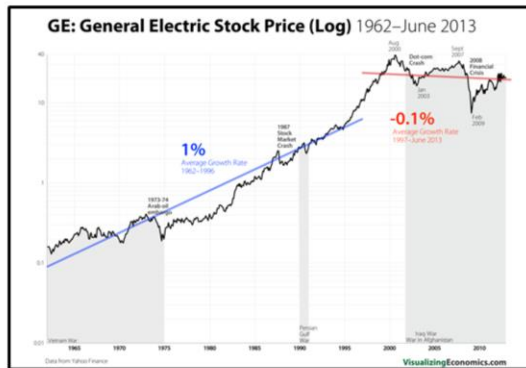


time series and cross-sectional data

This learning module will describe the difference between time series data and cross-sectional data.

time series data

- Data collected for the **same variable over a period of time**, such as months, quarters or years, is called time series data.



Example:

Data collected daily for a company's stock price for the period of several years.

When the data are collected for the **same variable over a period of time**, such as months, quarters or years, it is called **time series data**.

Time series data have many applications in business. Data collected *daily* for a company's stock price for the period of several years is a good example of time series data. The typical measuring points are months, quarters, or years, but virtually any time interval is possible.

cross-sectional data

- Data collected for **several variables at the same point in time** is called cross-sectional data.



Example:

Data on sales volume, sales revenue, number of customers and expenses for the past month at each Starbucks location.

When the data are collected for **several variables at the same point in time** it's called **cross-sectional data**.

For example, if we collect data on sales volume, sales revenue, number of customers and expenses for the past month at each Starbucks location, this would be cross-sectional data.

If we expanded our data collection process to include daily sales revenue and expenses over a time span of several months, we would now have a **time series** for sales and expenses.

Because different methods are used to analyze these different types of data, it is important to be able to identify both time series and cross-sectional data sets.

image credits

- brandondillon creative. (2014). Starbucks holiday 2013 highlights. Retrieved from <http://www.brandondilloncreative.com/wpcontent/uploads/2014/08/Starbucks-Infographic.jpg>
- VisualizingEconomics.com (n.d.). GE: General Electric stock price (log) 1962-June 2013. Retrieved from http://visualizingeconomics.com/exp-growth-png/ge-stock-prices_log_11png