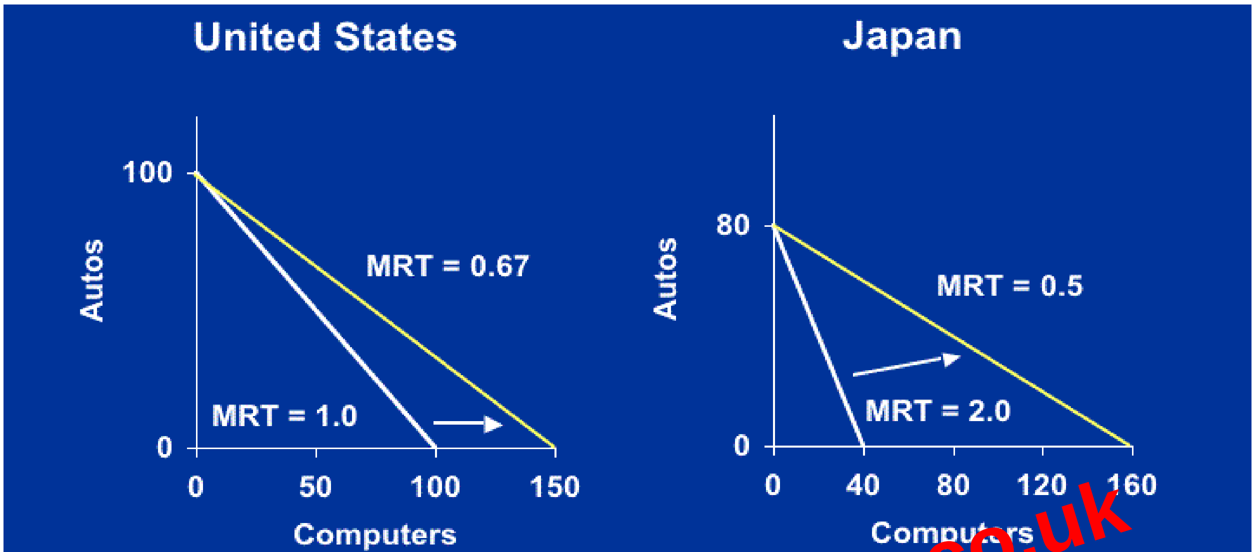
Table 2.5 (b): Consumption Gains from Specialization:
Constant Opportunity Costs

	Before Trade		*After Trade*		*Net Gain (Loss)*	
	Autos	**Wheat**	**Autos**	**Wheat**	**Autos**	**Wheat**
US	**40**	**40**	**60**	**60**	**20**	**20**
Canada	**40**	**80**	**60**	**100**	**20**	**20**
World	**80**	**120**	**120**	**160**	**40**	**40**

Productivity and Comparative Advantage

- Refer to **Figure 2.4**:
  - Assume that initially the ***MRT*** of automobiles into computers equals **1.0** for US and **2.0** for Japan.
  - Thus, the US has comparative advantage in the production of computers and a comparative disadvantage in auto production.
  - If both countries experience productivity increases in manufacturing computers (auto unchanged) but Japan moves with a faster rate.
  - The new ***MRT*** of auto into computers then becomes **0.67** for the US and **0.5** for Japan.
  - The comparative cost of a computer in Japan has thus fallen below that in the US due to the increased in productivity.
  - The change in manufacturing productivity results in a change in the direction of trade.

Figure 2.4: Changing Comparative Advantage



- If productivity in the Japanese computer industry grows faster than it does in US, the relative opportunity cost of US in producing computers will be higher. Therefore, for the US, comparative advantage shifts from computers to autos.

Trade Restrictions

- For a nation to achieve the greatest possible gains from trade, it must produce only the commodity of its comparative advantage.
- However, **trade restrictions** ***reduce*** the production and consumption gains from specialization and trade by decreasing the extent of specialization and the volume of trade.
- For example, see **Figure 2.5:**
    - US and OPEC have the comparative advantage in producing manufactured goods and crude oil respectively.
    - Thus, US should specialize in (export) manufactured goods at **point B** at the terms of trade ***tt***.
    - At post-trade consumption **point C**, US consumption gains from trade total **125** manufactured goods and **100** barrels of crude oil.
    - Due to national security reasons, if US wants to produce both goods at **point D**, US will achieve a lower post-trade consumption point under the terms of trade ***tt'***.