

Executive Summary: Analysis of Segal AmeriCorps Education Awards in the State of Maine between 1996-2016

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Introduction

The present report provides an analysis of trends in the redemption of Segal AmeriCorps Education Awards at Maine institutions from 1996-2016. Segal Awards are post-service grants that can be used to offset higher education expenses. “Education expenses” can be classified as the off-setting of tuition costs, paying qualified-loan principals, and paying loan interest—among other related educational costs. Segal Awards are considered taxable income by the IRS and the maximum dollar amount of the award is dependent on annual fluctuations to the U.S. Department of Education Pell Grant. The award amount is tiered depending on the minimum number of hours a member worked, relative to the Pell Grant maximum dollar amount (See Table 1).

This report can be broken down into four main sections, after the methodology section. The first section describes general trends in Segal Award use from 1996-2016, including what institution that money was used at and to what expense that money was directed toward. Given the current climate of the global economy, special care was given when analyzing data before, during, and after the 2001/2002 and 2008/2009 economic recessions; any trends are discussed. The second section considers a hypothetical scenario: “what would be the expense to public institutions if Segal Award recipients, who completed their service in Maine, qualified for in-state tuition?”. Some recommendations are given based on these data and projections. The third section considers a different hypothetical scenario: “what would be Maine’s fiscal impact if Segal Awards were not counted as taxable income?”. This question is based on the proposed “Segal AmeriCorps Education Award Tax Relief Act of 2019” and is reformulated to try to pose the same question to Maine in regard to waiving personal income tax at the state level; recommendations are given based on these data and projections. Section four closes the analysis by briefly discussing limitations to this research and proposes some follow-up analyses that would better contextualize the two hypothetical situations that were explored.

Table 1.

*Segal AmeriCorps Education Award amounts for national service positions approved in Fiscal Year 2020 (October 1, 2019-September 30, 2020)**

Participation Types	Minimum # of hours	Amounts
Full-time (FT)	1,700 (365 days for VISTA)	\$ 6,195.00
Three Quarters Time (TQT)	1,200	\$ 4,336.50
Half-Time (HT)	900	\$ 3,097.50
Reduced Half-Time (RHT)	675	\$ 2,360.00
Quarter-Time (QT)	450	\$ 1,638.89
Minimal-Time & Summer Associate (MT & SA)	300	\$ 1,311.11
AmeriCorps Affiliate (AT)	100	\$ 348.64

*Note ** = Table recreated from National Service's "Amount, Eligibility, and Limitations" page

Key Findings

Section II: General Trends

Presented below are some of the key trends and regressions that were discussed in this section presented as figures. In the main report, in-depth explanations, interpretations and recommendations are made. The general trend section essentially looked at the behavior of how AmeriCorps members have used the Segal Award in terms of student loan repayment (i.e., both banks/credit union loan repayment and university/college institutionally distributed loan repayment) and educational expenses (e.g., tuition, room and board, books, etc.) over the 1996-2016 period. The two most important conclusions are the following. The Segal Award seems to be doing "less work" over more expenditures. In other words, the award money is being spread over more expenditure categories and is of less 'targeted' value year-over-year to service members in paying and accessing further education. On a similar note, students putting the yearly average amount of their award toward tuition would be able to pay 18.08% of their tuition in 1996, but only 10.61% in 2016. In other words, the Cost of Attendance (COA) has significantly outpaced the relative size of the Segal Award in tuition; this does not take into account the higher cost of other categories, making the value of the Segal Award much lower than expected (discussed in main report).

A portion of the general trend section also pointed out the drastic disparities between how Segal Awards are being used between for-profit and non-profit schools in Maine (see Figure 9). AmeriCorps members attending for-profit schools in Maine spend roughly double the amount of their award on educational expenses compared to those at non-profit schools. As the report discusses, for-profit schools (and online schools) typically spend well under 50% of tuition costs on educational instruction and most of the cost is directed toward private marketing campaigns, which is directly opposed to non-profit schools that spend well over 50% of tuition costs on instruction (i.e., community colleges, public universities, and private non-profits).¹ For example, Purdue University Global, a school that is on the Maine for-profit Segal education list, spent merely 18% of tuition on instruction and spent \$16.47 per ad click out of a total \$8,100,000 spent during 2016-2017.² This disparity has gone unnoticed for an extended period of time because educational expenses are reported differently between different types of institutions. The author provides that analysis because policy makers should be aware of tax-payer dollars heavily subsidizing private, for-profit marketing campaigns in the form of Segal Awards. Further, recessions tend to increase for-profit enrollment, making this more relevant in the near future.³

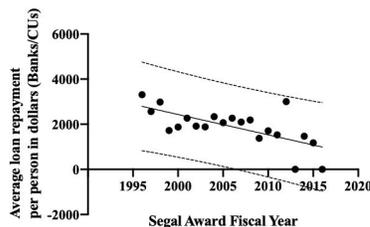


Figure 1. Shown is a scatterplot of the calculated, average loan repayment to Banks and Credit Unions per AmeriCorps member per year. There is a strong, negative association between Fiscal Year and the average loan repayment amount per person in USD, $r(19) = -.67, p < .001$. Displayed above are the projection intervals, as well as the simple linear regression itself. Given the projection intervals, if there was a repeated, random selection of AmeriCorps service members from the public in Maine, 99% of the mean loan repayments would be between the dashed lines. In other words, we are 99% certain the average loan payments per person will be between those lines given similar conditions between 1996-2016. Since each cohort of service members are independent, these results imply an underlying confounding variable.

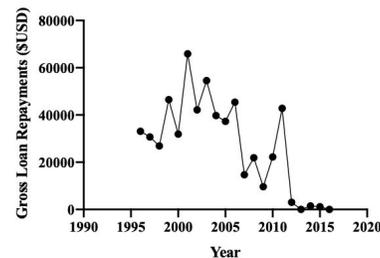


Figure 3. Gross amount of loan payments made to private banks and credit unions by year. There are two clear spikes centered in the immediate aftermath of the 2001/2002 and 2008/2009 recessions. This trend does *not* imply causation, but merely shows that more people directed money toward private loan repayment during these periods of time.

¹ Examining Instructional Spending for Accountability and Consumer Information Purposes. (2019, February 28). The Century Foundation.

² How Much Education Are Students Getting for Their Tuition Dollar? (2019, February 28). The Century Foundation.

³ How will for-profit colleges fare in the recession? (2020, March 19). Inside Higher Ed. Retrieved June 1, 2020

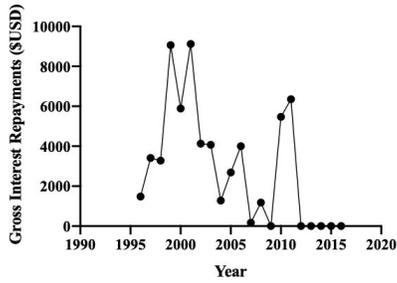


Figure 4. Gross amount of loan payments that were categorized as interest payments made to private banks and credit unions by year. There are two clear spikes centered in the immediate aftermath of the 2001/2002 and 2008/2009 recessions and one spike prior to the 2001/2002 recession. This trend does *not* imply causation, but merely shows that more people directed money toward private loan interest repayment during these periods of time.

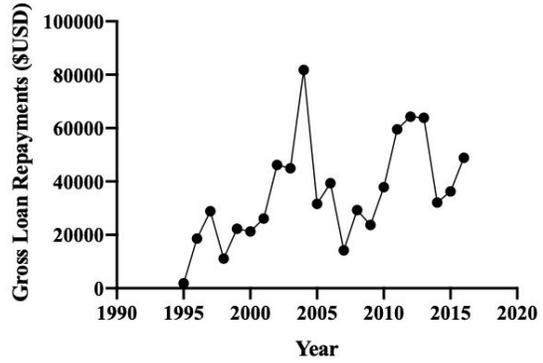


Figure 5. Gross loan repayments per year to colleges and universities from 1995-2016. There are two notable spikes that start at 2001 and 2009 respectively and decline overtime.

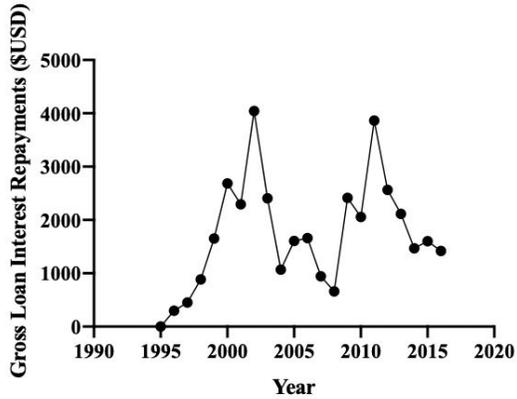


Figure 6. Gross loan interest repayments per year to colleges and universities from 1995-2016. There are two notable spikes that start at 1998 and 2008 respectively and decline overtime.

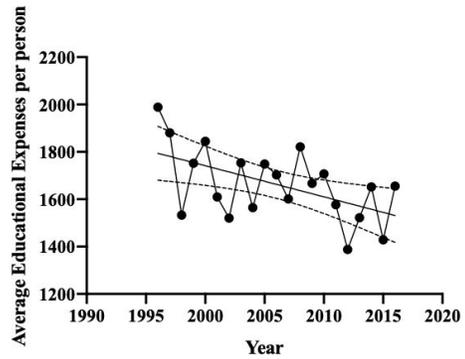


Figure 7. Average amount of Segal Awards going toward educational expenses (e.e.) per person between 1996 and 2016. There is a moderately strong relationship between the year and the average e.e. per person, $r(19) = -.5433, p = .0109$. Given the repeated, independently random behaviors of year to year AmeriCorps members, we can be 95% confident that average e.e. per person will continue to decrease by anywhere between \$22.88 to \$3.389 per year.

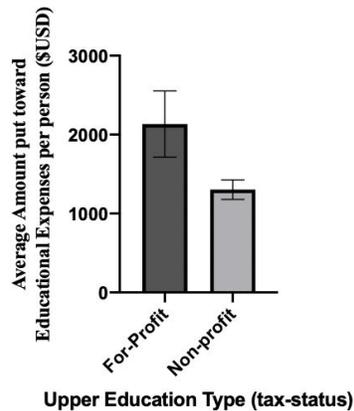


Figure 9. The average amount, per person, of the Segal Award going toward for-profit and non-profit educational expenses. The difference between each group is statistically significant, $t(2.517)$, $p = .0169$. In fact, we can be 95% confident that the true difference between for-profit and non-profit average expenses is between \$1501 and \$159.30

Section III: Hypothetical #1 and Public Institutions

The following question was posed: What would be the expense to public institutions if Segal Award recipients, who completed their service in Maine, qualified for in-state tuition? The current projections take into account behavior from two different economic recessions (housing bubble collapsing and the “dot com” bubble collapsing), a widespread disease outbreak of SARS in 2002, and a global pandemic in 2009 from the H1N1pdm09 virus. With that being said, the current impacts from the SARS-CoV-2 virus (the cause of ‘COVID-19’) is not known and is expected to be drastically different. Some impacts could include fewer students going out to serve in-state or out-of-state. This behavior could be for economic reasons (i.e., service, even with a stipend, is typically seen as a fiscal and temporal privilege). Students could also be going to higher education less frequently for the immediate future, which would drastically alter the way these projections were carried out. More pressingly, for the projections carried out toward the middle of the 2020s, how the current economic recession recovers is an important consideration. There are three recovery models currently discussed (“V”, “U”, and “L” shaped recovery).

In including the discussion regarding economic recovery models, the author is trying to emphasize that the below projections are useful as they relate to past descriptive conditions of

service in the state of Maine and expected tuition rates and general public school revenue. It is much more likely, given COVID-19, that these outcomes are unpredictable with a high level of confidence due to the complexity, properly speaking, of current market forces and informed decision making can be done with a lower level of statistical confidence—that is, unless some sort of rolling analysis is done with (quasi)-real-time analysis.

Two types of inferential analysis were conducted (methods thoroughly discussed with calculation examples given). There are “school specific” projections, which are specifically built off of school specific Segal Award behavioral trends (tables 3 and 4); there are also “statewide” projections which were based off of a linear regression constructed in the general trends section (tables 5 and 6). Tables 5 and 6 are temporal by nature (discussed in paper) and give loss projections until 2026 and 2028, respectively.

Table 3.

Projected maximum losses for four-year institutions if out-of-state (O.S) students qualified for in-state (I.S) tuition between 2017-2028 per student

University	Expected loss per student (O.S to I.S)
UMaine at Augusta	\$10,767.00
UMaine at Machias	\$6,892.27
UMaine Farmington	\$12,350.82
UMaine Fort Kent	\$5,158.48
UMaine of Southern Maine	\$15,747.27
UMaine Orono	\$21,794.09
UMaine Presque Isle	\$5,158.64
Maine Maritime Academy	Not enough Information*

Note: *=Only two entries were present in 2008 and 2014, a statewide was still conducted in the next section

Table 4.

Projected maximum losses for two-year institutions if out-of-state (O.S) students qualified for in-state (I.S) tuition between 2017-2026 per student

Community College	Expected loss (O.S to I.S)
Central Maine Community College	\$2,861.56
Eastern Maine Community College	\$2,937.00
Kennebec Valley Community College	\$2,861.44
Washington County Community College	\$3,989.33
York County Community College	\$2,861.67
Northern Maine Community College	\$2,861.44
Southern Maine Community College	\$2,861.44

Table 5.

*Projected losses for two-year institutions if out-of-state students qualified for in-state tuition between 2017- 2026 per student (based on figure 7 regression)***

FY Projection	Central Maine Community College	Eastern Maine Community College*	Kennebec Valley Community College*	Northern Maine Community College*	Southern Maine Community College*	Washington County Community College	York County Community College*
2017-2018	\$2680.01	\$2760	\$2760	\$2760	\$2760	\$3636	\$2760
2018-2019	\$2740.01	\$2820	\$2820	\$2820	\$2820	\$3722	\$2820
2019-2020	\$2740.01	\$2820	\$2820	\$2820	\$2820	\$3784	\$2820
2020-2021	\$2760.01	\$2841	\$2841	\$2840	\$2841	\$3877	\$2840
2021-2022	\$2781.01	\$2861	\$2861	\$2861	\$2861	\$3972	\$2861
2022-2023	\$2802.01	\$2882	\$2881	\$2882	\$2881	\$4071	\$2882
2023-2024	\$2823.01	\$2902	\$2902	\$2902	\$2902	\$4174	\$2903
2024-2025	\$2843.01	2924	\$2923	\$2923	\$2923	\$4279	\$2924
2025-2026	\$2865.01	\$2945	\$2945	\$2945	\$2945	\$4389	\$2945

Note * = Losses are projected to be the same even though balance sheets are distinct (see appendix), ** = does not take 95% confidence interval into account, see figure 7 for a visual of the confidence interval.

Table 6.

*Projected losses for four-year institutions if out-of-state students qualified for in-state tuition between 2017- 2028 per student (based on figure 7 regression)***

FY Projection	Maine Maritime Academy	UMaine at Augusta	UMaine at Machias	UMaine Farmington	UMaine Fort Kent	UMaine of Southern Maine	UMaine Orono	UMaine Presque Isle
2017-2018	\$13,350	\$9,690	\$11,640	\$9,568	\$4,110	\$11,956	\$18,596	\$4,110
2018-2019	\$13,620	\$9,930	\$7,270	\$9,480	\$4,200	\$12,376	\$19,112	\$4,200
2019-2020	\$14,028	\$10,170	\$7,080	\$10,170	\$4,290	\$12,824	\$20,310	\$4,290
2020-2021	\$14,359	\$10,365	\$6,901	\$10,791	\$4,533	\$13,625	\$20,814	\$4,534
2021-2022	\$14,698	\$10,564	\$6,718	\$11,444	\$4,789	\$14,477	\$21,331	\$4,790
2022-2023	\$15,045	\$10,765	\$6,531	\$12,132	\$5,057	\$15,382	\$21,860	\$5,057
2023-2024	\$15,400	\$10,970	\$6,339	\$12,854	\$5,337	\$16,342	\$22,402	\$5,337
2024-2025	\$15,764	\$11,178	\$6,142	\$13,614	\$5,631	\$17,363	\$22,958	\$5,631
2025-2026	\$16,136	\$11,387	\$5,940	\$14,414	\$5,938	\$18,448	\$23,528	\$5,938
2026-2027	\$16,516	\$11,601	\$5,733	\$15,254	\$6,261	\$19,601	\$24,113	\$6,260
2027-2028	\$16,907	\$11,817	\$5,521	\$16,138	\$6,597	\$20,826	\$24,711	\$6,598

Note ** = does not take 95% confidence interval into account, see figure 7 for a visual of the confidence interval.

Section IV: Hypothetical #2 (Segal Award as Taxable Income)

The following question was posed: What would be Maine’s fiscal impact if Segal Awards were not counted as taxable income? The complete methods and rationale for these estimates are extensively discussed. The results from this question are displayed below (see table 7).

Table 7.

Estimated total state revenue loss if Segal Awards were not counted as individual income tax in the State of Maine (possible outcomes within a national context)

End-of-year for service*	5.8% (Marginal tax-rate)	6.75% (Marginal tax-rate)	7.15% (Marginal tax-rate)
2019	\$46,445.08 (+/- \$9,474.80)***	\$54,052.46 (+/- \$11,026.70)	\$57,255.57 (+/- \$11,680.14)
2018**	\$44,832.75 (+/- \$9,145.88)	\$52,176.05 (+/- \$10,643.91)	\$55,267.96 (+/- \$11,274.66)
2017**	\$57,133.12 (+/- \$11,655.16)	\$66,491.13 (+/- \$13,564.19)	\$70,431.34 (+/- \$14,367.99)
2016**	\$61,381.20 (+/- \$12,521.76)	\$71,435.01 (+/- \$14,572.74)	\$75,668.20 (+/- \$15,436.31)
2015**	\$52,933.28 (+/- \$10,798.39)	\$61,603.39 (+/- \$12,567.09)	\$65,253.96 (+/- \$13,311.81)

Note *= End-of-year for service refers to the Year in Review reports. If 2019 is displayed, this refers to the 2018-2019 report found on national service main website. ** Using the 2020 marginal tax-rates, not those enacted in 2015-2019. *** Mean is based on 75% Segal Award use-rate, whereas tolerance is defined as a use-rate of +/- 15.3%.

Conclusions

While the nature of the study was not to recommend whether or not either hypothetical ought to be explored based on these numbers, several further research topics are recommended (within each methodology limitation section) to further contextualize these topics. That added context will allow for increased confidence in any decision making.

In closing out the presentation of some of the report’s key findings, it is clear that 1) Segal Award use has changed dramatically since the award was created, 2) it is less valuable than it was, 3) there are several key indicators from the interrelationship of research findings that show AmeriCorps members are financially stressed relative to non-AmeriCorps peers (particularly during a recession), 4) there is a distinct tension between the raising COA for students and the fiscal strain on public colleges and universities, 5) the state does not generate much revenue from taxing Segal Awards, and 6) the taxation of Segal Awards (in context of its decreased value) further compounds their depreciating appeal. The author encourages a close reading of the report to aid in improving the experience and appeal of service in Maine to AmeriCorps members.

Case Study: How Maine Conservation Corps Alumni Use Segal Awards

Follow up contextualization for “Analysis of Segal AmeriCorps Education Awards in the State of Maine between 1996-2016”

Patrick F. Bloniasz, Bowdoin College

Prepared for:

The Maine Commission for Community Service and Department of Education

June 15th, 2020

Section I: Introduction, Methodology, and Survey Design

The present case study was conducted in order to provide some further context to how the Segal Award is used by alumni of one of Maine's largest AmeriCorps programs: the Maine Conservation Corps. While the author is not going to interpret exactly what these results could mean for every aspect of the original analysis, key stakeholders for making policy regarding Segal Awards can use this information in coordination with the original analysis to influence decisions.

A survey was designed by using the *Segal AmeriCorps Education Award: Detailed Payments by Institution* dataset from the CNCS; this was done in an effort to glean some information that could contextualize speculations about member behavior as unique individuals rather than assumed unique data points. One of the major uncertainties from the original analysis was whether or not individuals spread out the use of their Segal Award or spent it all at once. Another was the relationship between those serving in Maine and using their award at a Maine institution or out-of-state. Finally, the author was also interested in the causes for why people would leave Maine after service.

The *Qualtrics* survey was distributed by the Maine Conservation Corps program director via email list to program alumni. The survey received 156 total responses and 152 were usable responses (i.e., participants completed the survey with a unique IP address). All personal identifying information was hidden from the researcher via Qualtrics' encryption option and the data were then deleted from the survey responses to be unrecoverable.

The following questions were designed and presented to participants (NOTE: the question Logic is not displayed, not all of these questions were viewed depending on how participants responded throughout the survey):

Q1 When you applied for your AmeriCorps service term, were you a Maine resident?

- Yes
- No

Q2 When you completed your AmeriCorps service term, did you stay in Maine?

- Yes
- No

Q3 Have you used your education award (either in-part or in-full)?

- Yes
- No

Q4 If you did not use your educational award, which statement best fits your reason?

- The seven year limit on availability expired before I could use it.
- I did not have any educational or student loan expenses after service ended.
- I designated its use to a child, foster child, or grandchild as permitted by Serve America Act.

Q5 What did you use your education award on?

- Educational costs
- Repayment of loans
- Both

Q6 If you used your award on loan repayments, did the lender/institution have a Maine address (i.e., were they providers in the State of Maine)?

- Yes
- No
- Not applicable

Q7 If you used your award on educational expenses, was the opportunity based in the State of Maine?

- Yes
- No
- Not applicable

Q8 What was the most important reason for pursuing education outside of Maine?

- Maine post-secondary programs did not have the training or education I wanted.
- I used the educational goal as an opportunity to live in a different part of the country or out of country.
- I returned to my home state for personal reasons.
- The post-secondary institution I attended matched the education award or provided some benefit to using my education award there.
- The state where the post-secondary institution was located provided some benefit to using my education award there.
- Other (please specify) _____

Q9 In terms of when you redeemed your award, which of the following did you do?

- Redeemed it all at once
- Redeemed a little over a few years (2-3 yrs)
- Redeemed it over a longer period (4-7 yrs)

Q10 Thinking about the income tax you paid as you redeemed the education award, please indicate which of the following was true for you.

- The state I went to/lived in does not have an income tax, so I only paid federal tax.
- Educational awards earned through AmeriCorps service are exempt from tax in the state I went to/lived in.
- I paid federal tax and income tax on the award.
- Other (please specify) _____

Q11 If you have any other thoughts to share regarding Segal Awards, please express them here.

Section II: Results (by question)

Note: Each question received it's own table for external purposes (i.e., unrelated reports).

Table 1.

Question 1: When you applied for your AmeriCorps service term, were you a Maine resident?

Yes	No	Yes (Percentage)	No (Percentage)
56	96	36.84%	63.16%

Table 2.

Question 2: When you completed your AmeriCorps service term, did you stay in Maine?

Yes	No	Yes (Percentage)	No (Percentage)
67	85	44.08%	55.92%

Table 3.

Question 3: Have you used your education award (either in-part or in-full)?

Yes	No	Yes (Percentage)	No (Percentage)
138	14	90.79%	9.21%

Table 4.

*Question 4: If you did not use your educational award, which statement best fits your reason?**

The seven year limit on availability expired before I could use it.	I did not have any educational or student loan expenses after service ended.	The seven year limit on availability expired before I could use it. (Percentage)	I did not have any educational or student loan expenses after service ended. (Percentage)
4	12	25%	75%

Note *= There were three possible responses, but only two received any responses which are displayed above.

Table 5.

Question 5: What did you use your education award on?

Educational costs	Repayment of loans	Both	Educational costs (Percentage)	Repayment of loans (Percentage)	Both (Percentage)
55	68	12	40.74%	50.37%	8.89%

Table 6.

Question 6: If you used your award on loan repayments, did the lender/institution have a Maine address (i.e., were they providers in the State of Maine)?

Yes	No	Yes (Percentage)	No (Percentage)
6	83	6.74%	93.26%

Table 7.

Question 7: If you used your award on educational expenses, was the opportunity based in the State of Maine?

Yes	No	Yes (Percentage)	No (Percentage)
16	52	23.53%	76.47%

Table 8.

*Question 8: What was the most important reason for pursuing education outside of Maine?**

Maine post-secondary programs did not have the training or education I wanted.	I used the educational goal as an opportunity to live in a different part of the country or out of country.	I returned to my home state for personal reasons.	The post-secondary institution I attended matched the education award or provided some benefit to using my education award there.	The state where the post-secondary institution was located provided some benefit to using my education award there.	Other (please specify)
8 (16%)	8 (16%)	15 (25%)	2 (4%)	5 (10%)	12 (24%)

Note *= percentages are included in each cell's response count

“Other “Responses from Question 8:

- Moved to another state After McCain and took classes for another job
- I'm from Maine, and I would have used my award here, but I happened to be living in Vermont for a couple years after my term in the MCC.
- I would have stayed in Maine, but the job market was dismal (2011)
- I was already attending school out of state. Also, to be somewhere new.
- I was already attending school out of Maine when I received the education award
- I was already attending a university outside Maine
- I served in AmeriCorps between my freshman and sophomore years of college (at Colgate University in NY) and so used it to pay tuition there.
- I left for another AmeriCorps term in another state, then returned home, then moved to another state, and am attending a college nearby.
- I had already completed my bachelors in another state. I used some Ed award to repay loans from that degree. Three years later I used another part of the award for tuition in my home state for another program.
- I chose a college where I could do all my schoolwork online.
- Chose a PhD program in another state
- Cheaper to go to college in my home state

Table 9.

Question 9: In terms of when you redeemed your award, which of the following did you do?

Redeemed it all at once	Redeemed a little over a few years (2-3 yrs)	Redeemed it over a longer period (4-7 yrs)	Redeemed it all at once (Percentage)	Redeemed a little over a few years (2-3 yrs) (Percentage)	Redeemed it over a longer period (4-7 yrs) (Percentage)
88	33	15	64.71%	24.26%	11.03%

Table 10.

*Question 10: Thinking about the income tax you paid as you redeemed the education award, please indicate which of the following was true for you. **

The state I went to/lived in does not have an income tax, so I only paid federal tax.	Educational awards earned through AmeriCorps service are exempt from tax in the state I went to/lived in.	I paid federal tax and income tax on the award.	Other (please specify)
7 (5.43%)	27 (20.93%)	62 (48.06%)	33 (25.58%)**

Note *= percentages are included in each cell's response count,

General themes from question 10 were 1) some variant of “I don’t remember”, which was almost all of the “other” responses or 2) some variant of “I strategically used a small enough amount each year that is really taxed” which was a small minority of the responses.

Section III: Participant feedback quotes

Note: The author welcomed any extra thoughts on Segal Awards to aid in this case study. All of the direct quotes from the survey responses are below:

- “They [Segal Awards] should be tax exempt.
- “There was always a delay between when I requested to use the award for my monthly payment and when the federal government loan service processed it as paid. Every month I would get a late notice. Although I was told that my loan payment would be considered paid on time, it was very stressful to get a notice almost every month saying my payments were late, which would mean they would not qualify for the Public Service Loan Forgiveness program.”
- “Taxing the reward seems odd... but I only understand the American tax system so much..” (original grammar)
- “My AmeriCorps experience was tremendously rewarding and has left me with a lifelong connection to Maine the place as well as several Mainers. But I felt frankly shortchanged by the amount of loan repayment I received in exchange for my half year of strenuous physical labor. I would urge Congress to triple the educational award component to better reflect the value added by MCC members to their host state.”
- “I wish that I had been paid more as an MCC trail crew member (\$220/week with housing and food stamps).”
- “I felt the taxation was a bit aggressive since its federal money... its like they give you 67% of the award versus the whole amount.”
- “I am deeply grateful for the education award, and I love the concept of it. However, the amount has not increased in a meaningful way over the years to match the cost of education. At this point the ~7000 thousand dollars awarded for a full year of service is almost irrelevant and makes it difficult for lower income people to participate in AmeriCorps programs. I would like to see these service programs more valued by greatly increasing the Ed award.”
- “Having the award was a huge factor in my decision to go back to school. It changed my life for the better 100%. I finished my degree in Maine, but the award happened to be applied to tuition in VT. Thank you for inquiring, I hope this survey helps to ensure that future alumni’s receive Education Awards.”
- “7 years is not enough time. And I wish there was more flexibility with how it can be used- local non-profit schools in Maine can not accept it (Haystack School of Craft for example)”

Section IV: Brief Result Interpretation and Conclusion

It is important to start off and mention that the current case study cannot directly map on one-to-one to the original inferential and descriptive analysis of Segal Award use from 1996 to 2016. What it can do is provide some interesting context to understand the hypothetical situations discussed in the analysis. While each question provides interesting data to the Maine Service Commission, the only questions presently discussed relate to some of the speculations and conclusions drawn in the original paper.

To begin, Question 3 points us in a really interesting direction about how many Maine AmeriCorps members would benefit from hypothetical #2 (i.e., the Segal Award not counting toward personal income tax in the state of Maine). The analysis was conservative in its calculations and used 75% as the benchmark for how many potential members in a given year would use their Segal Award. That number was drawn from the national statistic of how many members use their award, presented by a CNCS report. The author then used 2019 data from the post-service questionnaire conducted by the Maine Commission and determined that, from the 257 people who answered the question “What do you want to do with your Education Award”, 90.3% said that they were going to use it to 1) “Pay my tuition or educational costs related to additional education for me” or 2) “Repay my student loans”. The author then used this mark as the tolerance range for the rest of the analysis (i.e., how many people would use the award was expected to be 75% +/-15.3%).

The current case study showed that out of the Maine Conservation Corps alumni mailing list (data much more temporally representative of service in Maine), 90.79% said they used the award. There are two immediate realities this could mean (with many more possibilities). It could be that the true number of people that the tax-cut would help is much closer to the higher range of the analysis, directionally around 90%, compared to the 75% expected mean. This matches the speculation in the paper that the higher estimates were more relevant. Another possibility is that the true mean is actually still around the national 75% but that the people who responded to the survey are the same or similar to those who responded to the post-service survey. Consider for a moment those who are actively participating in data collection efforts after their time as members expired. If those respondents received some greater benefit (like the

Segal Award), it is reasonable that they had intrinsic motivation to complete these surveys as opposed to those who did not need the award at all.

Question 5 provides interesting insight that does not contradict the speculations of the original analysis, but shows that most of the members used their award specifically in one expenditure category. As per Question 9, people spread their award use out much more than was expected in the 2-3 year range and 4-7 year range, even though the vast majority of members still used it all at once. While the analysis expected people to spread the use of their money out in order to “stretch it out” in recent times, it would be interesting to know whether the 35.29% that stretched their award out are those who served more recently to 2016. This would confirm or deny certain speculations in the analysis.

Questions 6 and 7 were very telling: the vast majority of those who served in the MCC who used their Segal Award used it outside of Maine. In fact, 93.26% of respondents who repaid loans directed their money to non-Maine loan lenders and 76.47% of respondents who used the award to pay for educational expenses were outside of Maine. This is surprising, as 63.16% of respondents were from out-of-state compared to 36.84% who were in-state. We would expect that money would be directed more proportionally to institutions from their origin, especially in the banking category. As such, we can be more comfortable, alongside the findings of the analysis, that much of the money earned in Maine leaves Maine.

These results, when coupled with the analysis, more fully contextualize the feasibility of both of the hypotheticals. Few of those who come from outside of Maine to serve actually stay in Maine for school and it has to do with 1) personal reasons, 2) lack of programs members are looking for, 3) wanting to live in a different state or already intending to go to school elsewhere, 4) receiving better benefits/value for their Segal Award elsewhere, and 5) the expense of the Maine programs. It is unclear whether this conclusion would count in favor of hypothetical #1 or against; there does not seem to be a large incentive to stay in Maine for out-of-state students, but it is unclear whether the change would drive that incentive in a sustainable way. It was shown that hypothetical #2 would most likely cost the state more money in revenue than the lower estimate from the analysis (but still under or around the higher estimates). It was also shown that much more people would benefit from the tax-cut than were expected, which would increase the

value of using the Segal Award in Maine relative to other states (which might aid as an incentive related to what was discussed in hypothetical #1). There were also a relatively large number of open responses, without probing, that asked for the Segal Award to not be taxable income in Maine or to increase the actual dollar amount of the award.

Analysis of Segal AmeriCorps Education Awards in the State of Maine between 1996-2016

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Prepared for:

The Maine Commission for Community Service and Department of Education

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Introduction

The present report provides an analysis of trends in the redemption of Segal AmeriCorps Education Awards at Maine institutions from 1996-2016. Segal Awards are post-service grants that can be used to offset higher education expenses. “Education expenses” can be classified as the off-setting of tuition costs, paying qualified-loan principals, and paying loan interest—among other related educational costs. Segal Awards are considered taxable income by the IRS and the maximum dollar amount of the award is dependent on annual fluctuations to the U.S. Department of Education Pell Grant. The award amount is tiered depending on the minimum number of hours a member worked, relative to the Pell Grant maximum dollar amount (See Table 1).

This report can be broken down into four main sections. The first section describes general trends in Segal Award use from 1996-2016, including what institution that money was used at and to what expense that money was directed toward. Given the current climate of the global economy, special care was given when analyzing data before, during, and after the 2001/2002 and 2008/2009 economic recessions; any trends are discussed. The second section considers a hypothetical scenario: “what would be the expense to public institutions if Segal Award recipients, who completed their service in Maine, qualified for in-state tuition?”. Some recommendations are given based on these data and projections. The third section considers a different hypothetical scenario: “what would be Maine’s fiscal impact if Segal Awards were not counted as taxable income?”. This question is based on the proposed “Segal AmeriCorps Education Award Tax Relief Act of 2019” and is reformulated to try to pose the same question to Maine in regard to waiving personal income tax at the state level; recommendations are given based on these data and projections. Section four closes the analysis by discussing limitations to this research and proposes some follow-up analyses that would better contextualize the two hypothetical situations that were explored.

Table 1.

*Segal AmeriCorps Education Award amounts for national service positions approved in Fiscal Year 2020 (October 1, 2019-September 30, 2020)**

Participation Types	Minimum # of hours	Amounts
Full-time (FT)	1,700 (365 days for VISTA)	\$ 6,195.00
Three Quarters Time (TQT)	1,200	\$ 4,336.50
Half-Time (HT)	900	\$ 3,097.50
Reduced Half-Time (RHT)	675	\$ 2,360.00
Quarter-Time (QT)	450	\$ 1,638.89
Minimal-Time & Summer Associate (MT & SA)	300	\$ 1,311.11
AmeriCorps Affiliate (AT)	100	\$ 348.64

*Note ** = Table recreated from National Service's "Amount, Eligibility, and Limitations" page

Section I: General Methodology

The *Segal AmeriCorps Education Award: Detailed Payments by Institution* dataset from the Corporation for National and Community Service was used to conduct a descriptive analysis. The overall data set contains 1,124 unique rows, with each row containing six relevant data points needing to be sorted. As such, the institution types of “college/university” and “bank/credit union” were used to constrain data into useful sets for further modeling. There were eight entities that could not be squarely placed within the two categories, ranging from a high school to the U.S Department of Justice. The outlier school (*Empire Beauty School*) was kept outside of the main college/university models but was used in secondary analyses. The reason this one school was excluded is because it doesn’t meet traditional per credit hour expectations which were assumed for the analysis, unlike similar trade schools (e.g., the SPA tech institute). Since the follow up analysis in the section was “for-profit” vs “non-profit”, there was no reason to try to control for the type of the school and the outlier could easily be categorized in the for-profit category. Seven of the eight outliers were removed from all analyses because they were ambiguous in terms of classification and could impact the outcome by either strengthening or weakening associations in a disingenuous way; this is essentially because most of the seven were either unidentifiable as an existing institution or were not colleges of any kind (e.g., the Department of Justice and the Maine Oil Dealers Association).

There were several errors in the data set that were highlighted for the readers convenience, but were not entirely removed from the distributions in every case (See Table 2). Not every error was removed because some were easily classifiable or did not meaningfully change the outcome. For example, an uncategorized payment that has a negative cash flow is clearly a “return” and was treated as such. “Empty payments” are classified as a payment of zero dollars being paid to an institution while still contributing a count of one (1) person to the population count. While this is a potential source of skew, the later discussed outcomes are not impacted in any meaningful way regardless of whether the 2006 and 2010 “empty” educational data points or the 2002 and 2007 data points were present; as such, they were included for completeness and transparency. There were also five instances of “uncategorized payments” in the college/university category in 1995, 1996, 1998, 2002, and 2010. The last four were removed

from the main analysis to avoid adding any skew to inferential models that would be built, but were allowed for use in secondary analyses when categorization did not have an impact on strengthening or weakening conclusions. The 1995 uncategorized payment was removed entirely. The decision for removal came from there being a lack of information that would allow for a comfortable differentiation of the \$13,470 into variable categories; further, because so few sub-categories in the subset had data from 1995, it was determined that it would be more confusing to try to accommodate the payment in secondary analyses.

It is important to note that some analyses based on this data set are difficult to justify, not only because of a lack of critical data to individuate outcomes, but not all assumptions for statistical tests are justifiable for all portions of the data. For instance, after the “Serve America Act” was passed in 2009, the maximum amount for a full-time Segal Award recipient was matched to the U.S Pell Grant, whereas that was not the prior case. This would introduce a co-dependence between the year and the specific dependent variable that was not previously present. An example of this codependence would be Department of Education budget cuts pushed by certain members of prominent political parties or recessions that cause a need for a disproportionately higher budget relative to what would, in a moderately strong economy, be sufficient. In some cases, basic statistical tests were used to flesh out data into a consistent narrative, but the author urges strongly that those using these analyses for internal and external institutional projects should proceed with caution.

In preparing the dataset into college/university and bank/credit union categories, three main payment types were identified: 1) Loan Repayments, 2) Educational Expenses, and 3) Award Returns. Within the category of loan repayments the author broke it down further into loan interest (as opposed to loan principal); as such, the larger trend shown later covers both the principal and interest and the follow up analysis of the interest payments was added to further contextualize that trend.

The next section highlights general trends that were identified for loan repayments and educational expenses, but *not* award returns. An award return is an overpayment going to the school or the bank and that amount can then be repurposed to other areas. To provide an in-depth analysis in that area would be to double count money; any trend on returns that did surface

would show a trend in accounting errors or institutional price adjustments that don't necessarily have anything to do with what this current analysis is interested in. The data is attached in the appendix if further analyses would like to dig into this area.

Keep in mind that these trends are expressed *within* the meta-trends of budget fluctuations. This means that a negative association does not control for loss of dollar value through inflation and does not reflect immediate specific budget cuts, because the focus was placed on the average student receiving the grants and their behavior within that context.

For transparency purposes, the Excel sheets are attached to this document as an appendix to allow for replication if needed. Statistical analyses and inferential analysis were done in a mix between *RStudio* and *Prism 8* statistical software.

Table 2.

Data Errors for Colleges/Universities and Banks/Credit Unions and how they were handled

Year of Error	Error Type	Earned Reward	Positive flow	Positive flow population count	Negative Flow	Negative flow population count
1995	Uncategorized Payment***	Education	13470.00	13	0	0
1996	Uncategorized Payment*	Education	2925.00	3	-1,000.00	1
1998	Uncategorized Payment*	Education	3100.50	2	0	0
2002	Uncategorized Payment*	Education	4,225.00	1	0	0
2006	Empty Payment**	Education	0	1	0	0
2010	Empty Payment**	Education	0	1	0	0
2010	Uncategorized Payment*	Education	2175.00	2	0	0
2002	Empty Payment****	Education (repay loans)	0	1	0	0
2007	Empty Payment****	Education (repay loans)	0	1	0	0

Note * = Removed from Main analysis only, ** = Included in Main analysis and Labeled, *** = Removed from all analyses, ****Errors are for Banks and Credit Unions, the rest are for Colleges and Universities

Section II: General Trends

Loan Repayments

Banks and Credit Unions

From 1996-2016, the total amount of loan payments (amount of Segal Award spent toward loan payments) directed toward Banks and Credit Unions has been on a consistent decline since 2001 (See Figure 1). In a two-tailed Pearson r test, there is an inverse relationship between the year and the average amount of the Segal grant paid toward qualified student loans and the association is strong, $r(19) = -.67, p < .001$. The relationship is so strong, in fact, that if we randomly recruited AmeriCorps members who would receive Segal Awards, we could be 95% confident that the average amount paid year-over-year would decrease by between \$137.7 to \$42.38 dollars; this projection is validated based on the appropriate assumptions being met, including there being a non-patterned residual plot (See Figure 2). There is no trend in the amount of interest paid on these loans, as the reported average interest payment per person is highly variable year over year and is generally consistent between \$0 and \$1000.

It is unclear what is driving this decline in loan payments based on the data, but several trends in higher education could be partially explanatory. Loans that qualify for repayment from the Segal Awards can take many forms, but these loans, in general, are backed by the federal government under Title IV of the Higher Education Act. One exception of a loan that cannot be repaid with a Segal Award is the “PLUS Loan”, which is becoming a much more attractive option for families even though PLUS Loans are becoming increasingly problematic. Since 1994, the overall share that PLUS loans have in overall federal loan distribution has increased by 13%—from 10% to 23%.³ PLUS loans are typically seen as an option for families when a student maxes out the subsidized and unsubsidized loan amounts, which was the case for 26.6% of the families taking out PLUS loans.³ One way to confirm this speculation could be to parse out the combination of loans AmeriCorps members are taking out. While that data is unavailable, one trend we would expect to see if this increased PLUS loan scenario was partially contributing to the overall declining of qualifying-private loan repayments is that public institution loan repayments would be steady (see next section for this descriptive analysis).

Another possible explanation, that is more clearly supported with this data set, is that there is no decrease in qualifying-private loans being taken out, but rather *AmeriCorps members find that there are more pressing expenses for their Segal Award* (i.e., textbook expenses, transportation, room and board, etc). In other words, there is an increase in other pressing educational commitments.¹ It would be difficult to confirm or deny this speculation without there being more data present for where the “educational expenses” were going, though the later section in this analysis emphasizes that there is an increase in multiple areas at Universities and Colleges (i.e., room and board, tuition, and books). As such, we can be confident in saying there is a logical association between these two trends, but the author cautions against taking it for certain (which is why this speculation was given last).

Less weight was placed on the gross categories of loan payments (i.e., total loan payments per year and total interest payments per year) as opposed to using averages. This decision was made because these categories lend themselves the least to valuable inferential analysis—they do not take into account the number of members contributing to those totals. Keeping this in mind, there are two interesting trends that should be pointed out. In both the total loan payment per year and total interest payments per year there are noticeable spikes in activity around the national recessions in 2001/2002 and 2008/2009 (See Figures 3 and 4). Naturally, there is also a spike in the number of AmeriCorps members using portions of their awards to repay loans. One speculation is that post-secondary enrollment surges during economic hardship—specifically part-time education (e.g., online school, community college) as people seek out new skills.² The confirmation of this behavior would come from higher enrollment of older individuals who are either returning to school or going for the first time, but there would not be an increase of those coming right out of high school.

As the recessions pass, this behavior seems to go away. This is merely speculation, but the spikes are worth noticing; further, there is a similar payment peak in interest payments *before* the 2001 recession in 1999 which detracts from the offered speculation (See figure 4). Regardless, the author chose to add this description to give some insight to stakeholders regarding what behaviors might be seen during the current economy recession in 2020.

¹ An anonymous reviewer emphasized this point as more plausible given the data; the author agrees.

² Point contributed by anonymous reviewer.

An even more plausible speculation on the spikes in 2001/2002 and 2008/2009 could be due to the inability of students to pay “anything or much” during the recession from their normal stream of income. This could be supported by the dips after each recession because, as the economy starts to settle, these students are better able to address the repayment schedule.³ This would paint a relatively negative picture of the financial circumstance of who is in service and the amount of money they earn from service (i.e., a valid inference from this reality would be that serving in AmeriCorps hinders a fresh graduate’s ability to establish themselves in a financially stable manner). Further research should be done in this area and appropriate legislative steps should be taken.

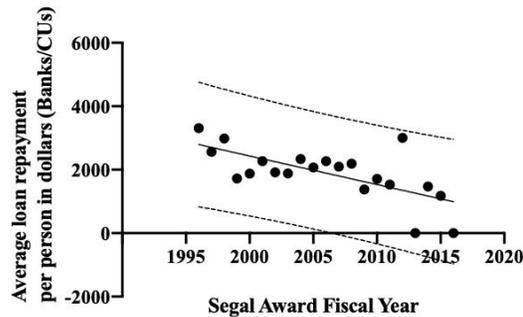


Figure 1. Shown is a scatterplot of the calculated, average loan repayment to Banks and Credit Unions per AmeriCorps member per year. There is a strong, negative association between Fiscal Year and the average loan repayment amount per person in USD, $r(19) = -.67, p < .001$. Displayed above are the projection intervals, as well as the simple linear regression itself. Given the projection intervals, if there was a repeated, random selection of AmeriCorps service members from the public in Maine, 99% of the mean loan repayments would be between the dashed lines. In other words, we are 99% certain the average loan payments per person will be between those lines given similar conditions between 1996-2016. Since each cohort of service members are independent, these results imply an underlying confounding variable.

³ This suggestion comes from an anonymous review that is more than supported in the given context of the data set and general self-reports of member experiences from end-of-service surveys.

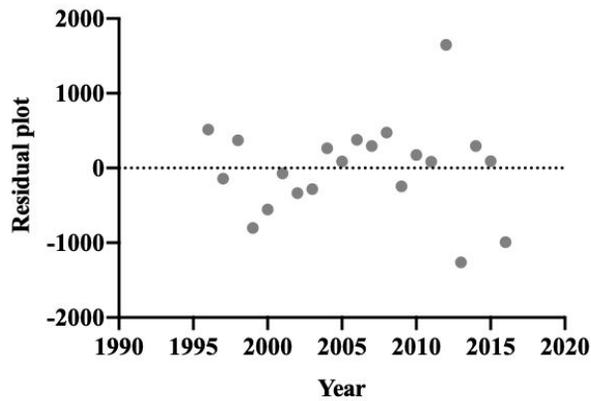


Figure 2. Picture above is the residual plot for the Figure 1 simple linear regression. There is no clearly observable pattern and it is safe to proceed with the linear regression and its respective projection intervals.

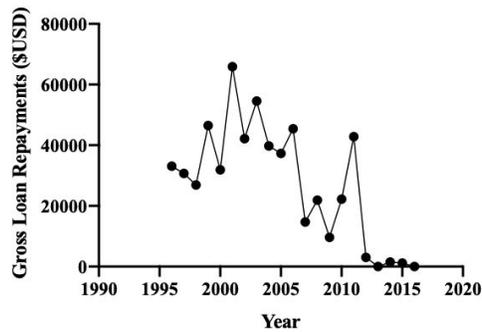


Figure 3. Gross amount of loan payments made to private banks and credit unions by year. There are two clear spikes centered in the immediate aftermath of the 2001/2002 and 2008/2009 recessions. This trend does *not* imply causation, but merely shows that more people directed money toward private loan repayment during these periods of time.

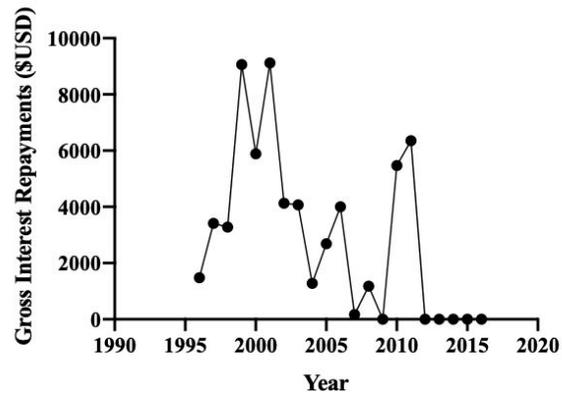


Figure 4. Gross amount of loan payments that were categorized as interest payments made to private banks and credit unions by year. There are two clear spikes centered in the immediate aftermath of the 2001/2002 and 2008/2009 recessions and one spike prior to the 2001/2002 recession. This trend does *not* imply causation, but merely shows that more people directed money toward private loan interest repayment during these periods of time.

Institutional Loans (Colleges and Universities)

Certain colleges and universities also give out loans packaged with their financial aid offers. Maine is home to two colleges that meet 100% of demonstrated financial need with grants (i.e., have a no-loan policy): Bowdoin College³¹ and Colby College.²⁹ With these two exceptions, the remainder of the schools can offer federally backed student loans to meet the cost of year-to-year expenses. The average amount of money students tend to put toward offsetting these loans has been remarkably stable since 1995 and does not show any meaningful trend. In fact, the association between year and the average amount of a student's Segal Award going to pay off loans in general is essentially zero, $r(20) = -.011$, $p = .9598$. There is a very weak association between year and the average amount of a Segal Award going to pay off loan interest, but, given the lack of relationship in the larger loan category, this trend was expected to be mostly due to quasi-random variance.

In context of the qualifying private loans from banks and credit unions, this lack of relationship does have some implications. It shows that, in general, students are changing their relationship to loan payments. If college is getting drastically more expensive year-over-year and payments toward institutional loans from colleges and universities are remaining the same, the decrease in private loan payments shows that students are either choosing to put off their loan payments (either interest or principal) or are taking out loans that do not qualify for Segal Awards (i.e., PLUS loans).

There are two interesting trends for gross amounts of loan repayment and interest repayment surrounding recessions, similar to those discussed in the previous section. There are two distinct peaks of gross payment amount as well as number of students choosing this option just after 2000 and 2007, which then return to lower levels several years after each respective peak (See Figures 5 and 6, respectively). To reiterate, it is not the case that students are putting larger portions of their Segal Awards to this category during these times, but rather that more students are putting *some* portion toward this expenditure category.

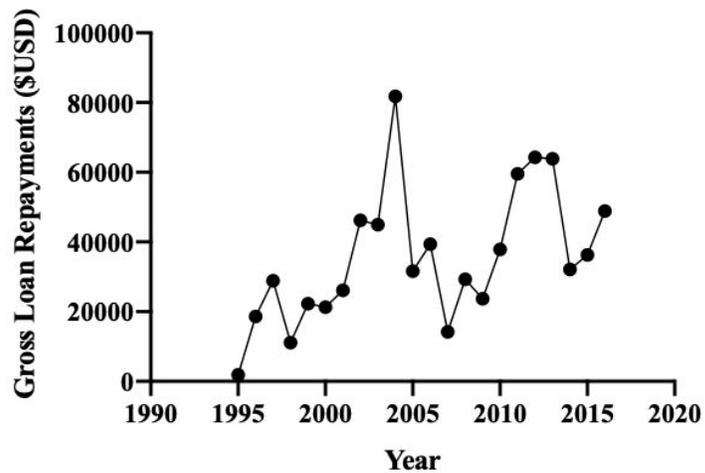


Figure 5. Gross loan repayments per year to colleges and universities from 1995-2016. There are two notable spikes that start at 2001 and 2009 respectively and decline overtime.

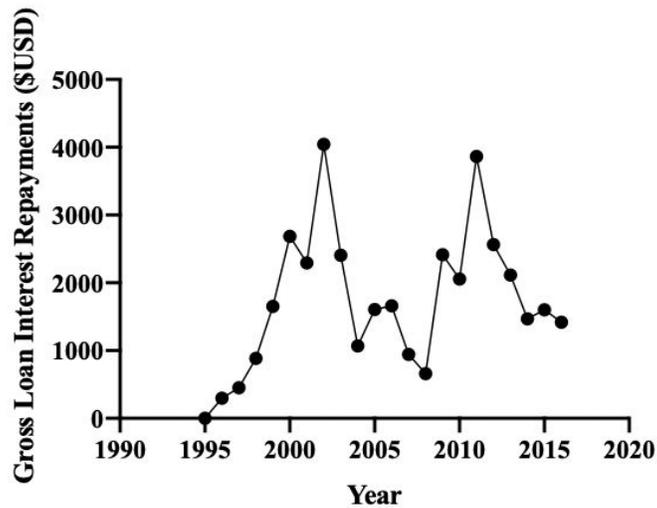


Figure 6. Gross loan interest repayments per year to colleges and universities from 1995-2016. There are two notable spikes that start at 1998 and 2008 respectively and decline overtime.

Educational Expenses

Banks and Credit Unions

No extensive analysis was done on the data points under this category, as 11 years between 1996 and 2016 had no transactions occur at all. More notably, six of the eleven years that did not have a transaction were from 2011-2016; as such, any trends that would be found would be ‘underpowered’ from a small sample size of annual behavior and would not be particularly relevant to projections from 2017-2026, which is the aim of the later sections of this paper. For completeness sake, the following basic descriptive information is provided: the total dollar amount of Segal Awards in this category was \$30,172.62 and was contributed by 23 AmeriCorps members. The median of the average amount spent per person per year over the period was zero and the average was \$819.01. When only considering the years where there was a transaction, the average number of members paying toward this category was 2 with an average amount of \$1719.93. For more information on this category, please see the appendix data sheets.

Colleges and Universities

From 1996-2016, the average amount of Segal Awards spent on educational expenses has been steadily decreasing even though both the Segal Award total amount has generally increased since 2009 and college expenses have consistently increased across the United States, with few exceptions (See Figures 7 and 8). One notable example discussed later in this analysis is the University of Maine at Machias. In general, there is a moderately strong relationship between the year and the average educational expense per person, $r(19) = -.5433$, $p = .0109$. Given the repeated, independently random behaviors of year-to-year AmeriCorps members, we can be 95% confident that the average amount of the Segal Award put toward educational expenses per person will continue to decrease by anywhere between \$22.88 to \$3.389 per year. Because of this relatively strong relationship and the ability to construct a statistically significant ($\alpha = 0.05$) simple linear regression, these data were used to conduct in-depth secondary analyses for each public institution in a later section.

An explanation for this trend is a bit more mysterious than Loan payments. The most likely possibility could stem from the general increase in student expenses in multiple areas,

most notably cost of attendance (COA) for high educational institutions, coupled with a relatively static award amount. The Segal Award seems to be doing “less work” over more expenditure areas. For instance, the average amount of money per person put toward educational expenses in 1996 was \$1991.30. In 2016, the average amount was \$2068.17. If we adjust the 1996 amount to inflation to 2016 numbers (where the cumulative rate of inflation 53.0%)³², the average amount put toward expenses in 1996 would be \$3,046.05 in 2016. As such, what the average actually was in 2016 was roughly \$1000 less in value than what would have been covered in 1996. Further, the average cost of public, four-year institutions across the U.S was \$11,016 in 1996 while it was \$19,488 in 2016, after adjusting for inflation.³⁰ This basic calculation shows that a student putting the yearly average amount of their award toward tuition would be able to pay 18.08% of their tuition in 1996 and only 10.61% in 2016. What is important to note here is that Segal Awards, in being pegged to the Pell Grant in 2009, now keep pace with inflation. The difference is that the increase in overall COA expenses (e.g., housing expenses, transportation, tuition, books, etc.), loan expense, and so forth have drastically outpaced the relative size of the Segal Grants—even for those who opt for receiving the maximum Segal Award for the maximum number of years; we know for certain that the trend is not due to inflation, because otherwise we would expect the trend to flat line from 2009-2016 which is, interestingly enough, during this time period where the regression is strengthened. This brings us to the possible explanation: if a Segal Award fails to provide substantial improvement in any one area (i.e., paying off a substantial portion of a given expenditure category) and is taxable income the year it’s used, the optimal way to distribute the award is evenly across multiple categories in smaller payment increments over the life of the award to stretch the impact of the award value. This is because the award would, in some cases, push an individual into the next tax bracket. Second, since many of the loans that the Segal Award qualifies for accrue interest while someone is at college, it would make sense to break the award into multiple categories (i.e., hitting the principal and immediate expenses). One interesting way to investigate this speculation would be to try and parse out how many people are paying toward loans during and after college.⁴

⁴ Several reviewers pointed out that most people paying toward loans are out of college. While that certainly is a national trend, partially fueled by student PLUS loans, it is difficult to tell whether that is actually the case with this data set and that would be a confounding variable. The reader is cautioned to take the above speculation with a heavy qualification and to note that it is only being offered to contextualize the trend as much as possible.

This offered explanation does *not* make any claims about whether this is a good or bad option and it is *not* making a case for the Segal Award increasing in amount. Rather, this and other general trends of decreasing average payments shows that the way the Segal Award has been used since its conception has changed over time. Further research might try to more precisely uncover what is driving this change and relate it to AmeriCorps enrollment numbers—particularly as it relates to the state the members work in and the type of school they were enrolled in (i.e., non-profit four year, community college, private college, or for-profit).

The last general trend the author looked at was the difference between the amount of educational payments being made from the Segal Award toward for-profit and non-profit institutions. When assuming full-time enrollment, students who use their Segal Award at for-profit institutions spend on average \$2133.14, whereas students at non-profit institutions spend \$1302.84. Non-profit institutions include community colleges, four-year public universities, and private colleges that have 501(c)3 tax-exempt status. An unpaired t-test was conducted to compare the average amount of a Segal Award that goes toward for-profit school and non-school conditions to see if the above difference could be attributed to chance. The test is justifiable as both groups are independent of one and other by definition and the homoscedasticity⁵ was roughly homogenous (See Figure 10). Still, because of the different group sizes, a F-test was used to compare the variance between the two groups. There was no significant difference in variance between the two groups; $F_{5,28} = 2.364$, $p = .1312$. The p-value is relatively low, but we are more than justified in proceeding with caution with subsequent analyses. There was a statistically significant difference in the average dollar amount between the for-profit school (M=2133, SD=1029) and non-profit school (M=1303, SD=680) conditions; $t(2.517)$, $p = .0169$. In fact, we can be 95% confident that the true difference between for-profit and non-profit average expenses is between \$1501 and \$159.30—with the for-profit average being higher than the non-profit average (See Figure 9).

⁵ Homoscedasticity is essentially a description of the error term or uncontrolled ‘noise’ in a distribution. If random disturbance (noise) in the relationship between the independent variables (tax status of school) and the dependent variable (amount of money) is roughly the same, it means we can be comfortable in comparing each group; in other words, the difference between each group is mostly caused by being in one group over another (systematic variance).

The author is emphasizing this difference because a 2019 detailed analysis completed by Associate Professor of Education John J. Cheslock from Penn State described drastic disparities between institutional uses of tuition between for-profit and non-profit schools. For-profit schools and non-profit, online schools typically spend less than half of tuition on instruction or instruction related expenses (e.g., curriculum development, staff/faculty, tutoring, etc) and spend staggering amounts of tuition on marketing and student acquisition.²⁰ For example, the University of Phoenix, which is on the top 30 nationwide institutions receiving Segal Award funds, has received \$6,763,571.41 from the Segal Award program. In 2016-2017, they spent merely 21% of tuition on instruction of any kind and instead spent an average of \$14.98 per ad click out of a total of \$27,000,000 spent during 2016-2017.²² Similarly, Purdue University Global, a school that is on the Maine for-profit Segal education list, spent merely 18% of tuition on instruction and spent \$16.47 per ad click out of a total \$8,100,000 spent during 2016-2017.²² This is drastically different from the vast majority of four-year private, four-year public, and community colleges which typically spend well over 50% of their tuition specifically on educational costs. It is also expected that for-profit colleges will see single digital enrollment increases in the upcoming recession.²³

This disparity has gone unnoticed for an extended period of time because educational expenses are reported differently between different types of institutions. For-profit institutions are allowed to count marketing expenses that do not have anything to do with the quality of education once a student is enrolled toward their “educational costs”. Several scholars have recently pushed for the broadening of data collections from the The National Center for Education Statistics, which would break down currently reported data and would point out misreportings which can happen frequently from any type of institution. While an in-depth breakdown of this report is beyond the scope of the current analysis, including how Cheslock completed his analysis, policy makers should be aware of tax-payer dollars heavily subsidizing private, for-profit marketing campaigns in the form of Segal Awards.

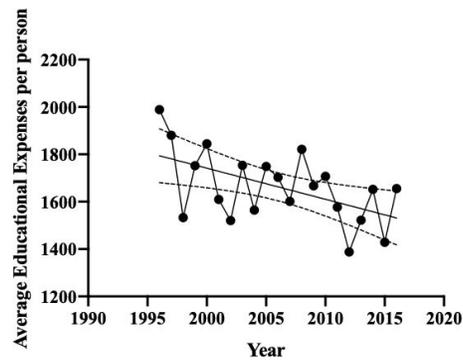


Figure 7. Average amount of Segal Awards going toward educational expenses (e.e.) per person between 1996 and 2016. There is a moderately strong relationship between the year and the average e.e per person, $r(19) = -.5433$, $p = .0109$. Given the repeated, independently random behaviors of year to year AmeriCorps members, we can be 95% confident that average e.e. per person will continue to decrease by anywhere between \$22.88 to \$3.389 per year.

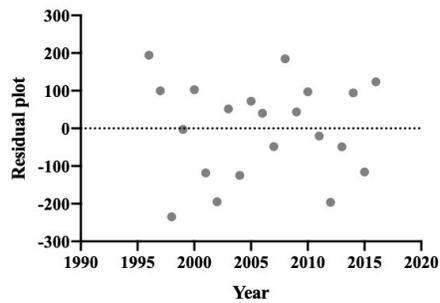


Figure 8. The residual plot for Figure 7, which acts as a justification for the construction of a simple linear regression. There is no visible trend in the data points with a seemingly random assortment of points.

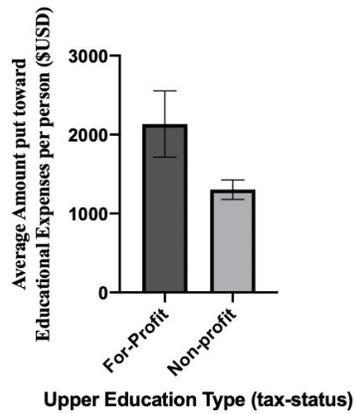


Figure 9. The average amount, per person, of the Segal Award going toward for-profit and non-profit educational expenses. The difference between each group is statistically significant, $t(2.517)$, $p = .0169$. In fact, we can be 95% confident that the true difference between for-profit and non-profit average expenses is between \$1501 and \$159.30

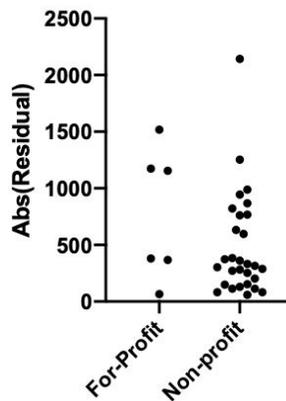


Figure 10. The homoscedasticity plot of Figure 9. There was no significant difference in variance between the two groups; $F_{5,28} = 2.364$, $p = .1312$.

Further Research for General Trends and Limitations

While the CNCS data available is useful for follow up analyses that shed light on year-to-year trends, as well as institutionally-based trends, one area that would be particularly interesting to investigate would be the 1996-2016 trends of in-state and out-of-state AmeriCorps members as it relates to Segal Award use. In particular, *who* is redeeming their award relative to when they earned the award (e.g., how long are they waiting, are they primarily residents or out

of state, etc.). This data would lend itself to a more stable inferential analysis that could predict behavior in a more complete way and could contextualize numbers within context of national events like economic recessions, four-year degree saturation, and so forth. This is because we would better be able to peak into the driving force of general trends considering there is technically a seven year period of highly variable options that one could explore using their award. It would also aid in AmeriCorps recruitment efforts (i.e., marketing campaigns) to attract people during economic recessions or those who are looking for a career change and so forth.

One limitation of the general trends analysis centers around a small population size, which is unavoidable in the service industry and within a relatively unpopulated state. When the population size is relatively small and analyses are driven by averages, it is much easier to be subject to uncommon behaviors that skew trends in an inappropriate manner. An average is unable to parse out whether a student taken a given action was full-time, part-time, reduced part-time, and so forth for their service term and whether they served for longer than one year. Because of this, trends are much more sensitive to outlier behavior without being identified as an outlier (i.e., putting their entire grant toward one category or whether it is distributed in small amounts, in multiple categories over multiple years). The smaller sample size makes this more of an issue, because we would expect a larger population to take a more centrally located position toward the true mean behavior.

One way to potentially address this problem in the future is to contextualize Maine's trends in the context of the U.S, New England, and regionally similar states like New Hampshire. While this would not fix problems with population size or means, we would be able to increase our confidence in the above discussed trends as being typical or atypical. Doing so would also most likely identify some other areas where data collection and, more importantly, data categorization could be improved.

Another crucial problem⁶ is that Segal Awards are redeemed but those with vastly different "residential and service identities". This means that the Awards are redeemed in Maine 1) by individuals who are not state residents and did not serve in Maine, 2) by those who are residents and served out of state, 3) by non-residents who served in Maine, and 4) by residents

⁶ This was taken into account in the analysis, but an anonymous reviewer graciously pointed out that this was not explicitly said in the report.

who served and are state residents. This is critical information that cannot be fully accounted for with this data set, particularly since there is a drastic disparity in the amount of money redeemed in Maine (the subject of this analysis) and the amount of money qualified for in Maine, which is roughly \$22.7 million dollars since 1994.²⁴

Section III: Hypothetical #1 and Public Institutions⁷

Introduction, Assumptions, and Limitations

The following question was posed: What would be the expense to public institutions if Segal Award recipients, who completed their service in Maine, qualified for in-state tuition? Given the structure of the data set, several assumptions had to be made in order to approach this question. For one, it is unclear which members using their Segal Award from Maine already qualified for in-state tuition between 1996-2016. While there are some ‘creative’ ways to try to parse out this information from other data repositories, it would create more room for error than would be acceptable at the present time. As such, the author compared the loss a college would experience if, in group one, every student was an in-state tuition student and, in group two, every student was an out-of-state student. While this assumption might appear unrealistic, what it allows us to do is have a sufficient population size to see, in general, what the tuition loss would be. This allows us to have a larger tolerance range and, as such, allows an increased level of confidence in the results.

Another assumption was that, in looking at “educational expenses”, the author counted all of the payments made toward this category as going toward tuition. Educational expenses can take essentially any form approved by the school, from room and board costs, books, tuition, and so forth. By only assuming the Segal Awards went to tuition, we can be confident that the losses accrued by colleges and universities are approaching the most extreme case one would expect to see. This is because “educational expenses” usually, with a couple exceptions in the case of *G.I.-only* programs, refers to *current* educational expenses. Current educational expenses can be defined as

Expenses that you incurred after you began serving in AmeriCorps. In other words, the award cannot be used to pay for an old tuition bill that dates back before you started your AmeriCorps service.²⁵

⁷ It should be made explicitly clear that Segal Awards never go into the ‘hands’ of those who qualify for the money, but rather those individuals direct where that money goes. For instance, payments are made to institutions for approved expenses from the government and that money is funneled toward tuition cost (i.e., it is easier to get approved to have Segal Awards cover tuition).

Suppose an individual who is looking to pay off their *current* educational expenses. It is much more realistic to believe money would go toward an immediate expense, as opposed to items where low interest loans could be taken out. While this assumption could be circumvented with more available data, for the time being it is a useful speculation to make that the losses discussed in this section are on the higher end of what a school would expect to lose for every conversion of an out-of-state student toward an in-state student paying tuition.

With that being said, two analyses were done for each public institution in Maine: a state-wide loss projection and a school-specific loss projection (both using the mean/SD and median/IQR). The state-wide projection utilizes the educational expenses trend previously mentioned in section II and extrapolates that state-wide regression out several years. While the relationship that allowed for the simple regression to be constructed, the author urges policymakers to proceed with caution. This caution stems not only from a place of modeling concerns, but also from a speculative concern.

The current projections take into account behavior from two different economic recessions (housing bubble collapsing and the “dot com” bubble collapsing), a widespread disease outbreak of SARS in 2002, and a global pandemic in 2009 from the H1N1pdm09 virus. With that being said, the current impacts from the SARS-CoV-2 virus (the cause of ‘COVID-19’) is not known and is expected to be drastically different. Some impacts could include fewer students going out to serve in-state or out-of-state. This behavior could be for economic reasons (i.e., service, even with a stipend, is typically seen as a fiscal and temporal privilege). Students could also be going to higher education less frequently for the immediate future, which would drastically alter the way these projections were carried out. More pressingly, for the projections carried out toward the middle of the 2020s, how the current economic recession recovers is an important consideration. There are three recovery models currently being discussed. The current Trump Administration has discussed several times since March that a “V-shaped” recovery is the most likely; the vast majority of economists, including the Congressional Budget Office⁴ disagree and state that a “U-shaped” recovery is more likely by 2022.²⁸ A “V-shaped” recovery, in this case, is where market strength/trends plummet quickly with the economy being shut down and then there being a quick recovery as soon as businesses

reopen. A “U-Shaped” recovery would be one where there is a longer period of economic stativity with a gradual return to normalcy around 2021 and 2022 in terms of unemployment rates and consumer spending. The third projection comes from Nouriel Roubini, who is a professor of economics at New York University's Stern School of Business and is a leading figure in the field of Macroeconomics. Roubini became famous for predicting the Great Recession with high accuracy when he made initial claims of a potential recession in 2006 during a talk of his at the International Monetary Fund.²¹ In a February essay 2020, Roubini predicted an “L-shaped” recovery throughout the 2020 decade that would take the form of a deep “depression”.²⁶ While Roubini shares the believe that the initial recovery from the COVID-19 economic crisis would be “U-Shaped”, he says that, in the context of ten more broad trends that we have been seeing for a while, there is a relatively high probability that an economic depression—much longer than the 2009 recession—is to be expected.

In including these economic recovery models, the author is trying to emphasize that the below projections are useful as they relate to past descriptive conditions of service in the state of Maine and expected tuition rates and general public school revenue. It is much more likely, given COVID-19, that these outcomes are unpredictable with a high level of confidence due to the complexity, properly speaking, of current market forces and informed decision making can be done with a lower level of statistical confidence—that is, unless some sort of rolling analysis is done with (quasi)-real-time analysis.

Inferential Analysis for Public Institutions (school-specific)

An inferential analysis was conducted for each higher educational institution (note: each school’s respective data sheet is included in the appendix for convenience). The National Center for Education Statistics (NCES) provides individual school tuition projections several years in advance of the present date. Since the primary data set from the CNCS only provides data until 2016 and the NCES provides true tuition data from 2017-2020, there are four years that can be used as a model check that connects historical general trends to future expectations, which would increase or decrease confidence in the current analysis’ more extrapolated projections. The desire

of having this model check is both for transparency, as well as for acknowledging the reality that a Segal Award can be used for current educational expenses up to 7 years after the award is issued. A necessary assumption for taking on the present analysis is that each year's number of payers and gross award amount in each category is a unique individual, because the alternative is untenable with the available data. As such, in answering the current question, there is no logical difference, properly speaking, between someone that completed service in 2014 and using their award in full in 2020 and someone that completed their service in 2019 and is using the award in full in 2020; this would break the model, so the four-year span (2017-2020) would allow anyone using these projections as a general guideline to more fully contextualize student behavior in a way not available to the present author.

Community college tuition projections from the NCES extend out until 2026, while four-year public universities have projections that extend out until 2028. As such, loss projections were carried out until at least 2026. This section discusses what the author has called "school specific" losses, which differs from "statewide" losses. The school specific analysis uses historical data trends only present at a given school in regard to how that school has experienced the use of Segal Awards. These trends are described and used in two different ways: 1) using mean and standard deviation and 2) using median and IQR. While the mean and SD would be much more typical in these sorts of analyses, since the projection is school specific, there was large variation in award use and general enrollment between 1996-2016. As such, the median and IQR were also included as these descriptive measures are considered to be more "skew" resistant in descriptive distributions.

Another note to the reader is that, regardless of the losses determined by the mean/SD or the median/IQR the projected loss *should* be the same. This is not because the actual revenue of the college was the same across each school, but rather because the methodology is the same across groups. To make this point more clear, a sample calculation is shown below.

From 1996-2016, the average amount of Segal Awards being redeemed for educational expenses per year, per person at UMaine Augusta was \$1315.48 and the standard deviation was \$450.37. As such, we would expect the 'lower range' (one standard deviation below the mean) of expenses for any given year to be \$865.10, while we would expect the 'upper range' (one

standard deviation above the mean) to be \$1765.85. While the actual average amount of educational expenses per year, per person could be much higher or lower than this range, the further from the mean the value travels (i.e., the more SDs away the value is from the average), the more surprising that value would be. To look at one given projection, NCES projects that UMaine Augusta will have an in-state tuition expense of \$9,532.00 in 2024-2025 and \$20,710.00 for out-of-state the same year. As such, for in-state revenue, we would expect the university to make, on the lower end, \$7,766.15 per student, \$8,216.52 on average per student, and on the higher end \$8,666.90. In the same year for out-of-state students, we would expect the university to see \$18,944.15, \$19,394.52, and \$19,844.90 in revenue, respectively for the lower, average, and upper ranges.

When looking at the median/IQR, historically the median Segal Award grant used on educational expenses per student, per year was \$1,386.46 with a lower estimate of \$1,000.82 and an upper estimate of \$1,685.60 (+/- 1 IQR). Using the same NCES tuition estimates we would expect the college to make \$7,846.40, \$8,145.54, and \$8,531.19 in in-state revenue using the lower, median, and higher projections respectively, per person. Similarly, for out-of-state revenue, we would expect them to make \$19,024.40, \$19,323.54, and \$19,709.19 respectively per student.

Each of these descriptive techniques gives different projections from historical data mixed with NCES projections, and looking at the actual values per school (in appendix) is helpful. With that being said, the reported “loss” per school in this hypothetical scenario will always be the same because the IQR and SD being used to establish the actual range and the NCES tuition projections (which will help define the actual loss) are constant year-to-year. As such, for all of those different descriptive projections, the expected loss, given historical data, for UMaine Augusta for counting an out-of-state student as an in-state student would be -\$10,767.00 per student (i.e., ‘in-state’ - ‘out-of-state’ for each respective range of analysis). It is this type of loss data shown below.

A similar analysis was done on each community college and university in Maine (See Tables 3 and 4). It is important to note that the tables below show expected losses if every existing student that paid the out-of-state rate instead paid in-state rates with their expected Segal

Award behavior. *As such, if a switch from out-of-state to in-state for AmeriCorps members would attract more members to the state, every college, even at maximum losses, would turn a profit by attracting one or two more members every year.* Further, it is more likely than not that the losses each school would accrue would be significantly less per student than what is shown below; to reiterate, the current analysis assumed that all of the Segal Award under the “educational expenses” category would go toward tuition rather than the broad options of expenses. For instance, in the past three years books alone cost anywhere from \$660 to \$1,400.

Table 3.

Projected maximum losses for four-year institutions if out-of-state (O.S) students qualified for in-state (I.S) tuition between 2017-2028 per student

University	Expected loss per student (O.S to I.S)
UMaine at Augusta	\$10,767.00
UMaine at Machias	\$6,892.27
UMaine Farmington	\$12,350.82
UMaine Fort Kent	\$5,158.48
UMaine of Southern Maine	\$15,747.27
UMaine Orono	\$21,794.09
UMaine Presque Isle	\$5,158.64
Maine Maritime Academy	Not enough Information*

*Note: **—Only two entries were present in 2008 and 2014, a statewide was still conducted in the next section

Table 4.

Projected maximum losses for two-year institutions if out-of-state (O.S) students qualified for in-state (I.S) tuition between 2017-2026 per student

Community College	Expected loss (O.S to I.S)
Central Maine Community College	\$2,861.56
Eastern Maine Community College	\$2,937.00
Kennebec Valley Community College	\$2,861.44
Washington County Community College	\$3,989.33
York County Community College	\$2,861.67
Northern Maine Community College	\$2,861.44
Southern Maine Community College	\$2,861.44

Inferential Analysis for Public Institutions (Statewide)

In the general trend section a simple linear regression was constructed to predict how much of a Segal Award one would expect to go toward educational expenses (See Figure 7). This trend was extrapolated to give a conservative estimate of the average amount of a Segal Award going toward educational expenses per year, per student from 2017-2026. From here, the NCES tuitions for each school were used (both in-state and out-of-state) to calculate the estimated revenue a school would receive for a student from out-of-state and for a student who was in-state. From here, the difference between each of these yearly expenses was calculated and then plotted year-to-year for each type of public school; this difference can be interpreted as the expected loss per student in a given year (See Tables 5 and 6).

Recall that, while the linear regression slope was a modest decrease for each year (-13.13), we can be 95% certain that, long-term, the decrease (slope) would be between -\$22.88 to -\$3.389. These ranges were excluded in this analysis as they would break the model, but the range should be kept in mind. The decreasing slope, big-picture, means that a smaller portion of the Segal Awards are being put toward educational expenses even though educational expenses continue to increase.

As shown below, some schools in each category would have a more difficult time accommodating a switch that would count out-of-state students as in-state students. Most notably Washington County Community College and UMaine Orono would experience the largest margin of losses due to the relatively large discrepancy between in-state and out-of-state tuition. These projections, as mentioned, ignore whether the change would increase enrollment via the AmeriCorps program. If the hypothetical change drew more students to the Maine public higher education system, these losses could be recuperated relatively quickly.

It should be noted that some anonymous reviewers of this analysis question whether public institutions would have the ability to recoup losses by shifting out-of-state students to in-state status simply by incentivizing students to attend colleges and universities in Maine as in-state residents. The counter-argument can be summed up in three premises. First, as alluded to, the number of students coming in year-to-year would have to be sustained every year which is unrealistic—specifically due to COVID-19 and the unfolding recession. It would also be a stretch

to say this shift would be perfectly recuperated without the complicating factors. Second, it isn't clear how any increased number of students would be distributed over the community colleges and universities of the University of Maine System. It is possible that the shift would cause a disproportionate benefit/burden on some schools as opposed to others without forms of compensation. Finally, the UMaine system, in-particular, is experiencing a great financial burden due to the conversion of courses to an online format in the spring of 2020 and a refund of room and board in the spring of 2020.

It is unrealistic given these challenges, as well as declining enrollment in general, to quickly make up losses. With that being said, it would be an oversimplification to say that the change is guaranteed to produce a loss at the net-level over an extended period of time. For instance, the population UMaine tries to attract could change (i.e., focusing more on 'non-traditional students') which would alter revenue. The author recommends that more research needs to be done in this specific area before any conclusions can be safely made.

Author's note (citations are in footnotes to separate them from the main paper):

The author would like to take a moment separate from the current analysis to look at one process that would probably need to be addressed if the two hypotheticals of this paper came into reality. The financial aid practice of "Merit-based" scholarships are incredibly problematic from both an administrative yield perspective and from a financially-driven perspective. It also should be said that, from a theoretical perspective in educational assessment theory (i.e., what national assessments like the SAT actually measure), "merit-based" aid is borderline incoherent as it drives test-score pollution and renders the data points less than useful by driving test-prep in a disproportionate way.⁸ Just one way this merit-aid financially burdens a University is that:

[the] increased use of merit aid is associated with a decrease in enrollment of low-income and minority students [meaning most aided students are those with means to pay]...[further,] institutions may be diverting financial resources to fund merit aid awards, such as through the increased use of part-time faculty, increases in tuition or fees, or smaller increases in faculty salaries. For middle and bottom tier colleges a merit aid

⁸ Chalak, A., & Tavakoli, M. (2010). Sources of Test Score Pollution: State of the Art.

policy is accompanied by an increase in tuition. Top tier colleges experience decreases in faculty salaries after the introduction of a merit aid policy.⁹

It also should be said that, most of the time, students getting large portions of financial aid money due to “merit-based” aid are those that have the means to be paying much higher tuition relative to Pell grant recipients, creating a financial hardship on the university system; it should also be said, in the current political and social climate, that the burden of these policies is majorly black and hispanic students and that overall yield of any demographic of student doesn’t usually increase due to higher-ed competition.^{10 11 12} The author intends to conduct an in-depth, independent analysis of this practice in a separate work and is only noted here to point out an example of a reform that would resolve the tension of high educational costs for AmeriCorps members and operational expenses. This comment is also to point out to the reader that the tension between hypothetical #1 and the operational budget of a given University (which then trickles down to community colleges) is due to strange admission norms linked to problematic recruitment techniques that are relatively recent developments in higher education.

⁹Griffith, A. L. (2009). Keeping up With the Joneses: Institutional Changes Following the Adoption of a Merit Aid Policy.

¹⁰Ehrenberg, R., Zhang, L., & Levin, J. (2005). Crafting A Class: The Trade Off Between Merit Scholarships and Enrolling Lower-Income Students. National Bureau of Economic Research.

¹¹Burd, S. (2013). Undermining Pell: How Colleges Compete for Wealthy Students and Leave the Low-Income Behind. New America Foundation.

¹²Orfield, G., Cornwell, C., Mustard, D. B., Binder, M., Ganderton, P. T., & St. John, E. P. (2004). State Merit Scholarship Programs and Racial Inequality.

Table 5.

*Projected losses for two-year institutions if out-of-state students qualified for in-state tuition between 2017- 2026 per student (based on figure 7 regression)***

FY Projection	Central Maine Community College	Eastern Maine Community College*	Kennebec Valley Community College*	Northern Maine Community College*	Southern Maine Community College*	Washington County Community College	York County Community College*
2017-2018	\$2680.01	\$2760	\$2760	\$2760	\$2760	\$3636	\$2760
2018-2019	\$2740.01	\$2820	\$2820	\$2820	\$2820	\$3722	\$2820
2019-2020	\$2740.01	\$2820	\$2820	\$2820	\$2820	\$3784	\$2820
2020-2021	\$2760.01	\$2841	\$2841	\$2840	\$2841	\$3877	\$2840
2021-2022	\$2781.01	\$2861	\$2861	\$2861	\$2861	\$3972	\$2861
2022-2023	\$2802.01	\$2882	\$2881	\$2882	\$2881	\$4071	\$2882
2023-2024	\$2823.01	\$2902	\$2902	\$2902	\$2902	\$4174	\$2903
2024-2025	\$2843.01	2924	\$2923	\$2923	\$2923	\$4279	\$2924
2025-2026	\$2865.01	\$2945	\$2945	\$2945	\$2945	\$4389	\$2945

Note * = Losses are projected to be the same even though balance sheets are distinct (see appendix), ** = does not take 95% confidence interval into account, see figure 7 for a visual of the confidence interval.

Table 6.

*Projected losses for four-year institutions if out-of-state students qualified for in-state tuition between 2017- 2028 per student (based on figure 7 regression)***

FY Projection	Maine Maritime Academy	UMaine at Augusta	UMaine at Machias	UMaine Farmington	UMaine Fort Kent	UMaine of Southern Maine	UMaine Orono	UMaine Presque Isle
2017-2018	\$13,350	\$9,690	\$11,640	\$9,568	\$4,110	\$11,956	\$18,596	\$4,110
2018-2019	\$13,620	\$9,930	\$7,270	\$9,480	\$4,200	\$12,376	\$19,112	\$4,200
2019-2020	\$14,028	\$10,170	\$7,080	\$10,170	\$4,290	\$12,824	\$20,310	\$4,290
2020-2021	\$14,359	\$10,365	\$6,901	\$10,791	\$4,533	\$13,625	\$20,814	\$4,534
2021-2022	\$14,698	\$10,564	\$6,718	\$11,444	\$4,789	\$14,477	\$21,331	\$4,790
2022-2023	\$15,045	\$10,765	\$6,531	\$12,132	\$5,057	\$15,382	\$21,860	\$5,057
2023-2024	\$15,400	\$10,970	\$6,339	\$12,854	\$5,337	\$16,342	\$22,402	\$5,337
2024-2025	\$15,764	\$11,178	\$6,142	\$13,614	\$5,631	\$17,363	\$22,958	\$5,631
2025-2026	\$16,136	\$11,387	\$5,940	\$14,414	\$5,938	\$18,448	\$23,528	\$5,938
2026-2027	\$16,516	\$11,601	\$5,733	\$15,254	\$6,261	\$19,601	\$24,113	\$6,260
2027-2028	\$16,907	\$11,817	\$5,521	\$16,138	\$6,597	\$20,826	\$24,711	\$6,598

Note ** = does not take 95% confidence interval into account, see figure 7 for a visual of the confidence interval.

Section IV: Hypothetical #2 (Segal Award as Taxable Income)

Introduction, Assumptions, and Limitations

The following question was posed: What would be Maine’s fiscal impact if Segal Awards were not counted as taxable income? This situation was a bit more difficult to analyze and produce a satisfactory result. The Maine Revenue Service does not have the needed data available to answer this question. For an answer we could be confident in, the analysis would need to go to each program to find the award use and then that would need to be matched to a tax return. Further, because some students would be non-Maine residents, there would be no tax return present. It should also be said that, if this methodology would be taken, it is expected that the number of Maine residents receiving and using the award in a **particular** way would be below the confidentiality threshold (i.e., individuals would be easily identifiable via the study).¹³

Luckily, there is still a relatively accurate way to be able to estimate the total revenue from those who ‘received’ and used Segal Award money at a Maine address via estimates from state profiles mixed with end-of-service questionnaire response rates from Maine and national sources. This methodology was inspired from a similar study conducted in the state of Minnesota.² Using state service profiles from 2015-2019, the total number of program participants qualifying for Segal Awards—and the maximum dollar amount of Segal Awards those participants qualified for—were used as a starting point. From there, an average use-rate of Segal Awards was determined to be 75% from the CNCS. In particular, “[o]ne quarter of alumni either did not receive, use, or have not yet used the education award” (59).¹¹ To make this use-rate more relevant to Maine, the 2019 end-of-service questionnaire was used to determine a tolerance range. In the 2018-2019 Maine year-of-service report, 354 AmeriCorps members qualified for a total of \$1,067,703 in education awards. In the 2019 service questionnaire, out of 257 people who answered the question “What do you want to do with your Education Award”, 90.3% said that they were going to use it to 1) “Pay my tuition or educational costs related to additional education for me” or 2) “Repay my student loans”. As such, a trivial tolerance level¹⁴

¹³ The author would like to note that this reality was communicated from Maine Revenue Services.

¹⁴ Properly speaking, a tolerance requires a standard deviation and a mean. The way the survey is constructed and the way questions are asked, there is no standard deviation.

of +/-15.3% is expected to cover the vast majority of revenue possibilities for Maine, in-line with National trends. The lower use-rate (59.7%) was justified as some states had a use-rate in the 60s, though the author encourages a more serious use of the mean and upper tolerance level for revenue expectations.² If we interpret the meaning of the use-rate of 75% (+/- 15.3%)—given Maine’s tax laws as of 2019—it would mean that Hypothetical Situation #2 (Segal Award not being taxed at the state) would benefit, roughly, anywhere to 59.7% to 90.3% of AmeriCorps members qualifying for the awards.

This use-rate range of 75% (+/- 15.3%) was then coupled with the 2019 Maine tax changes (i.e., Marginal tax brackets at 5.8%, 6.75%, and 7.15%). It is expected that this would give the total range of revenue the state would expect to lose for each member. To consider one example of how a calculation was performed, 2019 data was used with 2020 marginal tax-rates.

If a maximum of 354 qualified for a maximum of \$1,067,703.00 in education awards, we can expect on average 265.5¹⁵ and \$800,777.25 to be taxable. In other words, we would expect the taxable population and amount would be between 211.338 people earning \$637,418.69 and 319.662 people earning \$964,135.81. This would produce an award average of \$3016.11 per person. For each unique person, we would expect their award to produce the following amounts of state revenue at each marginal tax rate: \$174.93, \$203.59, and \$215.65. Using our total tolerance level, that would mean we would expect a total loss in this hypothetical case during 2019 to be between \$36,970.28 and \$68,935.71 for the state, with the most ‘average’ loss being \$54,052.46 (at a 75% use-rate and everyone being at a 6.75% marginal tax-rate).

To increase the context for this estimate, the same methodology was used for years in 2015-2018. The 2019 tax code was used for these years as well, even though different marginal tax rates were used between 2015-2019. These estimates are given below (See Table 7 for general estimates).¹⁶ In conclusion, we would expect, even in the most extreme or unlikely circumstances (i.e., a 7.15% marginal-tax rate for those making \$105,200.00+ per year at the highest use-rate), that this would cost the state well under \$100,000 in any given year in terms of lost revenue.

¹⁵ Decimals are carried through until the end for population count and are then rounded.

¹⁶ See appendix for data sheets and calculations

Author's Note: It was pointed out by an anonymous reviewer that, in regard to this state revenue loss, state revenue from sales tax should not be expected to have an enormous impact. While it is possible to recuperate some of the loss from sales tax and related consumer based taxes, it is clear that AmeriCorps members are under great fiscal stress. The reviewer states “the spending patterns of students are typically modest because of so many personal and educational expenses”, which, at least for Maine, is confirmed by many of the comments given in the 2019 end-of-service survey. Both the reviewer and author agree that in future research this economic activity should be quantified for complete context, but assume the result would be underwhelming at best.

Table 7.

Estimated total state revenue loss if Segal Awards were not counted as individual income tax in the State of Maine (possible outcomes within a national context)

End-of-year for service*	5.8% (Marginal tax-rate)	6.75% (Marginal tax-rate)	7.15% (Marginal tax-rate)
2019	\$46,445.08 (+/- \$9,474.80)***	\$54,052.46 (+/- \$11,026.70)	\$57,255.57 (+/- \$11,680.14)
2018**	\$44,832.75 (+/- \$9,145.88)	\$52,176.05 (+/- \$10,643.91)	\$55,267.96 (+/- \$11,274.66)
2017**	\$57,133.12 (+/- \$11,655.16)	\$66,491.13 (+/- \$13,564.19)	\$70,431.34 (+/- \$14,367.99)
2016**	\$61,381.20 (+/- \$12,521.76)	\$71,435.01 (+/- \$14,572.74)	\$75,668.20 (+/- \$15,436.31)
2015**	\$52,933.28 (+/- \$10,798.39)	\$61,603.39 (+/- \$12,567.09)	\$65,253.96 (+/- \$13,311.81)

Note *= End-of-year for service refers to the Year in Review reports. If 2019 is displayed, this refers to the 2018-2019 report found on national service main website. ** Using the 2020 marginal tax-rates, not those enacted in 2015-2019. *** Mean is based on 75% Segal Award use-rate, whereas tolerance is defined as a use-rate of +/- 15.3%.

Section V: Conclusion and Future Research

The purpose of this report was to generally describe large scale trends that effectively describe AmeriCorps member behavior. Some of those trends included where Segal Award money was being directed toward and whether that behavior has changed over time. From there, the author entertained two hypothetical situations to try to explore how those situations would impact the state of Maine.

The first hypothetical situation looked into what would happen if out-of-state AmeriCorps members were to qualify for in-state tuition at public Universities and Colleges. It was found, naturally, that every college would take a loss, but it was speculated that, in a standard economy, that loss could possibly be recuperated if such a policy change would incentivize more students to come to Maine, among other policy changes. Still, given the current economic and public health situation, it appears more unlikely than it would have previously been that these funds could be recuperated in such a straightforward way. Still, it is clear that a more comprehensive analysis with a more descriptive data set would need to be used to ensure that we can be comfortable with one conclusion over another. An interesting follow up would be to look at spending habits (at local businesses) of those who serve in Maine who are long-term residents compared to those who plan to leave the state.

The second hypothetical situation looked at what would happen if Segal Awards were not counted as taxable income in the state of Maine. It was found that, even in the most extreme circumstances, state revenue would decrease by no more than \$100,000 in a given year. The current study did not look at spending patterns of these individuals and it did not consider the monetary value of volunteer work—both which might help recuperate from this loss if the policy change acted as an incentive system.

The author also would like to call on the CNCS to collect one additional data point for the “Segal Award: by Institution” open data set: where the payment is being generated (i.e., in-state or out-of-state). For instance, if 23 payments are made in one year to the University of Maine at Farmington, it might be useful for future analysis if it is clear how many of those are from people who have lived in Maine longer than two years or under two years. While this would not give perfect data, it might be a way to shed light on the trends for each respective

group without violating privacy concerns for states who have smaller amounts of service members in a given year.

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