
Exploratory Analysis of Contact Strategies for Annual Economic Surveys

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Background

The Census Bureau utilizes mailings, emails, and telephone calls to inform and remind potential respondents about the importance of completing the survey; however, contact strategies can be resource-intensive.

For this project, we aimed to identify and track trends in communication outreach efforts over time for several annual economic surveys and understand their correlation with survey engagement (authentication code burn rates).

Data Sources:

1. Collection strategy documentation (survey years 2015-2022)
2. Authentication code usage (survey years 2017-2022)

Annual Economic Surveys Included in the Study:

- SAS (Service Annual Survey)
- ARTS (Annual Retail Trade Survey)
- AWTs (Annual Wholesale Trade Survey)
- M3UFO* (Manufacturers' Unfulfilled Orders Survey)
- ACES (Annual Capital Expenditures Survey)
- COS/ASM (Report of Organization/Annual Survey of Manufactures)

*M3UFO was left out of analysis due to lack of historical records.

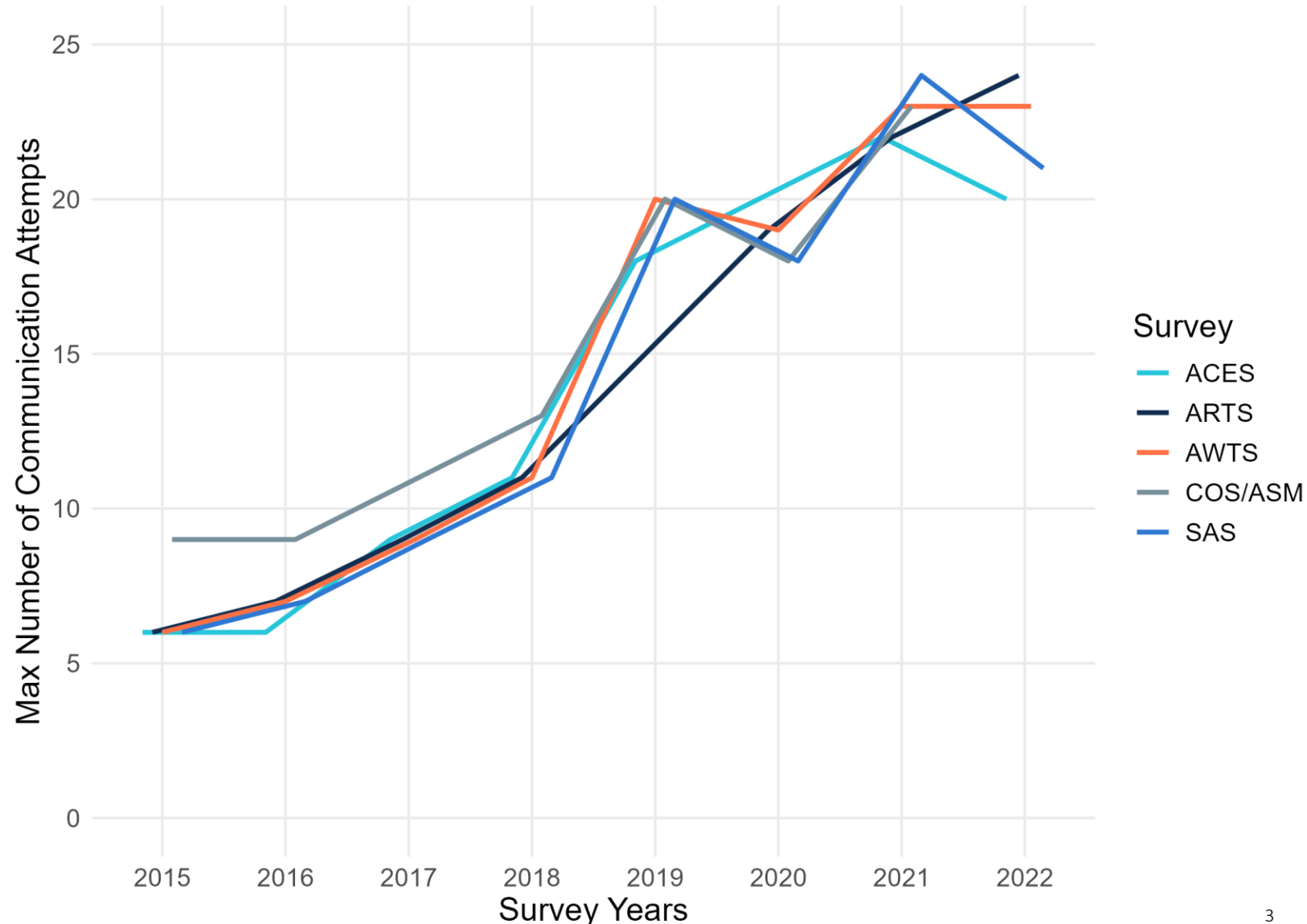
Exploratory Analysis: Communication Over the Years

Across surveys, the number of maximum contact attempts have **tripled** between survey years 2015-2022.

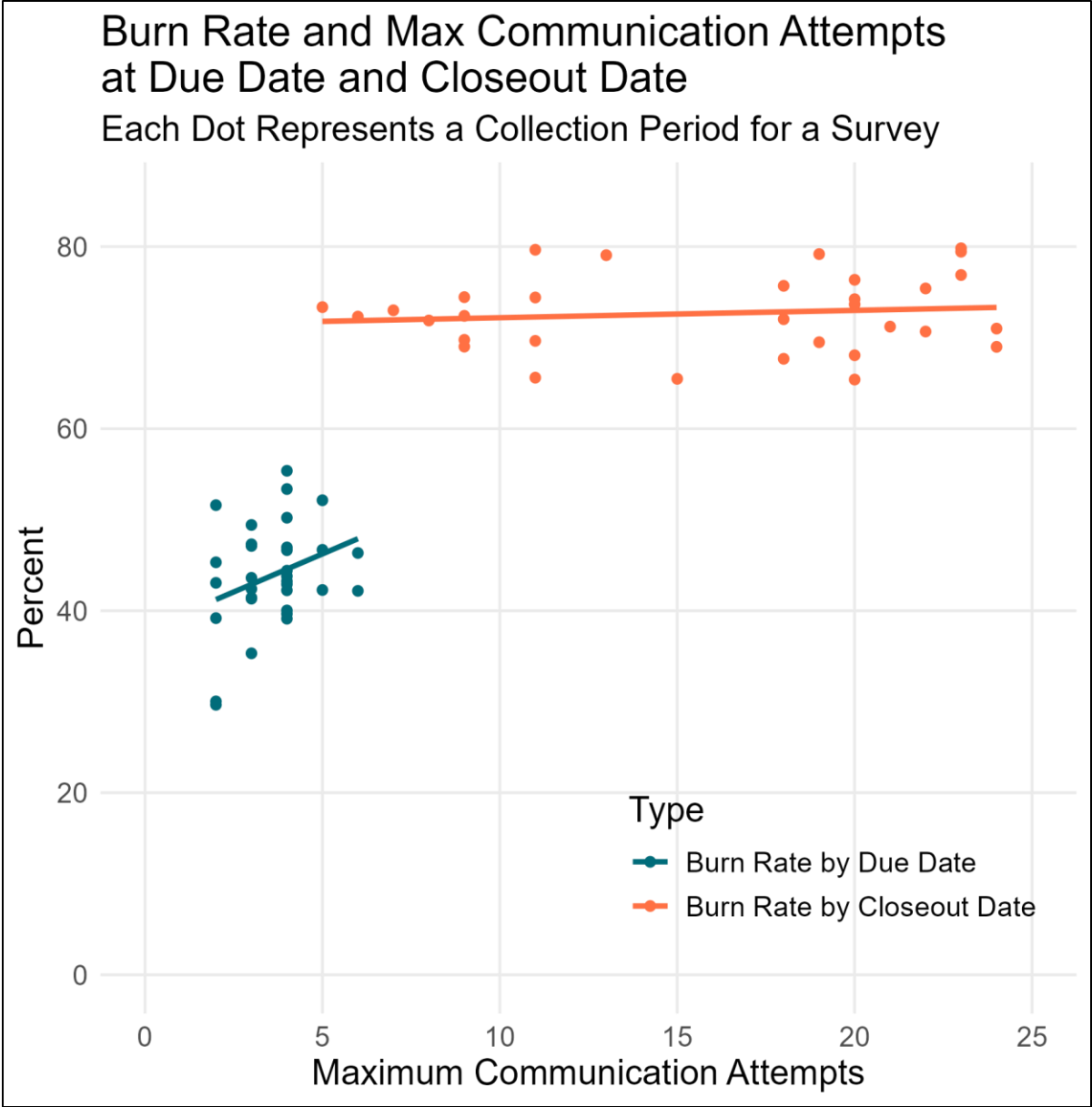
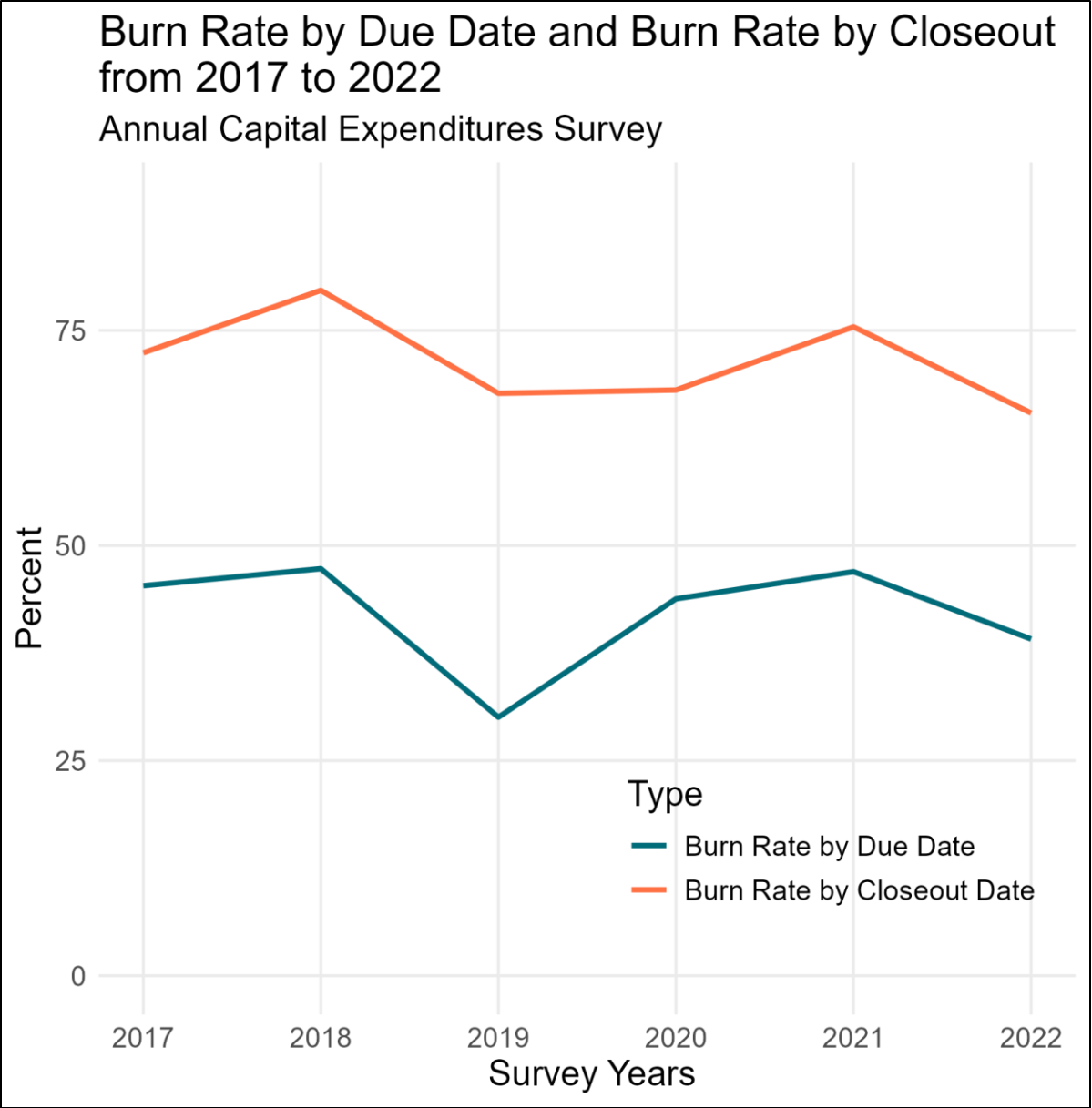
Notable changes in communication strategies over time include:

- Introduction of email and robocalls as contact methods
- Introduction of Undeliverable as Addressed (UAA) mailings and Unexpired Extension Requests (UER) emails as specific survey communication messages

Number of Max Communication Attempts Increases Over the Years

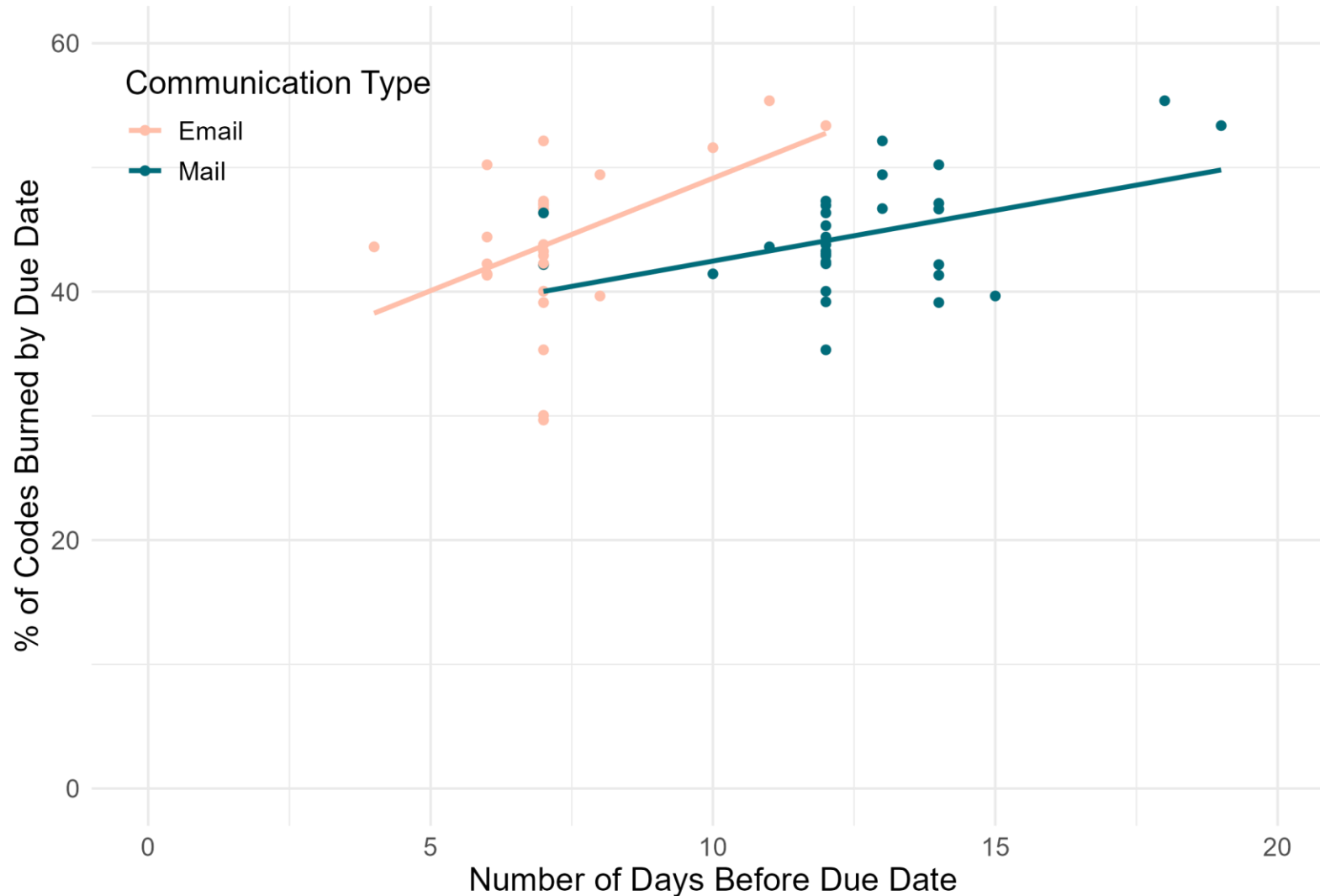


Exploratory Analysis: Respondent Engagement (Burn Rate) Over Time



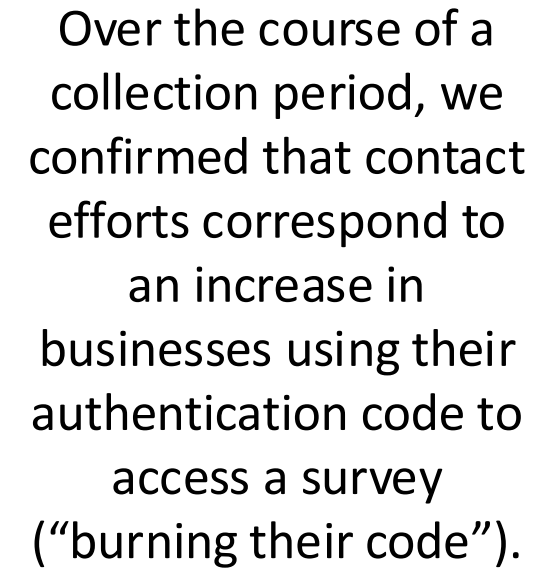
Exploratory Analysis: Due Date Reminder Timing

Burn Rate increases with Number of Days before Due Date a Due Date Reminder is sent



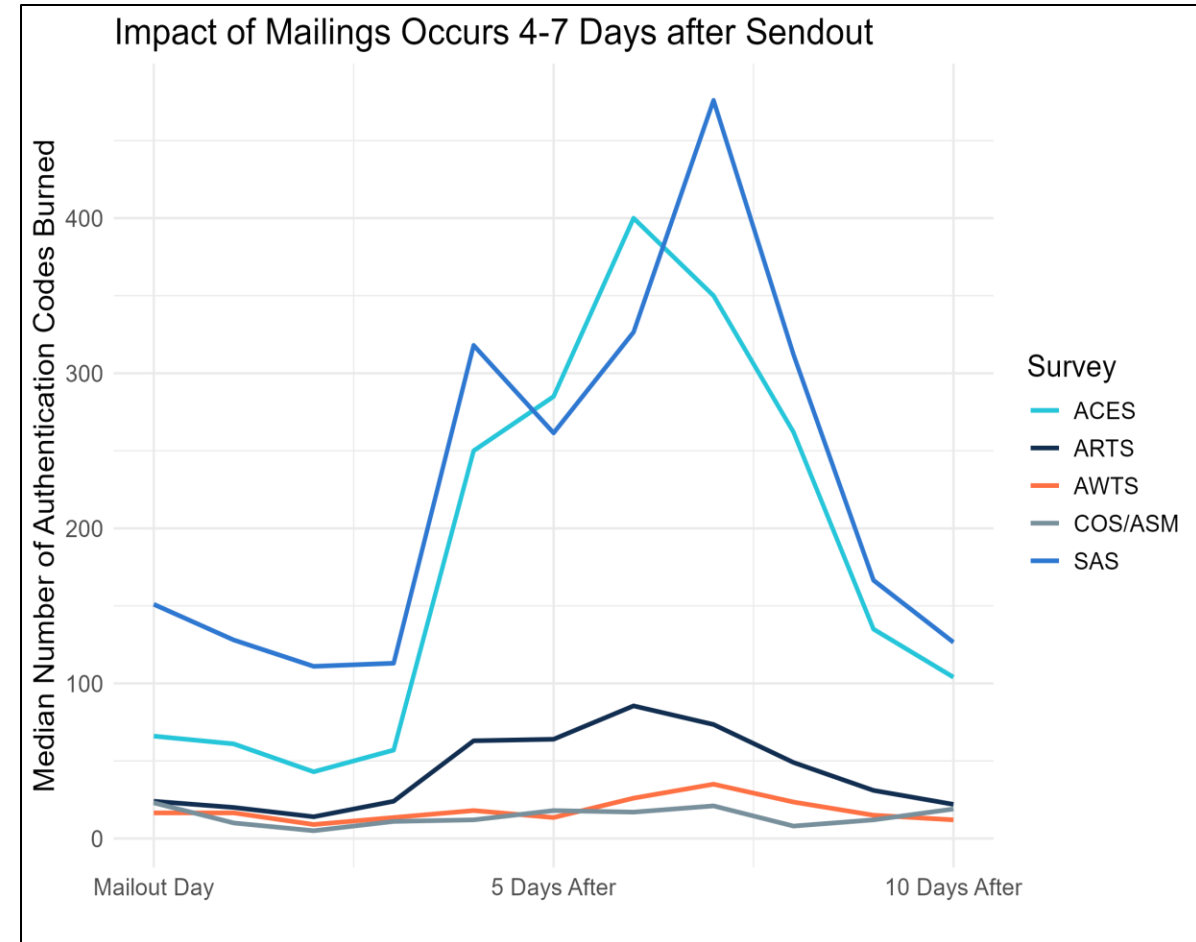
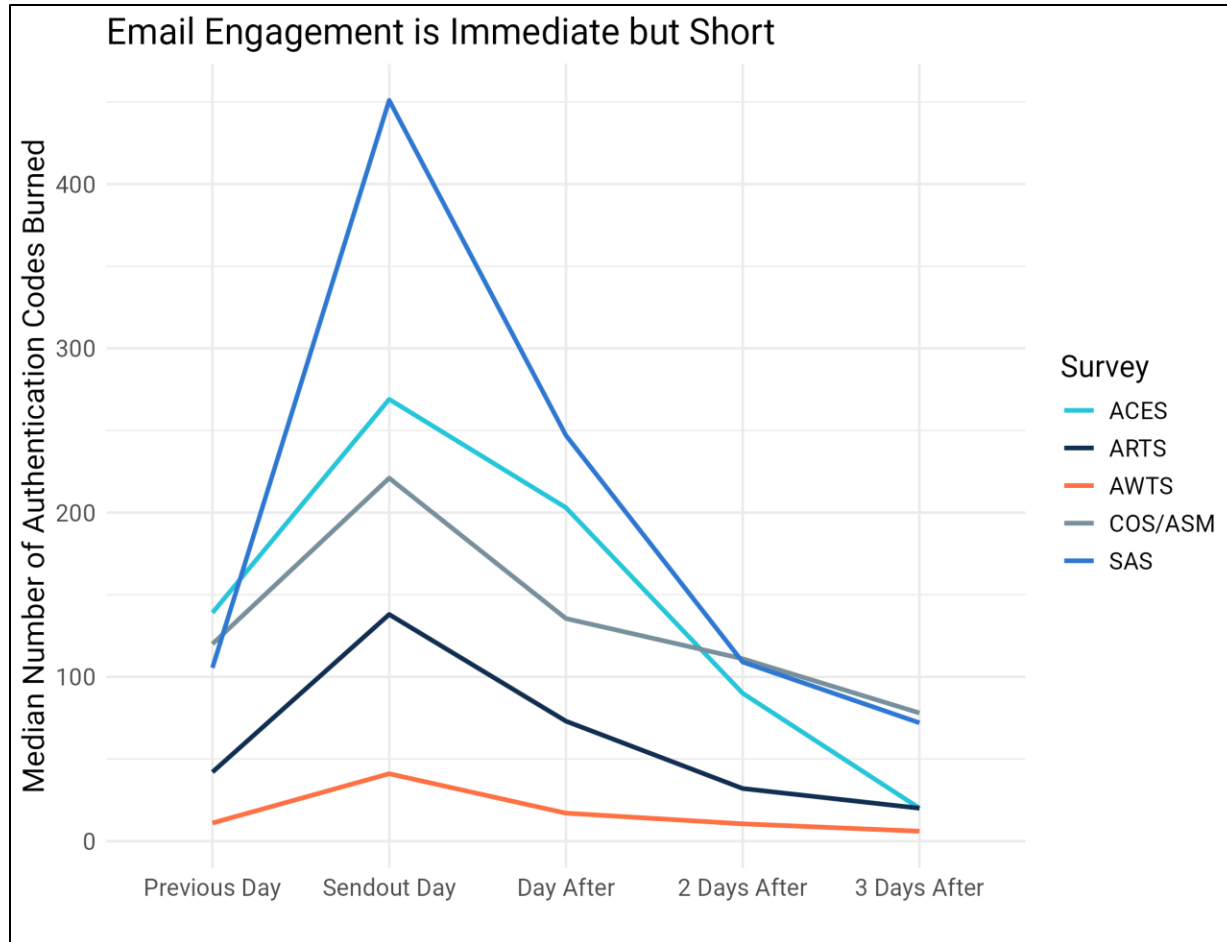
The number of days before the due date a due date reminder (DDR) is sent is positively correlated with the burn rate.

This indicates that more people may burn their codes when the due date reminder is sent earlier.



Exploratory Analysis: Email vs. Mail Engagement Shelf Life

The timing and length of effect of different contact methods varies significantly

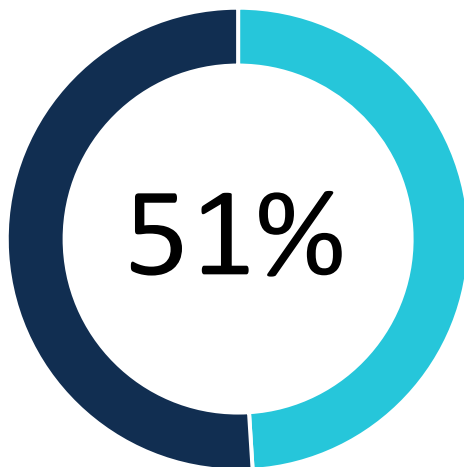


Exploratory Analysis Complications: Overlapping Communications

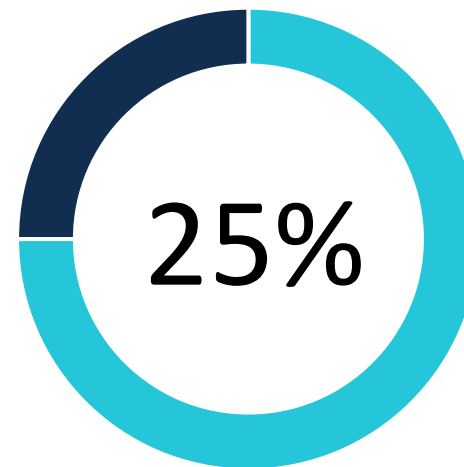
Emails have immediate impact while the impact of mailings is observed days after send out.

When emails and mailings are sent around the same time, it makes it difficult to isolate the impact of one method on authentication code burn rates.

For 182 mailouts sent during survey years 2017-2022:



About half of mailouts had at least 1 email sent within 2 weeks of mailing



A quarter of mailouts had at least 1 email sent 3-7 days after mailing (peak activity time)

Limitations & Recommendations

Limitations:

- Unable to link respondents with communication they received
 - Unable to model relationship between communication methods and respondent engagement

Recommendations:

- Minimize the use of emails in the week following mailouts to better discern the impact that mail specifically has on survey engagement
- Maintain historical records for the contact efforts over the statistical period
- Store data for the different communication strategies (mail/email/call/robocall) in one parent folder

Conclusion

Contact efforts notably increase survey engagement but their windows of engagement vary based on the communication method.

The timing of communications in relation to the survey due date may increase survey engagement as seen through authentication code use; however, more investigation is needed to determine causal effects.

A next step would be to add additional data sources such as outbound call information to understand the effects that calls specifically have on respondent engagement.



THANK YOU!

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