EFFECTS OF TARIFF IN GENERAL EQUILIBRIUM :

DEPARTMENT OF ECONOMICS

M.A ECONOMICS, SEM-ll, PAPER – 2

UNIT – 3,

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In the general equilibrium analysis, a study is made of the effects of tariff on consumption, production, trade and welfare. When a country imposes a tariff, not only a specific product or sector but practically every sector of the economy gets affected in one way or the other, until the economic system reaches a new equilibrium position.

In this connection, Kindelberger remarked that a tariff is "...likely to alter trade, prices, output and consumption, and to reallocate resources, change in factor proportions, redistribute income, change employment and alter the balance of payments." The general equilibrium analysis of tariff is made from the viewpoint of a small country and a large country.

The general equilibrium analysis will be decomposed into two scenarios; the small country scenario and the large country scenario. The tools in this analysis will include the production possibility curve (PPC) and community indifference map. This leads to the assumption of two countries, two commodities (exportable and importable), two factors and perfect competition.

Also assume that the tariff revenue is redistributed to consumers, intuitively.

Scenario 1

It is convenient to start with a small country, where the world terms of trade remain unchanged. This is because given the assumptions in the foregoing paragraph; a country will maximize its welfare by producing at that point where its domestic ratio of marginal cost equals the world exchange ratio, thereby engaging in trade so as to attain the

highest possible indifference curve. Such free trade equilibrium is shown in the diagram,
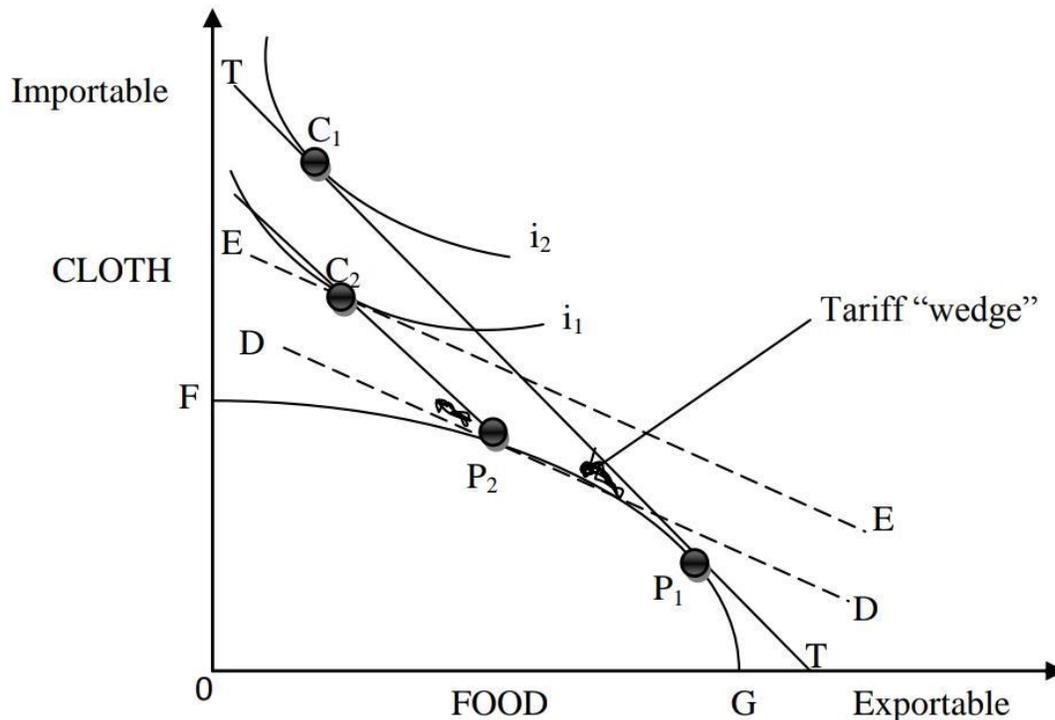
with world price ratio shown by the slope of TT, production at point P1 and consumption at point C1, where TT is tangent to the indifference curve i2. The country (say Nigeria) exports food and imports cloth.

From the diagram above, the domestic exchange ratio becomes equal to the slope of DD, which is flatter than TT, indicating a higher relative price of cloth. The tariff drives a wedge

between the two price lines. The higher price of cloth is an incentive for firms to expand cloth production and to reduce food production. This makes Nigeria to produce at P2 where the domestic price line (DD) is tangent to the production possibility curve (FG).

Being a small country case, the world price ratio is assumed to be unchanged, thus international trade takes place along line P2C2 (parallel to TT). A new equilibrium in consumption is reached when two conditions are met. First is that the domestic price line, EE, whose slope is equal to the tariff-distorted domestic price ratio, is tangent to a community indifference curve. Secondly, the world price line P2C2, intersect the community indifference curve at its point of tangency with the domestic price line EE. The point C2 satisfies these conditions in figure 2.1 above.In the new equilibrium point (C2), Nigeria continues to export higher quantities of food and import smaller quantities of cloth than before. The tariff has stimulated cloth production in Nigeria thus reducing its

import dependence. Consequently, domestic output in welfare reduces, which is indicated by the lower community indifference curve (i1). In conclusion, tariff reduces national welfare in a small country scenario (Robert & John, 2004).

Scenario 2

When the country imposing the tariff is large enough to influence the world price of what it buys, this will make us focus on its impact on world price ratio. Going by the same

illustration, as Nigeria levies a tariff on cloth, the result may be that the world price of cloth falls relative to the price of food. In this fashion, for a given ad valorem tariff, domestic

prices of cloth will not rise as much as before. This will shift production to a small extent.

This analysis is synonymous to scenario 1. The difference arises from the change in world price ratio.
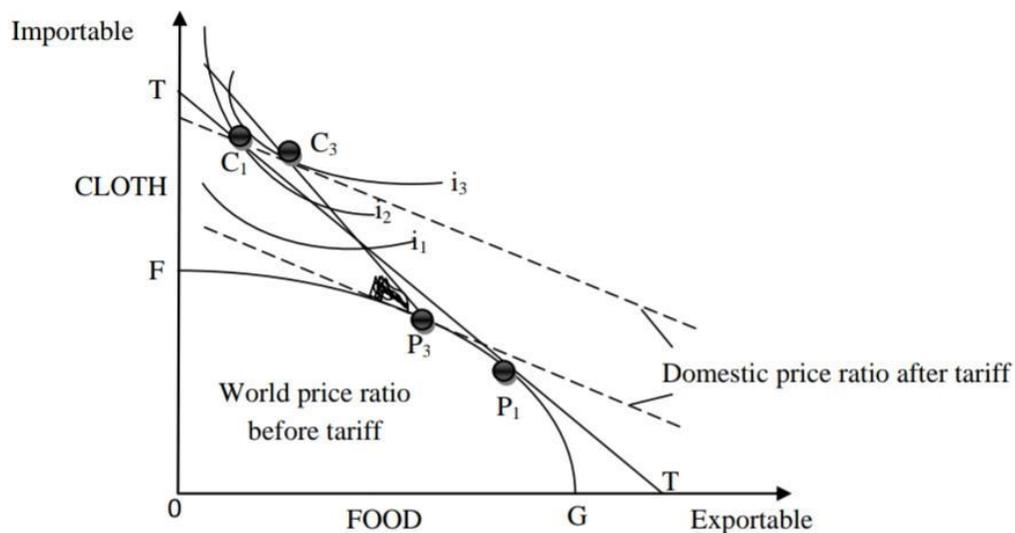
From the above fig, as Nigeria imposes a tariff on importable (cloth), the world price ratio shifts from TT to P3C3. Thus production takes place at P3. International trade now take

place at the world price ratio (P3C3). A new equilibrium in consumption is attained at point

C3, where tariff distorted domestic price line is tangent to a community indifference curve

and the world price line also passes through this point of tangency. Nigeria reaches a higher indifference curve as a result of the tariff. However, this result is not certain to occur. Its possibility of occurrence is a function of the

magnitude of the change in the world exchange ratio. Intuitively, one can see that Nigeria from the illustration given, benefits from tariff when its gain from the improved terms of trade outweighs its loss from less efficient use of domestic resources. The domestic and foreign elasticities of demand and supply shows the extent to which the terms of trade will improve. Also, the impact of the tariff is at the expense of the rest of the world. If other countries act in the concert, they can retaliate by imposing tariffs of their own, thereby deteriorating the terms of trade. It will benefit both countries if a mutual reduction of tariffs is maintained (Robert & John, 2004).

Study Material Reference :

- http://www.economicsdiscussion.net/tariffs/effects-of-tariffs-under-general-equilibrium-international-economics/30913
- Research Gate : The Impact of Terms of Trade Shocks on the Volatility of Selected Macroeconomic Variables in Nigeria.