Seminario Avanzado de Comercio

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Consider the Melitz (2003) model that we discussed in class. Make the same assumptions regarding preference, production and transport costs. Make the additional assumption that the distribution $G(\varphi)$ is Pareto:

$$G(\varphi) = 1 - \left(\frac{b}{\varphi}\right)^k$$

with support $[b, \infty)$ and shape parameter k with $\sigma < k+1$ Consider the simple case of two symmetric countries with population size L.

1. Derive the equilibrium conditions ZCP and FE in the closed economy. Find the equilibrium cutoff φ^* below which firms choose not to produce and the equilibrium mass of firms M.

2. Derive the equilibrium conditions ZCP and FE in an open economy with variable cost τ and fixed cost of exporting f_x per period (as we discussed in class it does not matter whether you assume a sunk cost f_{ex} or a per period f_x). Find the equilibrium cutoffs for domestic production and for exporting, φ^* and φ_x^*, and the mass of firms M. Compare the price index under autarky and trade. Can you conclude that welfare is always higher under trade than under autarky?

3. Starting from the open economy consider the effect of a reduction in τ on the two cutoffs φ_x^* and φ^*. How does the price index move with a decline in τ?