

ECN330 Trade Policy Analysis of Economic Integration and Trade Liberalization

Assignment 2. Comparison of price and income support for some level of support/protection

Objective: The purpose of this exercise is to illustrate the difference in economic, trade and welfare effects of domestic support measures (for a large country) that achieve an equivalent policy goal and to relate the policy differences to WTO rules and commitments.

Problem: The internal market for some agricultural product is described by the system of equations for the individual country. The total world excess supply (ES_{Wld}) and excess demand (ED_{Wld}) of the product are given as the equations under the world market situation. This is not a two-country world and the world market includes the net trade position of the individual country.

Individual country	World market situation
$Q_S = 15 + 15/10 P$	$ES_{Wld} = -350 + 35/2 P$
$Q_D = 265 - 35/10 P$	$ED_{Wld} = 1050 - 35/2 P$

- 2.1. Free trade is the benchmark trade situation over which welfare changes are compared.
 - 2.1.1 Derive the initial excess supply and demand functions.
 - 2.1.2 Solve for the market equilibrium under free trade. Enter results in table 1.
 - 2.1.3 Provide a 2-panel diagram of the equilibrium solution of the individual country (IC) and the world market.

Table 1. Equilibrium solutions under different policy regimes:

Individual country market				World market equilibrium	
$[Q_S]_{IC}$	$[Q_D]_{IC}$	$[Q_T]_{IC}$	P_D	P_W	$[Q_T]_{Wld}$
2.1 Free trade equilibrium:					
Excess supply or demand				Excess supply and demand	
2.2 Equilibrium under a price support at €60/unit (under a variable levy):					
Excess supply or demand				Excess supply and demand	
2.3 Equilibrium under income support at the same level of support:					
Excess supply or demand				Excess supply and demand	

- 2.2. Suppose the government of the individual country considers introducing a border measure, a variable levy, which supports the internal price at €60/unit.
- 2.2.1 Derive the individual country's new net trade situation.
- 2.2.2 Solve for the new domestic and world market equilibrium. Note that a change in the net trade situation of the country affects ES_{Wld} and ED_{Wld} . Enter the results under this equilibrium in table 1.
- 2.3. Rather than domestic price support, suppose the government considers providing income support (semi-decoupled) to producers equal to the support under the variable levy.
- 2.3.1 Derive the individual country's new net trade situation.
- 2.3.2 Solve for the new market equilibrium and enter the results in table 1.
- 2.4. Debriefing: interpretation of the welfare analysis and WTO notifications under each policy
- 2.4.1 Graph the equilibrium solutions under 2.2 and 2.3 using the same graph from 1.2.3.
- 2.4.2 In table 2, identify the areas in the graph of 2.4.1 that represent the welfare effects in the individual country under the price support from 2.2 and income support from 2.3.
- 2.4.3 Interpret the meaning of the difference in ΔNSW under the two policy regimes.

Table 2. Welfare analysis of the individual country under differing DS programs:

	Areas representing the welfare effects of the domestic price support	Areas representing the welfare effects of the semi-decoupled income support
ΔCS		
ΔPS		
ΔG		
ΔNSW		

- 2.4.4 Interpret how the programs differ in terms of WTO rules. For each, explain what the country would have to notify under MA, DS and ES as part of its WTO commitment.

Table 3. Notifications of agricultural commitments:

Trade policy regime:	Price support	Income support
Market access notifications:		
Applied MFN tariff		
Domestic support notifications:		
Value of support		
Type of support/box		
Export subsidy notifications:		
Value of subsidy		
Quantity of subsidy		