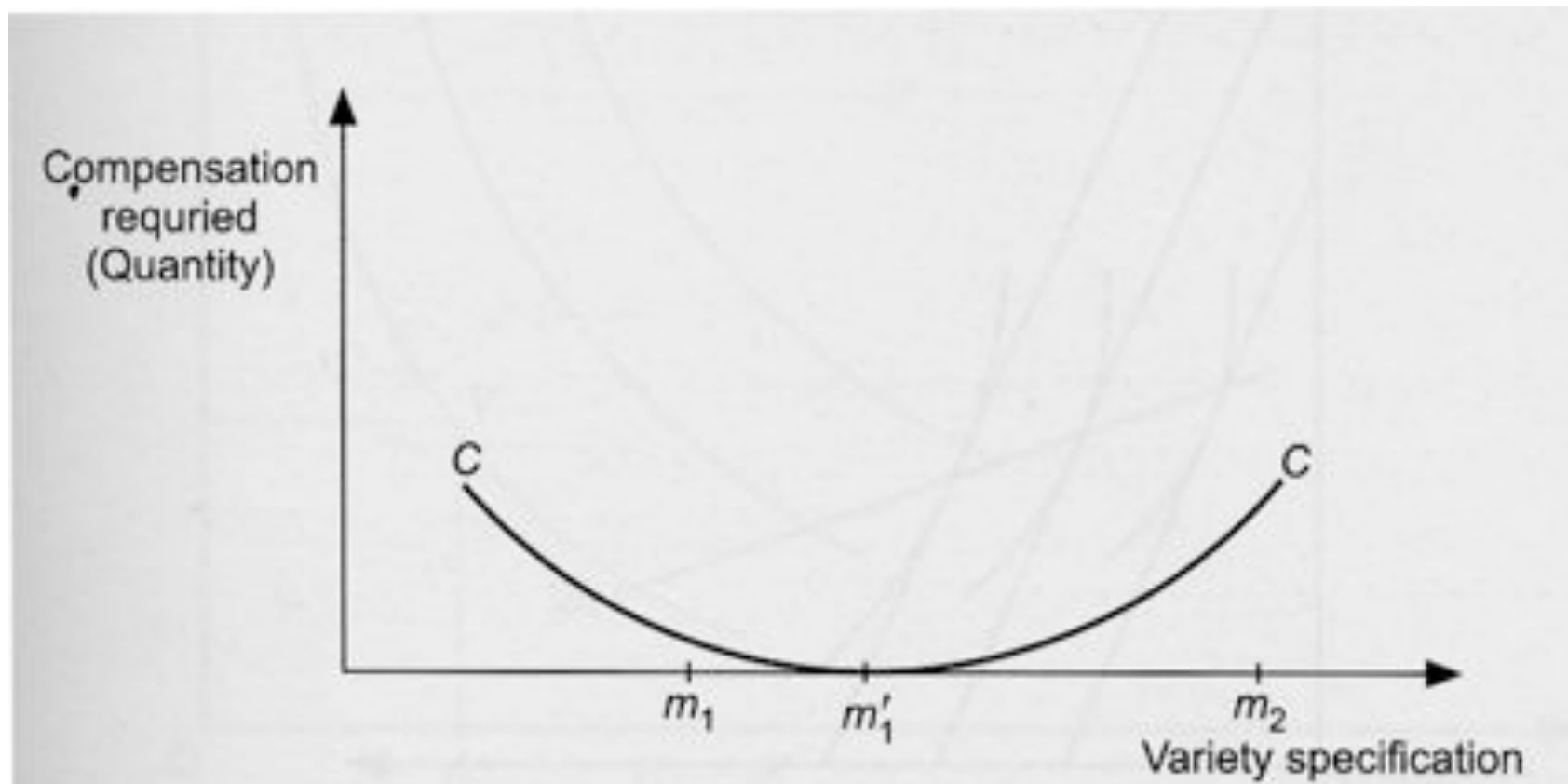
- people have an “ideal” (preferred) good non always available by combining existing variety of goods

Example: a consumer would like to buy a  $m'$  car but only  $m_1$  and  $m_2$  types of cars are available. Therefore he purchases the car with features closer to  $m'$



Lancaster introduces the concept of a “compensating function”

Consumer wants a compensation (price, quantity?) because he cannot find and buy the preferred “ideal” good



# “Vertical” differentiation

The analysis of “vertical (qualitative) differentiation” does not necessarily need the assumption of imperfect markets.

According to Falvey and Kierkowsky demand for high quality goods is positively related to income levels

- demand for those goods increases with income
- consumers prefer better quality good (Z) over low quality good (X) but are constrained by their income
- the consume expansion line is negatively sloped
  - (demand for Z increases at the expense of demand for X as income rises).

