4.1. Product Differentiation

Matilde Machado

Up to now we have assumed that goods, produced by different firms, are homogenous, that is perfect substitutes. Now we will relax this assumption and allow firms to produce differentiated goods.

- Definition: two goods are differentiated good if they are substitutes but not perfect substitutes.
4.1. Product Differentiation

There are two types of product differentiation:

1. **Horizontal:** Goods are different but at the same price some consumers will buy one and some will buy other, it really depends on their preferences. Example: Pepsi and Coca Cola;

2. **Vertical:** Goods are different and all consumers would prefer one to the other if they were sold at the same price. Goods are of different qualities. Example: Pentium III and Pentium II, BMW and Fiat.

Examples of Horizontal product differentiation:

- Consider a beach. In each extreme of the beach, there is an ice-cream post. Although the two posts sell exactly the same ice-creams, consumers are not indifferent between them, they prefer to buy from the one that is closer. There are transportation costs.

- Breakfast cereals may have lots of sugar or may be healthier. We may order them one a line according to their sugar content (like the beach in the previous example). Consumers have different tastes for sugar (different locations along the beach) and therefore at same prices they will buy those cereals that are closer to their taste.
4.1. Product Differentiation

More examples of horizontal product differentiation:

- White Renault Scenic versus Red Renault Scenic
- Walter García Fontes and Massimo Motta “Regulación de las Oficinas de Farmacia: Precios y Libertad de Entrada”
- What is more homogenous than water? The case of design bottled water – high price-cost margins.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Price per Half-Liter Bottle</th>
<th>Source</th>
<th>1997 Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua Fina</td>
<td>$0.59–$0.69</td>
<td>purified tap water</td>
<td>$ 60 million</td>
</tr>
<tr>
<td>Crystal Geyser</td>
<td>$1.00</td>
<td>springs in California &amp; Tennessee</td>
<td>$115 million</td>
</tr>
<tr>
<td>Evan</td>
<td>$0.99–$1.09</td>
<td>spring in the French Alps</td>
<td>$185 million</td>
</tr>
<tr>
<td>Sparklets Plain</td>
<td>$1.99 per six pack</td>
<td>wells in California and Texas</td>
<td>$181 million</td>
</tr>
<tr>
<td>Poland Spring</td>
<td>$1.39</td>
<td>spring in Maine</td>
<td>$300 million</td>
</tr>
</tbody>
</table>

Examples of vertical product differentiation:

- Different computer processors Pentium III versus Pentium IV
- BMW versus Fiat.
- Pharmaceutical branded good and generics
- Regular cell phone versus blackberry