Econ 188 – Exam 1
Winter 2015
Professor Spearot

I have neither given nor received unauthorized aid on this examination, nor have I concealed any similar misconduct by others.

Signature

Part 1 (2 points each – circle one unless otherwise noted)

1. An specific trade cost is ____
   a. assessed per-unit
   b. assessed as a percentage of production value
   c. a fixed cost
   d. None of the above

2. On their second attempt, via what route did Ben and Jerry’s enter the Japanese market?
   a. Domino’s Pizza
   b. 7-11
   c. Scoop Shops
   d. Pizza My Heart

3. In the Krugman model, doubling country size ______
   a. does not affect product variety
   b. halves the number of varieties
   c. doubles the number of varieties.
   d. Has an ambiguous effect on product variety.

4. Which characteristics are most associated with the Steel Industry over the last 50 years?
   a. Employment fell
   b. Production rose
   c. ‘a’ and ‘b’
   d. None of the above

5. A section 201 complaint, like the most recent protection measure used by the steel industry, is assessed against ______ in that particular product.
   a. a specific firm
   b. a specific country
   c. all countries
   d. None of the above
Part 2: (10 points each)

1. In trade theory, we generally view firms as “small” when making decisions on international markets. Please discuss how Bernard, Jensen, Redding, and Schott changed this with their empirical work?

*Bernard et al changed the way we think about international firms in three ways.*

1. The majority of exporting firms sell only one product to one market. +3
2. The majority of export value is sold by very few firms that sell five or more products to five or more markets. +3
3. The majority of export employment is hired by very few firms that sell five or more products to five or more markets. +3

2. Please discuss two ways in which ‘tramp’ shipping and ‘liner’ shipping differ.

+5 for each comparison (two required)

*Tramp shipping:*
No defined port of call
Bulk grains and commodities
Shipping patterns follow demand and supply fluctuations

*Liner Shipping*
Defined ports of call
Uses containerization
In the Krugman model, we used a constant elasticity demand function, which is represented by the inverse demand function \( P(q) \). Firms may produce each unit at a constant marginal cost ‘\( c \)’. Assuming that firms maximize profits, please solve for the profit-maximizing price as a function of the marginal cost and the elasticity of demand ‘\( e \)’ (defined positively). Show your work!

\[
Profits = P(q)q - c \cdot q
\]

Differentiate with respect to \( q \), set equal to zero

\[
P'(q)q + P(q) - c = 0
\]

Bring \( c \) to other side and factor out \( P(q) \)

\[
P(q)(P'(q)q/P(q) + 1) = c
\]

Define \(-1/\text{elasticity of demand} = -1/e = P'(q)q/P(q)\)

\[
P(q)(-1/e + 1) = c
\]

Rearrange to solve for the “monopoly mark-up

\[
P(q) = \text{marginal cost} \times \text{markup} = c \left( e/(e-1) \right)
\]

+3

+3

2 for additional work beyond FOC

2 for correct answer
Consider the “Melitz” exporting model we discussed in class. A firm must decide to exit the market or operate, and if the latter, whether to be purely domestic or a domestic firm that also exports. The returns from exiting are zero. If the firm decides to operate in some manner, it must pay $F_0$ in overhead costs. If the firm also decides to export, it must pay $F_X$ in exporting fixed costs, such as up-front export financing. The firm can earn $\Pi_H(\alpha)$ in the domestic market. If the firm exports, it earns $\Pi_F(\alpha)$ in the foreign market, but loses ‘t’ percent of these profits through a foreign tariff. The term $\alpha$ is firm level productivity, where each profit function is increasing in $\alpha$.

1. Please graphically detail how firms sort into the three outcomes.

+6 for profit functions correctly drawn and labeled
+2 for labeled cutoffs
+2 for labeled regions
2. Suppose that the foreign government violates their international agreements and increases their tariff ‘t’. Please detail graphically the direct effects of the change in tariffs.

+ 3 for a shift down of the exporting profit function
+ 4 for this downward shift being a pivot from the origin
+ 3 for the correct shift of the exporting cutoff and no shift of the domestic cutoff
3. What do you think the domestic government will do in response? From the end point of part ‘2’, please detail the direct effects of your answer graphically.

The domestic government will raise tariffs in response. This will limit competition on the domestic market, and shift up domestic profits for both types of firms. +3

The key to this graph is showing that both lines go up the same amount at a given value of alpha. This will leave some cutoffs unchanged, while others will move.

+3 for having both shift up
+2 for having a shift up such that alpha_x does not change
+2 for the correct change in the domestic cutoff.