

Ch 7 (Product Diff) Review Questions: 1, 2, 8

Problem 1

Provide examples of the following types of product differentiation.

Multicharacteristic diff: when products differ over a variety of characteristics

- (1) Houses
- (2) Cars

Horizontal diff: people disagree over preferences

- (1) Flavors of bagels
- (2) Colors of cars given they are all the same kind

Vertical diff: people agree that one is better than the other

- (1) Craftsman vs knock offs
 - (2) Nike vs knockoff
-

Problem 2

How do changes in key parameters impact firm demand in each type of prod diff?

Multicharacteristic diff: when products differ over a variety of characteristics

Equation for firm 1:

$$\text{Price} = Y \text{ intercept} - q_1 - \text{degree of differentiation} * q_2$$

- (1) Greater Y intercept = greater demand
 - (2) Degree of differentiation = greater demand
-

Horizontal diff: people disagree over preferences

Equation for firm 1:

$$q_1 = \text{Number of customers} * \frac{t - p_1 + p_2}{2t}$$

- (1) Number of total possible customers goes up = greater demand
 - (2) Greater transportation costs = indeterminant change on demand
-

Vertical diff: people agree that one is better than the other

Equation for firm 1:

$$q_1 = \text{Number of customers} * \left(\text{Preference}_{\text{High}} - \frac{p_1}{\text{quality}} + \frac{p_2}{\text{quality}} \right)$$

- (1) Number of total possible customers goes up = greater demand
 - (2) Increase in market size from taste preference = greater demand
-

Problem 8

Assume a market with

- (1) 2 firms
- (2) vertical diff (people agree of quality diff)
- (3) One high quality, one low quality

How would demand of each change with an increase in disposable income?

Answer:

As disposable income increases in a market with two goods, demand for the higher quality item will increase and demand for the lower quality item will fall. If the higher quality firm decides to raise prices as a result, the lower quality firm will be able to raise their

prices as well. This is because the cost-benefit tradeoff (indifference point) will change as the high quality firm raises their price.