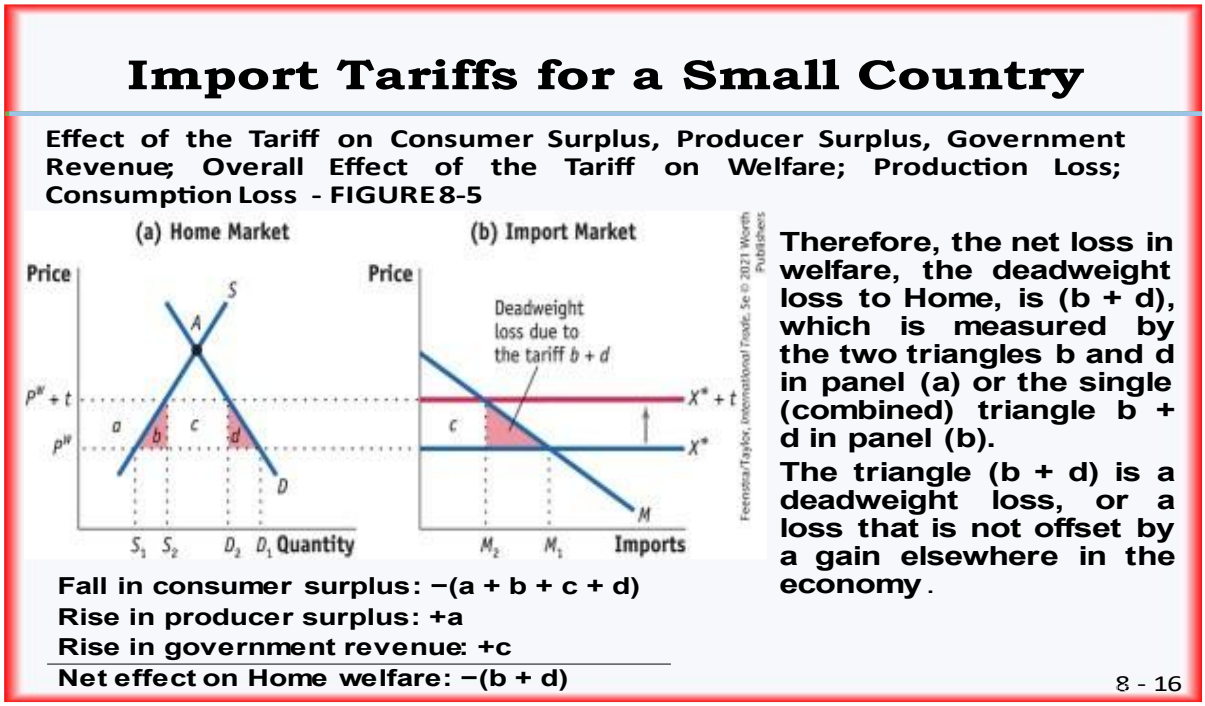
Solutions

International Trade

Georgetown University School of Foreign Service in Qatar
Fall 2025

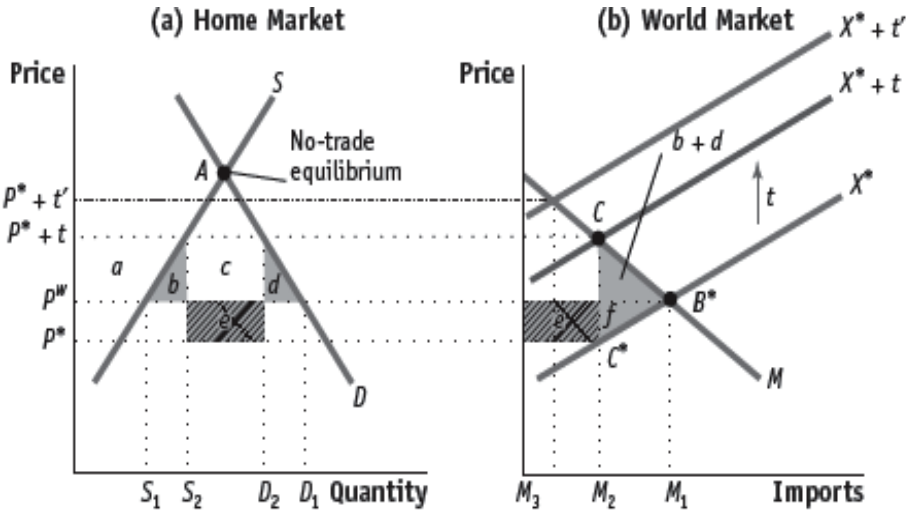
Problem Set 6: This problem set will not be collected and we will go over it the day it is due.

Show the effect of a tariff imposed on a small country. What is the net gain or loss to the country as a result of the tariff.



5. Consider a large country applying a tariff t to imports of a good like that represented in Figure 8-7. How does the size of the terms-of-trade gain compare with the size of the deadweight loss when (i) the tariff is very small and (ii) the tariff is very large? Use graphs to illustrate your answer.

Answer:



As the size of the tariff increases from t to t', the export supply curve shifts upward by more, M_2 decreases (relative to M_3), and the size of the triangle with area $b + d$ increases relative to rectangle e. That is, consumer deadweight losses get larger relative to terms-of-trade gains due to the tariff. We can interpret this as meaning that for small tariffs the welfare gains from terms-of-trade improvements outweigh consumer deadweight losses, but the opposite is true for tariffs that are sufficiently large.

6. a. If the foreign export supply is perfectly elastic, what is the optimal tariff Home should apply to increase welfare? Explain.
Answer: This is the small-country case. Lowering the foreign export price will reduce export quantity to zero. Because the incidence of the tariff is shouldered completely by consumers and there is no terms-of-trade gain to applying a tariff, the optimal tariff is zero.

b. If the foreign export supply is less than perfectly elastic, what is the formula for the optimal tariff Home should apply to increase welfare?
Answer: This is the large-country case. The optimal tariff is determined as:
$t = \frac{1}{E_x^*}$, where E^*_x is the Foreign export supply elasticity.