



# **M.A. ECONOMICS**

## **SEM II**

### **PAPER II International Economics**

#### **Optimum Tariff , Part I**

**E-CONTENT PREPARED BY**

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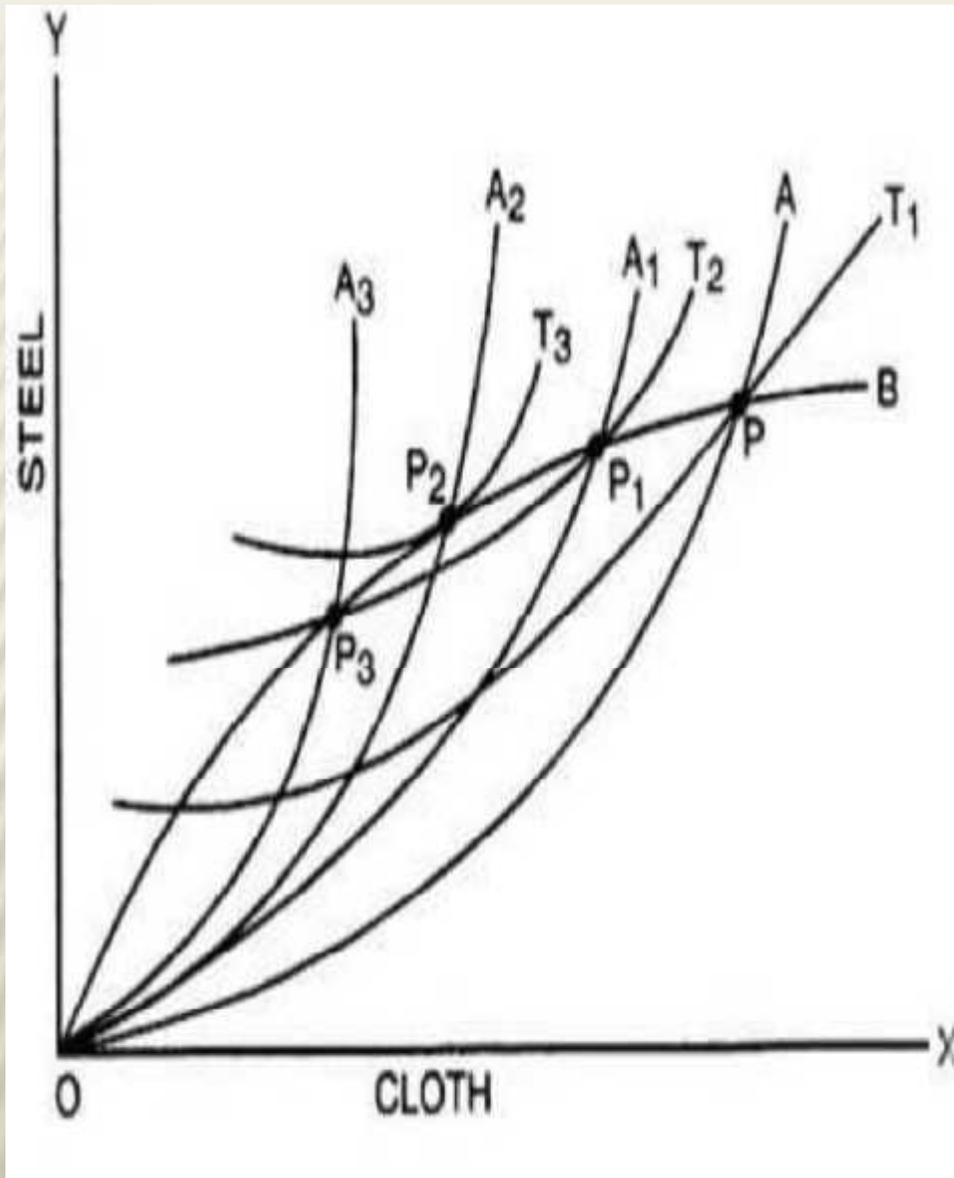
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➤ In this content we will discuss about the theory of optimum tariff. It is, of course, true that tariff, and in certain situations may fail to improve the terms of trade of a given country. There is, however, a widespread belief that tariffs can improve the terms of trade. This leads to a vital question, viz., to what extent a country can go on increasing tariffs, improve its terms of trade and maximise the economic welfare.

➤ Tariffs result in gain for the tariff-imposing home country in the form of improvement in the terms of trade. At the same time, tariffs involve cost in the form of reduction in the volume of exports and imports. So long as the gain from tariffs is more than the cost of it, the welfare of the tariffs-imposing country increases and it is worthwhile for it to raise tariff.

In case the cost of tariffs for the society is more than the gain from tariffs, there may be reduction in the level of economic welfare and the worsening of the terms of trade.

➤ In such a situation, it is appropriate for the tariff-imposing country to reduce tariff. The point of optimum tariff is reached when tariff does not further increase the net benefit to the given country and a level of economic welfare has become maximum. In the words of Sodersten, “.... the tariff that maximises a country’s welfare is called the optimum tariff.”



The point of optimum tariffs is determined where the trade indifference curve of the tariff-imposing home country becomes tangent to the offer curve of the foreign country. This can be shown through Fig. 1.

**FIG. 1**

➤ In Fig. 1 originally OA is the offer curve of home country A and OB is the offer curve of foreign country B.  $T_1$ ,  $T_2$  and  $T_3$  are the trade indifference curves of country A. Before the imposition of tariff, the exchange takes place at P. This point lies on the trade indifference curve  $T_1$ . As tariff is imposed, the offer curve of country A shifts to  $OA_1$  and exchange takes place at  $P_1$ . This point occurs at the higher trade indifference curve  $T_2$ .

➤ Thus, tariff results in an improvement in terms of trade, on the one hand, and increases the level of welfare on the other. If there is a further increase in tariff, country A's offer curve shifts to  $OA_2$  and given the offer curve OB of country B, the exchange takes place at  $P_2$ . This point occurs at the higher trade indifference curve  $T_3$ .  $P_2$  is the point of tangency between the trade indifference curve  $T_3$  and foreign country B's offer curve OB. Compared with point  $P_1$ , there is a further improvement in the terms of trade and increase also in the level of welfare.

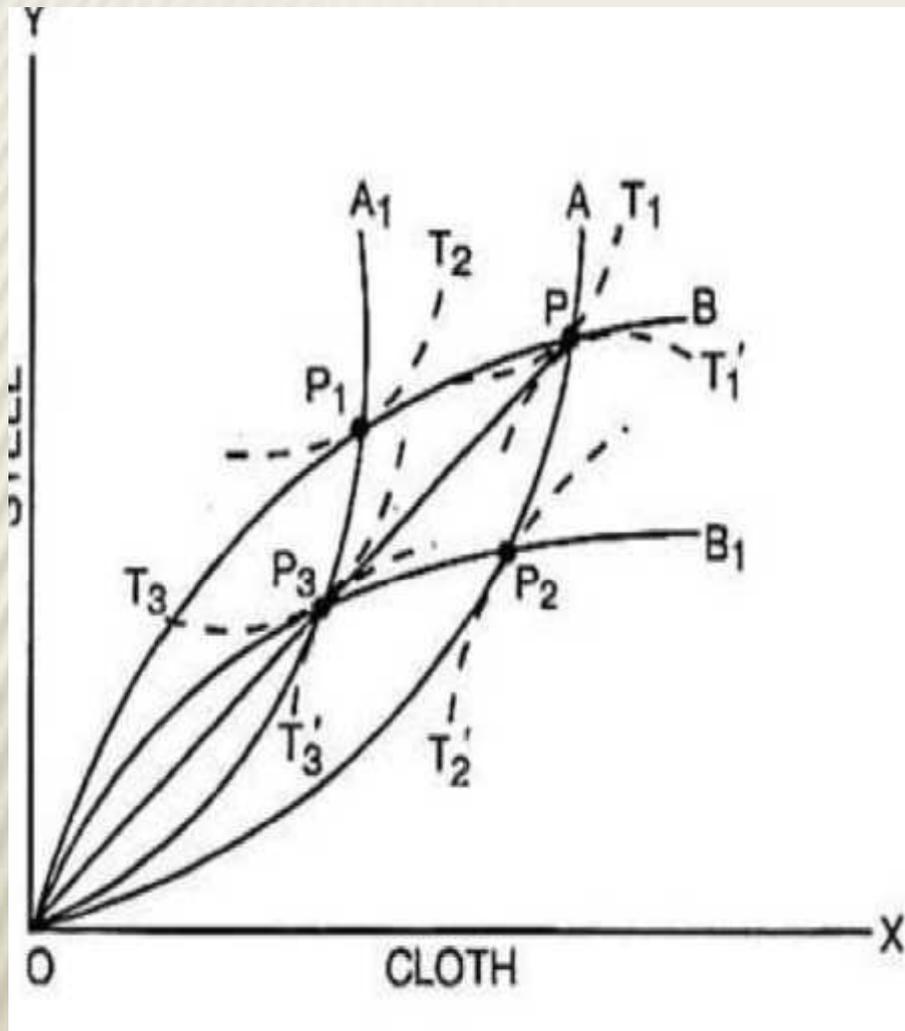
➤ In case, country A raises the tariff still further, its offer curve shifts to the left to  $OA_3$ . Given the offer curve of country B as OB, exchange takes place now at  $P_3$ . This point shows that terms of trade improve further but this point lies on a lower trade indifference curve  $T_2$ .

➤ Although the terms of trade in this situation improve, yet there is worsening in respect of the level of welfare. In such a situation, it is appropriate for the home country to reduce tariff and move back to the point  $P_2$  where the welfare is maximum. Thus  $P_2$  is the point of optimum tariff which corresponds with the maximisation of welfare.

# Optimum Tariff with Retaliation

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In the above analysis, the home country continues to raise tariffs and improve its terms of trade. It has been implicitly assumed that foreign country does not retaliate. In actual reality, the possibility of retaliation cannot be ruled out. The impact of imposition of tariffs by the two trading countries upon their terms of trade and the level of welfare can be shown through Fig. 2.



**FIG. 2**

In Fig. 2, OA and OB are the free trade offer curves of countries A and B respectively. P is the point of exchange and the terms of trade for the home country A are measured by the slope of line OP. This point lies on the trade indifference curves  $T_1$  and  $T_1'$  of countries A and B respectively. So point P also indicates the respective welfare levels in these countries in the pre-tariff situation.

➤ If country A imposes tariff so that its offer curve shifts to  $OA_1$  while country B does not enforce any retaliatory tariff,  $P_1$  is the point of optimum tariff for A. At this point of exchange, the higher trade indifference curve  $T_2$  of country A is tangent to the offer curve  $OB$  of country B. There is an improvement in terms of trade as well as an increase in welfare of the tariff-imposing home country.

➤ If country B had imposed tariff first without provoking country A to retaliation, the point of exchange would have shifted from  $P$  to  $P_2$ . This would have been the point of optimum tariff for B because of tangency between its higher trade indifference curve  $T_2$  and the offer curve  $OA$  of country A. The point  $P_2$  shows an improvement in terms of trade and increase in the level of welfare for B.

➤ In case, the tariff action of A is followed by the retaliatory tariff action of country B, their respective offer curves  $OA_1$  and  $OB_1$  intersect each other at  $P_3$ . The terms of trade for both the countries are exactly the same as at the pre-tariff position P. The point  $P_3$  is the optimum tariff situation because the trade indifference curves  $T_3$  and  $T_3'$  are tangent to the offer curve of each other at this point. However, the point  $P_3$  lies on the lower trade indifference curves of the two countries, compared with the tariff situations ( $P_1$  and  $P_2$ ) in the absence of retaliation. So tariff has left their terms of trade unchanged but has worsened the level of welfare in both the countries.

➤ The above analysis shows that both the countries in the ultimate analysis are likely to lose due to tariff. Johnson has, however, not supported such a general conclusion.

➤ In his words, “...whatever the final equilibrium point, one country must lose under tariff as compared with free trade, since gain depends on obtaining an improvement in the terms of trade sufficient to outweigh the loss of trade volume, and this is impossible for both countries simultaneously, and both countries may lose...but it is not necessarily true that both will lose.”

➤ The tariff action, particularly retaliatory tariff may or may not permit the improvement in terms of trade, but one thing is definite that it will reduce sharply the volume of trade and lower the level of welfare. In view of this, it is better for both the trading countries to avoid disastrous, beggar-my-neighbour tariff policies. The lowering down of tariff walls can, no doubt, affect adversely the terms of trade but the expansion in trade volume and consequent increase in welfare will certainly be highly desirable from the point of view of both the trading countries.

# **SOURCE OF STUDY MATERIAL**

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**Kindelberger, Charls P., International Economics.**

**Sodersten Bo, International Economics.**

**<http://www.economicdiscussion.net/tariffs/the-theory-of-optimum-tariff-international-trade-economics/30448>**