

MITx: 14.310x Data Analysis for Social Scientists

Help



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- Module 2: Fundamentals of Probability, Random Variables, Distributions, and Joint Distributions
- Module 3: Gathering and Collecting Data, Ethics, and Kernel Density Estimates
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# **Principles of Data Visualization - Quiz**

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## **Question 1**

1/1 point (graded)

True or False: Taken together, Tufte's principles argue for graphs that have only the minimal amount of data needed to convey one's point and as little non-data ink as possible

a. True

b. False

## **Explanation**

While it is true that Tufte's principles say that you should erase as much as the non-data ink as possible (e.g. grid lines, repetitive labels, etc.), Tufte also argues that you should try to increase the density of data ink, meaning that charts and graphs should include lots and lots of information.

Submit

You have used 1 of 1 attempt

<u>Functions of Random</u> Variable

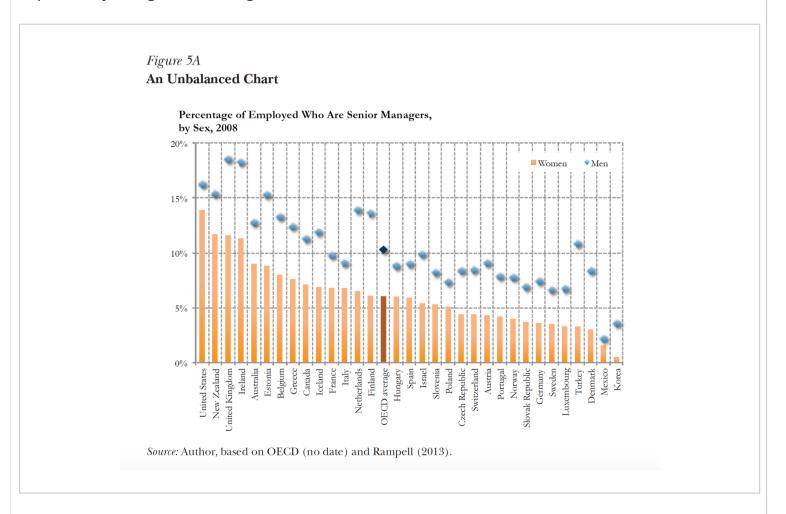
- Module 5: Moments of a Random Variable,
   Applications to
   Auctions, & Intro to
   Regression
- Module 6: Special
   <u>Distributions, the</u>
   <u>Sample Mean, the</u>
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   and Estimation
- Module 7: Assessing and Deriving Estimators
   Confidence Intervals, and Hypothesis Testing
- Module 8: Causality,
   Analyzing Randomized
   Experiments, &
   Nonparametric
   Regression
- Module 9: Single and Multivariate Linear

✓ Correct (1/1 point)

# Question 2

1/1 point (graded)

Using Tufte's principles the following data visualization take from Schwabish (2014) could be improved by doing the following:



### **Models**

- Module 10: Practical Issues in Running Regressions, and Omitted Variable Bias
- Module 11: Intro to
   Machine Learning and
   Data Visualization

#### **Machine Learning I**

Finger Exercises due Dec 12, 2016 05:00 IST

#### **Machine Learning II**

Finger Exercises due Dec 12, 2016
05:00 IST

### **Visualizing Data**

Finger Exercises due Dec 12, 2016 05:00 IST

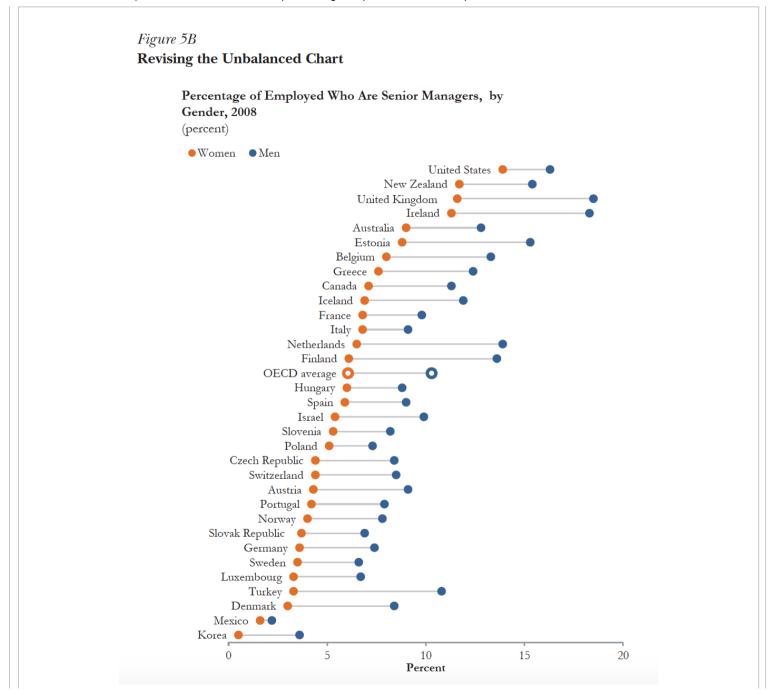
- Module 12:
   Endogeneity,
   Instrumental Variables,
   and Experimental
   Design
- Exit Survey

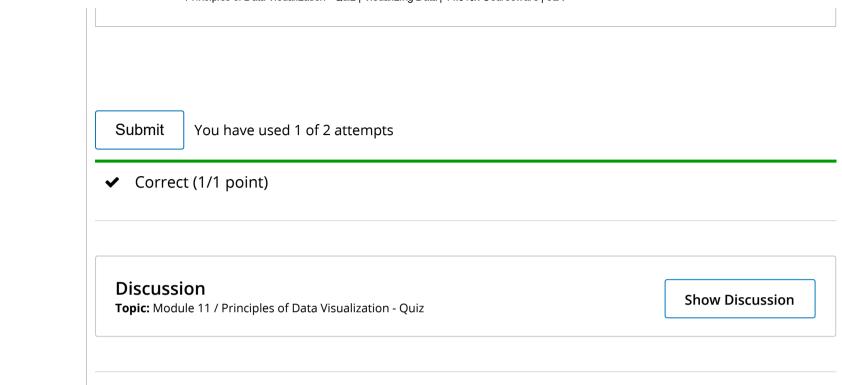
- a. Making the data horizontal
- ✓ b. Removing gridlines
- c. Abbreviating names of countries
- d. Removing percentage signs



#### **Explanation**

Since your readers may not be familiar with the common abbreviations of countries, changing the names to abbreviations would result in the graph not being self-explanatory. The percentage signs are redundant since we already specified we are talking about percentages in the title and this increases the data to ink ratio and they could be removed, gridlines could also be removed in this example. Finally making data horizontal can help make the graph easier for a reader. An improved version (also from Schwabish (2014)) is presented below.





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