

# Final Project Presentation

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Analysis of OASDI and SSI Data

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HCDE DATA 512, Fall 2018

# Introduction

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OASDI stands for Old-Age, Survivors, Disability Insurance. It is part of Social Security Disability program. It is provided as support to people who are retired and families (dependent spouses and children) of **workers** who have died. Additional details on its history can be found here on Wikipedia - [https://en.wikipedia.org/wiki/Social\\_Security\\_\(United\\_States\)](https://en.wikipedia.org/wiki/Social_Security_(United_States))

SSI stands for Supplemental Security Income. It is part of Social Security and involves monthly payment as support to people with limited income and people who are **disabled**, **blind** or **aged 65 years and above**. Additional details about SSI can be found here - <https://www.ssa.gov/ssi/text-over-ussi.htm>

Both programs are administered by Social Security Administration (SSA) - <https://www.ssa.gov/>

# Data

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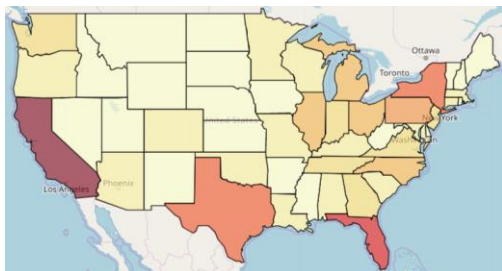
- Each year congressional reports are published with information of SSI and OASDI payments made by each state. This report includes information about no. of recipients in each category and the total payments made for each state. Reports for years 2013, 2014, 2015, 2016 and 2017 has been used for analysis
  - OASDI Categories – Retired Workers and Families
  - SSI Categories – Aged, Blind and Disabled
- Population data for US for the years 2013, 2014, 2015, 2016 and 2017.

# Motivation

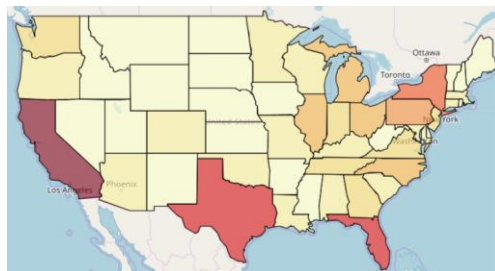
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- Understand the distribution of people benefiting from OASDI and SSI across US.
- Identify any trends in spending (if present).

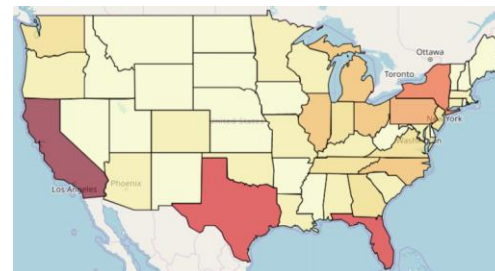
# Results – Distribution of Total Beneficiaries - OASDI



2013



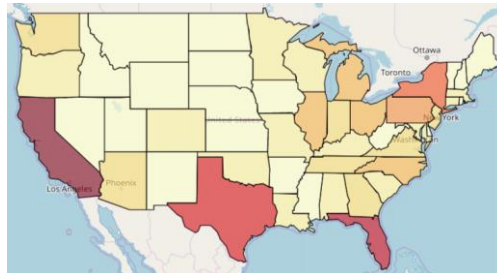
2014



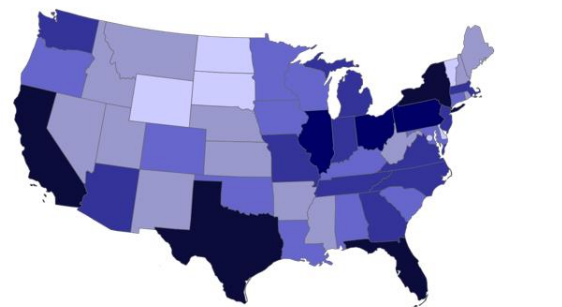
2015



2016



2017



US Population

Source: [Wikipedia](https://en.wikipedia.org/wiki/United_States_population)

Low

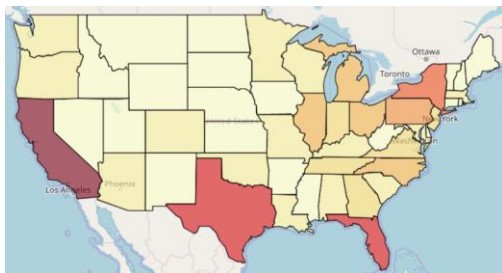


High

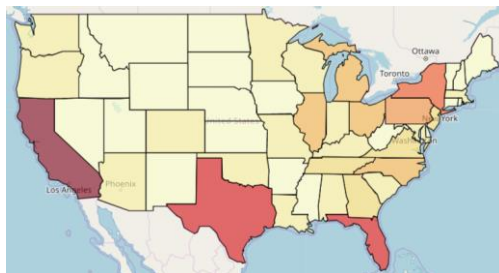


# Results – Distribution of Total Beneficiaries - SSI

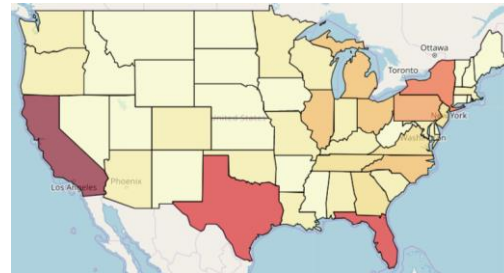
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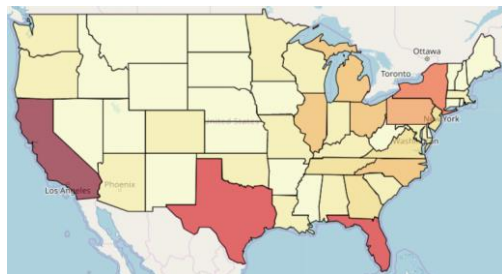
2013



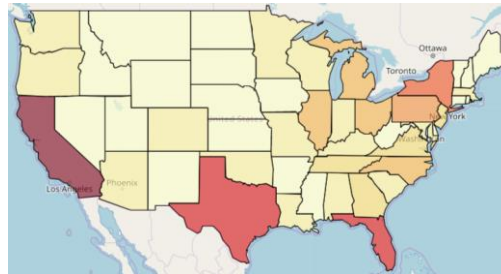
2014



2015



2016



2017

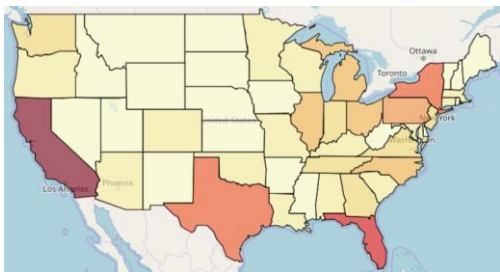
Low



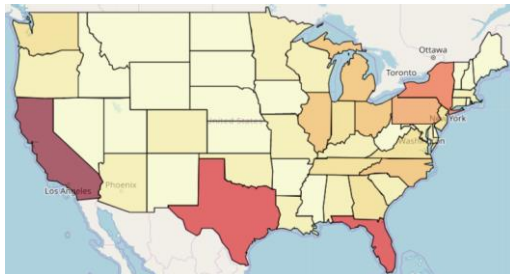
High

# Results – Distribution of Total Spending - OASDI

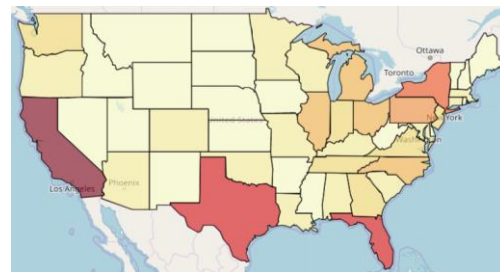
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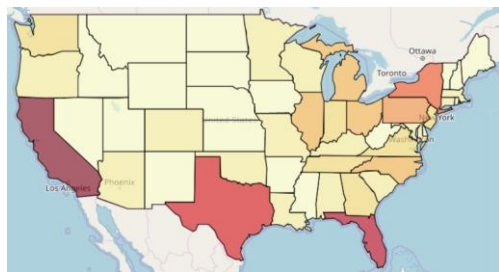
2013



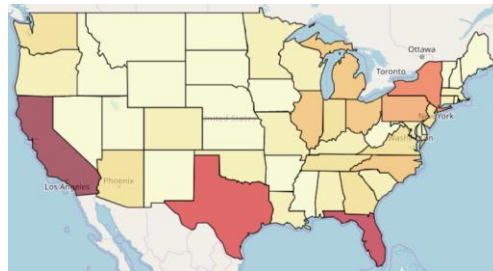
2014



2015



2016



2017

Low  High

# Results – Distribution of Total Spending - SSI



2013



2014



2015



2016



2017





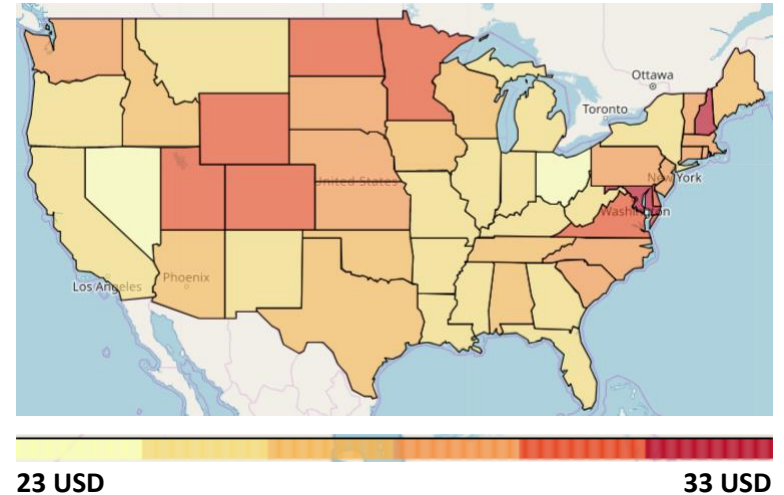
# Results – Avg Increase in Spending per Person - OASDI

## Top 10

state	avg_inc
DC	33.0
NH	32.0
MD	32.0
DE	31.0
MN	31.0
WY	30.0
UT	30.0
VA	30.0
ND	30.0
CO	30.0

## Bottom 10

state	avg_inc
NV	23.0
OH	24.0
MS	25.0
WV	25.0
LA	25.0
KY	25.0
NY	25.0
GA	25.0
CA	25.0
AR	25.0



Figures are in USD

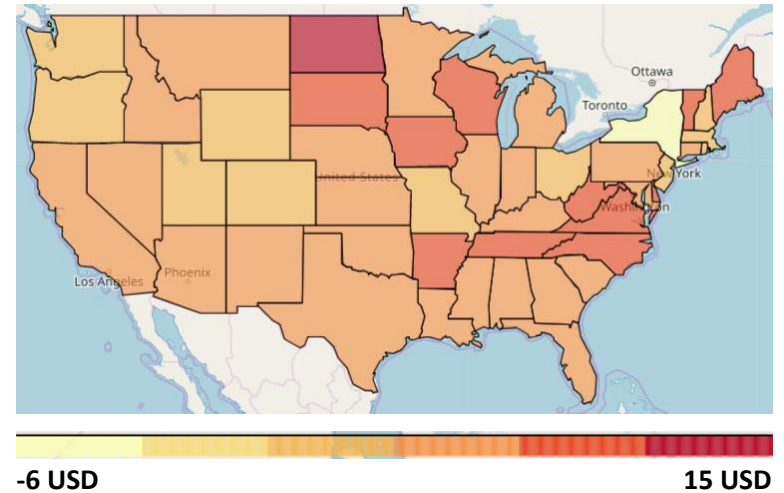
# Results – Avg Increase in Spending per Person - SSI

Top 10

state	avg_inc
ND	15.0
NC	9.0
WV	9.0
DE	8.0
IA	8.0
SD	8.0
ME	8.0
TN	8.0
DC	8.0
VA	8.0

Bottom 10

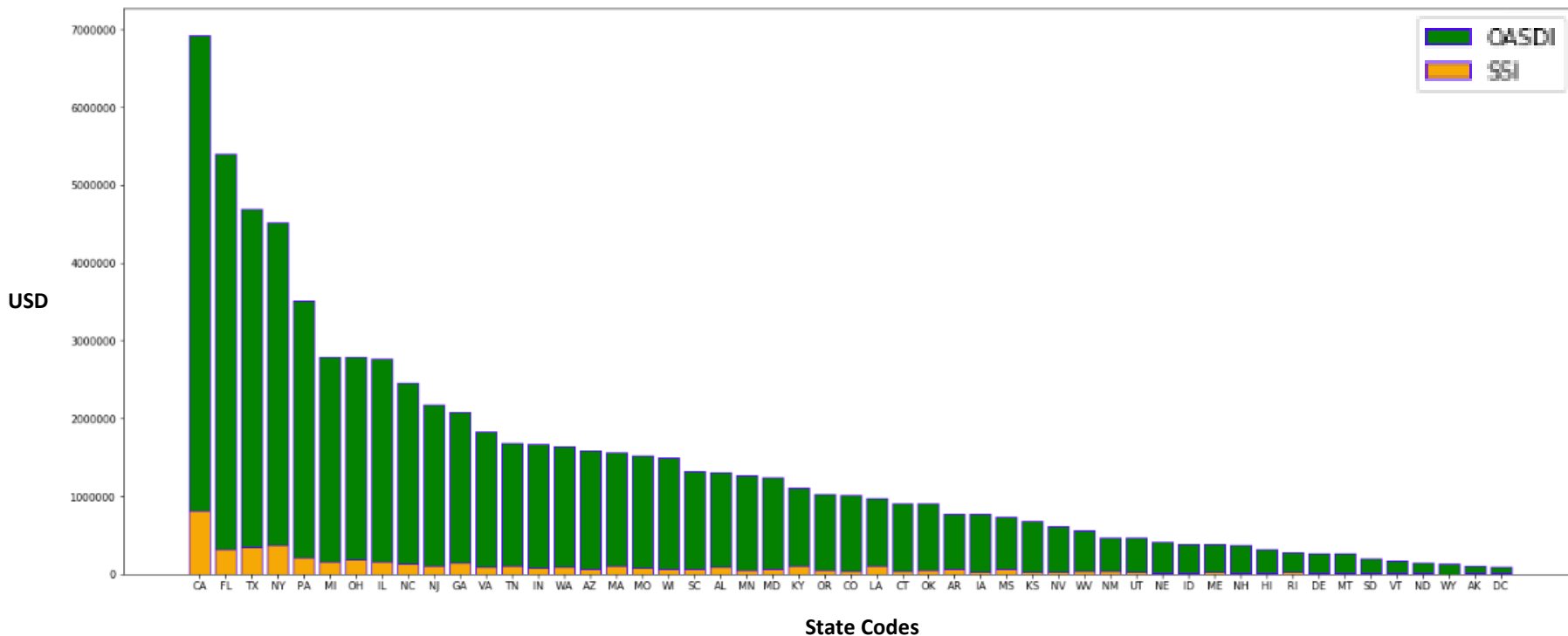
state	avg_inc
NY	-6.0
HI	0.0
RI	2.0
OH	3.0
UT	3.0
OR	3.0
WY	4.0
NH	4.0
WA	4.0
CO	4.0



Figures are in USD

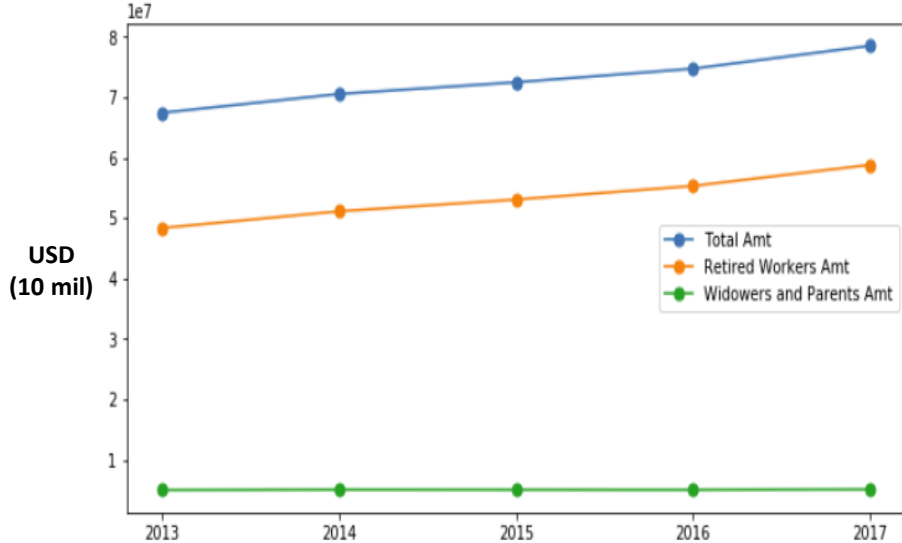
# Results – OASDI vs. SSI spending

Arranged in decreasing order of OASDI spending

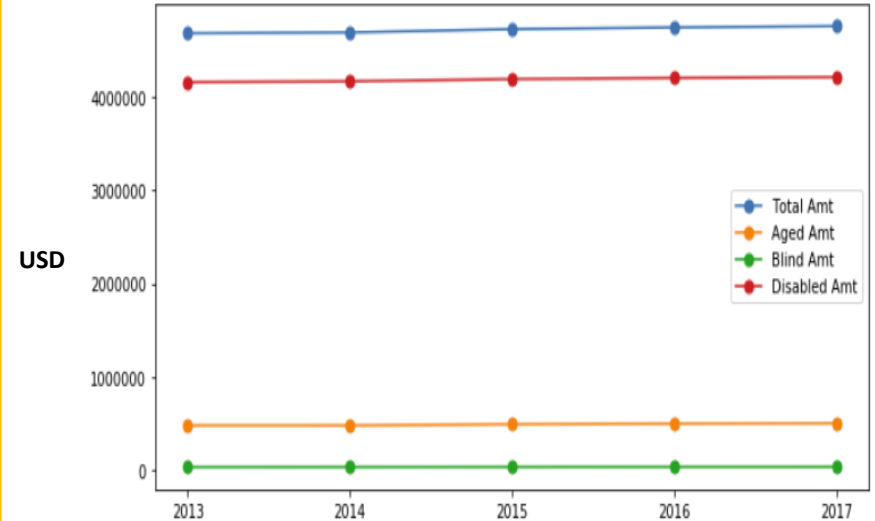


# Results – Category-Wise spending trend across years

## OASDI

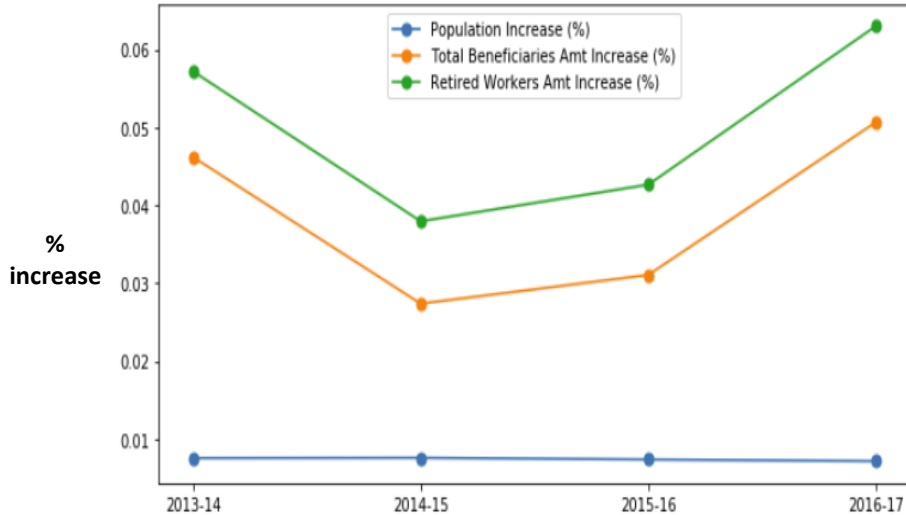


## SSI

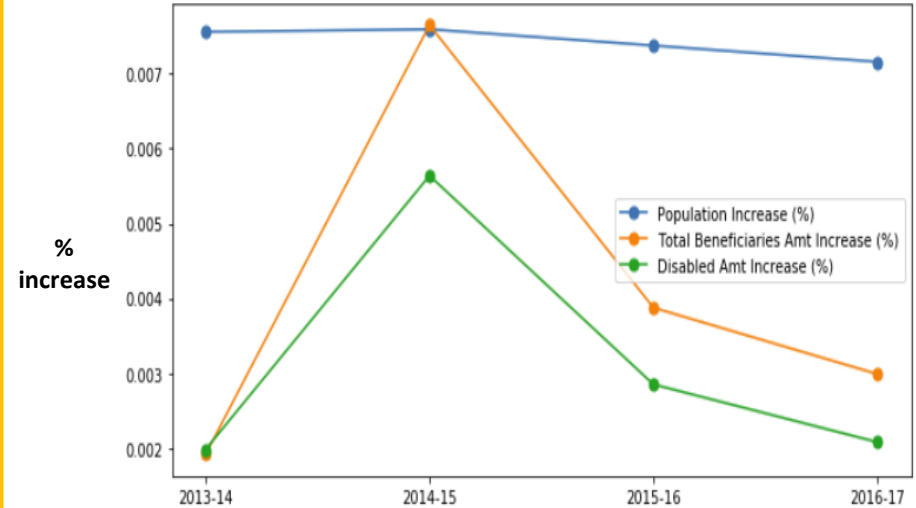


# Results – Spending increase vs. Population increase

## OASDI



## SSI



# Conclusion

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- SSI spending is small fraction of OASDI spending.
- At high level, the spending and beneficiaries per state appear to correlate positively with state's population.
- The analysis raises more questions, especially the “WHYs” which need further analysis based on additional data.