Research Tips, Infographics, Finding & Using Data

AKA, How do we do what we do?

Why It Matters

"OK Policy believes that Oklahoma can be a great state, one that ensures prosperity for all our citizens through good schools, good jobs, good health and strong communities. To make the best policy decisions that lead us to this better future, policymakers and citizens need good, factual information. We provide the facts and advocate for fair and responsible public policies."
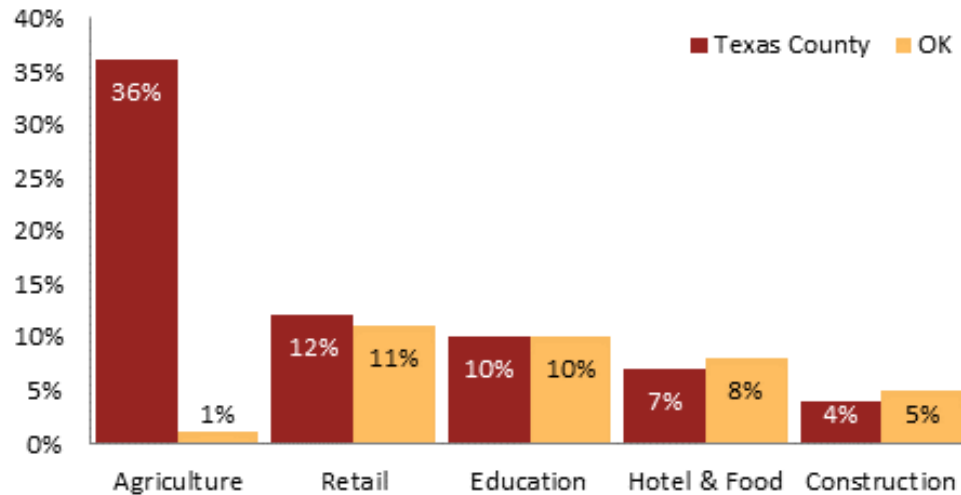
Why It Matters

"The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually slaves of some defunct economist."
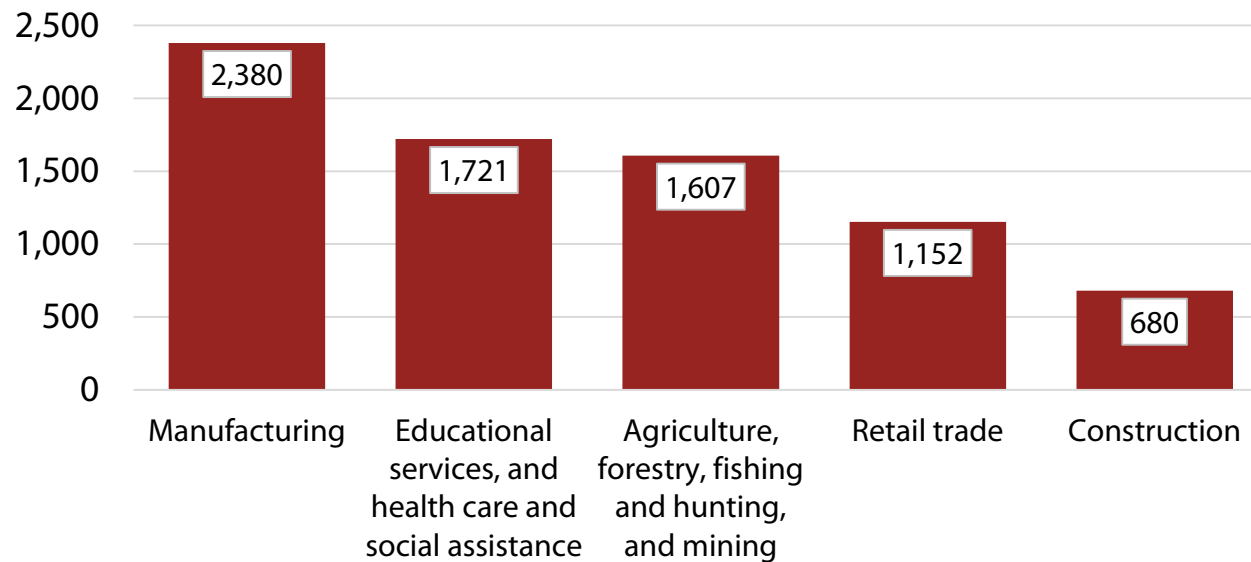— John Maynard Keynes

Data is made by humans.

Top 5 Employment Sectors in Texas County

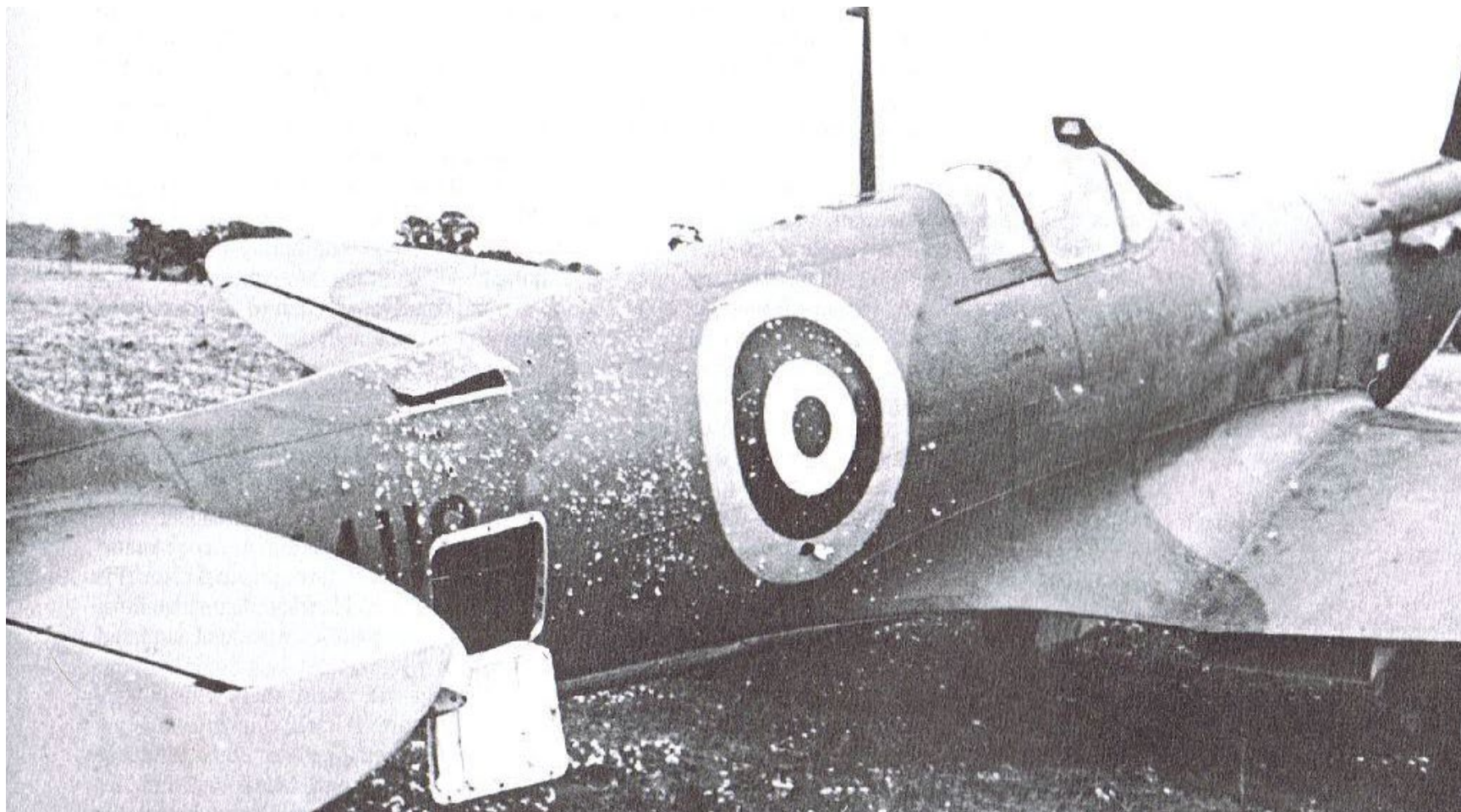Source: U.S. Census Longitudinal Employer-Household Dynamics survey, 2013

Source: U.S. Census American Community Survey, 2009-2013 5-year estimates

Data lives as part of a story.

Example from "How Not To Be Wrong:
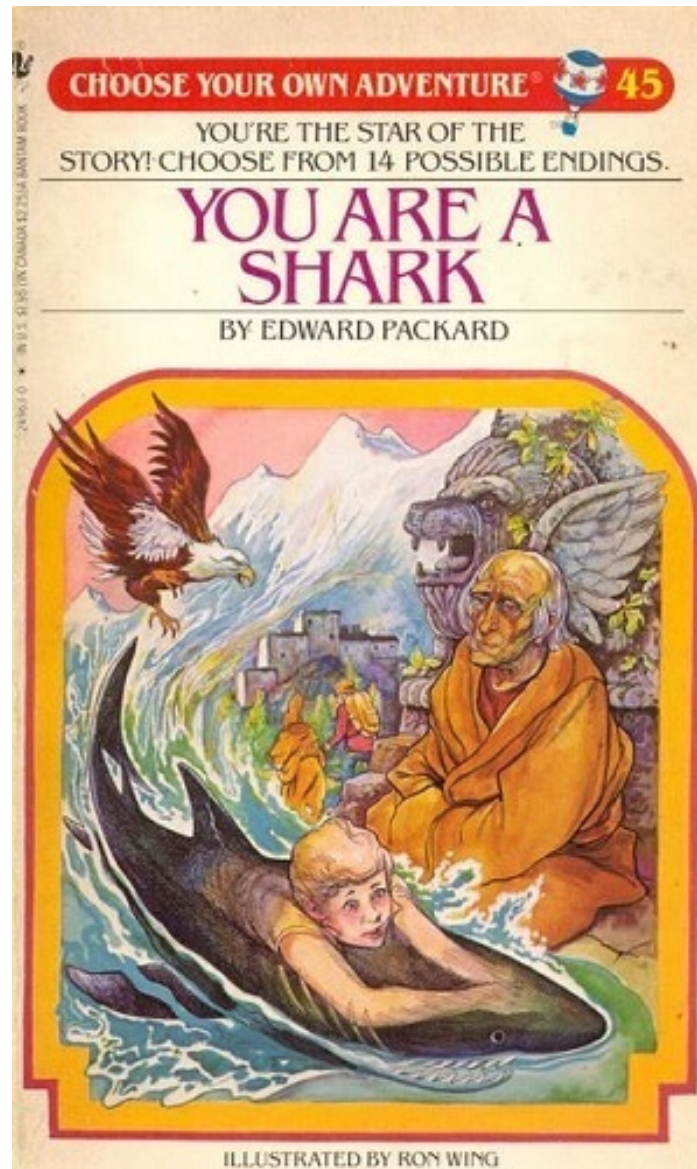The Power of Mathematical Thinking"
by Jordan Ellenberg

Bullet holes per square foot

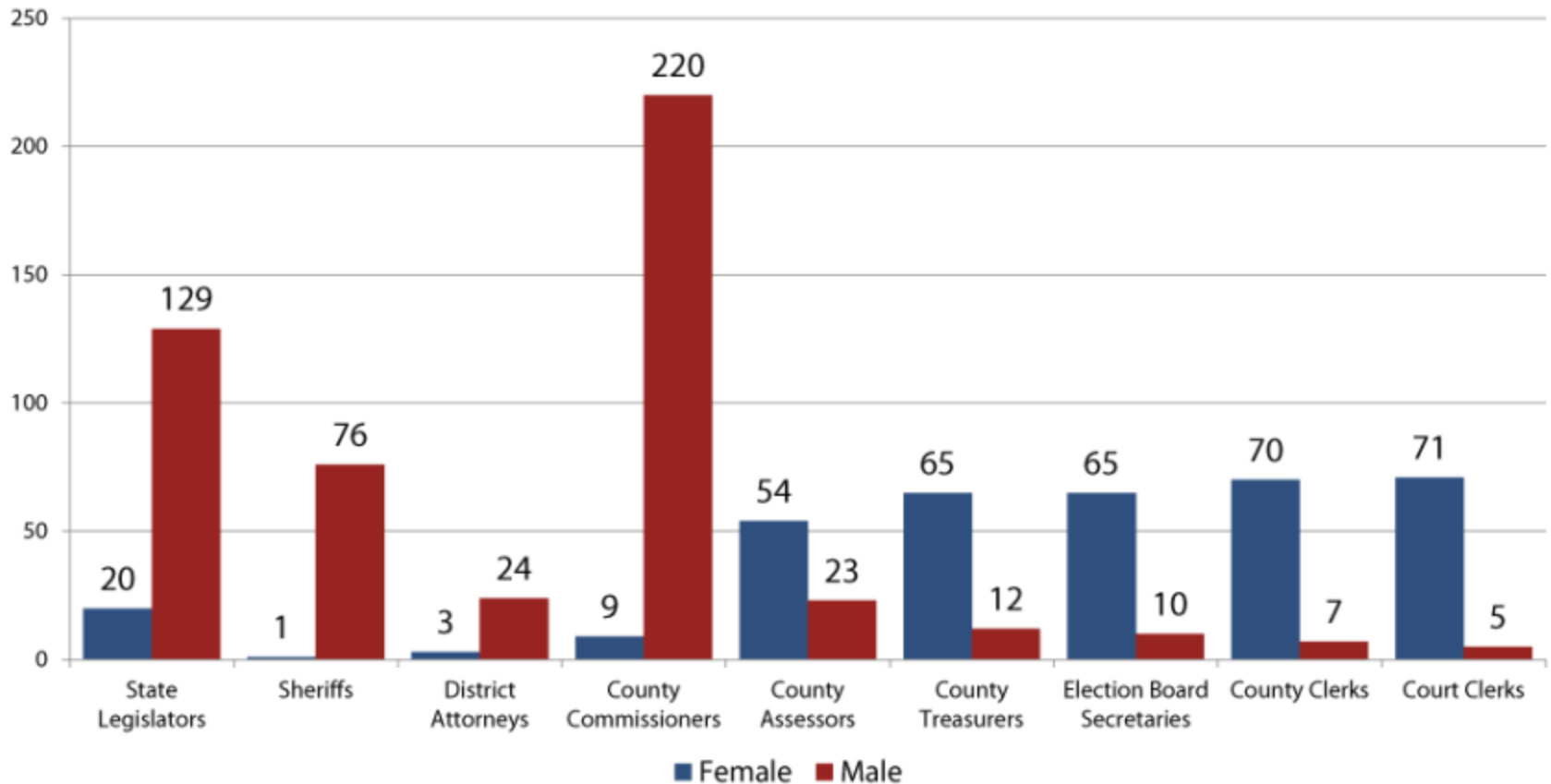|	
Engine	1.11
Fuselage	1.73
Fuel system	1.55
Rest of plane	1.8

The same data tells more than one story.

"Oklahoma, which ranks first in female elected representation, ranks last in communities of color elected representation."

-Health of State Democracies Report, Center for American Progress Action Fund

Oklahoma State and County Officeholders, 2014 - 2015

Office	Female	Male
State Legislators	20	129
Sheriffs	1	76
District Attorneys	3	24
County Commissioners	9	220
County Assessors	54	23
County Treasurers	65	12
Election Board Secretaries	65	10
County Clerks	70	7
Court Clerks	71	5

■ Female ■ Male

Data Source: wholeads.us; some data was corrected by OK Policy
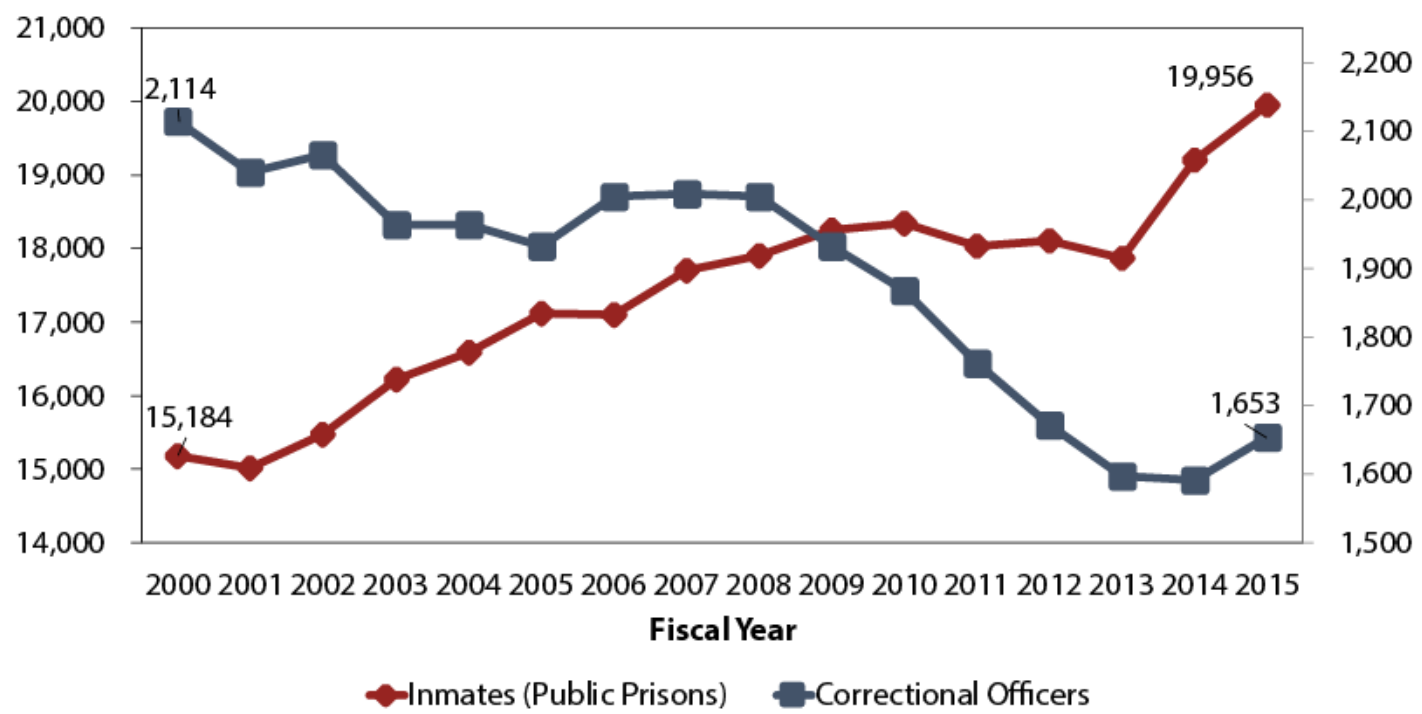
www.okpolicy.org

So what's the right chart to use?

Line Chart for viewing trends in data over time.

Line Chart for viewing trends in data over time.

Oklahoma State Prisons Have 4,772 More Inmates
and 461 Fewer Correctional Officers Since 2000

If you have two y-axes, keep them proportional.

Data Source: Oklahoma Department of Corrections. All numbers as of 6/30 each year.

Line Chart for viewing trends in data over time.

Oklahoma State Prisons Have 4,772 More Inmates
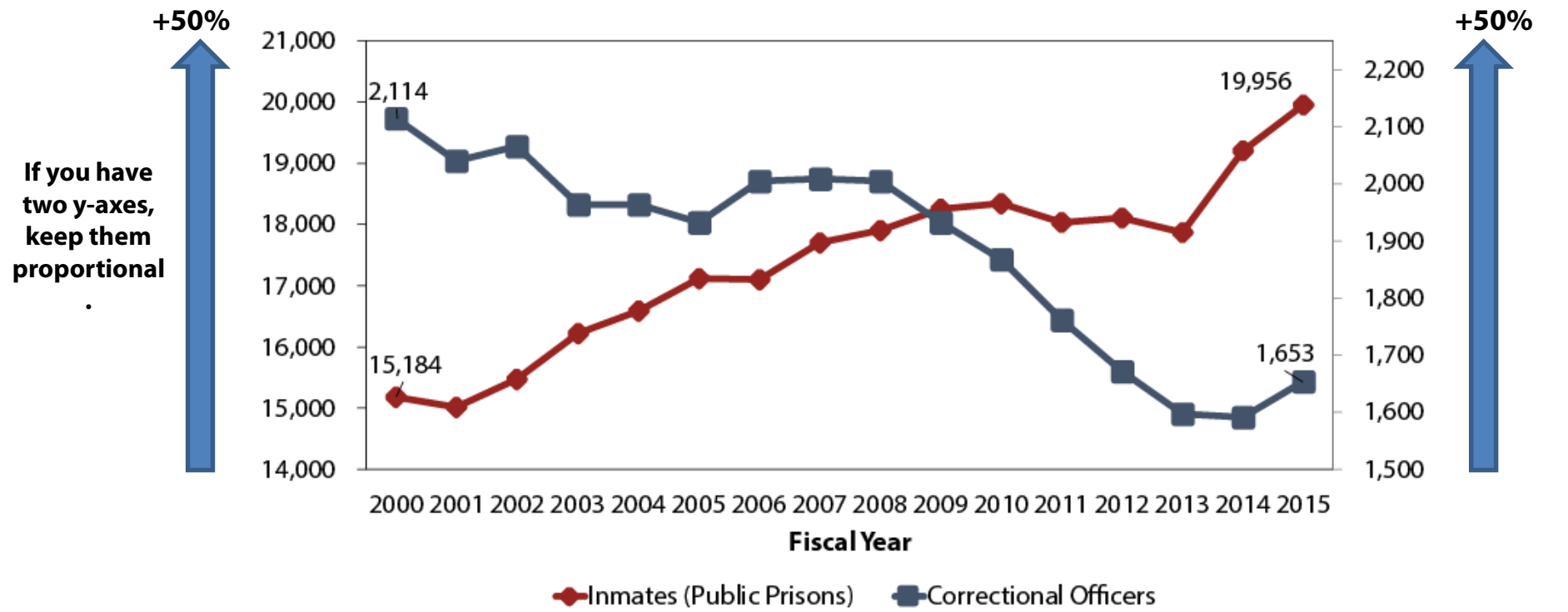and 461 Fewer Correctional Officers Since 2000

+50%

+50%

If you have
two y-axes,
keep them
proportional
.

2,114

15,184

19,956

1,653

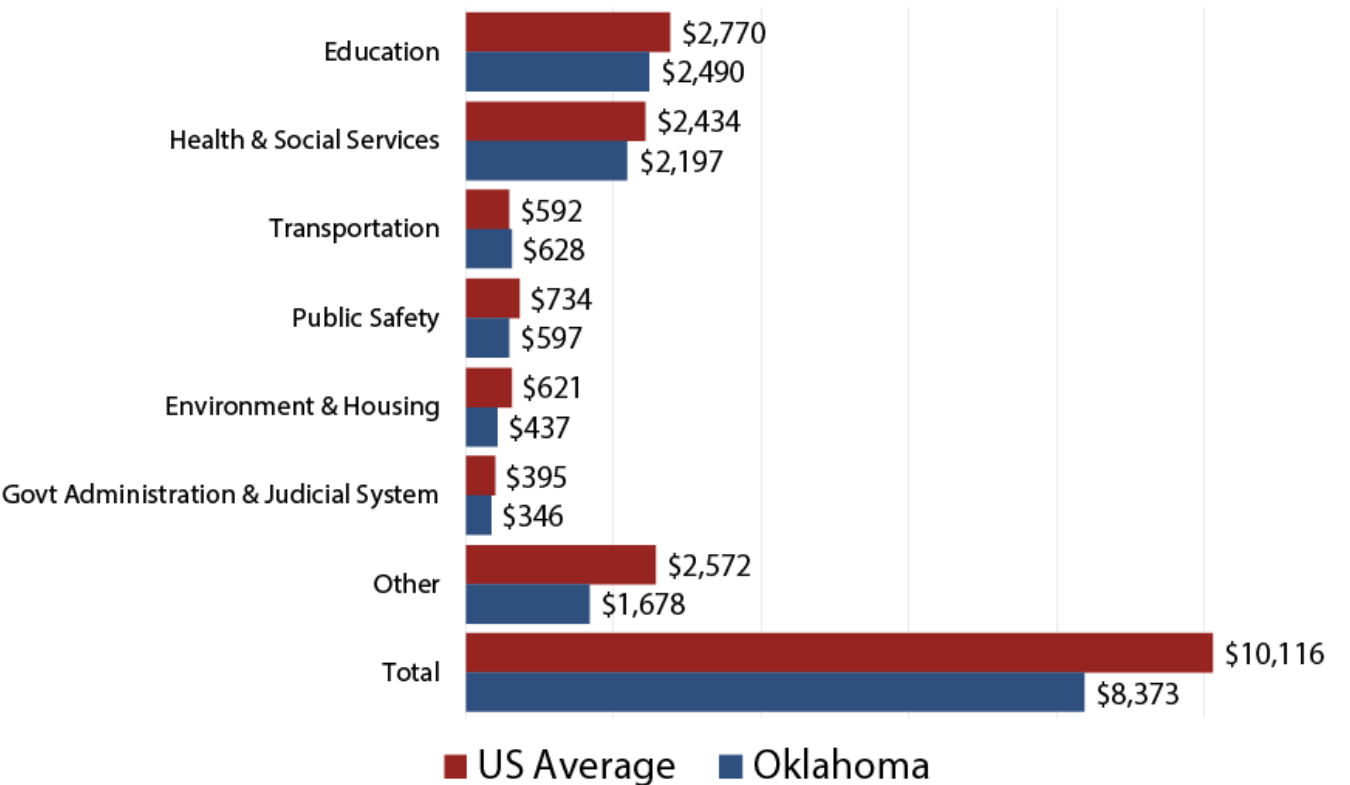Inmates (Public Prisons)   Correctional Officers

Fiscal Year

Data Source: Oklahoma Department of Corrections. All numbers as of 6/30 each year.

Bar Chart for comparing data across categories.

Bar Chart for comparing data across categories.

State and Local Government Expenditures Per Person, 2013

Category	US Average	Oklahoma
Education	$2,770	$2,490
Health & Social Services	$2,434	$2,197
Transportation	$592	$628
Public Safety	$734	$597
Environment & Housing	$621	$437
Govt Administration & Judicial System	$395	$346
Other	$2,572	$1,678
Total	$10,116	$8,373

■ US Average ■ Oklahoma

Data Source: U.S. Census

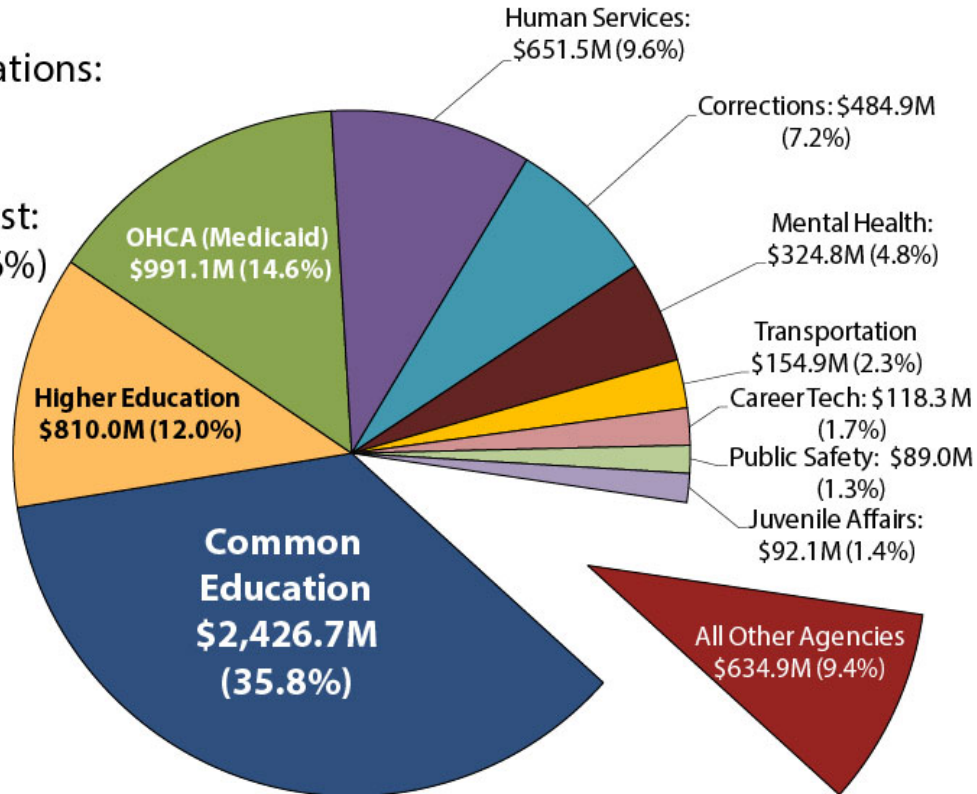**Oklahoma Policy Institute | www.okpolicy.org**

Pie charts to show relative proportions.
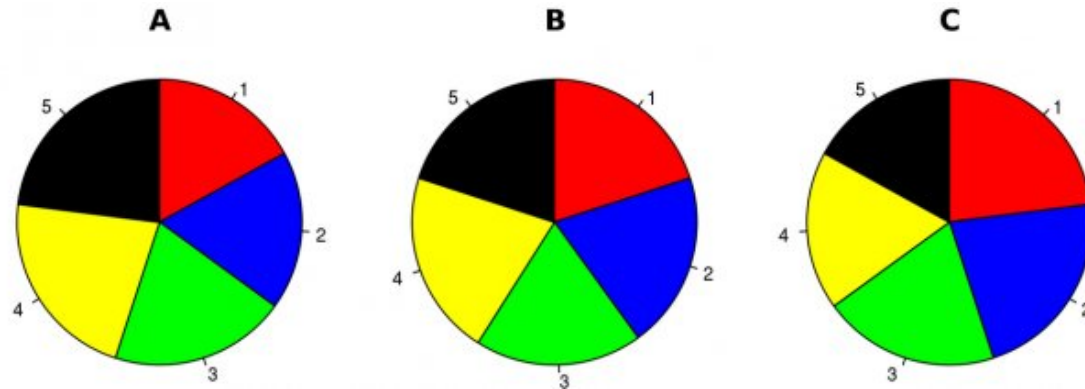
Pie charts to show relative proportions.

FY 2017 Appropriations to Ten Largest Agencies
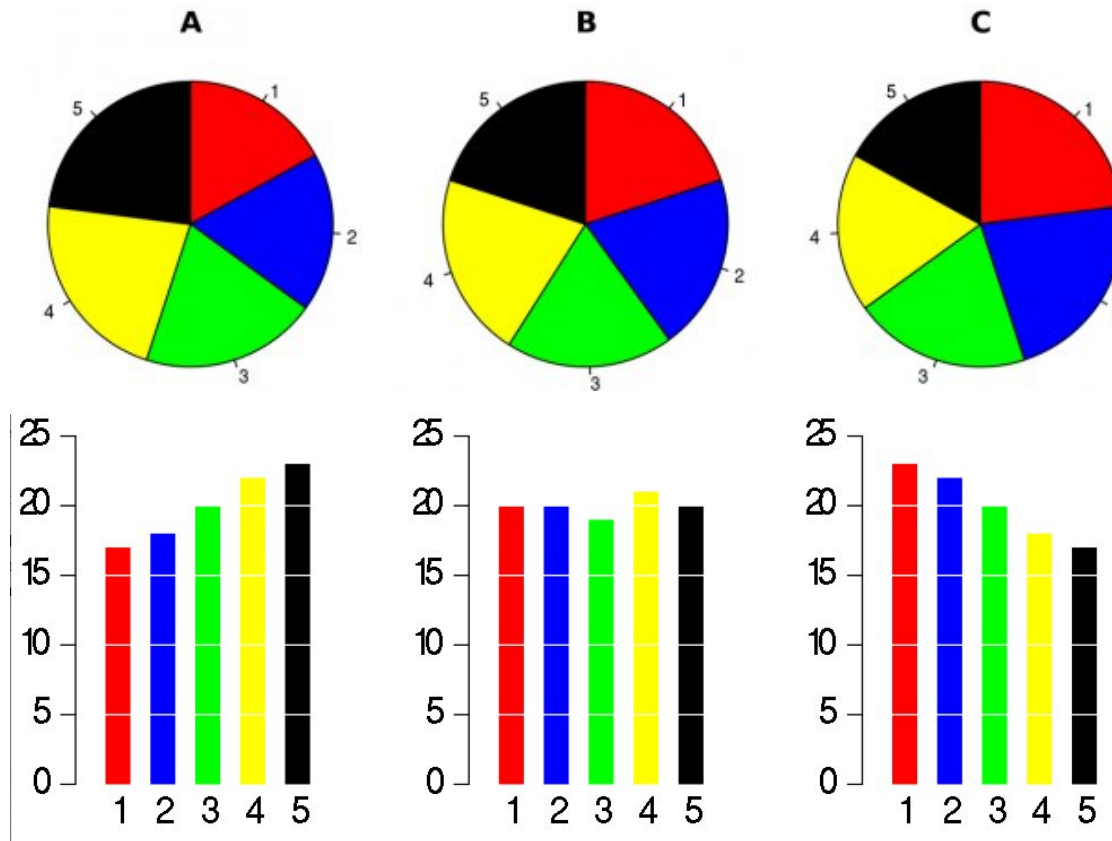
Total Appropriations:
$6778.1M

Total Ten Largest:
$6,143.2M (90.6%)

OHCA (Medicaid)
$991.1M (14.6%)

Higher Education
$810.0M (12.0%)

Common Education $2,426.7M (35.8%)

Human Services:
$651.5M (9.6%)

Corrections: $484.9M (7.2%)

Mental Health:
$324.8M (4.8%)

Transportation
$154.9M (2.3%)

CareerTech: $118.3 M (1.7%)

Public Safety: $89.0M (1.3%)

Juvenile Affairs:
$92.1M (1.4%)

All Other Agencies
$634.9M (9.4%)

Oklahoma Policy Institute | www.okpolicy.org

Pie charts are hard to compare across multiple graphs.

Pie charts are hard to compare across multiple graphs.
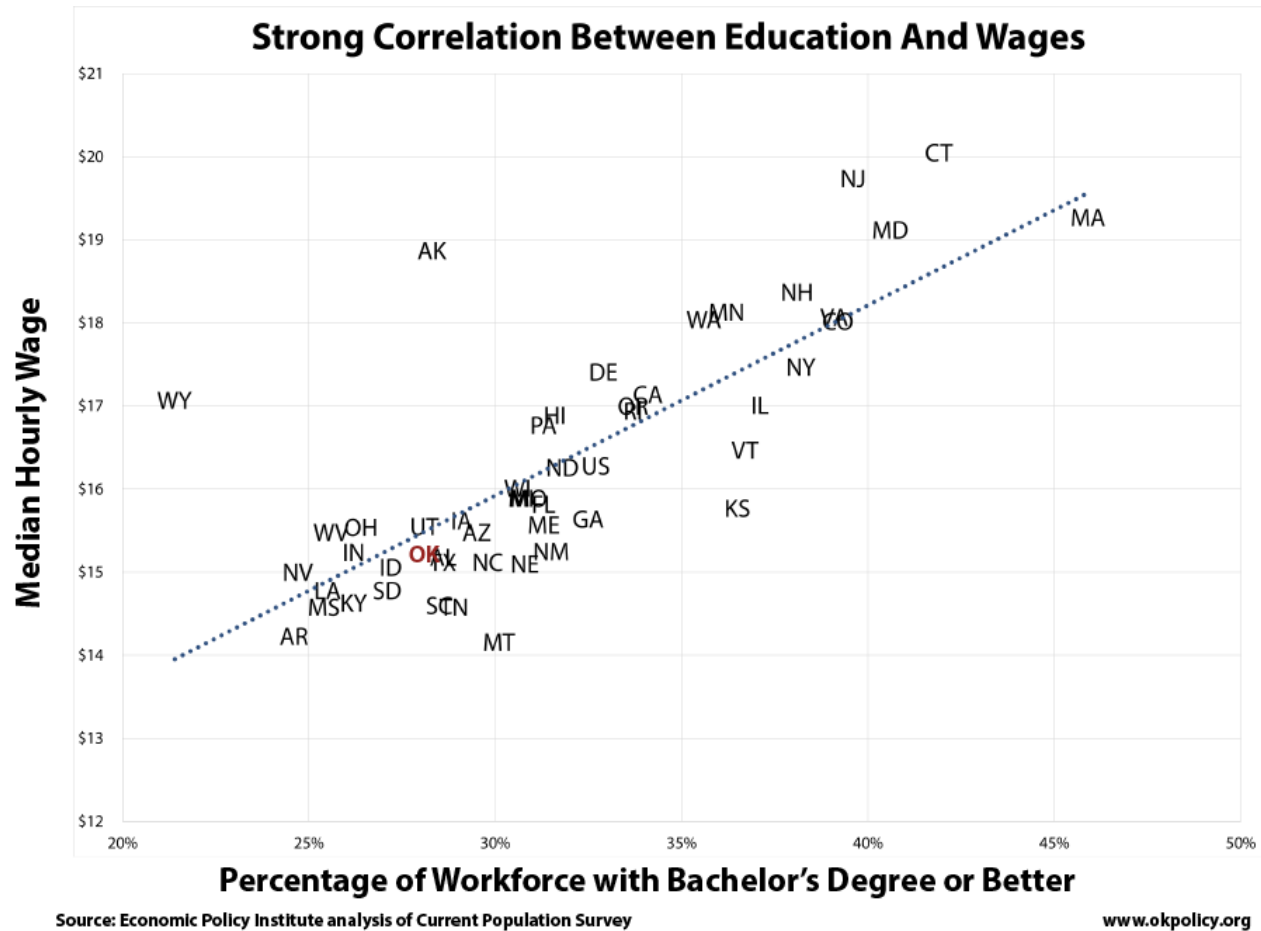

Use a **Bar Chart** instead.

And make sure it adds up!

9%

32%

51%

Although Christmas is traditionally celebrated to remember the birth of Jesus Christ,

32% consider it a cultural holiday

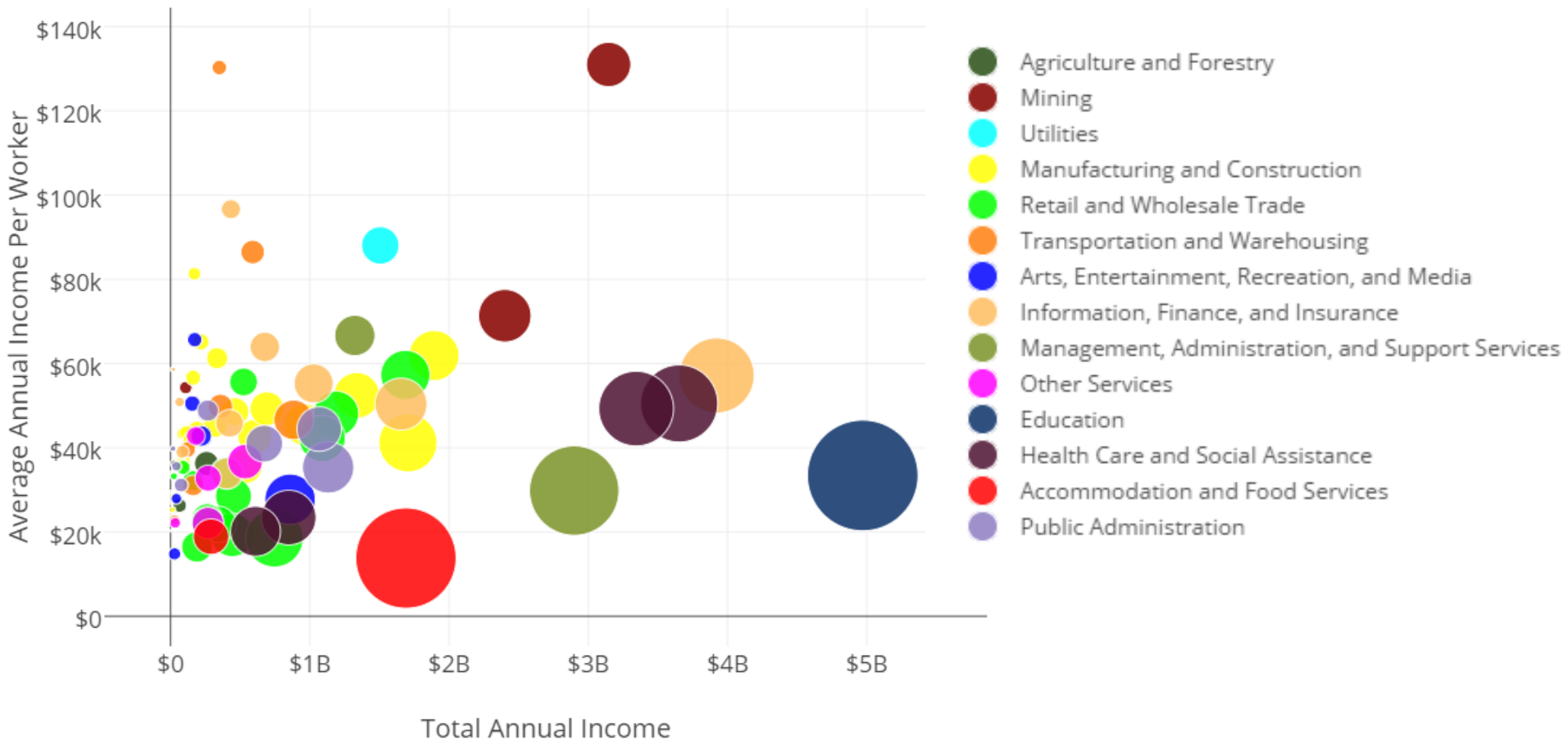51% of Americans consider it a religious holiday

9% Both/Other

Scatter plot to investigate relationship between different variables.

Scatter plot to investigate relationship between different variables.

Strong Correlation Between Education And Wages

Source: Economic Policy Institute analysis of Current Population Survey

www.okpolicy.org

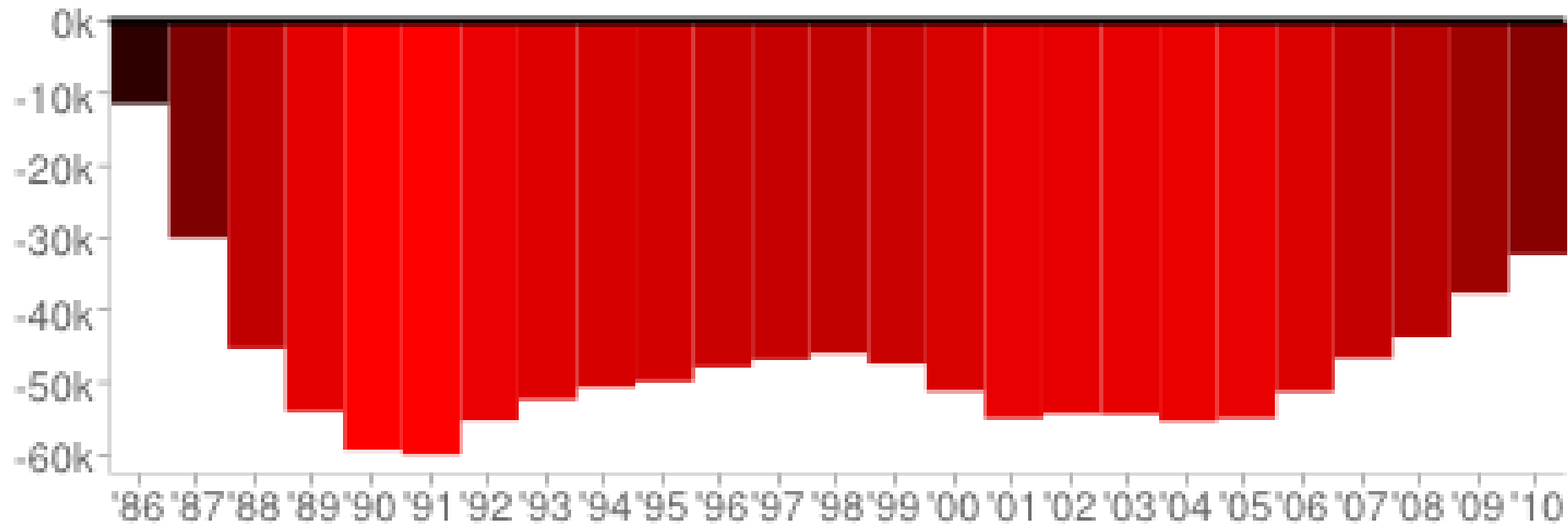# **Bubbles** can add more variables to scatter plots.

Oklahoma Jobs (Q4 2013 - Q3 2014)

A story told with data can still mislead.
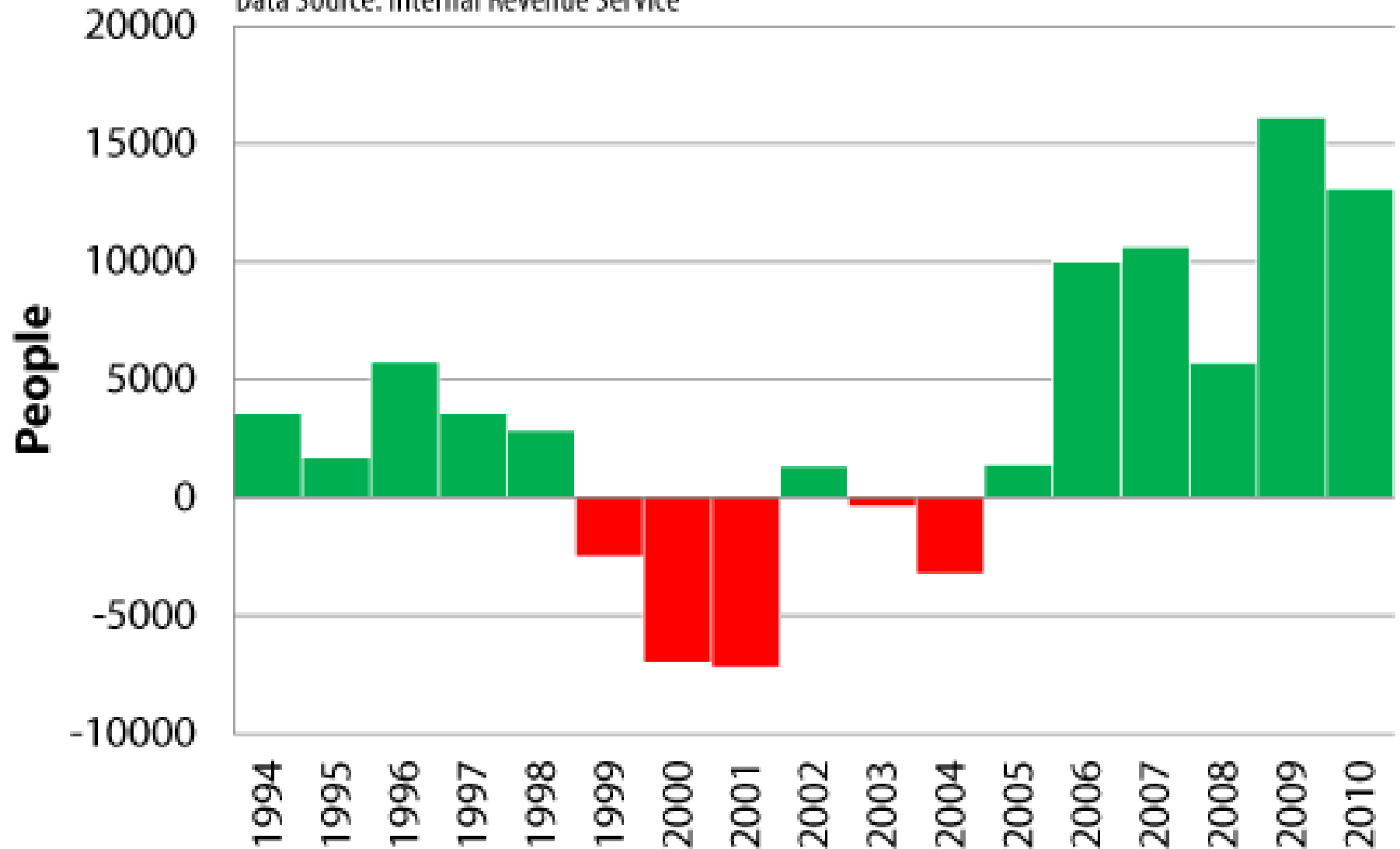
Oklahoma

Population Migration 1985-2010
Lost 33,649 people

Oklahoma Annual Net Migration, 1994-2010

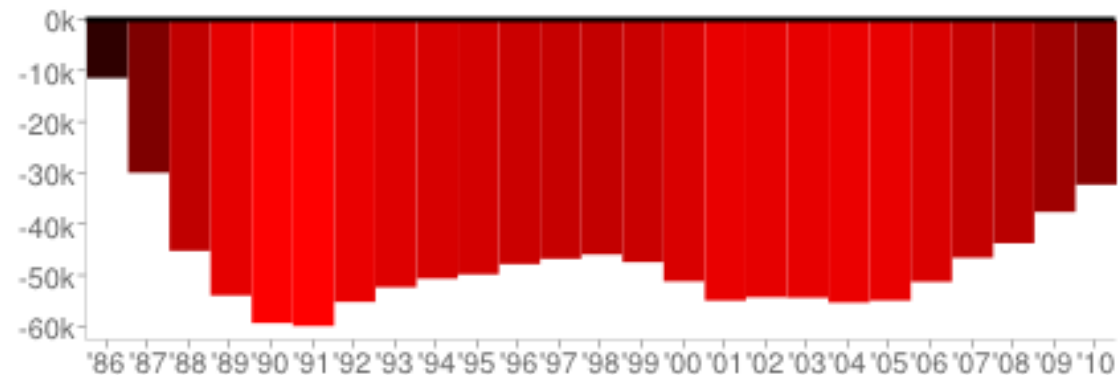Data Source: Internal Revenue Service

Oklahoma
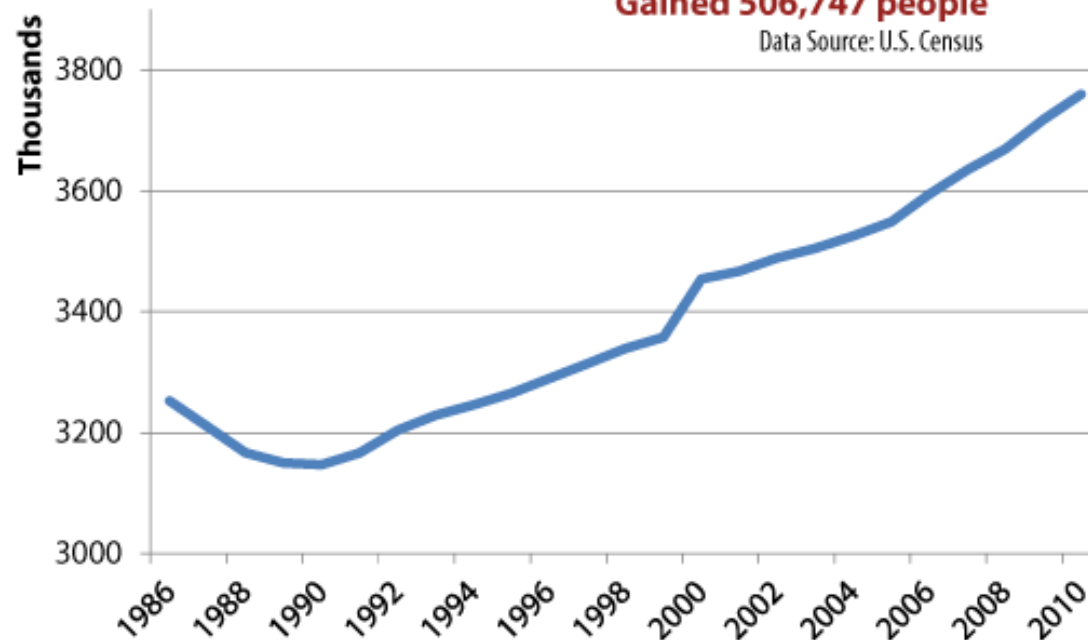
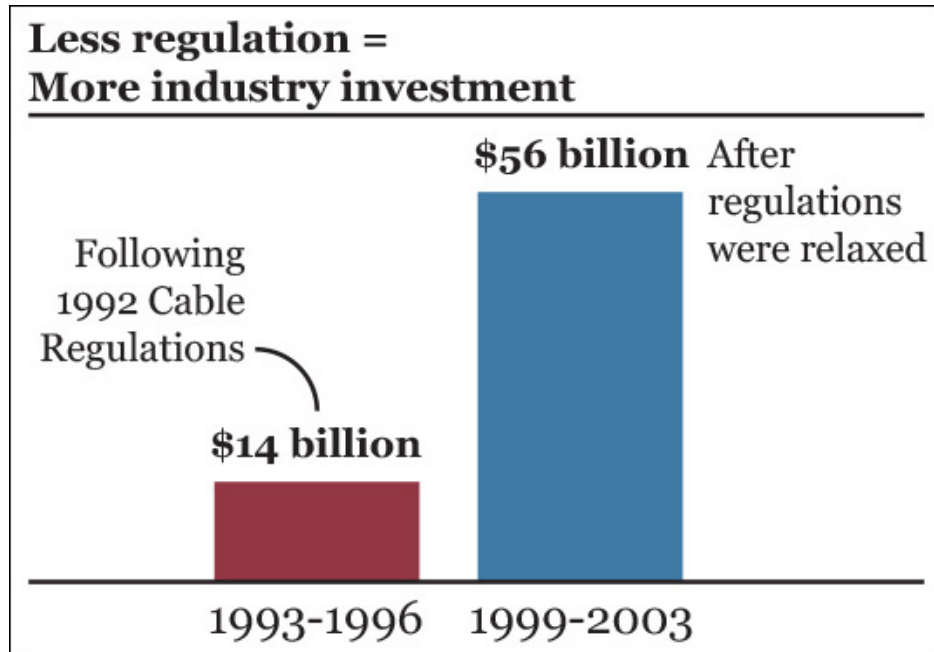**Population Migration 1985-2010**
Lost 33,649 people

Oklahoma Resident Population, 1986-2010
Gained 506,747 people
Data Source: U.S. Census

Get used to not just *seeing* or *looking at* visualizations but *reading* them. If someone hides data from you, it's probably because they have something to hide.

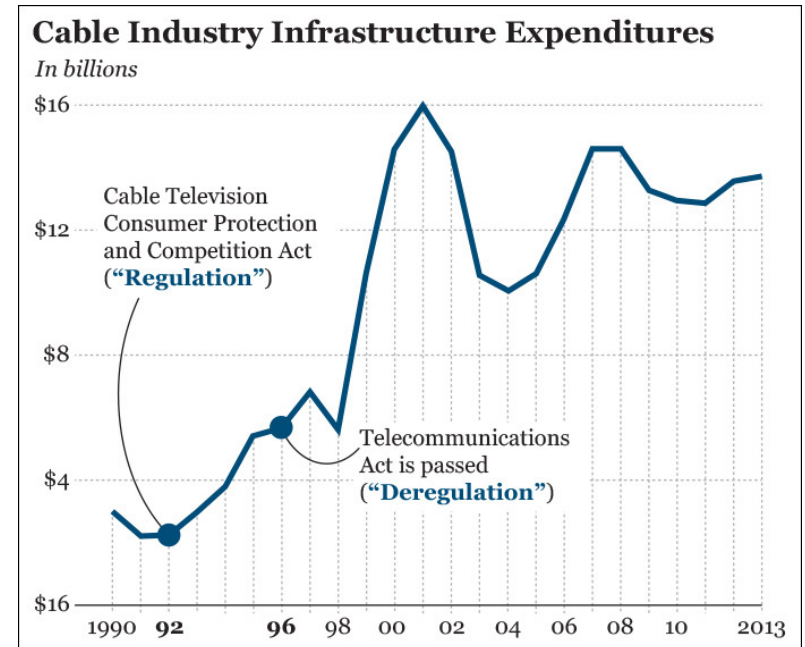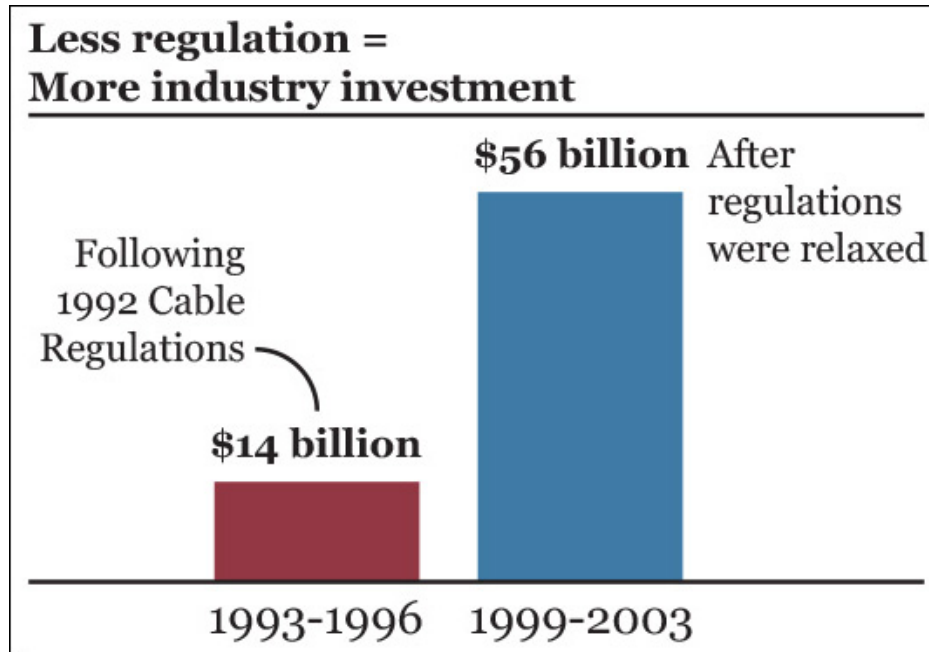Source: Alberto Cairo, "The Truthful Art: Data, Charts, and Maps for Communication"

Get used to not just *seeing* or *looking at* visualizations but *reading* them. If someone hides data from you, it's probably because they have something to hide.

Source: Alberto Cairo, "The Truthful Art: Data, Charts, and Maps for Communication"

Be creative, but don't let design interfere with comprehension.

CHANGING FACE OF AMERICA
Percent of total U.S. population by race and ethnicity. 1960–2060

1960   2010   2060

10%   16%   8%
85%   31%
            12%
            64%   13%

                        43%

OTHER   ASIAN   HISPANIC   BLACK   WHITE

SOURCE: PEW RESEARCH CENTER

NIGHTLY NEWS
with BRIAN WILLIAMS

Be creative, but don't let design interfere with comprehension.

Source: XKCD.com

Read the bills.

HB 2301 by McCall and Simpson

Enter Bill #   **Search**

Revenue and taxation; adjustments to taxable income; exemption for the practice of medicine and osteopathic medicine in rural areas; effective date.

| **History** | **Amendments** | **Bill Summaries** | **Versions** | **Votes** | **Co Authors** |

History For HB 2301

Action	Journal Page	Date	Chamber
First Reading	197	02/06/2017	H
Authored by Representative McCall	197	02/06/2017	H
Second Reading referred to Appropriations and Budget	317	02/07/2017	H
CR; Do Pass, amended by committee substitute Appropriations and Budget Committee	351	02/14/2017	H
Authored by Senator Simpson (principal Senate author)	351	02/14/2017	H
Title stricken	351	02/14/2017	H
General Order	770	03/22/2017	H

Read the Bills, Laws, Rules, Etc.

- **Browse legislation by subject: http://www.oklegislature.gov/SubjectIndex.aspx**

- **Search legislation: http://www.oklegislature.gov/AdvancedSearchForm.aspx**

- **Look up current Oklahoma laws: http://www.oscn.net/applications/oscn/index.asp?ftdb=STOKST&level=1**

- **Look up Oklahoma agency rules: http://okrules.elaws.us/oac**

Learn the Process

- **Oklahoma Legislative Primer:** https://okpolicy.org/resources/oklahoma-legislative-primer/
- **What's That? Glossary:** http://okpolicy.org/category/whats-that

Advanced Googling for Fun and Profit

- **Search for a specific phrase with quotes** - "wind blows sweeping down the plain"
- **Search for one thing or another** - sanction OR enforcement
- **Search for results that don't include a specific word with the hyphen/subtraction sign** - "Chocolate cake recipe" -butter
- **Search by site** - site:okpolicy.org "budget"
- **Find similar sites** - related:okpolicy.org
- **Search by filetype (ppt, xls, mdb, pdf, etc.)** - filetype:xls
- **Combine them**! - site:ok.gov/doc filetype:xls
- **Designate where search terms appear (in the url, title, body of the page and in links to the page)**
  - allinurl: oklahoma data
  - allintitle: oklahoma data
  - allintext: oklahoma data
  - allinanchor: oklahoma data
- **Search by image** - http://www.google.com/insidesearch/features/images/searchbyimage.html (But seriously, don't type out this link. Do a Google search for "Google search by image.")
- **Google News Archive Search** - http://news.google.com/archivesearch/advanced_search

Where's the data?

Oklahoma-Specific
OK Policy County-Level Data App - http://okpolicy.org/resources/county-level-data
Oklahoma Digital Prairie - http://www.digitalprairie.ok.gov (State Agency Annual Reports and other primary documents)
State of Oklahoma public data - https://data.ok.gov/
Precinct-Level Election Results - https://www.ok.gov/elections/Election_Info/Election_Results/index.html
Criminal Justice Data & Dashboards - https://openjustice.okpolicy.org/

Demographic
US Census Current Population Survey - http://www.census.gov/cps/data/cpstablecreator.html
US Census American Fact Finder - http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml
Census Reporter (tool created for the Knight News Challenge that is an easier way to explore and chart Census data) - http://censusreporter.org/

Economic
US Bureau of Labor Statistics – http://www.bls.gov/
US Bureau of Economic Analysis - https://www.bea.gov/
Federal Reserve Economic Data - http://research.stlouisfed.org/fred2/
IRS Tax Statistics - http://www.irs.gov/uac/Tax-Stats-2
National Association of State Budget Officers - http://www.nasbo.org/publications-data
Zillow Research - https://www.zillow.com/research/

Where's the data?

Education
National Center for Educational Statistics (NAEP scores) -
http://nces.ed.gov/nationsreportcard/naepdata/
Common Core of Data - http://nces.ed.gov/ccd/
IPEDS Data Center (higher education) - http://nces.ed.gov/ipeds/datacenter/Default.aspx

Criminal Justice
Bureau of Justice Statistics - http://www.bjs.gov/index.cfm
Hall of Justice (Sunlight Foundation) - http://hallofjustice.sunlightfoundation.com/

Health
Henry J. Kaiser Family Foundation (State Health Facts) – http://kff.org/statedata/
Health Indicators Warehouse - http://www.healthindicators.gov/

Where's the data?

Think Tanks

Center on Budget and Policy Priorities - http://www.cbpp.org/

State Priorities Partnership - http://statepriorities.org/

Institute on Taxation and Economic Policy - http://www.itepnet.org/

Economic Policy Institute – http://www.epi.org/

Brookings Institute - http://www.brookings.edu/

Urban Institute - http://www.urban.org/

Pew Center on the States - http://www.pewstates.org/

Tax Foundation - http://taxfoundation.org/

Even More

Google Public Data Explorer - http://www.google.com/publicdata/directory

Journalist's Resource - http://journalistsresource.org/

Hechinger Report (education policy news) - http://hechingerreport.org/

Marshall Project (criminal justice policy news) - https://www.themarshallproject.org/

Kaiser Health News (health policy news) - http://khn.org/

Governing Magazine (state and local policy news) - http://www.governing.com/

Analysis + Impact
State Priorities Partnership

Home   About   Partnership Organizations   Jobs   Contact

Click on the map to visit the State Priorities partners' websites.

Tweets from State Priorities Partners

OK Policy 26s
@OKPolicy

Happy Birthday, Medicare and Medicaid!
These programs improve the health &
financial security of 1 in 3 Americans.
bit.ly/1gq6ncl

Jared Bernstein 2m
@econjared

Instead of asking if #Medicare &
#Medicaid are sustainable, we should be
asking what we need to do to sustain
them: nyti.ms/1DSeGmt

↻ Retweeted by Center on Budget

Expand

Shannon Spillane 2m
@ShannonCBPP

#Medicaidat50 key fact: Medicaid provides
significant financial support to low-income
beneficiaries bit.ly/1lspfh9

MN Budget Project 6m
@MNBudgetProject

Children who get h/care through Medicaid
are more likely to succeed in school
#medicaidat50 bit.ly/1H6q2mU