



# Congressional Activity

Productivity Trends

---

April 2024

# Agenda

---

- Introduction
- Objectives and Scope
- Measuring Productivity
- Project Methodology
- Data
- Analysis
- Findings and Conclusion



# Introduction




---

The Resume of Congressional Activity has been published since 1947. It includes statistics on the number of measures introduced, bills passed, the outcome of confirmations, etc.

This project analyzes activity trends and factors that affect the productivity of Congress.

# Objectives and Scope



---

## Trend Analysis

Has the United States Congress become more, or less productive over time?

## Correlation

What factors influence the productivity of Congress?

## Scope

98th - 117th Congresses (1983 – 2022)

# Measuring Productivity

What makes a Congress productive?

Responsibility	Measure
Enact laws	Number of bills enacted into law
Fund the government	Number of appropriations bills passed, and timing of passage
Provide oversight	Number of confirmations

# Project Methodology

*Based on CRISP-DM Methodology*

Understand Business	Understand Data	Validate Data	Explore & Analyze	Validate & QA	Visualize & Present
<ul style="list-style-type: none"><li>• Define:<ul style="list-style-type: none"><li>• Objectives</li><li>• Scope of work</li><li>• Deliverables</li></ul></li><li>• Gather Background Information</li></ul>	<ul style="list-style-type: none"><li>• Collect data</li><li>• Load data</li><li>• Preview data</li><li>• Explore data</li></ul>	<ul style="list-style-type: none"><li>• Verify data integrity</li><li>• Address:<ul style="list-style-type: none"><li>• Duplicates</li><li>• Missing data</li><li>• Data errors</li><li>• Outliers</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Perform analysis:<ul style="list-style-type: none"><li>• Statistical</li><li>• Descriptive</li><li>• Correlation</li><li>• Trend</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Review findings</li><li>• Validate:<ul style="list-style-type: none"><li>• Data</li><li>• Process</li></ul></li><li>• Checkpoint – Are objectives met?</li></ul>	<ul style="list-style-type: none"><li>• Finalize:<ul style="list-style-type: none"><li>• Documents</li><li>• Visualizations</li><li>• Presentations</li></ul></li><li>• Next Steps</li></ul>

# Data Overview



## Congressional Activity

From Senate.gov

Days, Time in Session

Measures Introduced, Measures Passed

Votes

## Confirmation Data

From Senate.gov

Positions requiring Senate confirmation

Nominations (civilian and military)

Disposition of nominations

## Demographic Data

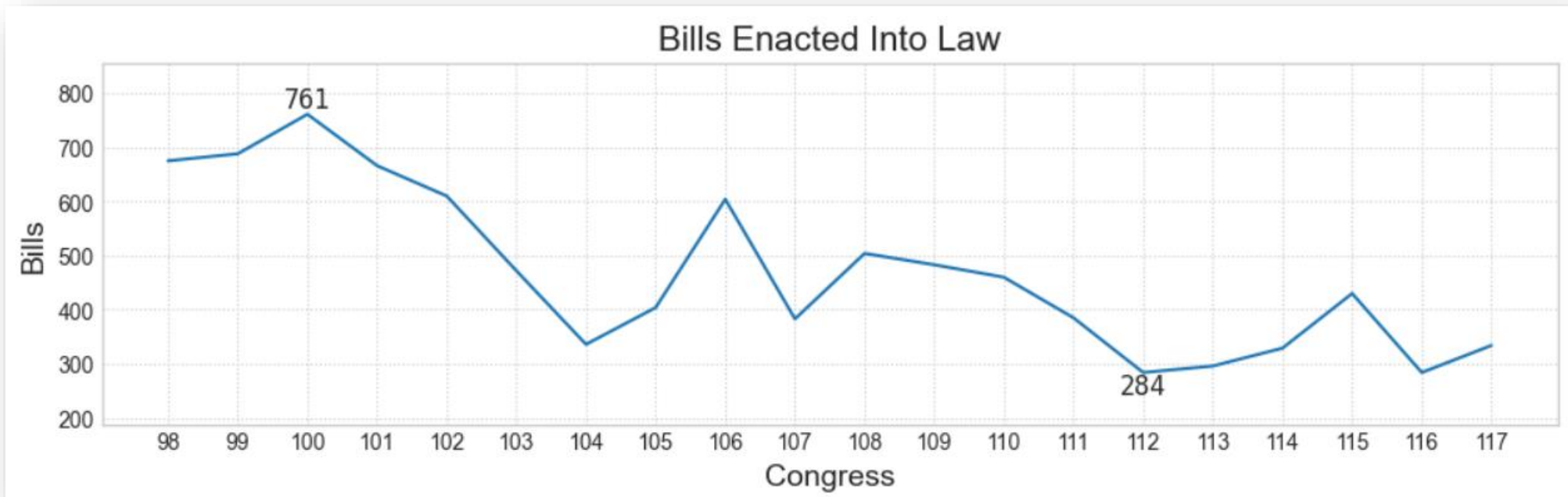
From Brookings  
Institute

Political Party

Time in Congress

# Trend Analysis – Bills Enacted

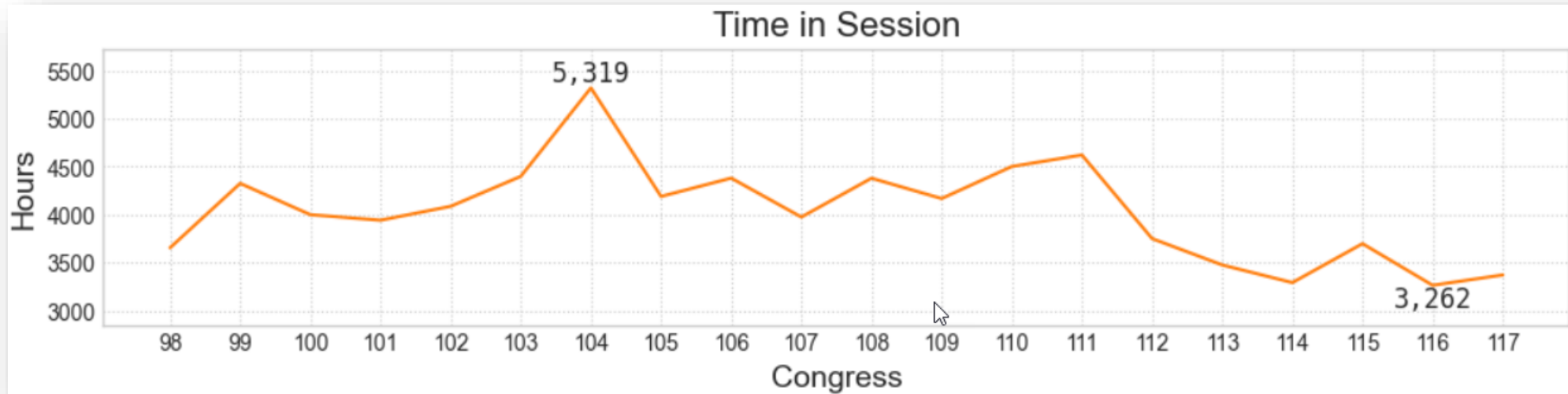
The number of bills enacted into law is generally trending downward, with a few exceptions.





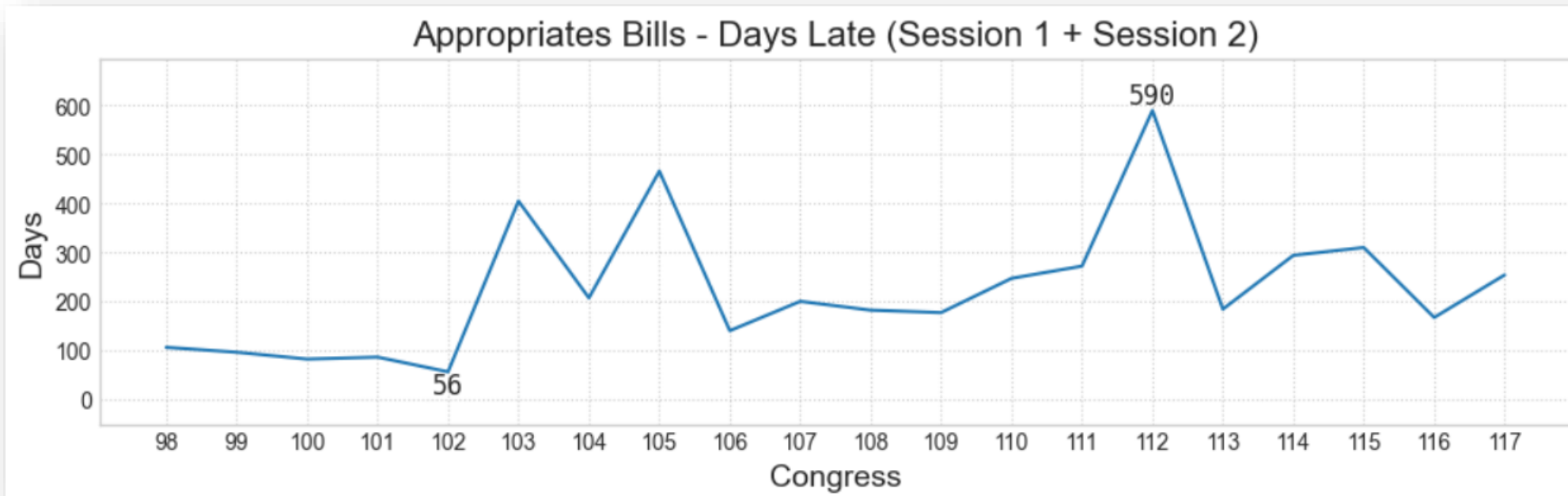
# Trend Analysis – Time in Session

After the 104<sup>th</sup> Congress, the time spent in session has generally trended downward.



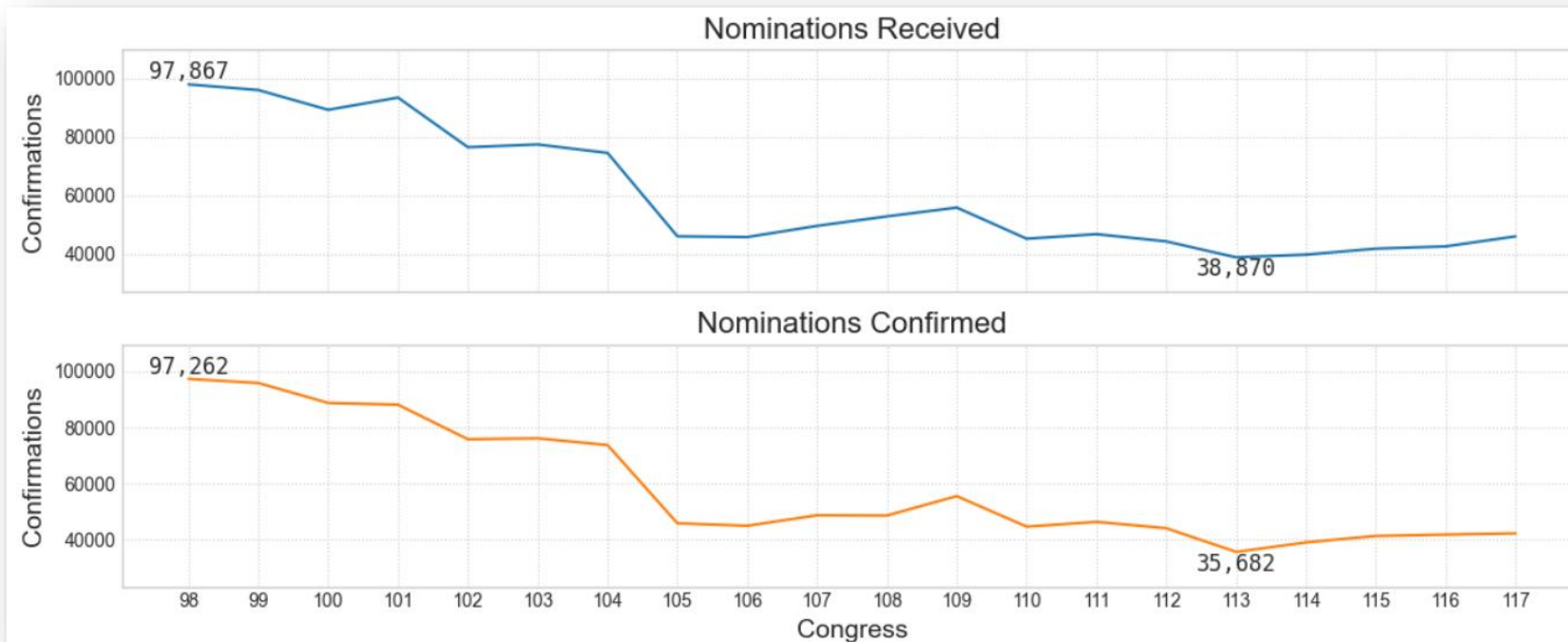
# Trend Analysis - Appropriations

Congress hasn't passed appropriations bills on time for both sessions of Congress within the range of data analyzed. There is no discernible trend.



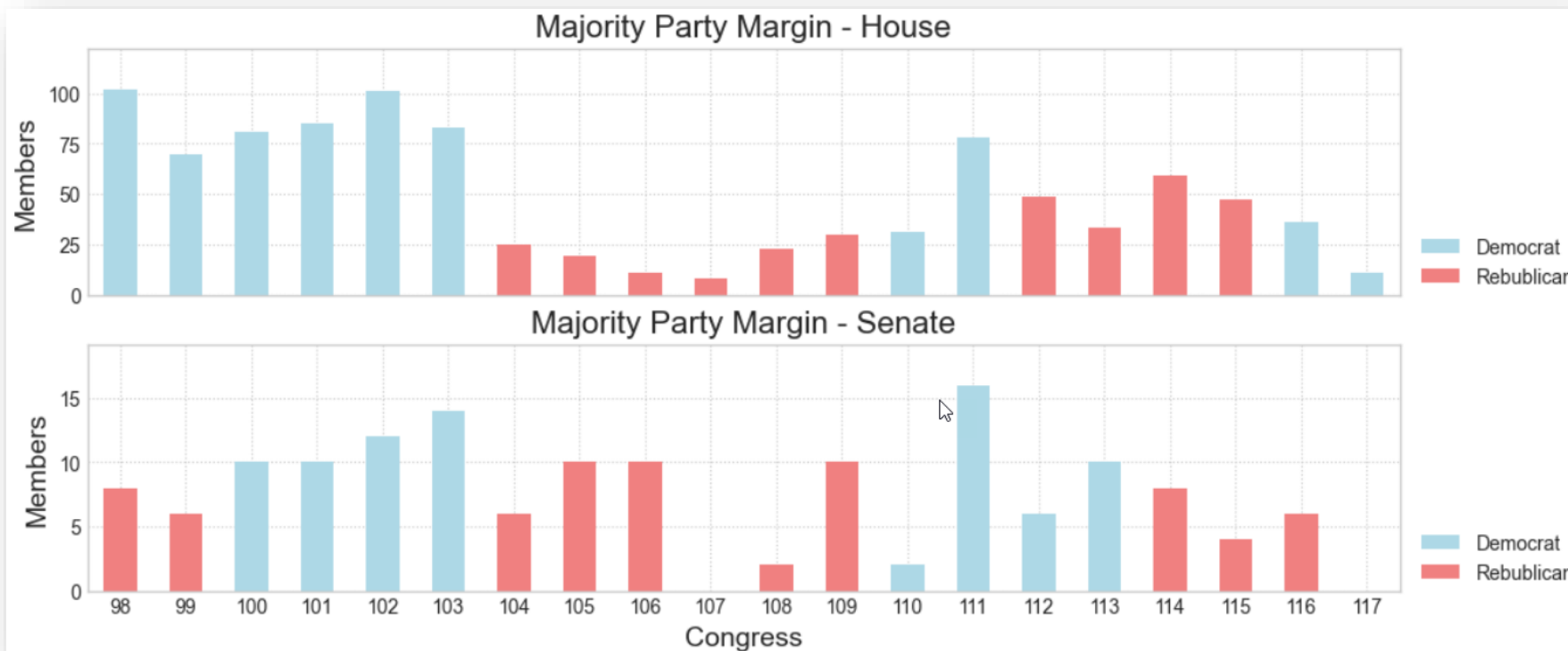
# Trend Analysis - Confirmations

The number of confirmations has dropped significantly over the last 20 Congresses. However, this aligns with a decrease in nominations received from the Executive branch.



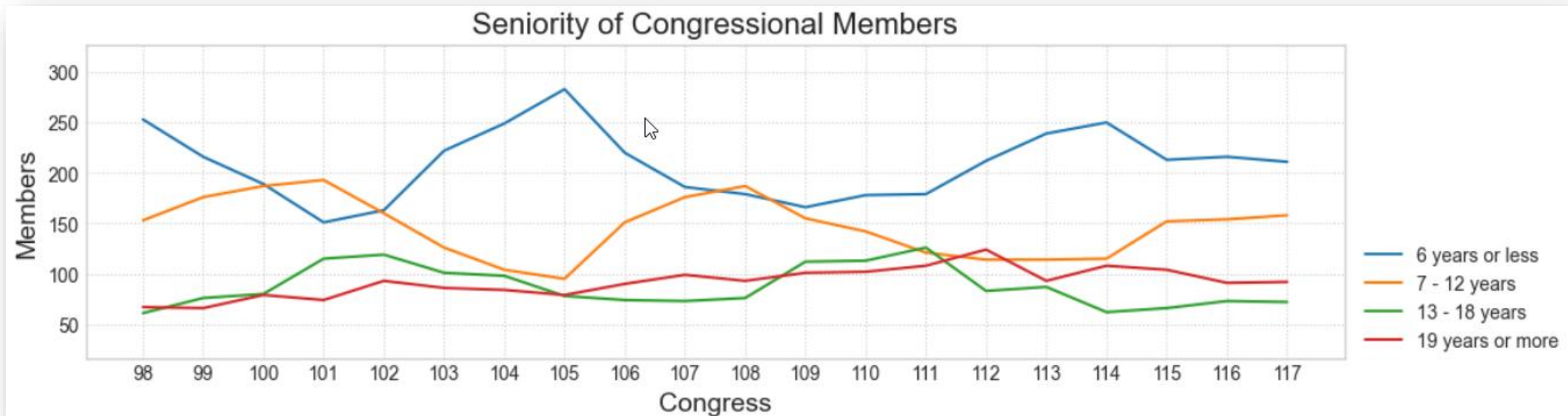
# Trend Analysis – Party in Power

Control of the House and Senate has seesawed over the years.



# Trend Analysis – Seniority of Members

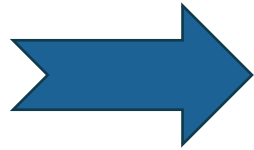
Generally, the largest portion of the membership is those with the least amount of experience in Congress.



# Activity vs Productivity

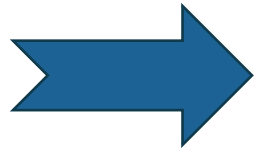
## Measures of Activity

Time or days in session  
Measures introduced  
Votes held



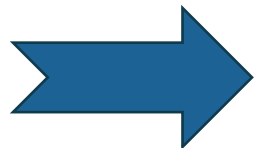
## Measures of Productivity

Number of laws enacted



Continuing resolutions  
Days past Oct 1

Appropriations bills



Number of nominations

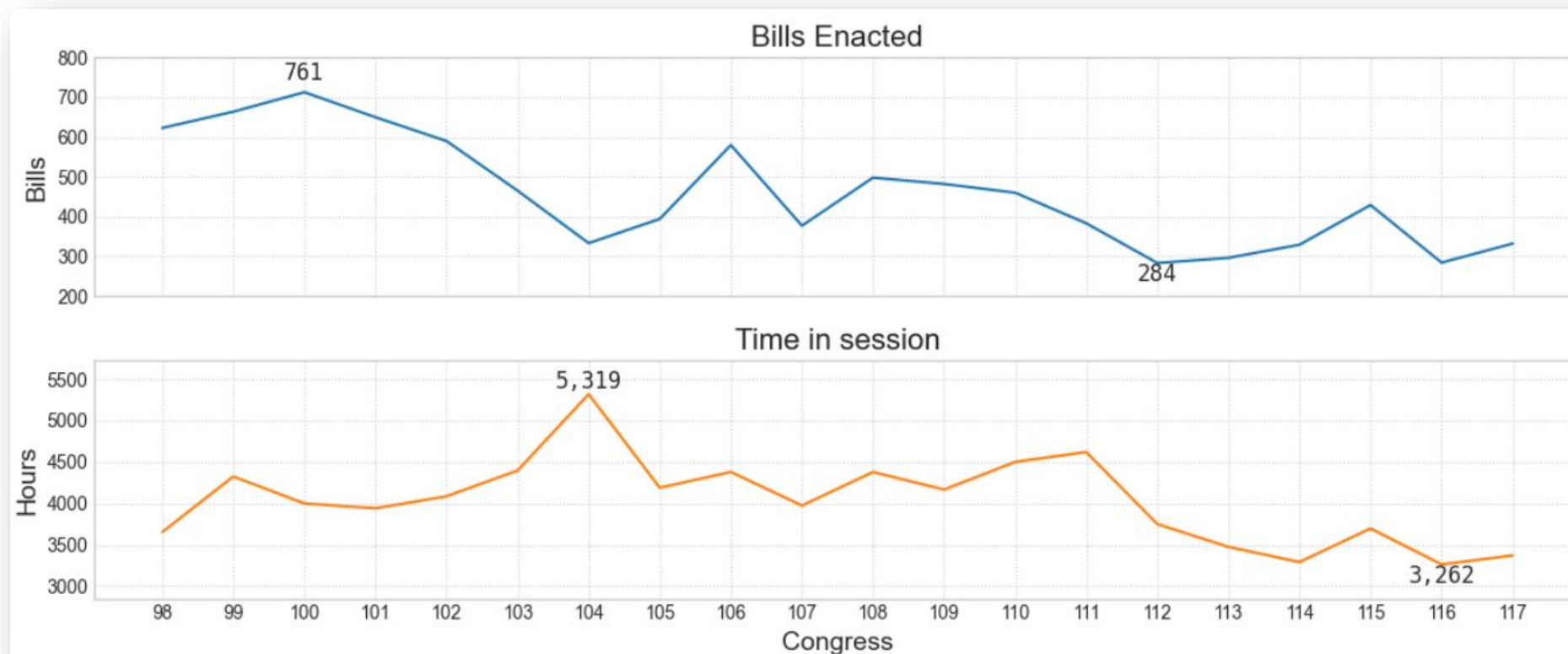
Number of confirmations

*Is there a correlation  
between  
Productivity and  
Activity?*



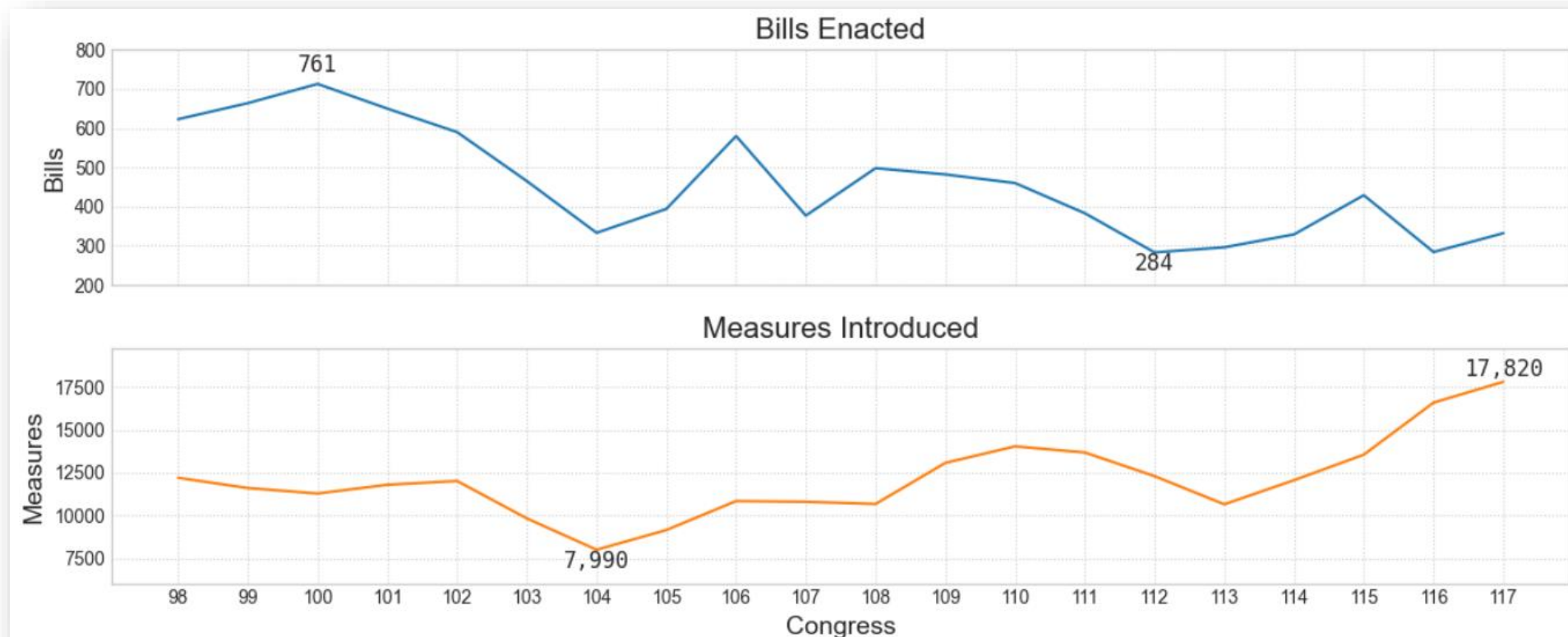
# Correlation Analysis

Pearson correlation between Bills Enacted and Time in Session = 0.22



# Correlation Analysis

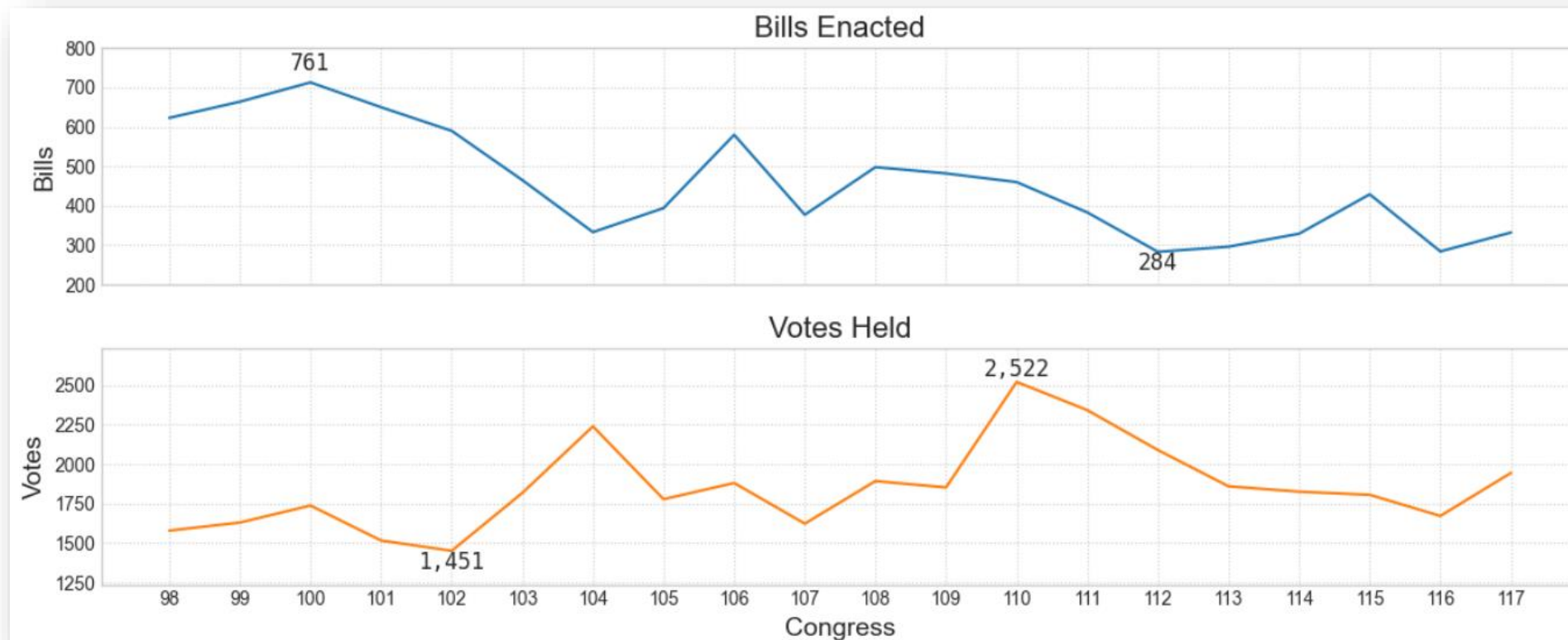
Pearson correlation between Bills Enacted and Measures Introduced = -0.20





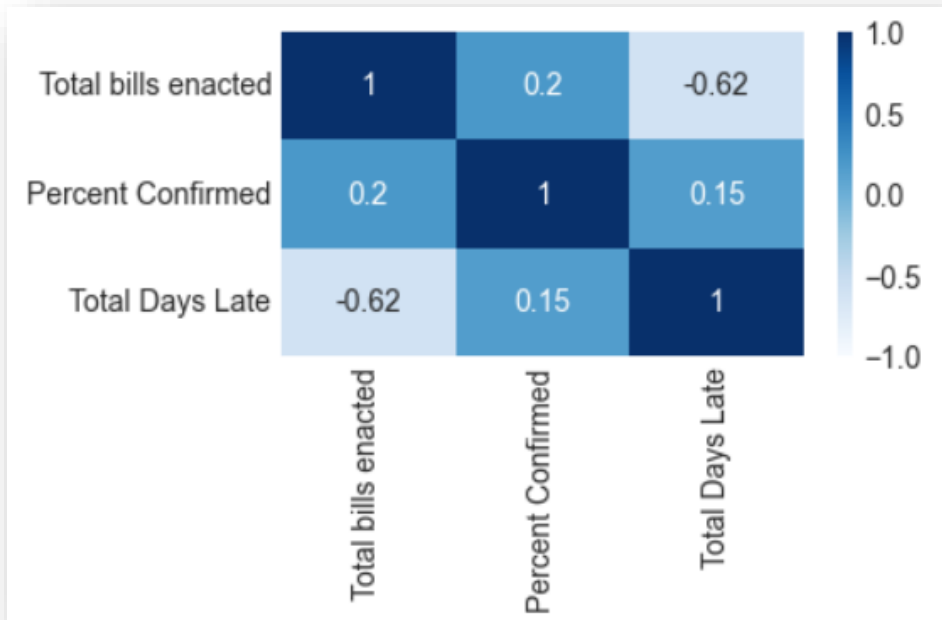
# Correlation Analysis

Pearson correlation between Bills Enacted and Votes Held = -0.48



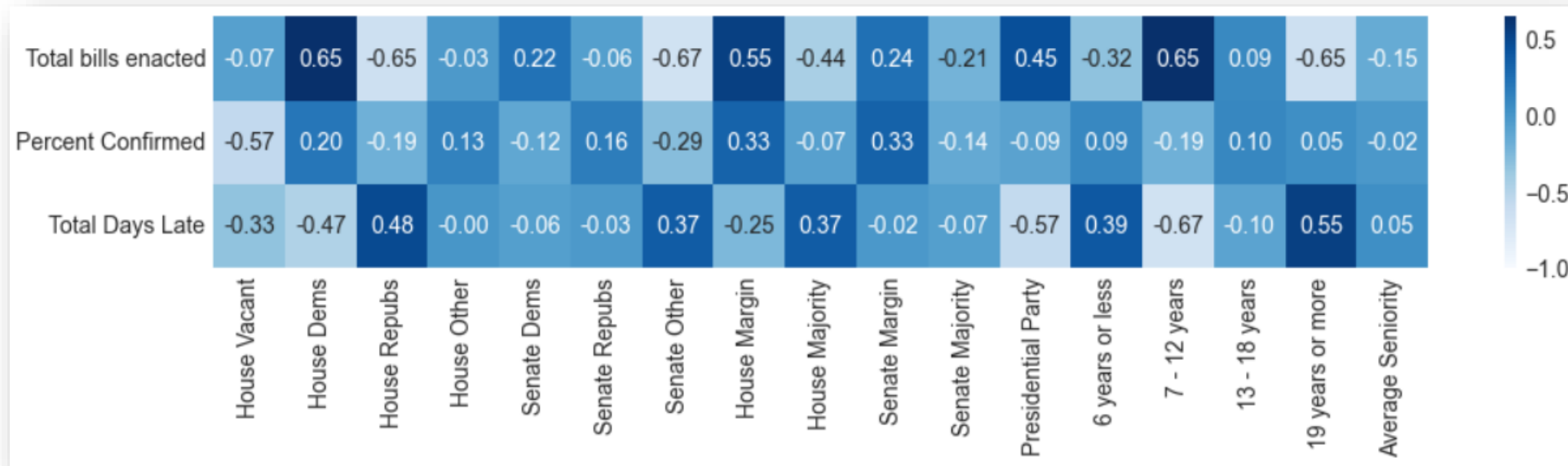
# Correlation Analysis

There isn't a strong correlation between the three measures of productivity.



# Correlation Analysis

There isn't a strong correlation between demographics and measures of productivity.



# Findings

---



There has been a general ***downward*** trend in the number of bills enacted and the time spent in session over the last twenty Congress.



The number of confirmations has ***decreased dramatically*** over the last twenty Congresses, but this is in line with a decrease in nominations from the Executive Branch. This could be interpreted as a ***reduction in the workload*** of Congress.



The appropriations process has been dysfunctional for a long time, with no Congress in the last twenty having passed appropriations bills on time during both sessions.

# Recommendations

---

## Data

- Increase sample size to improve trend analysis
- Expand demographics in search of correlations

## Metrics

- Add of pages of legislation to assess complexity of legislation
- Add legislative hearings as another measure of productivity

## Context

- Consider historical context and significant events with regard to productivity



# Thank you

---

Tami McManus

[https://github.com/tamimcm416/congressional\\_activity](https://github.com/tamimcm416/congressional_activity)

<https://www.linkedin.com/in/tami-mcmanus/>

# Appendix A – Source Data

---

“Appropriations”, *United States Senate*,  
[https://www.senate.gov/legislative/common/generic/bills\\_acts\\_laws\\_appropriations.htm](https://www.senate.gov/legislative/common/generic/bills_acts_laws_appropriations.htm).  
Accessed Apr 9, 2024

“Appropriations Status Table”, *Congressional Research Service*,  
<https://crsreports.congress.gov/AppropriationsStatusTable>. Accessed Apr 7, 2024.

“Congressional Data Scrape”, [GitHub Repository],  
[https://github.com/tamimcm416/congressional\\_data\\_scrape](https://github.com/tamimcm416/congressional_data_scrape), Accessed Mar 31, 2024.

“Legislation Search Results”, *Library of Congress*,  
<https://www.congress.gov/search?q=%7B%22source%22%3A%22legislation%22%2C%22search%22%3A%22isRelatedToAppropriations%3AY%22%2C%22bill-status%22%3A%22law%22%7D>. Accessed  
Apr 7, 2024.

# Appendix A – Source Data, cont.

---

“List of presidents of the United States”, *Wikipedia*,  
[https://en.wikipedia.org/wiki/List\\_of\\_presidents\\_of\\_the\\_United\\_States](https://en.wikipedia.org/wiki/List_of_presidents_of_the_United_States). Accessed Apr 11, 2024

“Vital Statistics on Congress.” Chapter 1, *Brookings Institution*, [Microsoft Excel],  
<https://www.brookings.edu/articles/vital-statistics-on-congress/>. Accessed Jan 2, 2024.