ECO 550 – Winter 2017

Assignment 1: Demand Estimation

Due Week 3 and worth 200 points

Imagine that you work for the maker of a leading brand of low-calorie, frozen microwavable food that estimates the following demand equation for its product using data from their 26 supermarkets around the country for the month of April.

Note: The following is a regression equation. Standard errors are in parentheses.

QD = -3,500 - 150P + 30A + 75PX + 10Y

(5,234) (2.29) (5.25) (1.75) (1.5)

R2 = 0.90 n = 26 F = 35.25

Your supervisor has asked you to compute the elasticities for each independent variable. Assume the following values for the independent variables:

QD = Quantity demanded of a unit (dependent variable)

P (in cents) = 300 cents per unit (price per unit)

A (in dollars) = $750 (monthly advertising expenditures)

PX (in cents) = 200 cents per unit (price of leading competitor’s product)

Y (in dollars) = $10,000 (per capita income)

Write a four to six (4-6) page paper in which you:

1. Compute the elasticities for each independent variable. Note: Write down all of your calculations.

2. Determine the implications for each of the computed elasticities for the business in terms of short-term and long-term pricing strategies. Provide a rationale in which you cite your results.

3. Recommend whether you believe that this firm should or should not cut its price to increase its market share. Provide support for your recommendation.

4. Assume that all the factors affecting demand in this model (A, PX and Y) remain the same.

Plot the demand curve for the firm using these prices: 100, 200, 300, 400, 500, 600, 700, and 800 cents.

The equation for the firm’s supply curve is: Qs = -7909.79 + 79.0989 P, where Qs is quantity supplied and P is price. Plot the supply curve, Qs, using the same prices 100, 200, 300, 400, 500, 600, 700, and 800 cents.

5. Determine the equilibrium price and quantity. (Show this graphically and/or calculate using algebra.)

6. What short-term and long-term changes in market conditions could shift the demand and supply curves for this product?

7. Use at least three (3) quality academic resources in this assignment.

Your assignment must follow the formatting requirements below:

Document must be typed using Times New Roman font (size 12). Use double spacing and one-inch margins on all sides. Citations and references must be consistent with APA formatting. Check with your professor for any additional instructions.

Document must include a cover page containing the title of the assignment, the student’s name, the professor’s name, the course title, and the date. The cover page and the reference page are not included in the required assignment page length.