Case Study: Exploring corporate tax rate variation in the USA

Explore this article by Mike Bostock titled '**Across U.S. Companies, Tax Rates Vary Greatly**' from The New York Times, and consider the questions below.

Consider the following questions/ideas:

- Variation of corporate tax.
- What types of companies pay less tax and high tax?
- Why some companies pay less tax than others?
- Any interesting discoveries.
- Now upload your answers to the 'Module Wiki' for formative feedback.

Learning Outcomes

- Critically evaluate and apply data visualisation grammar and idioms to the whole of the visualisation process and the resulting presentations.
- Critically evaluate the capabilities of different visualisation tools and programming languages (proprietary and/or open source) to support the discovery and display of critical and valuable answers in different types of datasets.

Variation in Corporate Tax Rates

Corporate tax rates vary significantly across industries and companies due to different tax laws, deductions, and operational strategies. The chart illustrates effective tax rates (from 2007-2012), where:

- Overall effective tax rate: 29.1%.
- Industries like Utilities, Information Technology, and Telecom have lower tax rates, while Energy, Retailers, and Insurance face higher tax rates on average.

Types of Companies Paying Less or High Tax

1. Companies paying less tax:
    - Utilities: Benefit from tax breaks due to capital-intensive investments like power plants.
    - Information Technology: Leverage tax advantages by operating in low-tax countries and reporting losses in earlier growth phases.
    - Pharma: Gain from research tax credits and global structuring.

2. Companies paying high tax:
    - Energy: Oil companies typically pay higher rates, partially driven by debates about pollution costs.
    - Retailers: Brick-and-mortar retailers face higher effective tax rates compared to online companies.

Reasons Some Companies Pay Less Tax

- Tax Credits and Deductions:
    - Research and development credits (Pharma, Tech).
    - Investment in infrastructure (Utilities).
- International Operations:
    - IT and Pharma companies often shift profits to countries with lower tax rates.
- Company Size and Market Capitalisation:
    - Larger companies (with higher market caps) tend to optimise taxes better through accounting practices and global operations.
- Loss Carryforward:
    - Companies in industries like Tech may report lower effective tax rates due to earlier losses offsetting future profits.

Interesting Discoveries

- The largest variation occurs within industries like Materials, showing that even within the same sector, tax optimisation strategies significantly affect tax rates.
- Financial companies have seen shifts post-crisis, leading to relatively higher tax rates.
- Notably, some online retailers (e.g., Amazon) manage to pay much lower effective tax rates compared to traditional retailers like Bed Bath & Beyond.