ECN330 Trade Policy Analysis of Economic Integration and Trade Liberalization

Assignment 3 **Effect of a countervailing duty to offset an export subsidy**

Problem: Consider a two-country world where supply and demand for a particular good are as represented below. Suppose the exporting country applies an export subsidy which then is offset by a countervailing duty by the importer. Compare welfare under the differing policy regimes.

Country 1	**Country 2**
$Q_S = -150 + 15/2\ P$	$Q_S = 800 + 5\ P$
$Q_D = 900 - 10\ P$	$Q_D = 1150 - 25/2\ P$

3.1. Free trade is the benchmark trade situation over which welfare changes are compared.
- 3.1.1 Derive the initial excess supply and demand functions.
- 3.1.2 Solve for the market equilibrium under free trade.
- 3.1.3 Provide a 3-panel diagram of the equilibrium solution.

Equilibrium solutions under different policy regimes:

Country 1						**Country 2**					
P_W	P_D	$[Q_S]$	$[Q_D]$	$[Q_T]$	$[V_T]$	P_W	P_D	$[Q_S]$	$[Q_D]$	$[Q_T]$	$[V_T]$
3.1. Free trade equilibrium:											
Excess supply or demand						Excess supply or demand					
3.2. Export subsidy of €9/unit:											
Excess supply or demand						Excess supply or demand					
3.3. Export subsidy of €9/unit and an offsetting countervailing duty:											
Excess supply or demand						Excess supply or demand					

3.2. Now, the government in the exporting country applies a €9/unit export subsidy.

- 3.2.1 Derive the new excess supply function with the export subsidy.
- 3.2.2 Solve for equilibrium under a €9/unit export subsidy.
- 3.2.3 Present the new equilibrium on the 3-panel diagram in 3.1.3.
- 3.2.4 Identify the areas representing the welfare effects (resulting from the policy) in each country. Sum the ΔNSW of the two countries to solve for the ΔNSW in the world.
- 3.2.5 Interpretation of the welfare analysis: What evidence could the importing country present to justify a policy response, i.e., a countervailing duty (CVD)? What would be the appropriate rate of duty for the CVD to offset the effect of the export subsidy? Use this rate to answer 3.3.

Welfare changes with the policy intervention:

	Welfare analysis of the export subsidy		Welfare analysis of the export subsidy and an offsetting countervailing duty	
	Country 1	Country 2	Country 1	Country 2
ΔCS				
ΔPS				
ΔG				
ΔNSW				
ΔNSW World				
ΔNSW World over 2 periods				

3.3. Consider a retaliatory response through the use of a countervailing duty.

- 3.3.1 Derive the new excess demand function with the countervailing measure.
- 3.3.2 Solve for equilibrium with the CVD and the export subsidy of €9/unit.
- 3.3.3 Show the equilibrium result on a new 3-panel diagram of the equilibrium
- 3.3.4 Identify the areas representing the welfare effects. Sum the ΔNSW of the world over the two periods to determine the net situation relative to the free trade situation.

3.4. Debriefing: interpretation of the results of the final welfare analysis.

- 3.4.1 Would the CVD be justified under WTO rules? Explain using the welfare results.
- 3.4.2 Does the retaliatory response of a CVD make sense from the importing country's perspective? Explain using the welfare results.