

Polis: Market Rules and Marketing Strategyⁱ

Polis is a city of 100 people that makes its own laws. It has a tradition of enacting frequent and dramatic changes to the way it regulates business.

All people in Polis want one, and only one, jug each year and value jugs the same at $\mathcal{D}_p3.50$ (drachma). Jugs are imported and sellers all face the same variable cost: $\mathcal{D}_p0.9$ per jug (i.e., the seller must pay for every jug sold). Sellers must charge all consumers the same (i.e., can only set one price). Profit per jug is price less variable cost.

Of the Polis population, 40 people are left wing, 40 people are right wing, and 20 people are moderates. They incur a psychic cost from having to buy from a seller who does not completely align with their political views. This cost is 0.4 drachma per category difference. Thus, a left-wing consumer suffers a psychic cost of 0.4 drachma when buying from a moderate company and 0.8 drachma when purchasing from a right-wing company.

People of Polis		
Left Wing (40)	Moderates (20)	Right Wing (40)

The “total cost” of a jug is the price paid plus the psychic cost. A price of \mathcal{D}_p2 and psychic cost of $\mathcal{D}_p0.4$, gives a total cost of $\mathcal{D}_p2.4$ to the consumer. Consumers buy only if the total cost *does not exceed* the value they get ($\mathcal{D}_p3.50$). Consumers buy from whoever offers them a jug at the lowest total cost, while sellers will make the choice that makes them the most money.

The consumer surplus—the value the consumer gains—is what they are willing to pay less the total cost. When willing to pay $\mathcal{D}_p3.5$ with a total cost of $\mathcal{D}_p2.4$, consumers gain a surplus of $\mathcal{D}_p1.1$. Total consumer surplus is the sum of all 100 consumers' surpluses.

Year 1: Monopoly

Allie is a seller and a close personal friend of the Archon (ruler) of Polis. She has no personal political views beyond wanting to make as much money as possible. A law is written so that Allie is the only one allowed to sell jugs in Polis, but the price must be \mathcal{D}_p2 or \mathcal{D}_p3 . Allie “positions” the jug in the moderate location in the center of Polis’ political spectrum.

1. What price does Allie set?
2. What profit does Allie make per jug?
3. What total profit does Allie make?
4. What is the total consumer surplus?

Year 2: Price Controls

Political change hits Polis. The new Archon insists on also allowing Bernie a chance to sell to the people of Polis. Bernie, like Allie, only cares about making money. Allie and Bernie will be allowed to reposition their jugs but must each pick left, right, or moderate. The new law also fixes prices at \mathcal{D}_p3 .

1. What positions do Allie and Bernie set?
2. How many jugs do Allie and Bernie sell each?
3. What total profit do Allie and Bernie make?
4. What is the total consumer surplus?

Year 3: Price Competition

A new Archon decides that Allie and Bernie must position their jugs to appeal to moderates. The Archon also decides to let the sellers price at either \mathcal{D}_p2 or \mathcal{D}_p3 . (In all

scenarios, a seller must charge the same to all consumers). Remember, Allie and Bernie make the most profitable choice they can in the current year.

1. What prices do Allie and Bernie set?
2. How many jugs do Allie and Bernie each sell?
3. What total profit do Allie and Bernie make?
4. What is the total consumer surplus?

Year 4: Mild Political Differentiation

Another new Archon is upset that jugs are positioned to appeal to moderate consumers when most consumers are not moderate. The new Archon insists that one seller must position on the left and one must position on the right. Allie and Bernie toss a coin and Allie positions on the left, Bernie on the right. They each price at either D_2 or D_3 .

1. What prices do Allie and Bernie set?
2. How many jugs do Allie and Bernie each sell?
3. What total profit do Allie and Bernie make?
4. What is the total consumer surplus?

Year 5: Strong Political Differentiation

It is an especially turbulent year in Polis politics. Allie and Bernie can't change positions as their brands are now widely seen as left and right wing respectively. The strength of the political debate means that the psychic cost of buying from a company not at the consumer's position doubles. For example, a left-wing consumer now incurs a psychic cost of 0.8 drachma when buying from a moderate company and 1.6 drachma when buying from a right-wing company.

1. What prices do Allie and Bernie set?
2. How many jugs do Allie and Bernie sell each?
3. What total profit do Allie and Bernie make?
4. What is the total consumer surplus?

5. What is different about this market compared to earlier markets?

Endnotes

ⁱ Case written by Neil Bendle (neilbendle.com). You are free to use the case any way you wish.