

Analysis of Chariton County Annual Financial Reports

Introduction

This is an R Markdown document recording the step by step analysis of the Chariton County (Missouri) financial reports from 2009 through 2015. Chariton County currently has a population of 7,589 residents, and an assessed valuation of \$216,030,641. The data in the dataset **chariton.csv** comes directly from the annual reports published in the Chariton County Journal newspaper the last week of February of every year.

Summary: Chariton County currently has over 5.2 million dollars in savings. The average annual surplus for the past seven years is just over \$340,000 (excluding outlier year 2013). The annual surplus is the excess of all county revenues minus all county expenditures. In 2015, the county began the year with \$4,542,000 in cash, and ended the year 2015 with \$5,222,000 cash on hand. In 2015 the cash on hand earned \$74,000 in interest for the county. The 2015 surplus, that is excess revenues over expenditures, was \$679,000.

Here is the data file:

```
chariton
```

```
##   year begincash revenues propertytax salestax interest expenditures
## 1 2009   1673000   3446000      409000    438000         NA      3353000
## 2 2010   1766000   3563000      431000    727000         NA      3154000
## 3 2011   2175000   3921000      544000    359000         NA      3626000
## 4 2012   2470000   3534000      538000    415000         NA      3362000
## 5 2013   2642000   4538000      600000   1514000         NA      3030000
## 6 2014   4150000   4078000      592000   1678000         NA      3684000
## 7 2015   4542000   3783000      730000    825000     74000      3104000
##   surplus endcash
## 1    93000 1766000
## 2   409000 2175000
## 3   295000 2470000
## 4   172000 2642000
## 5 1508000 4150000
## 6   394000 4544000
## 7   679000 5222000
```

The variables in the dataset represent the following data:

year = reporting year, January 1 through December 31

begincash = reported amount of cash on hand at the beginning of the year

revenues = total amount of money received from the county, includes property tax, sales tax, law enforcement tax, road and bridge tax, federal and state funds, etc.

propertytax = amount of revenues received from the county property tax

salestax = amount of revenues received from the county sales tax

interest = amount of interest received from the cash in the county's accounts

expenditures = total amount of money spent by the county

surplus = difference between revenues and expenditures each year

endcash = reported amount of cash on hand at the end of the year

All amounts are in U.S. dollars (\$).

From the dataset, we can see that in 2015, the county began the year with \$4,542,000 in cash, and ended the year with \$5,222,000 cash on hand. This amount of cash on hand earned \$74,000 in interest for the county. The 2015 surplus, that is excess revenues over expenditures, was \$679,000. The average annual surplus over the past seven years is \$507,000:

```
## [1] 507143
```

Removing the surplus for year 2013 (an unusual year with one-time property tax receipt from the pipeline company), the average surplus is over \$340,000:

```
## [1] 340333
```

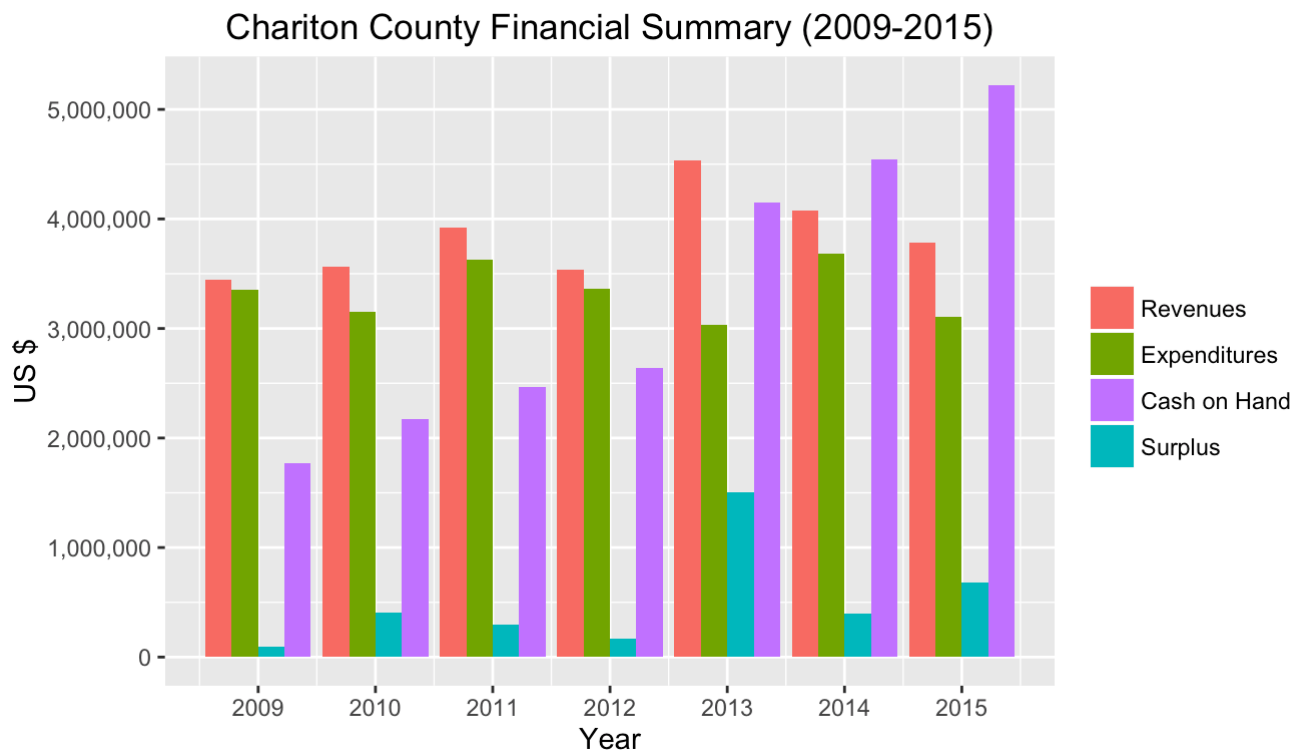
Using the latter number, the average, annual revenue surplus exceeds \$340,000, which has resulted in a healthy "rainy day" fund of over \$5.2 million at the end of 2015.

The mean of the different variables in the dataset is:

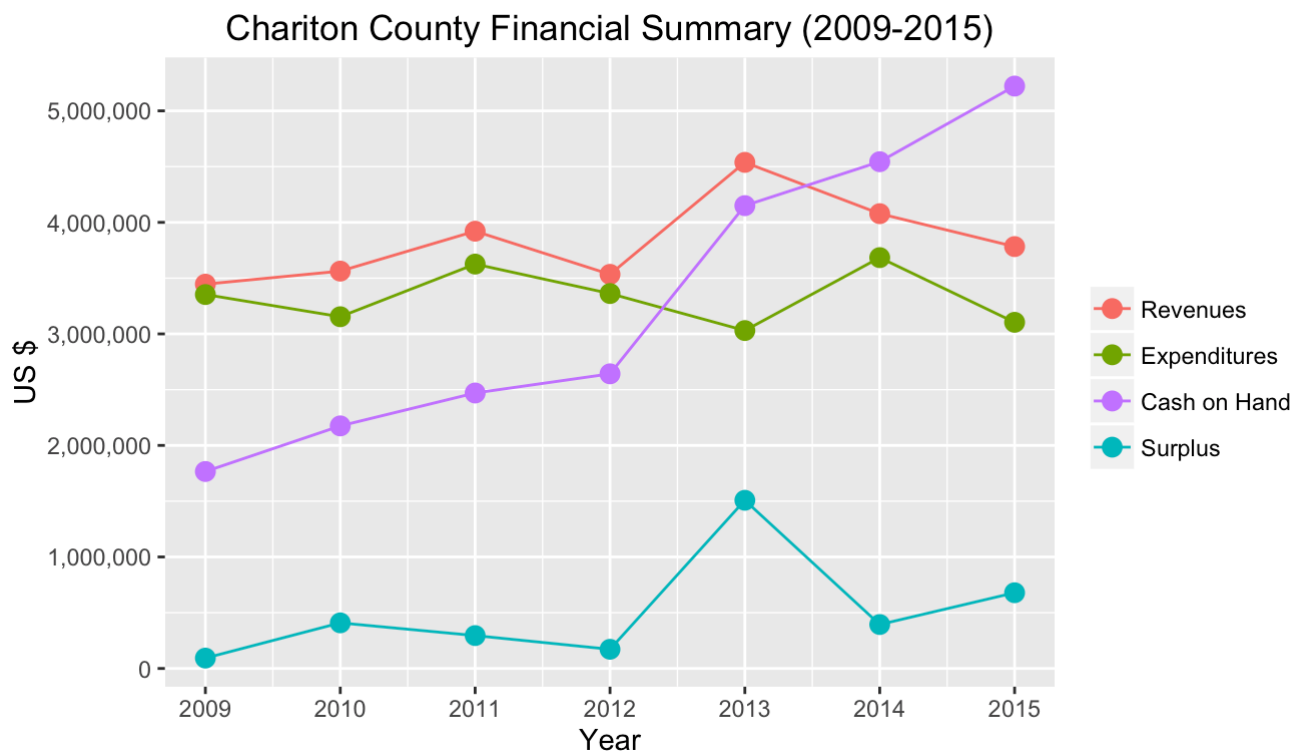
| | | | | | |
|----|-----------|----------|-------------|----------|--------------|
| ## | begincash | revenues | propertytax | salestax | expenditures |
| ## | 2774000 | 3837571 | 549143 | 850857 | 3330429 |
| ## | surplus | endcash | | | |
| ## | 507143 | 3281286 | | | |

Plots of the data

Plotting the annual revenues, expenditures, surplus, and ending cash balance for the past seven years, with a bar chart:



A line chart is more readable:



Additional information:

More information about the county can be found here:

https://en.wikipedia.org/wiki/Chariton_County,_Missouri

(https://en.wikipedia.org/wiki/Chariton_County,_Missouri).

The names and contact information for the county elected officials can be found at this site:
<http://www.mocounties.com/chariton-county.php> (<http://www.mocounties.com/chariton-county.php>).

Audits performed by the Missouri State Auditor can be found at
<http://app.auditor.mo.gov/AuditReports/AudRpt2.aspx?t=chariton>
(<http://app.auditor.mo.gov/AuditReports/AudRpt2.aspx?t=chariton>).

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