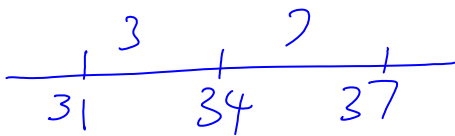


Ch.1. Introduction to Business Statistics

Statistics — Stato: state
 \ Statista: Statesman

Data $\xrightarrow{\text{Stat. analy}}$ Information



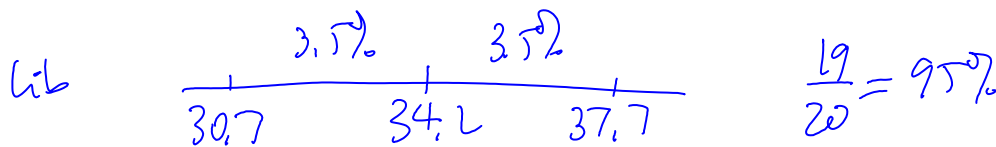
Who uses it?

Political parties:

Nanos surveyed 816 committed voters and the poll is accurate plus or minus 3.5 percentage points, 19 times out of 20

Pasted from <http://profs.degroote.mcmaster.ca/ads/pafar/courses/a600/ChapterComments/ch-01.htm>

<http://www.cbc.ca/news/politics/story/2013/06/27/pol-nanos-poll-june-numbers-liberal-lead-undecided-voters.html>

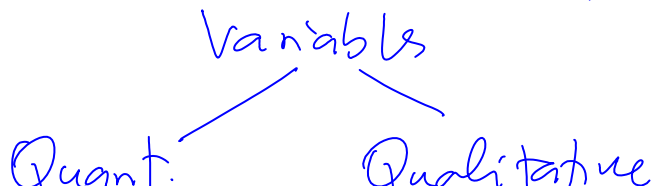


Conf. Int (Ch.7)

Business: finance, marketing, operations,

a) Populations & Samples

Pop'n (universe): Set of all existing unit
 Variable: Characteristics of a pop'n

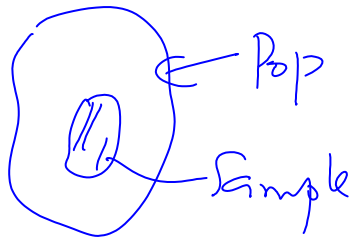


- GMAT
- Age
- \$

- Car's color
- Gender
- Phase A

Census

Sample



Ex. Bad sample

Truman won

<http://blogs4brownback.files.wordpress.com/2007/12/dewey-defeats-truman.jpg>

(Simple) Random Sampling. On each selection from pop'n, every unit remaining on that selection has the same chance of being chosen

Ex. CRA audit

100 physicians: 00, 01, 02, ..., 98, 99

① Bucket
Pick 10



(Silly)

audit 10%

② Table of random #s

10097

37542

68422

99019

③ Megastat

<http://profs.degroote.mcmaster.ca/ads/parlar/courses/g600/ChapterComments/documents/RandomNumbers.xls>

0.70555
0.53342
0.57952

0.28956
0.30195
0.77474
0.01402
0.76072
0.81449
0.70904
0.04535
0.41403

Pasted from <file:///C:/DOCUME~1/parlar/LOCALS~1/Temp/RandomNumbers.xls>

Ex. Real estate data

<http://profs.degroote.mcmaster.ca/ads/parlar/courses/q600/ChapterComments/documents/RealEstateData.xls>

No.	Price	LotSize	SqrFt	Bedrooms	Bathrooms	Pool?	Basement?	Distance	Rating	SubDiv
1	480.1	1.72	3985	5	4 1/2	1	1	17.0	6	5
2	397.8	0.77	3564	4	4	1	0	12.6	6	4

Pasted from <file:///C:/DOCUME~1/parlar/LOCALS~1/Temp/RealEstateData-1.xls>

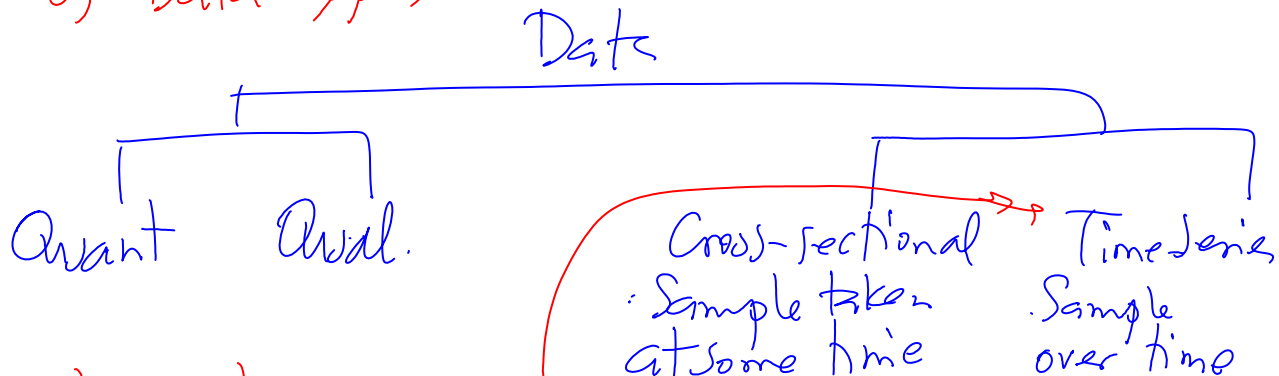
10 variables / Qual
 \ Quant

Price, LotSize, SqrFt, Distance: Quantitative, continuous and ratio.
 Bedrooms, Bathrooms: Quantitative, discrete and ratio.
 Pool, Basement: Qualitative.
 Rating: Seven point scale of a person's rating. This is ratio, but may be just ordinal. To be ratio, 6 would have to be twice as good as 3.
 SubDiv: Qualitative.

Pasted from <http://profs.degroote.mcmaster.ca/ads/parlar/courses/q600/ChapterComments/ch-01.html>

<http://homes.point2.com/CA/Ontario/Hamilton-Real-Estate.aspx>

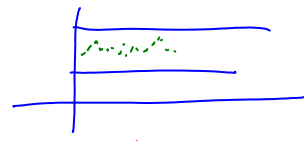
c) Data Types



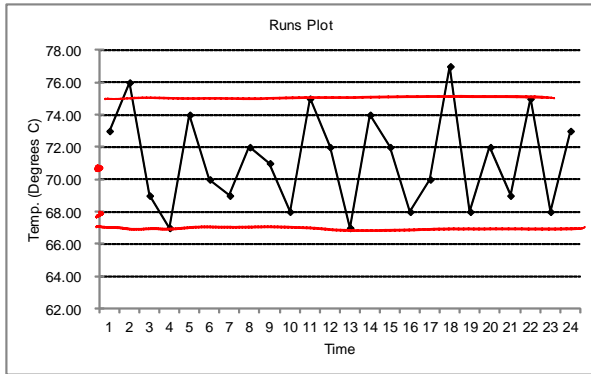
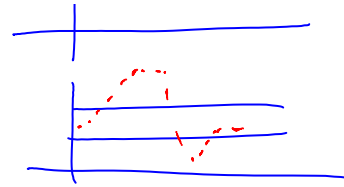
d) Sampling a process

Ex. Coffee Temp

(1) In statistical control



- ① Instatistical control
- ② Capabili ty



EX. B-P