

VW Invasion of North America

Group 7

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Overview

- 1 Before 1964, why VW can increase sales revenue every time when it increase its price?
- 2 VW built sales network after 1964, what is its influence on the demand of Beetles in the US market? Why VW can increase its revenue through increasig price again ?
- 3 Assume we have the same slope of demand curve before 1964 and after 1964. Draw the two demand curve, write down the two demand function, and calculate the elasticities when price increases from \$800 to \$1000, from \$1200 to \$1350, and then from \$1500 to \$1800.
- 4 Raise one or two examples which you think the seller should set better price. And explain.

Question 1

1. Before 1964, why VW can increase sales revenue every time when it increase its price ?

- VW has an inelastic price demand curve, which means that every 1% increase in price leads less than 1% drop in quantity demanded.

Question 2

2. VW built sales network after 1964, what is its influence on the demand of Beetles in the US market? Why VW can increase its revenue through increasing price again ?

- The demand curve of Beetles in the US market moves upward. In other words, we have an increase in demand of Beetles in the US market after 1964. Since the increase in demand will cause the original unit elastic price point to be at the inelastic price, the revenue at that price will increase again.

Question 3

3. Assume we have the same slope of demand curve before 1964 and after 1964. Draw the two demand curve, write down the two demand function, and calculate the elasticities when price increases from \$800 to \$1000, from \$1200 to \$1350, and then from \$1500 to \$1800.

Question 3: Steps of Finding Price Elasticity

Step 1: Obtain the Demand Curve After 1964

$$\begin{cases} 1500 = 562000a + b \\ 1800 = 538000a + b \end{cases} \Rightarrow P_{after} = -\frac{1}{80}Q_{after} + 8525$$

Step 2: Obtain the Demand Curve Before 1964

$$\begin{cases} Q_{\pi_{max}} = 40d \\ 1350 = -\frac{1}{80}40d + d \end{cases} \Rightarrow P_{before} = -\frac{1}{80}Q_{before} + 2700$$

Step 3: Obtain the Elasticity

$$\begin{cases} P_{after} = -\frac{1}{80}Q_{after} + 8525 \\ P_{before} = -\frac{1}{80}Q_{before} + 2700 \end{cases} \Rightarrow E_{(Q,P)}$$

Theorem (Profit Maximization)

*If the linear demand curve is unit elastic or $E_{(P,Q)} = -1$:
Then $MR = 0$*

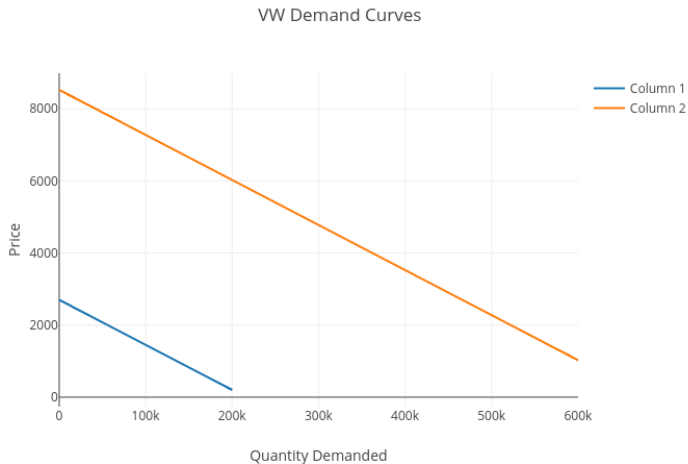
Question 3: Calculate Price Elasticity

Price Range	Q_{before}	Q_{after}	$\frac{\Delta P}{P}$	$\frac{\Delta Q}{Q}$	Elasticity
800-1000	152000	136000	0.2222	-0.1111	-0.50
1200-1350	120000	108000	0.1176	-0.1053	-0.89
1500-1800	562000	538000	0.1818	-0.0436	-0.24

Table: Price Elasticity of Demand

The Demand Curves

We draw VW's demand curves both before and after 1964 with the same slope.



Question 4

4. Raise one or two examples which you think the seller should set better price. And explain.

- One example is *Moutai*, whose demand curve is inelastic and whose demand is too high so that there is always a shortage of supply. In order to solve the shortage of supply problem and to maximize the revenue, it is better for the company to raise the price.

The End