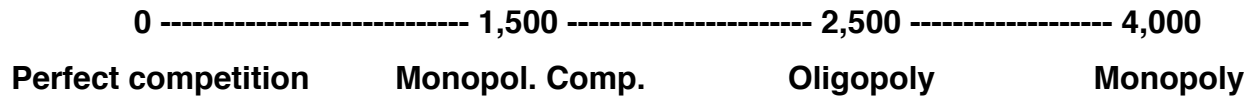


**ASSIGNMENT: Competition**

**DIRECTIONS:** An interesting way to determine whether a market is best described as a monopoly, oligopoly, monopolistic competition, or pure (perfect) competition is to calculate the Herfindahl-Hirschman Index (HHI).

If you know the market share of a company, the HHI is a powerful tool to quantitatively determine the competitive structure of that market.

In order to calculate the HHI, square the market share expressed as a whole number for every company in that market and add them together. Sums closer to zero indicate perfect (pure) competition and numbers closer to 4,000 indicate a monopoly.



For example: here's the wireless industry in 2003: (source - Blue Field Strategies)

- Verizon: 24% of all wireless connections
- Cingular: 15%
- AT&T: 14%
- Sprint: 10%
- Nextel: 8%
- T-Mobile: 8%
- Alltel: 5%
- Other companies: 16%

To calculate HHI, we square all the percentages after converting them to whole numbers.

$$\Sigma (24^2 + 15^2 + 14^2... + 5^2) = 1250$$

< we omit the "Other" category >

Here's the data for the same industry in 2009: (source - Blue Field Strategies)

- |              |           |             |               |           |
|--------------|-----------|-------------|---------------|-----------|
| Verizon: 32% | AT&T: 29% | Sprint: 18% | T-Mobile: 12% | Other: 9% |
|--------------|-----------|-------------|---------------|-----------|

Here's the data for the wireless industry in 2013: (source - Blue Field Strategies)

- |              |           |             |               |           |
|--------------|-----------|-------------|---------------|-----------|
| Verizon: 30% | AT&T: 33% | Sprint: 17% | T-Mobile: 13% | Other: 7% |
|--------------|-----------|-------------|---------------|-----------|

Using your values for HHI, please comment on the state of competition in the wireless industry since 2003. (Please omit "Other" for these calculations)

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