

Post-Schooling Outcomes of University Graduates: A Tax Data Linkage Approach

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EPRI

Education Policy
Research Initiative

Initiative de recherche sur les politiques de l'éducation

Acknowledgements

- uOttawa for supporting the project
- IRP for data
- Statistics Canada for access to data and overall partnering
- OHCRIF (MTCU) for financial support
- Industry Canada for supporting related project on ICT graduates

Context

- EPRI – uOttawa collaboration on student retention
- SSHRC EPRI Partnership Development Grant in 2011
- Including Statistics Canada, uOttawa
- OHCRIF RFP

What We Do: Track Students' Post-Schooling Labour Market Outcomes

- Year-by-year after graduation
- Cohort-by-cohort
- By faculty group
- By gender

Motivation



Informing Student Choices

Motivation



- PSE Institutions/systems
- Employers
- Policy Makers
- General Public
- Research Community

Informing Student Choices

Data

Graduates 1998-2010



Linked to tax data

Data

98%!

Protocols to ensure student privacy



Samples

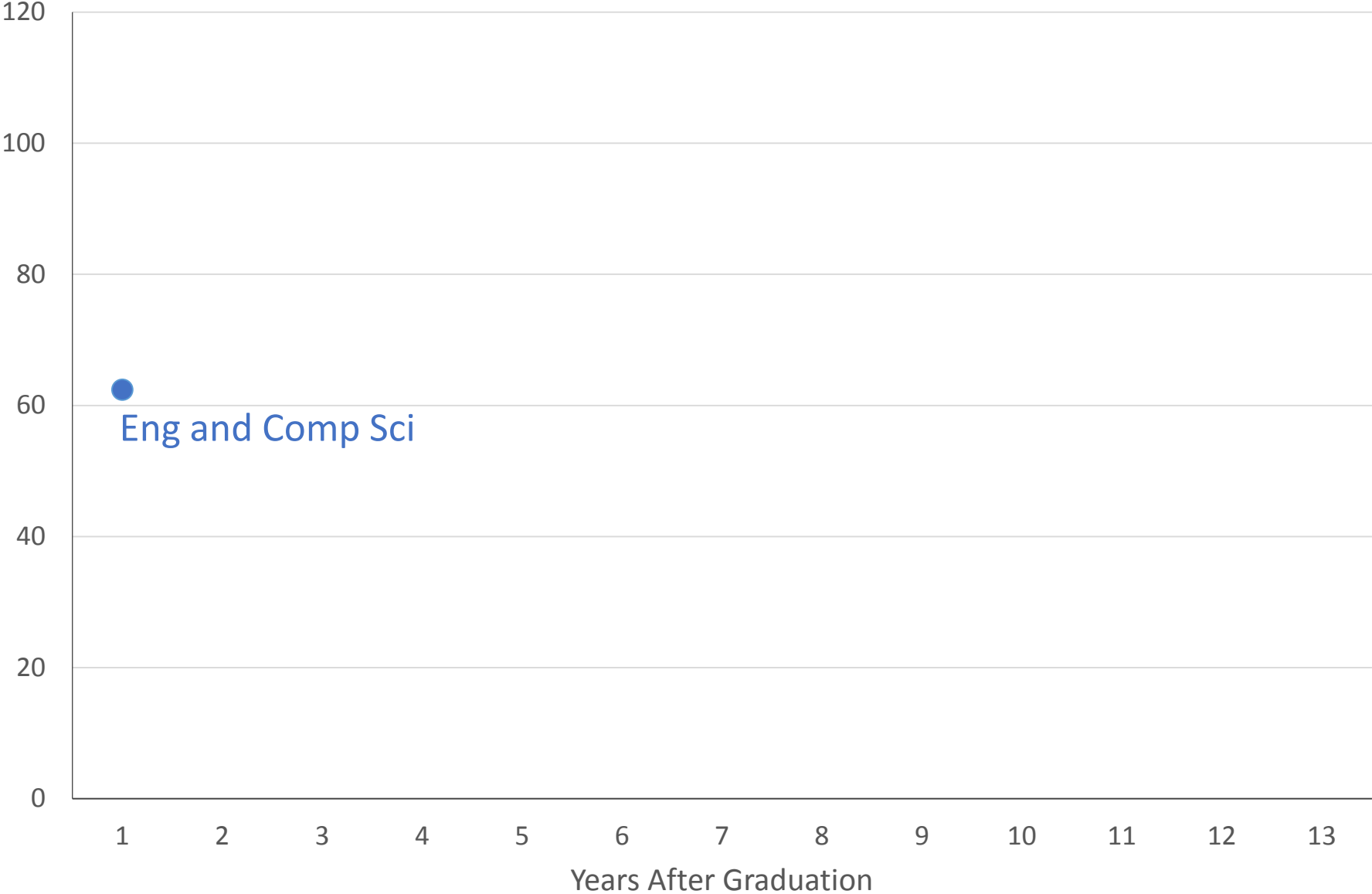
- uOttawa Bachelor's graduates only
- Censored where
 - Further schooling (as identified in tax data)
 - Missing
- Included any year earnings > \$1,000

Earnings Measure

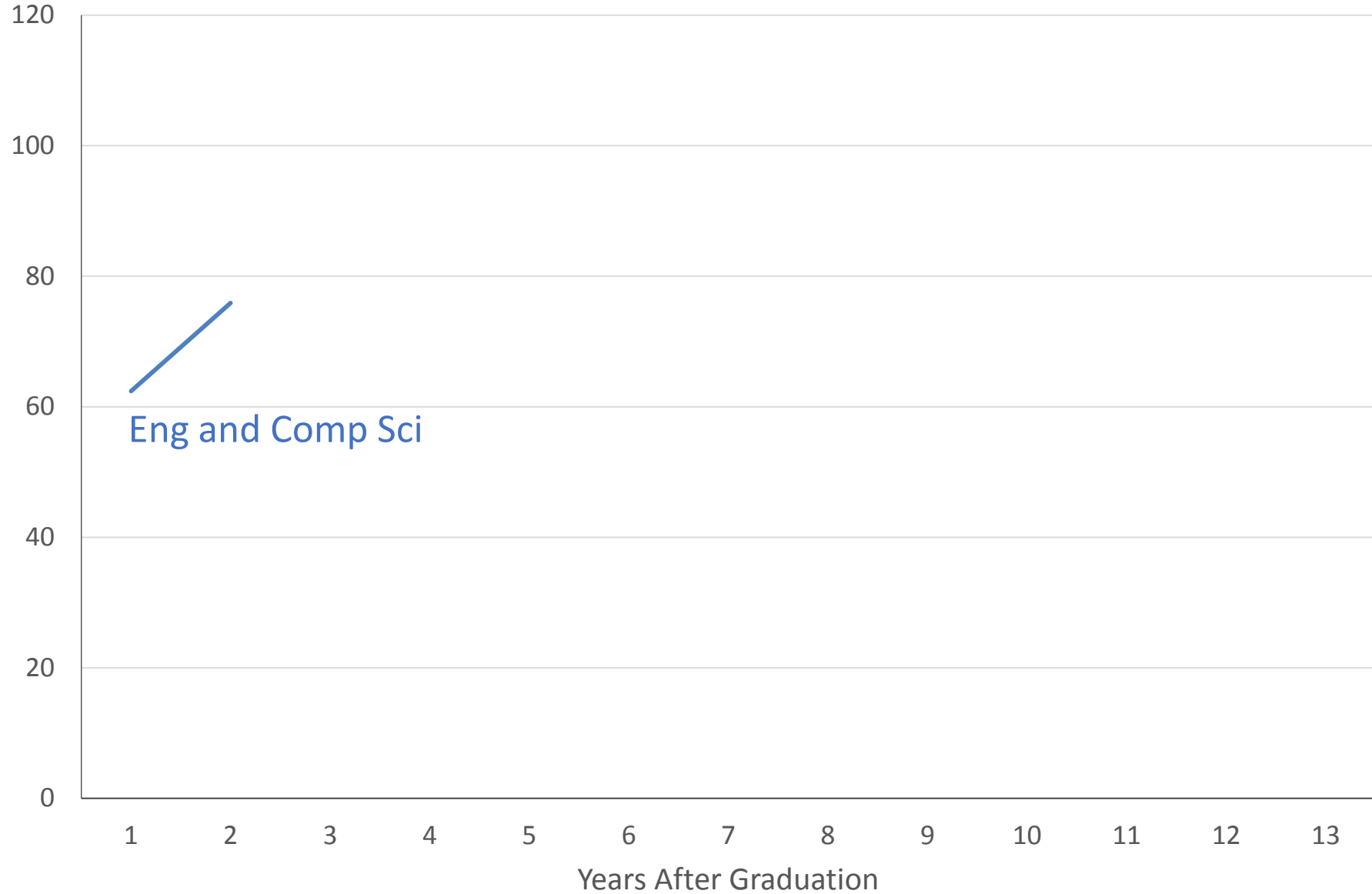
- Annual wage and salary, net-self emp., tips/gratuities income
- Constant \$2011
- Have looked at other measures/selection, could do more...

1998 Cohort

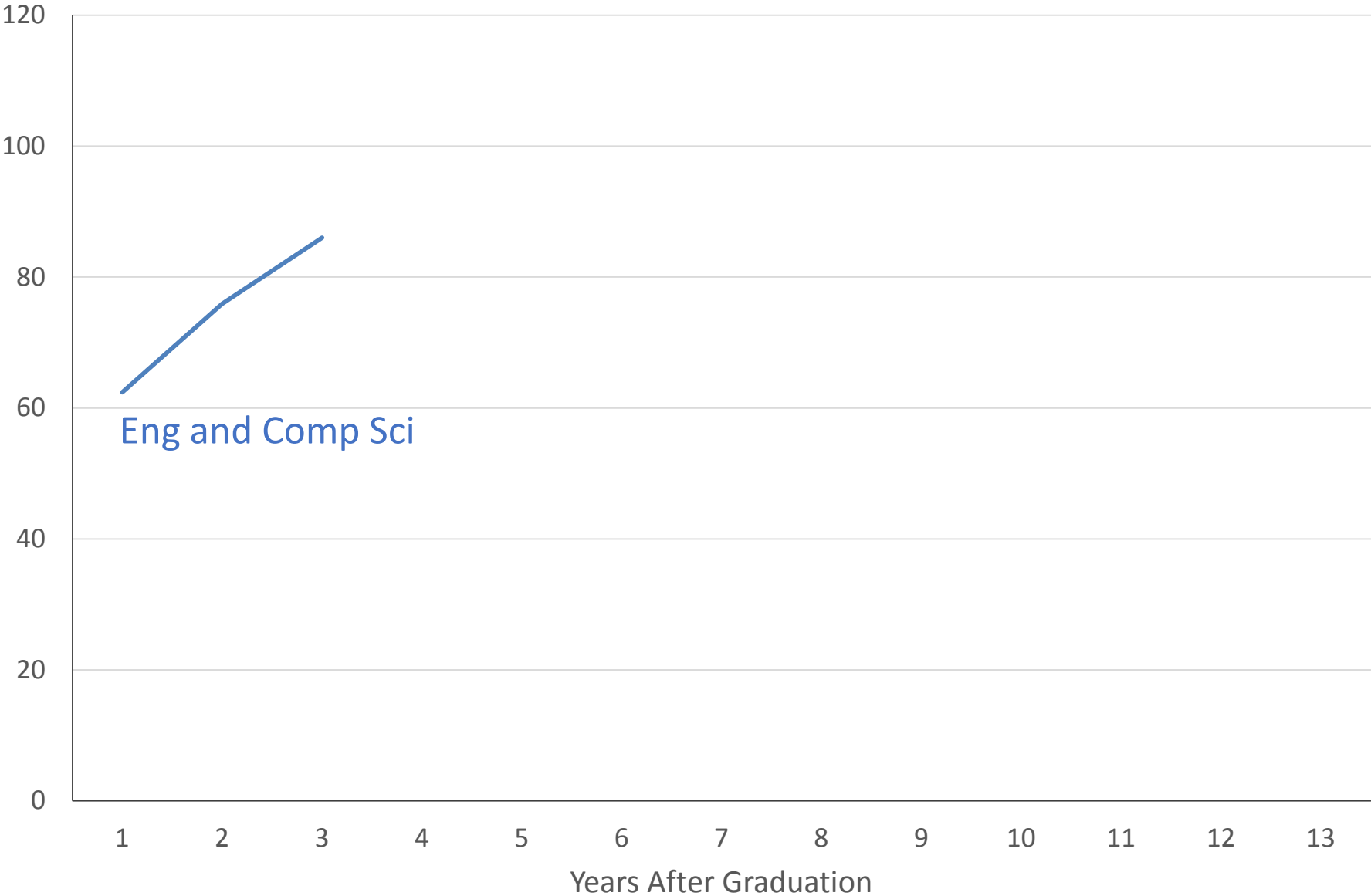
Mean Earnings (,000s) of the 1998 Cohort (\$2011)



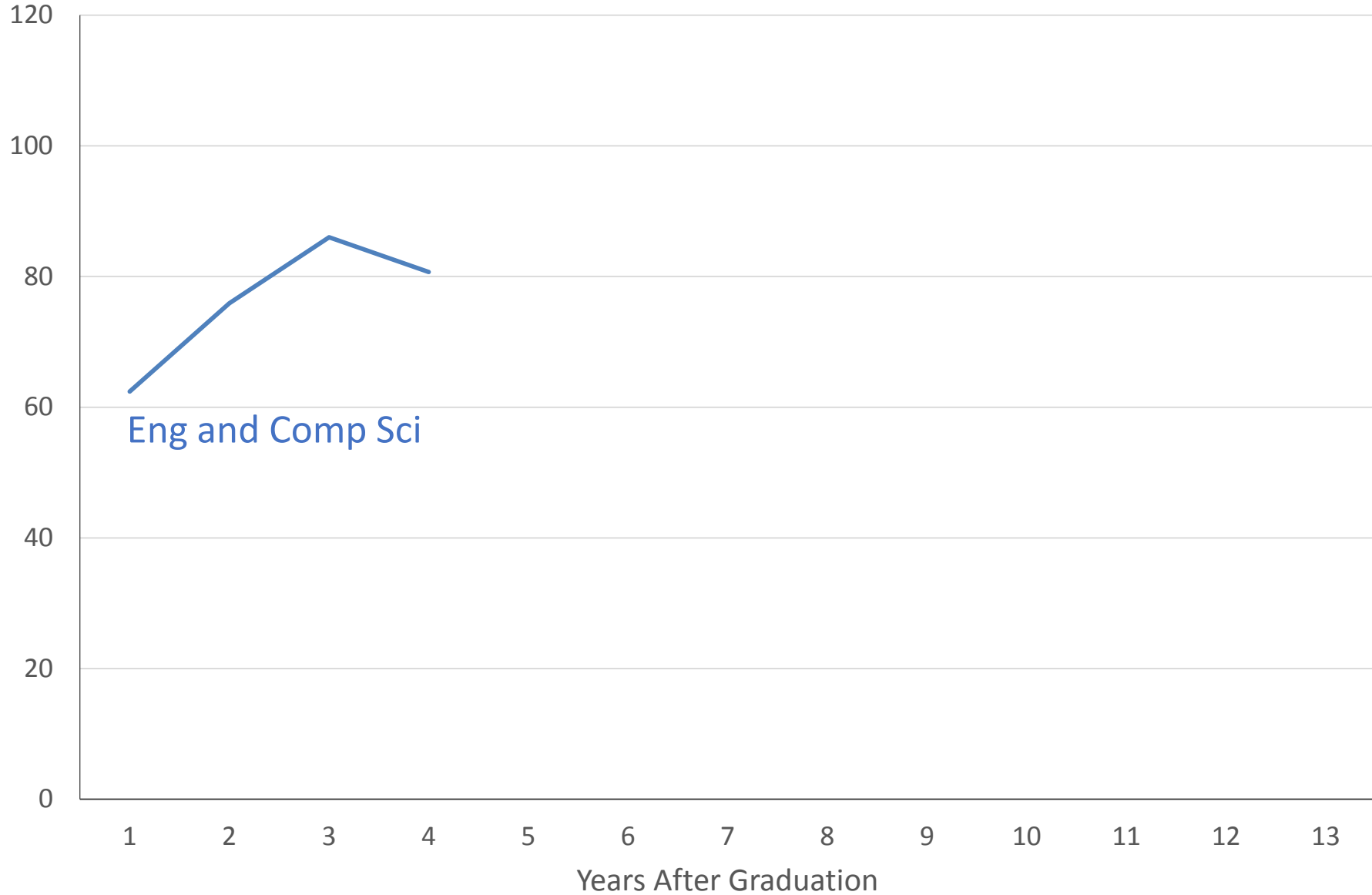
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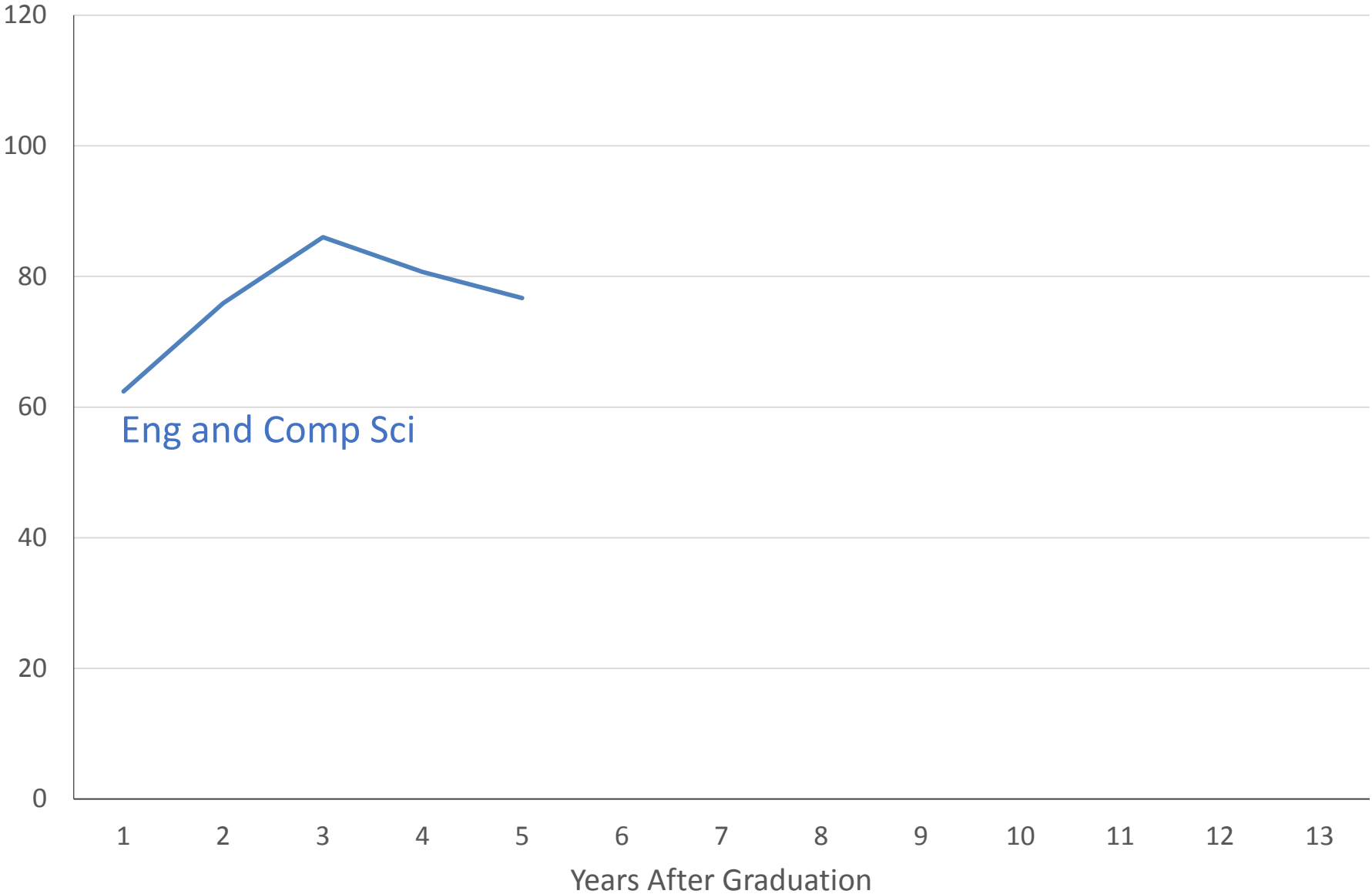
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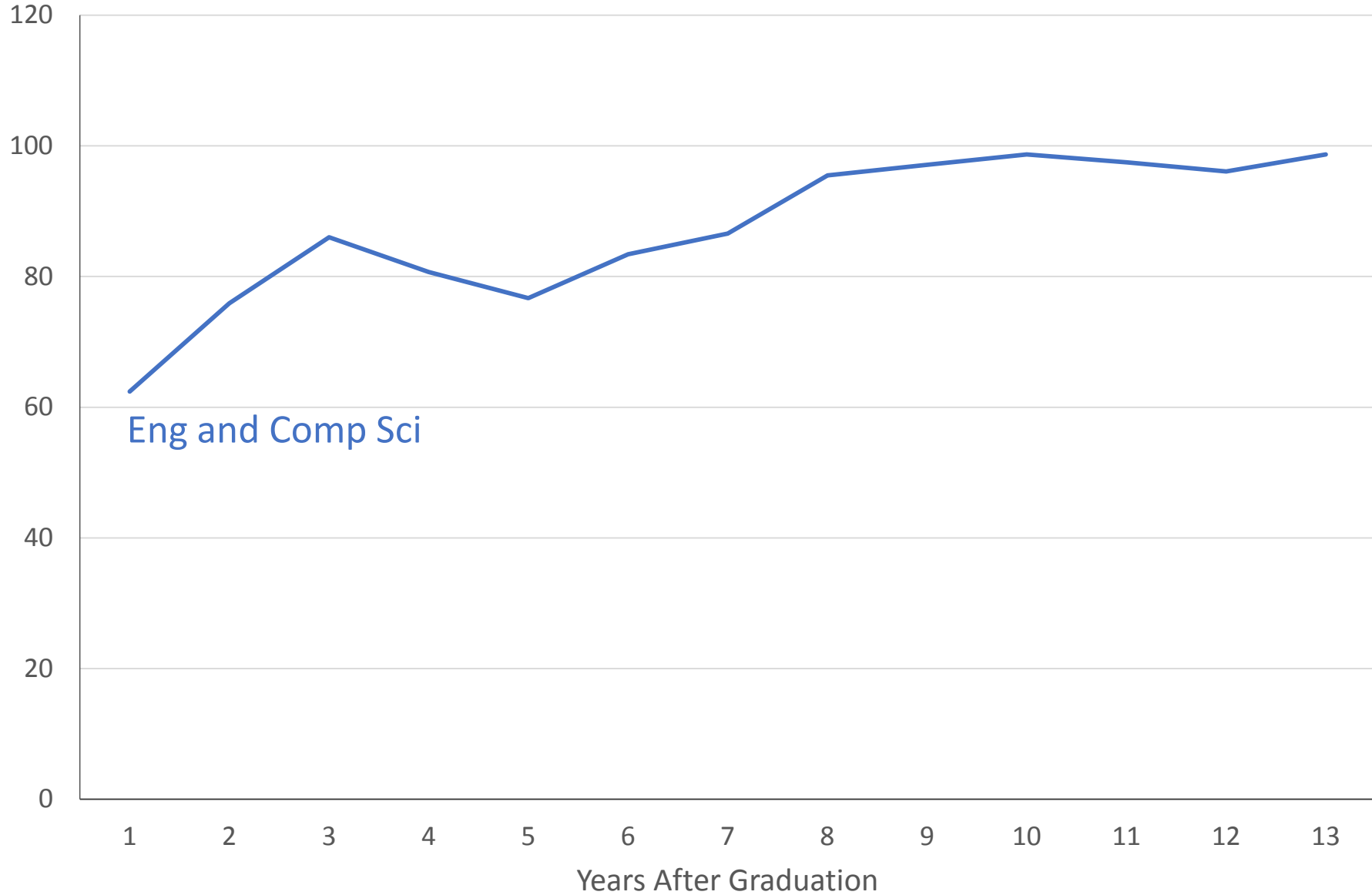
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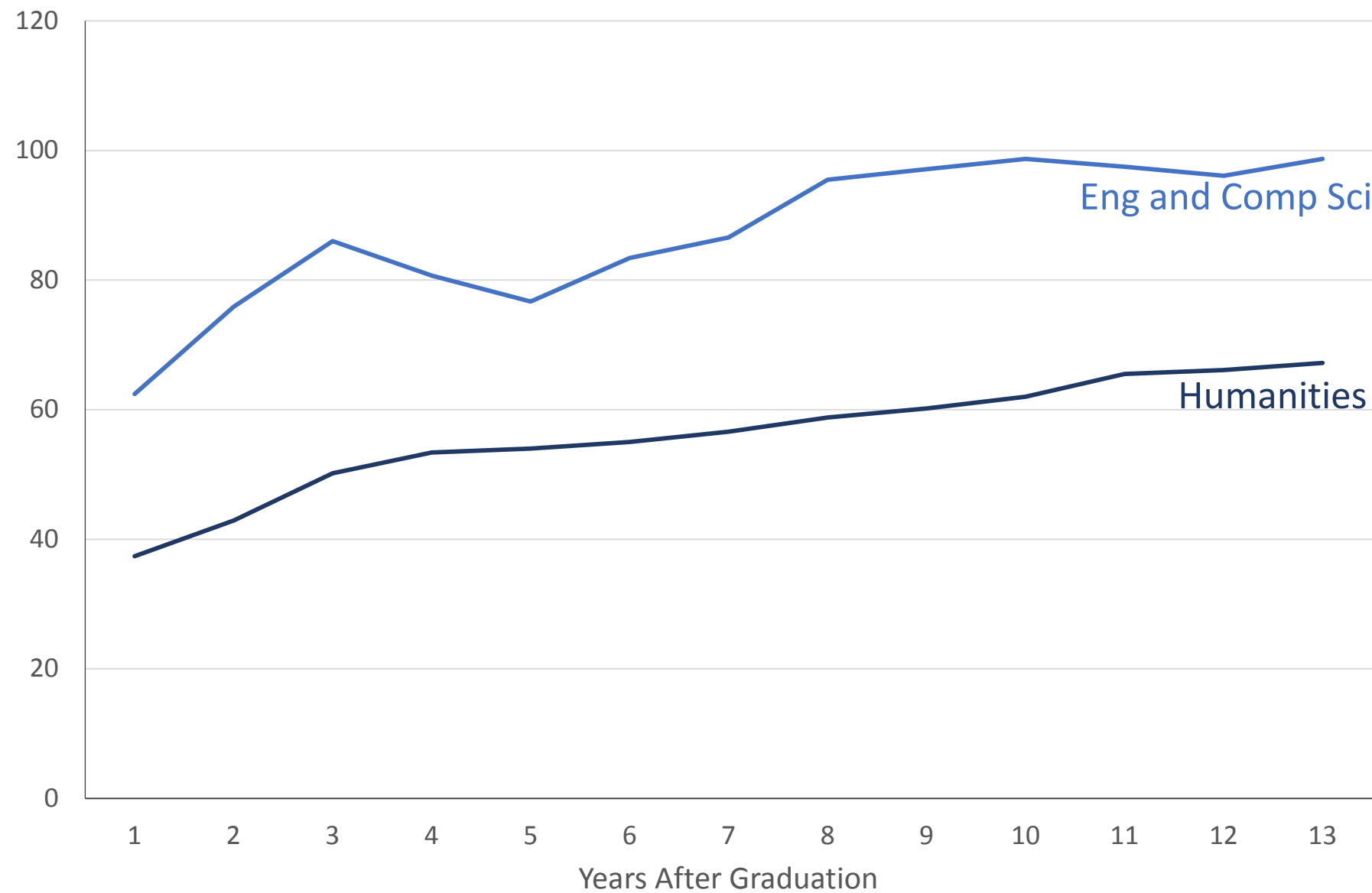
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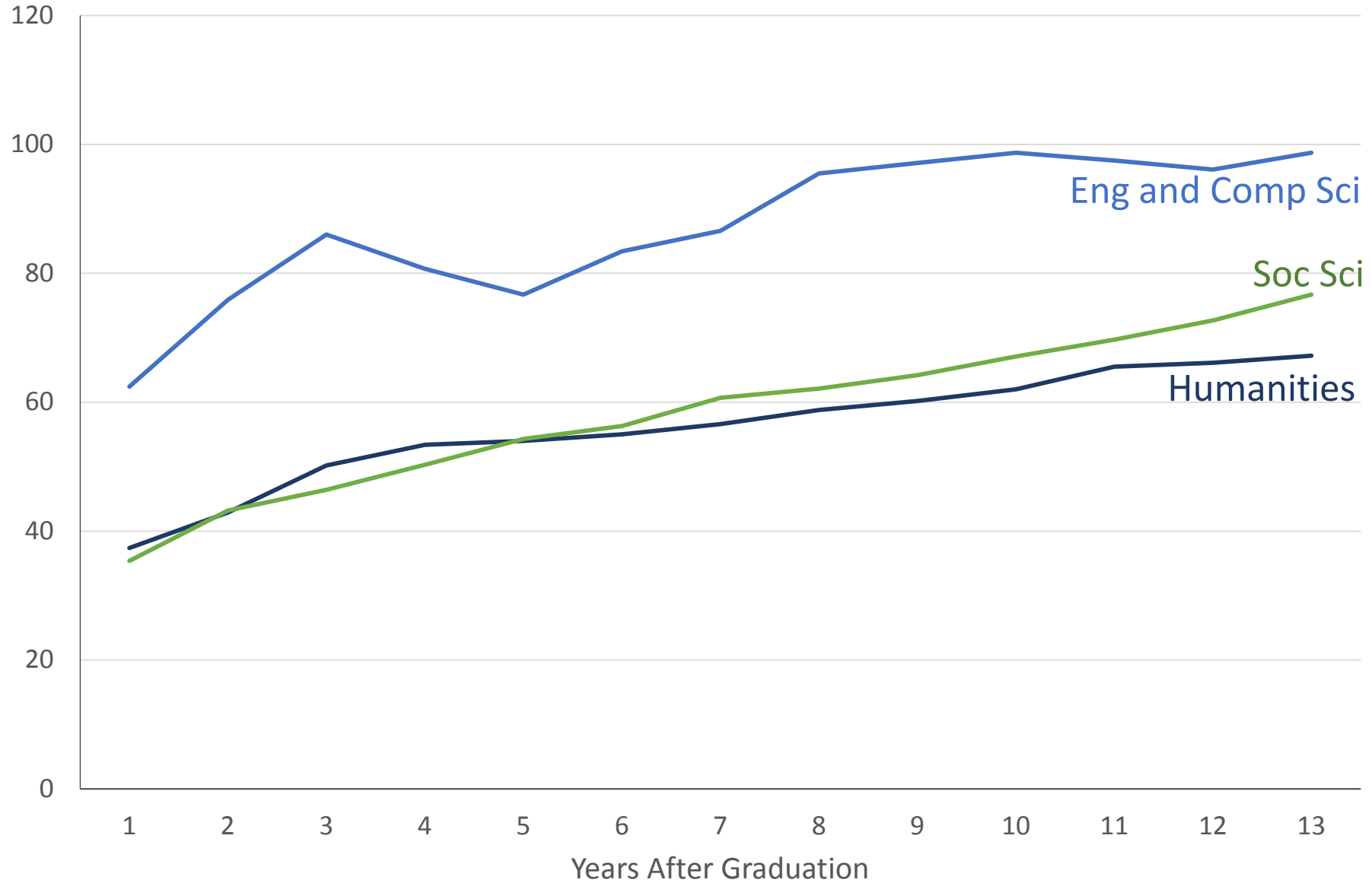
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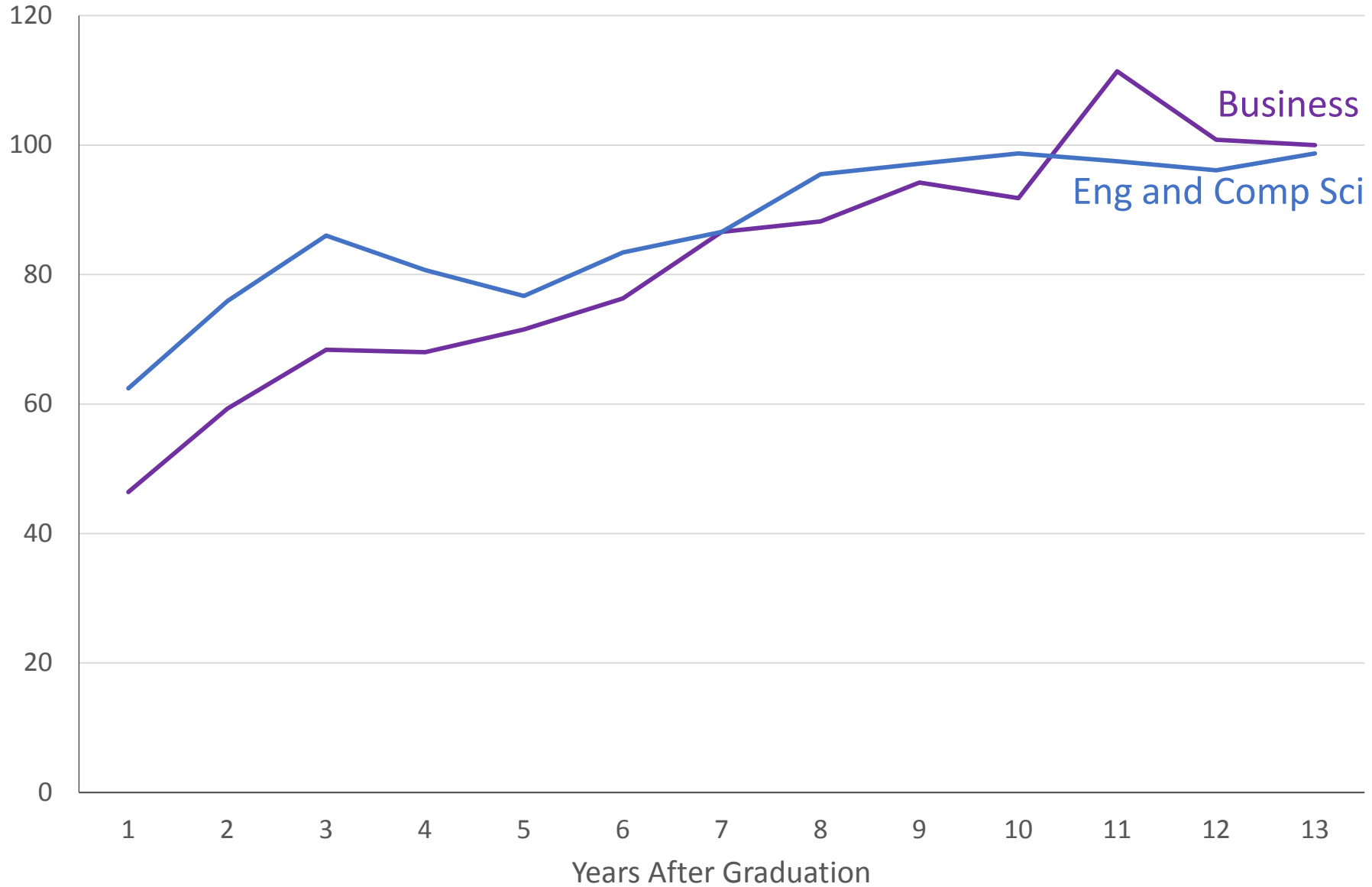
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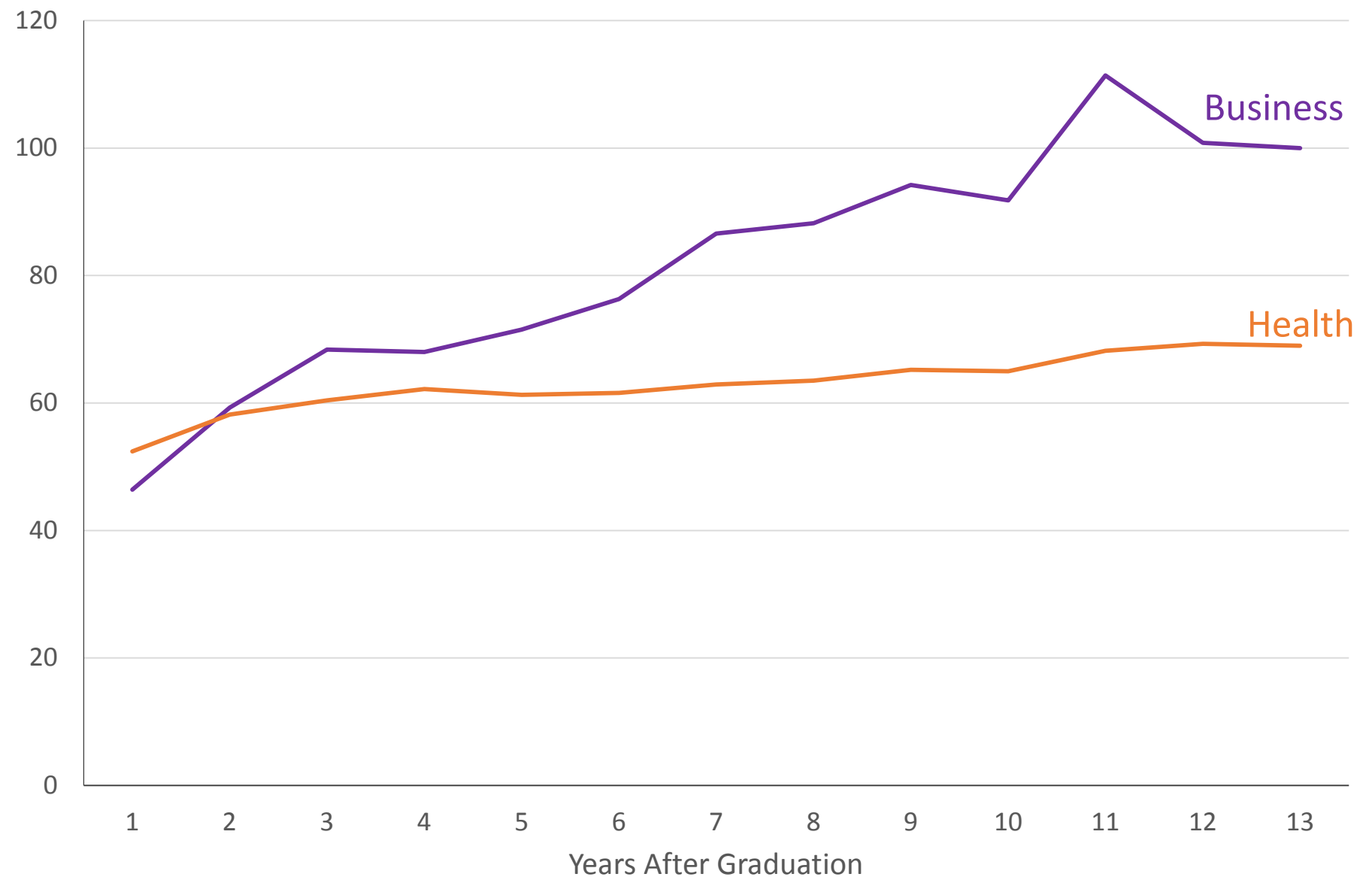
Mean Earnings (,000s) of the 1998 Cohort (\$2011)



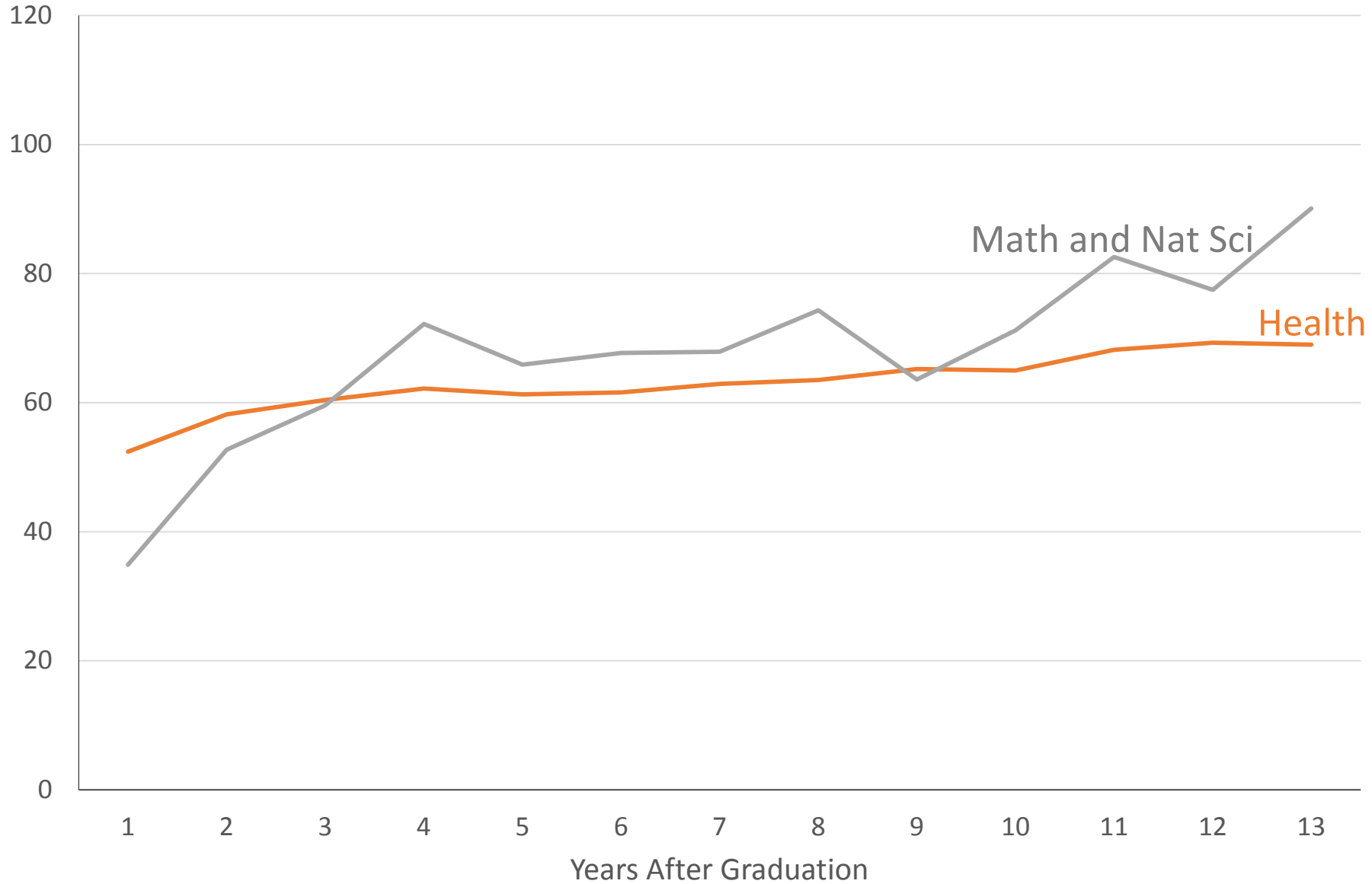
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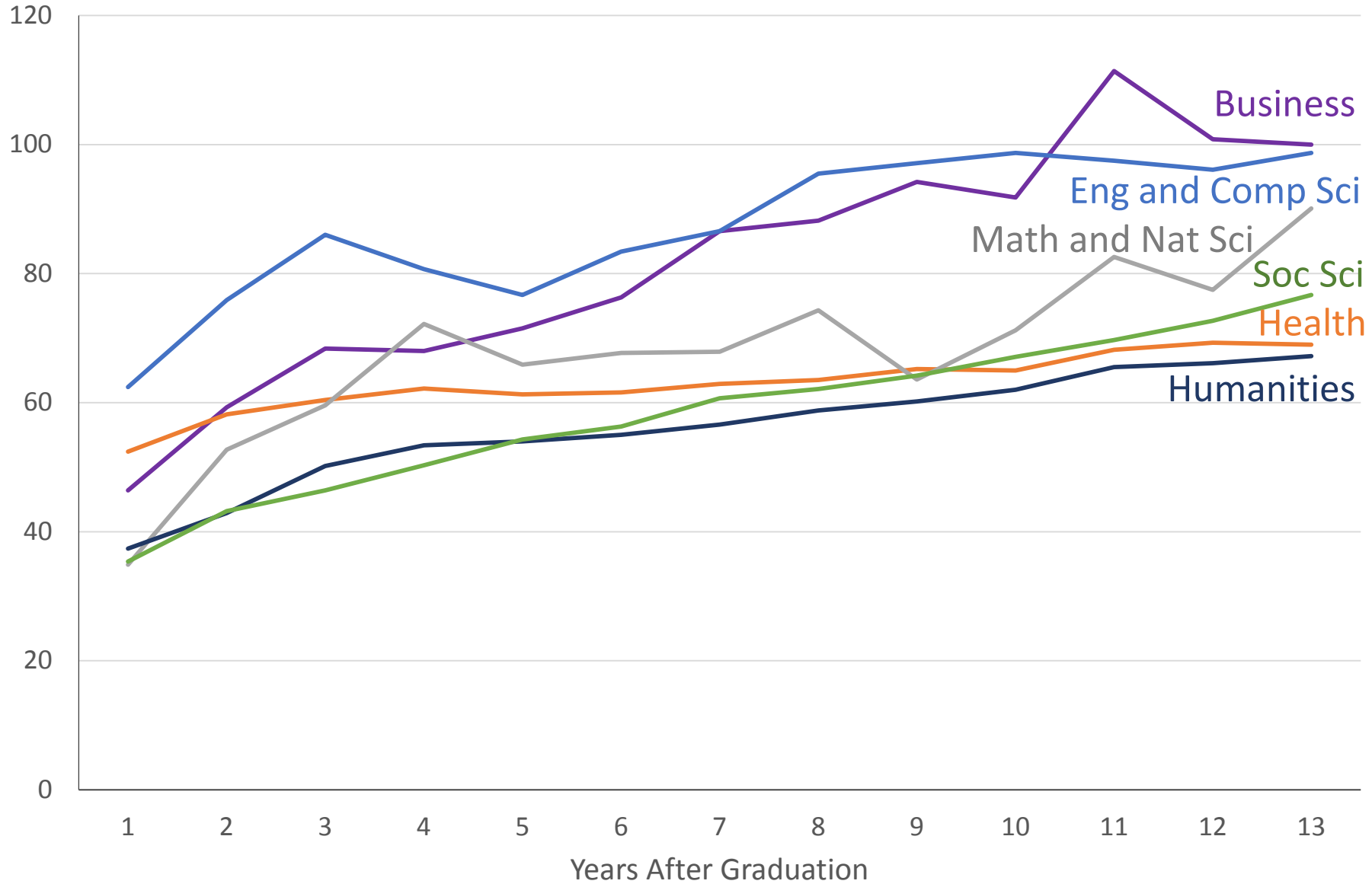
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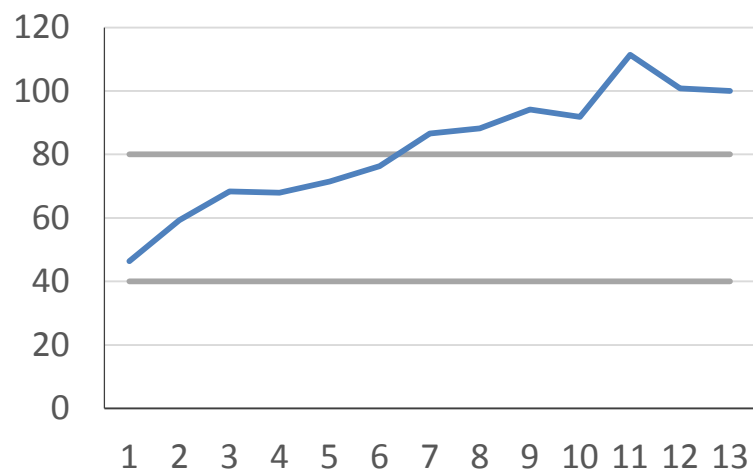


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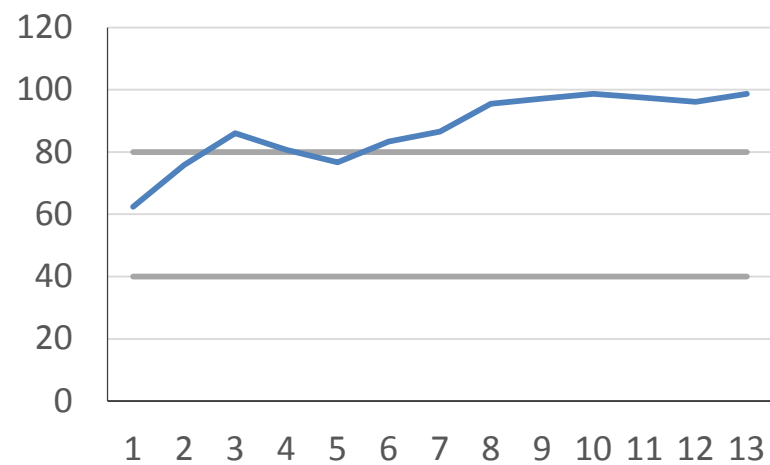


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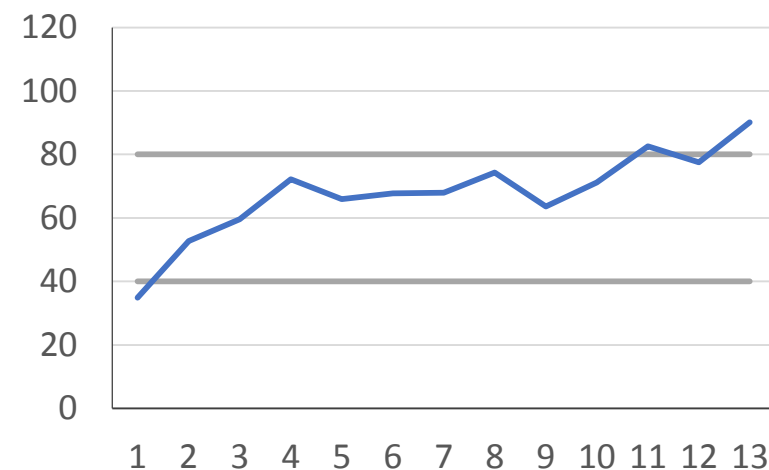
Business



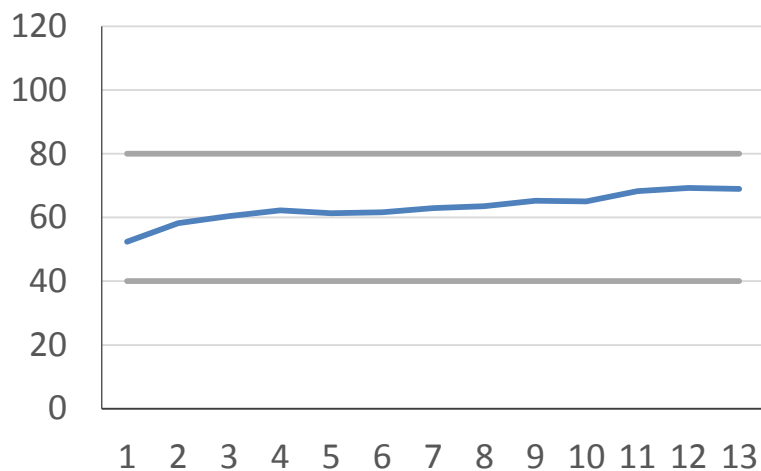
Engineering and Computer Science



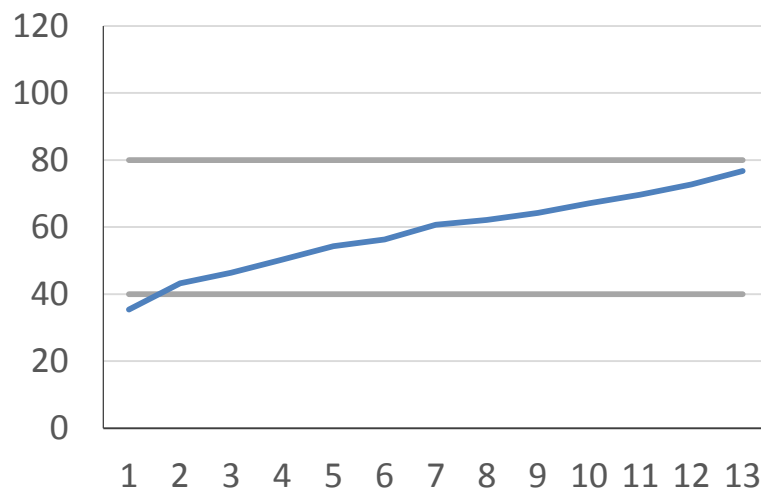
Mathematics and Natural Sciences



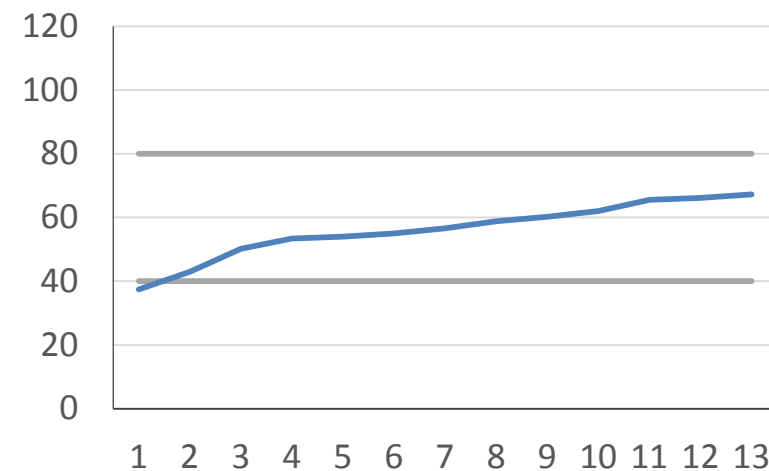
Health



Social Science

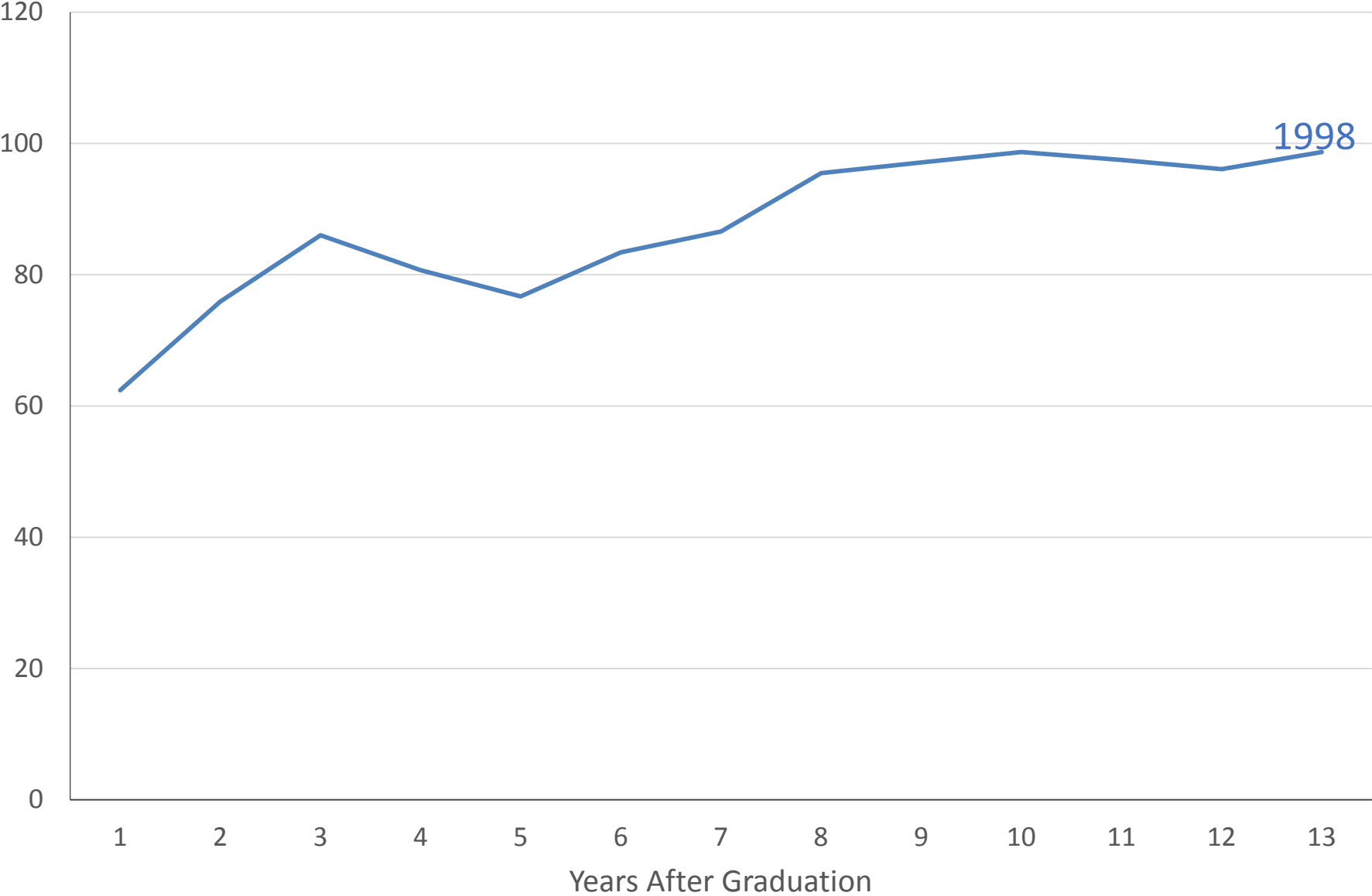


Humanities



All Cohorts

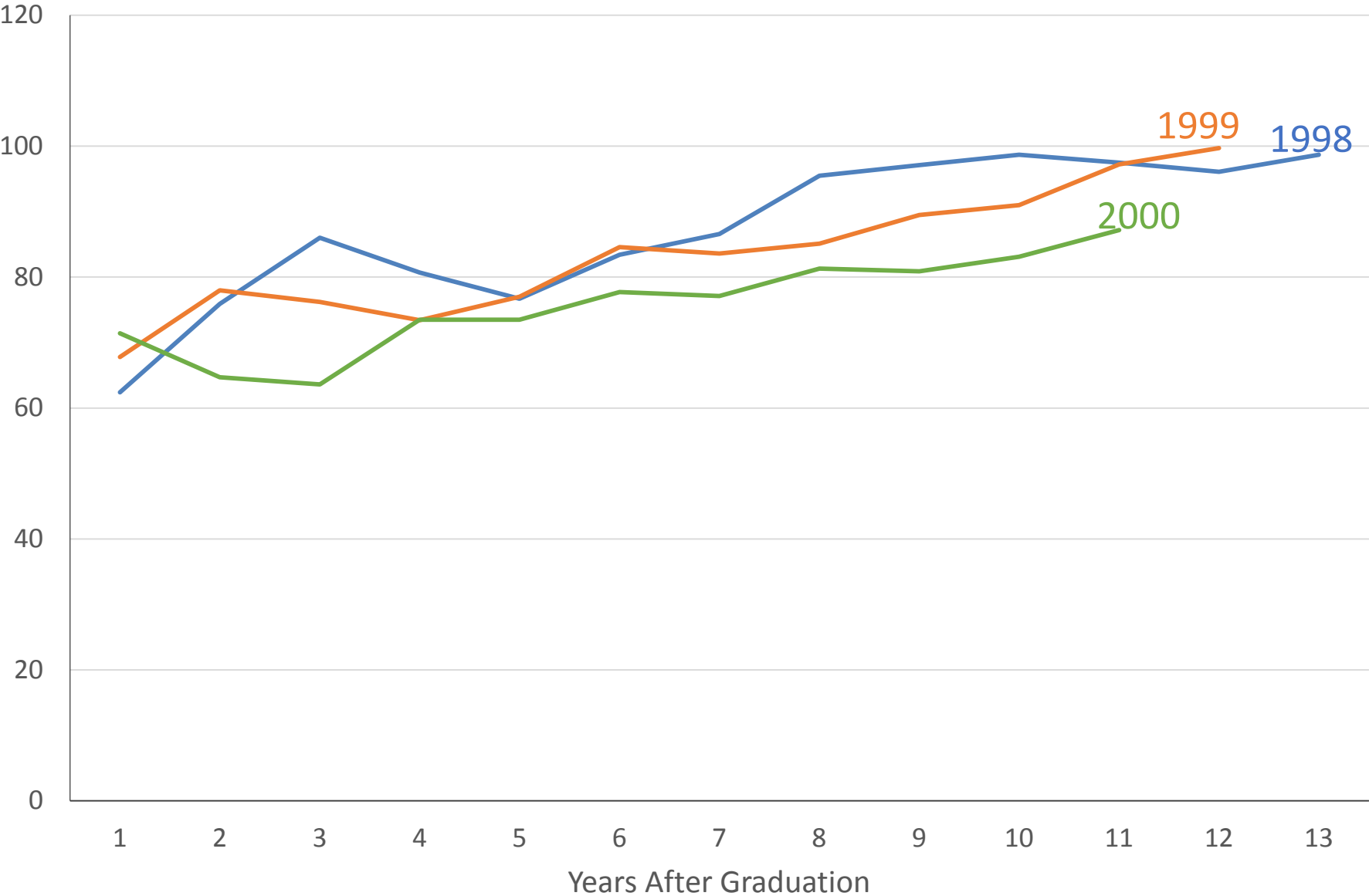
Engineering and Computer Science – All Cohorts



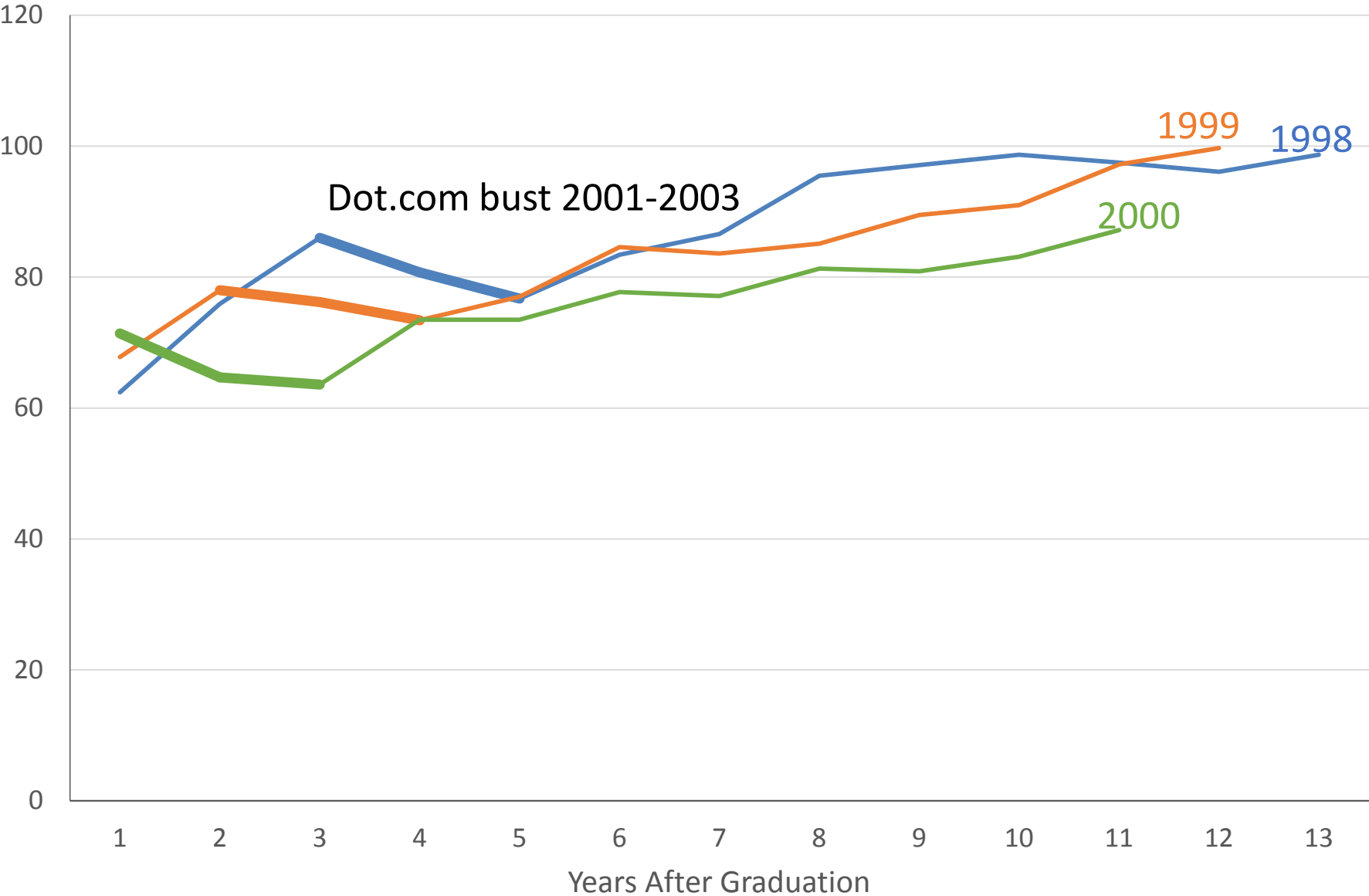
Engineering and Computer Science – All Cohorts



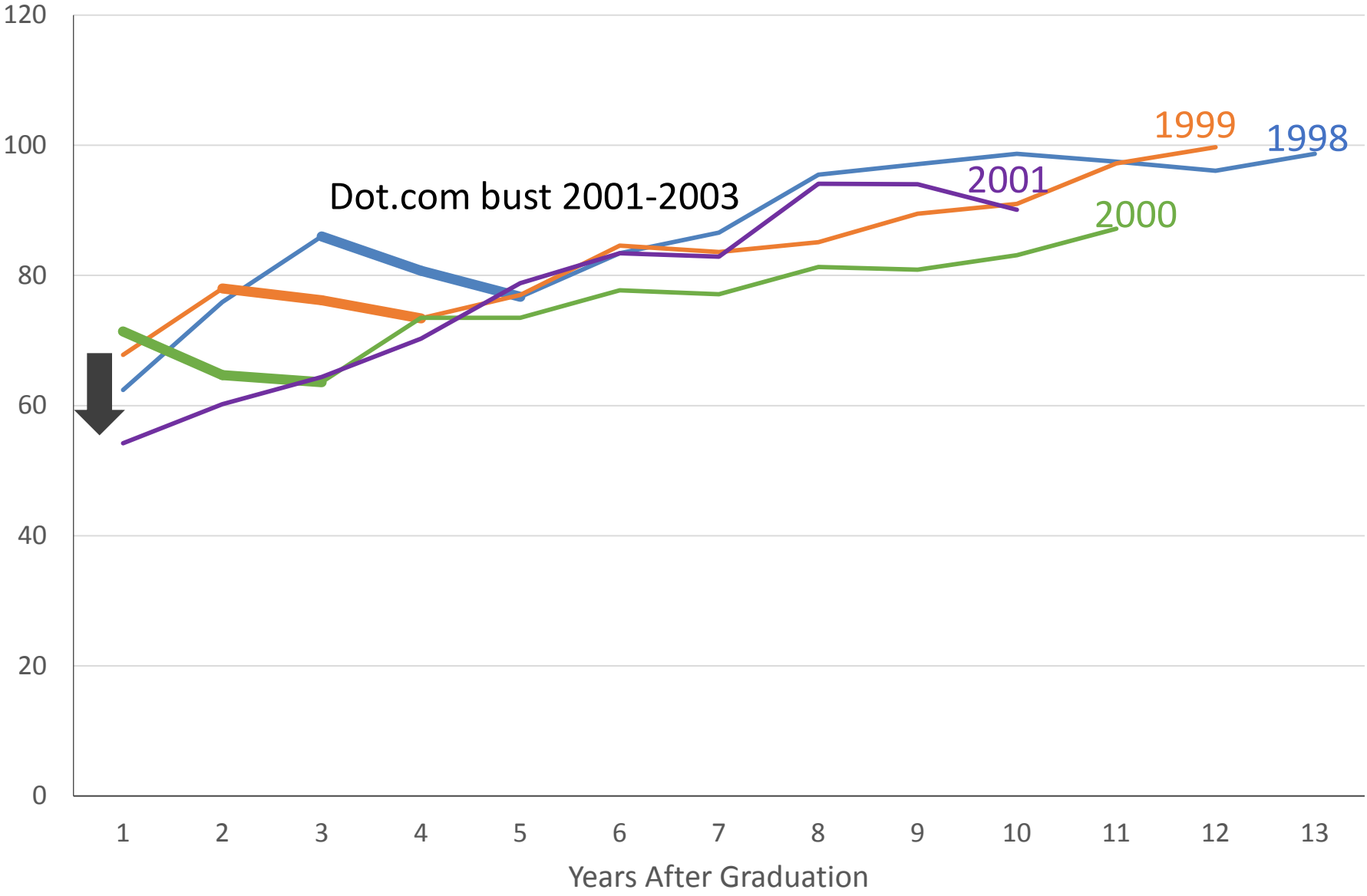
Engineering and Computer Science – All Cohorts



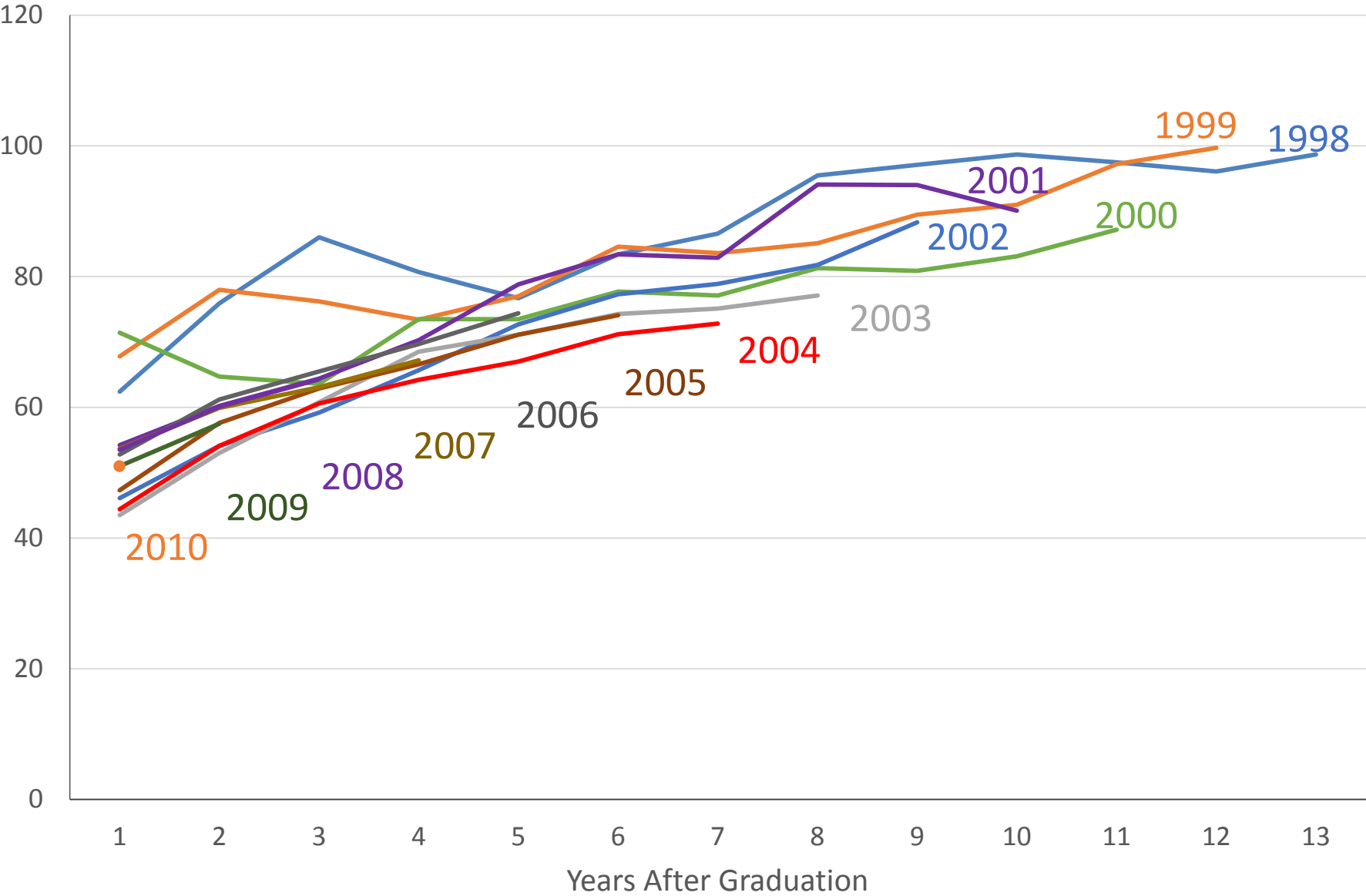
Engineering and Computer Science – All Cohorts



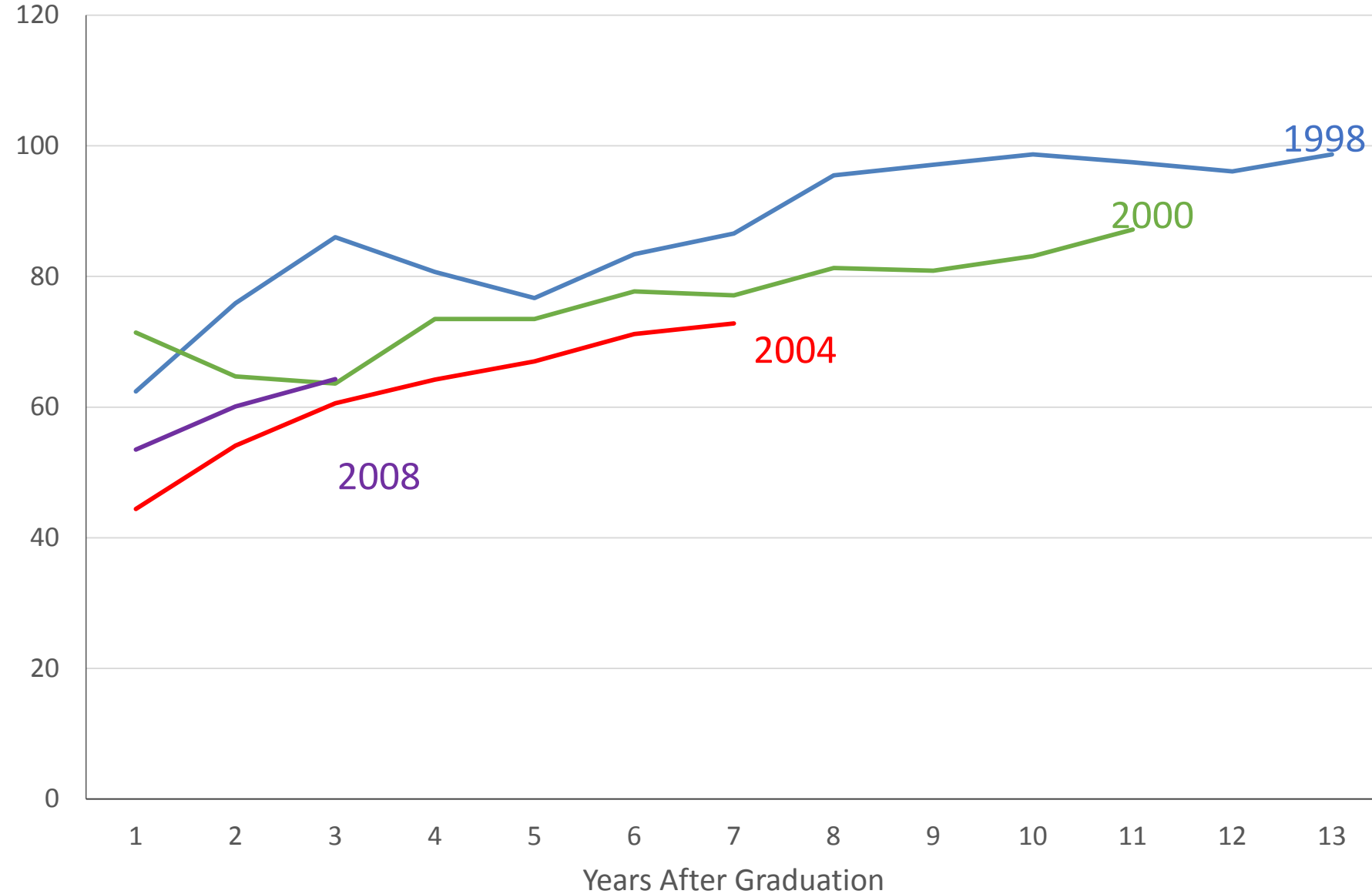
Engineering and Computer Science – All Cohorts



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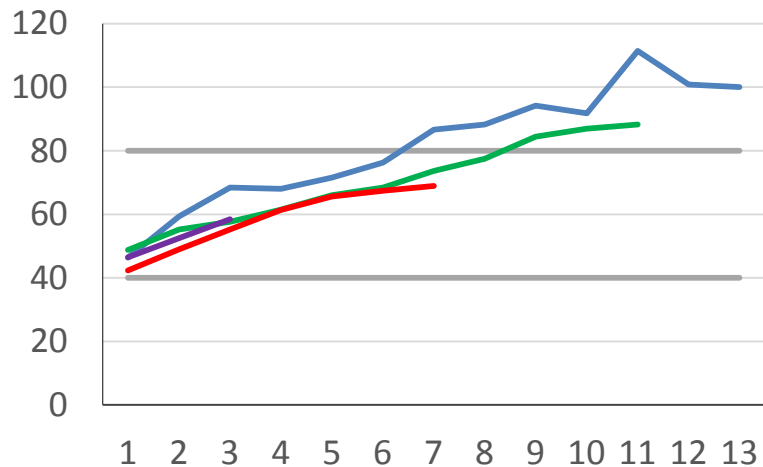


Engineering and Computer Science – Selected Cohorts

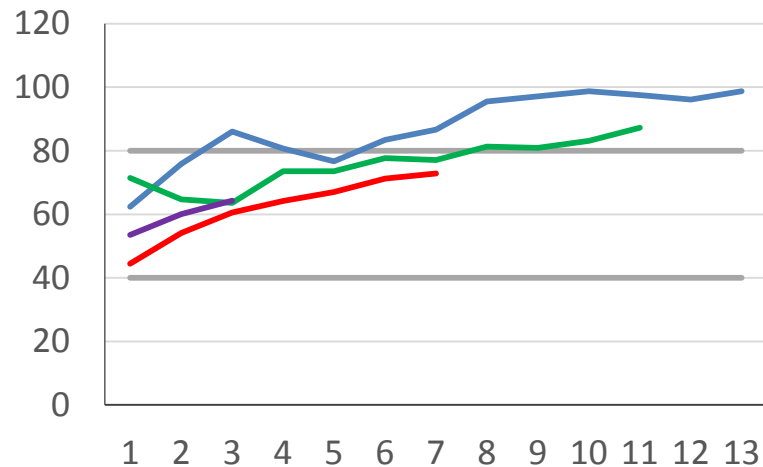


Mean Earnings of Selected Cohorts (\$2011)

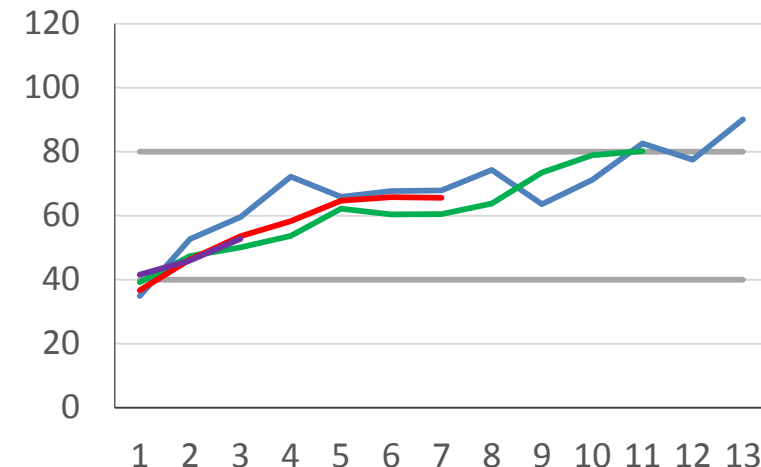
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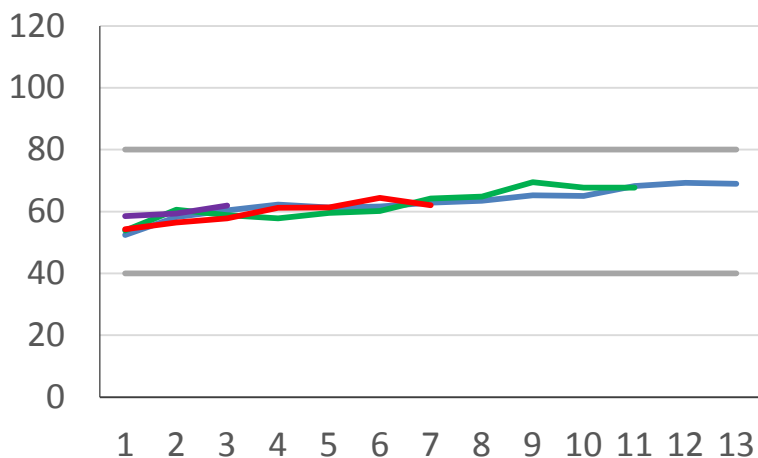
Engineering and Computer Science



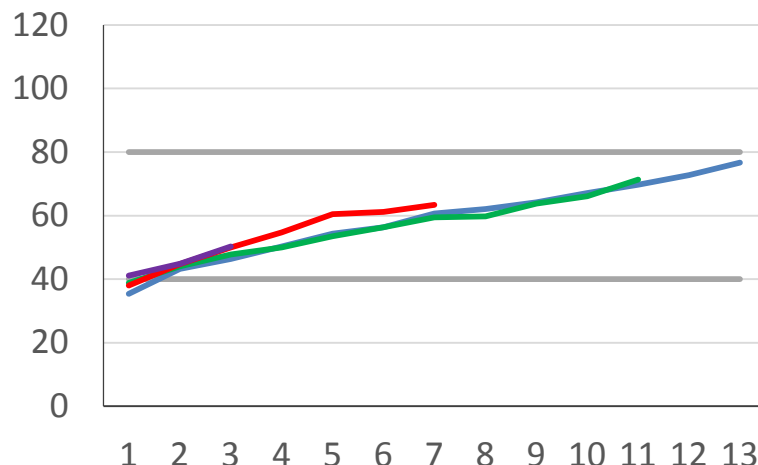
Mathematics and Natural Sciences



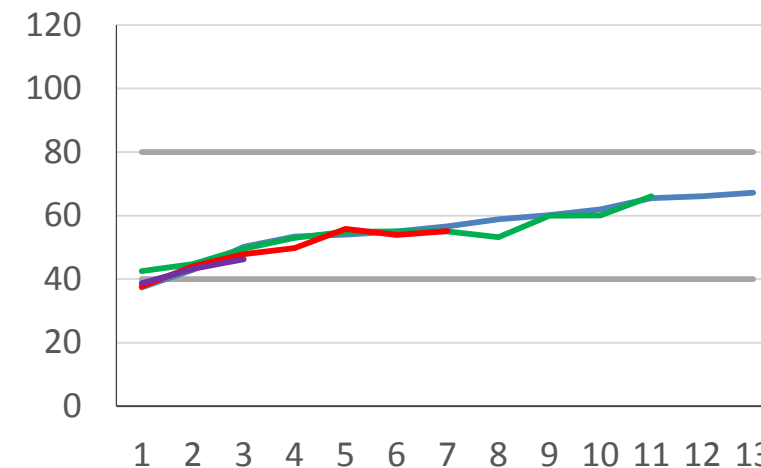
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Social Science

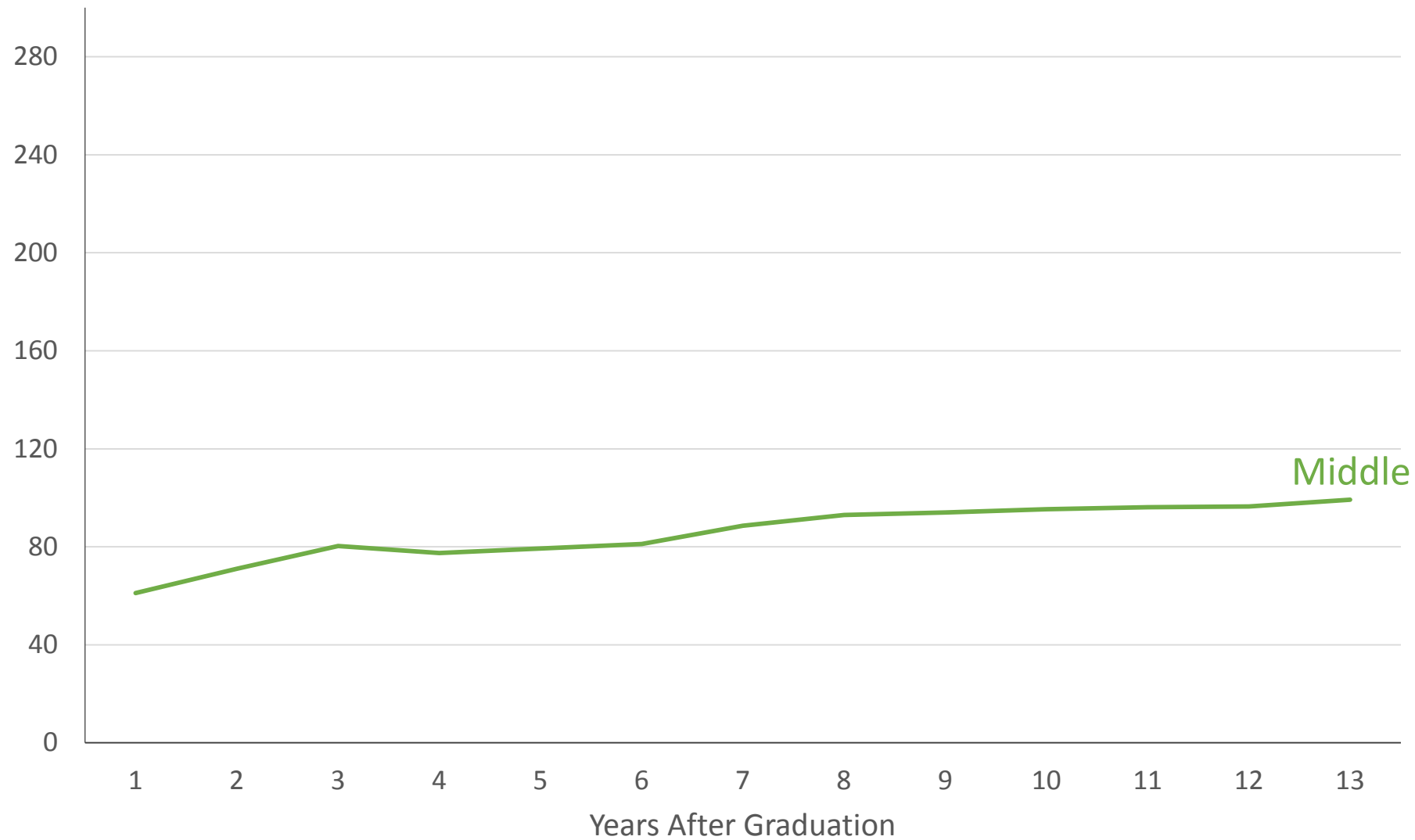


Humanities

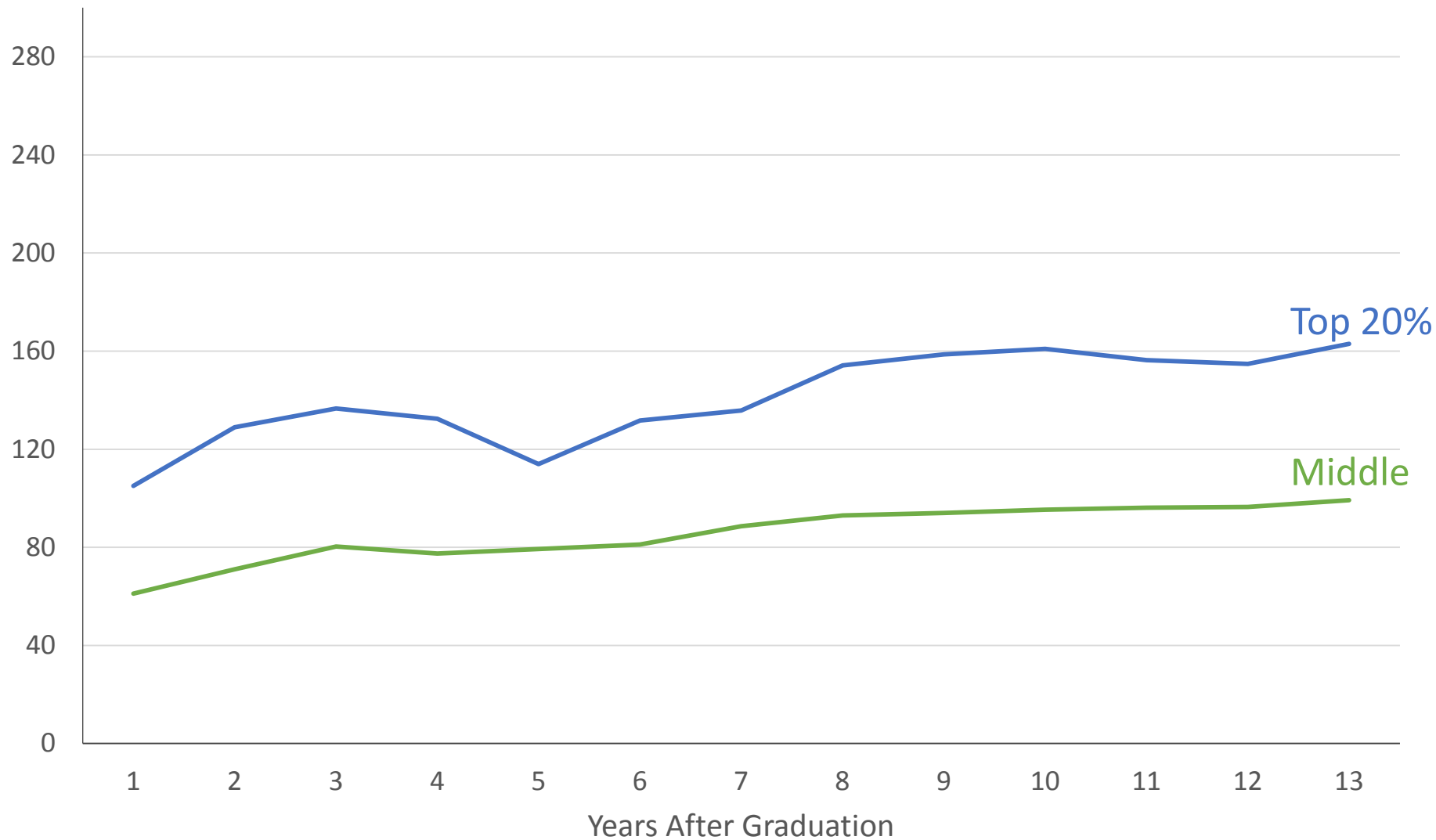


Quintiles

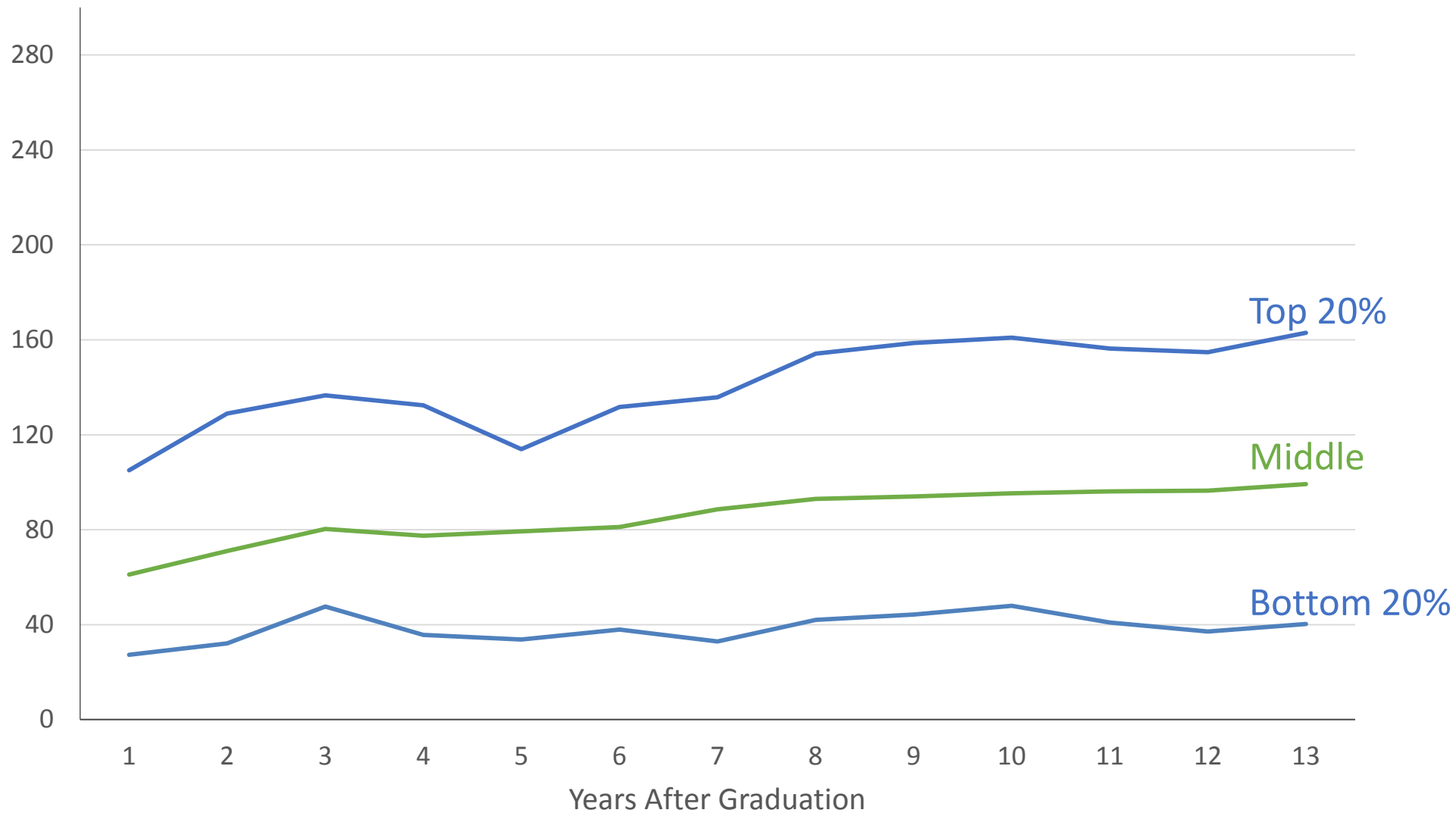
Engineering and Computer Sciences Quintile Means of 1998 Cohort



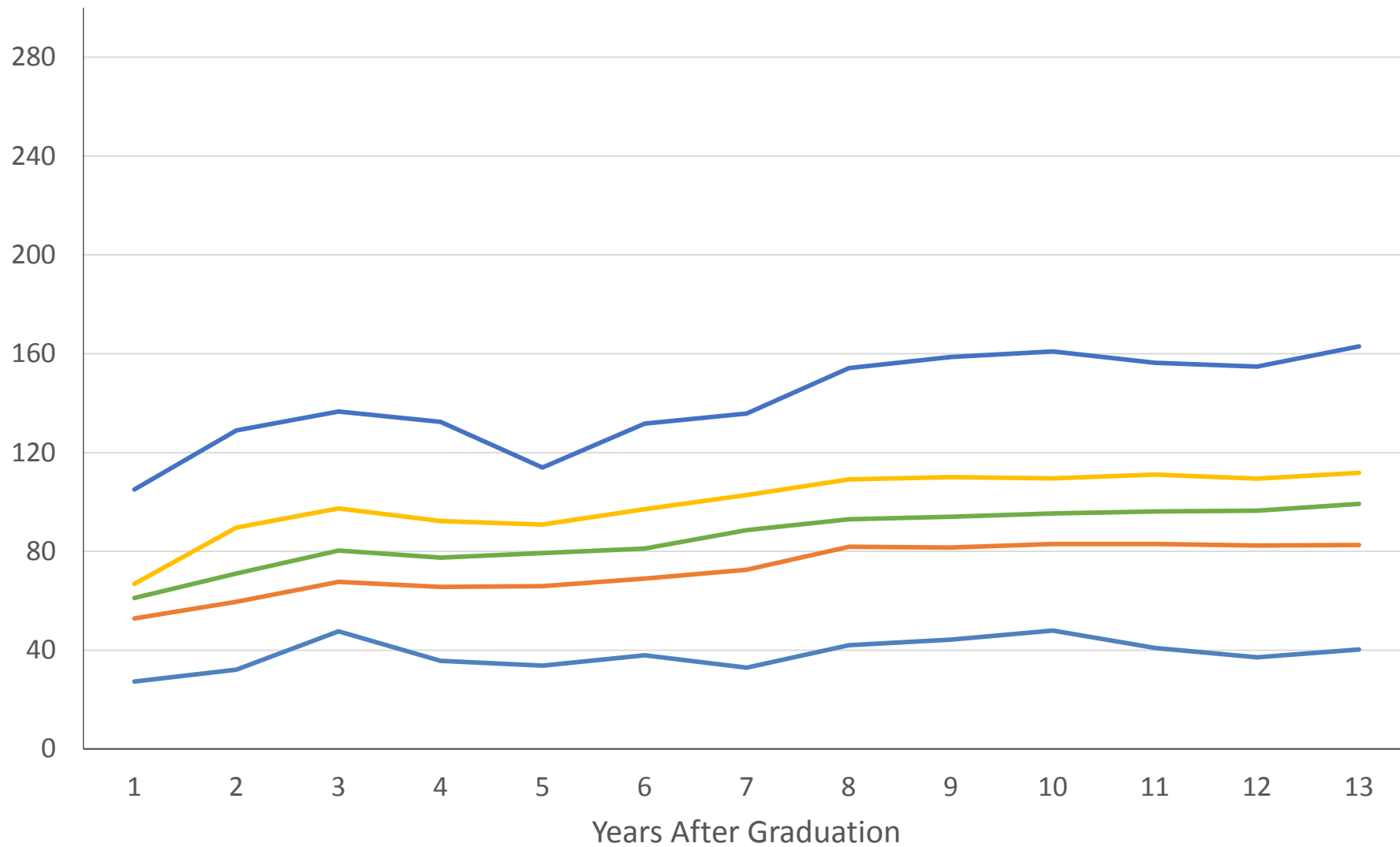
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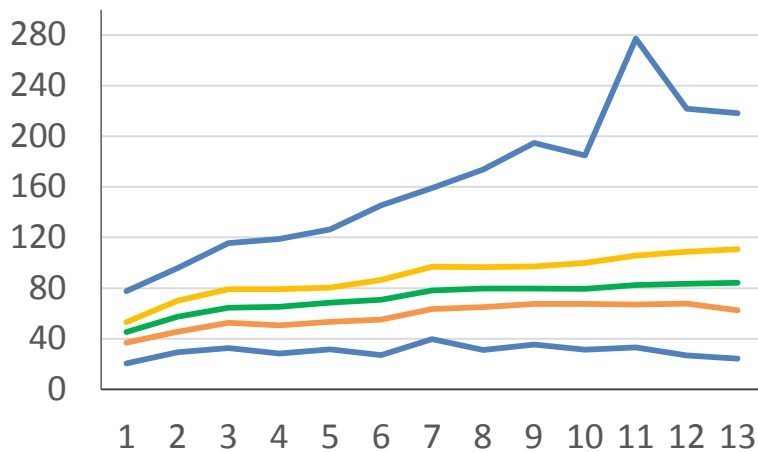


Engineering and Computer Sciences Quintile Means of 1998 Cohort

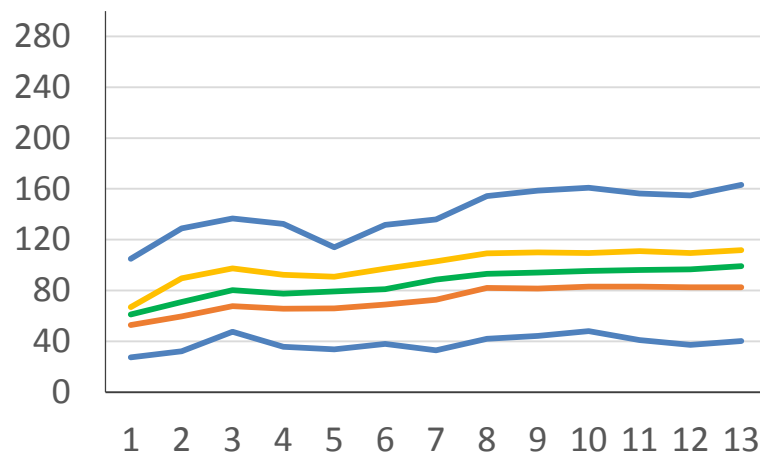


Quintile Means of the 1998 Cohort (\$2011)

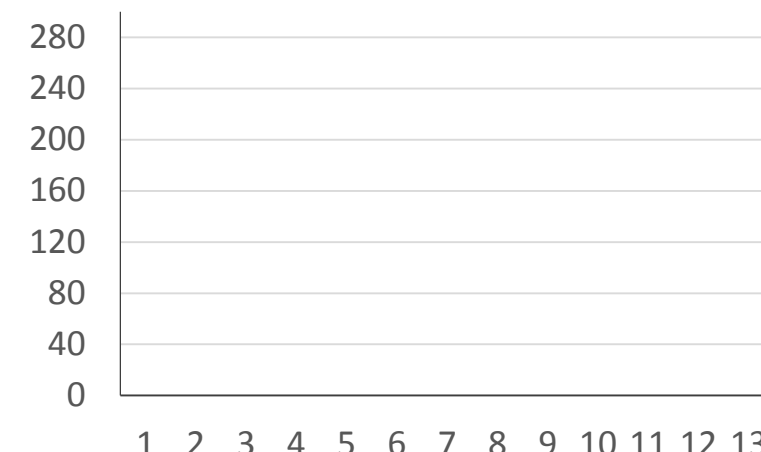
Business



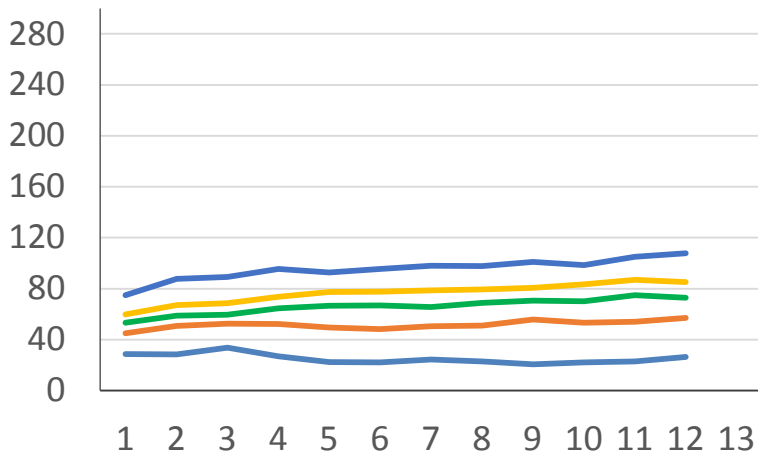
Engineering and Computer Science



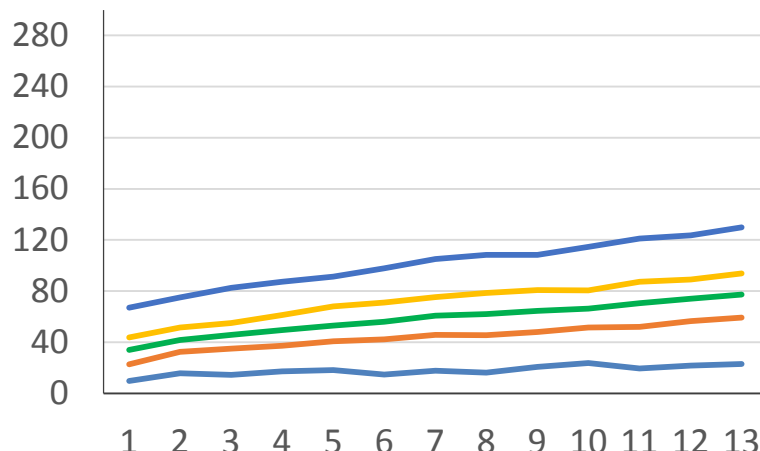
Mathematics and Natural Sciences



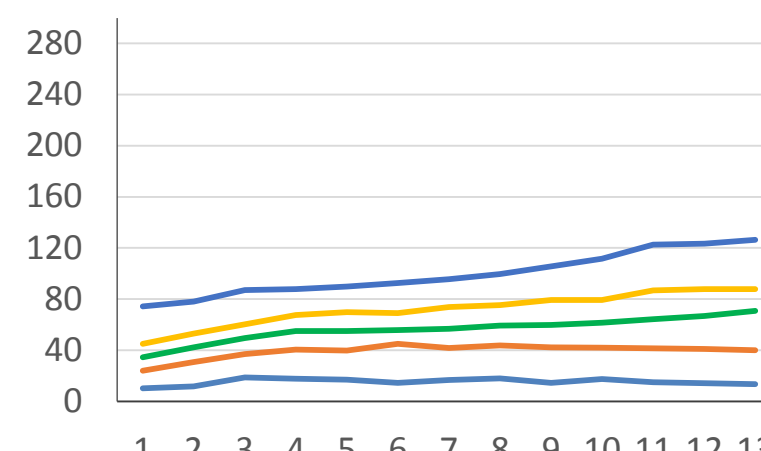
Health



Social Sciences

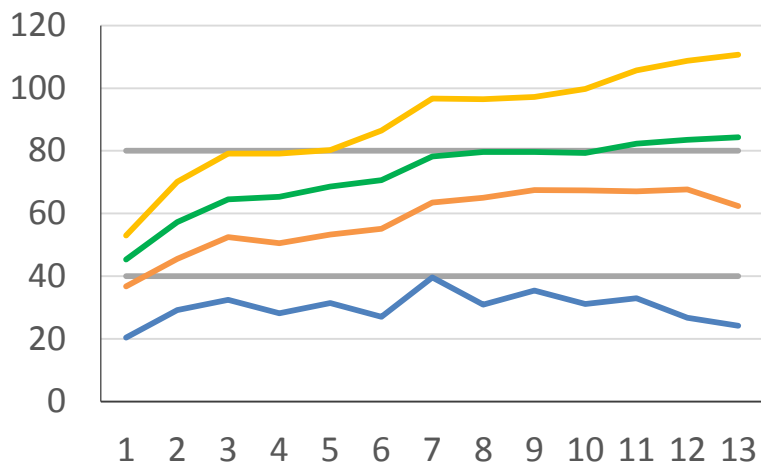


Humanities

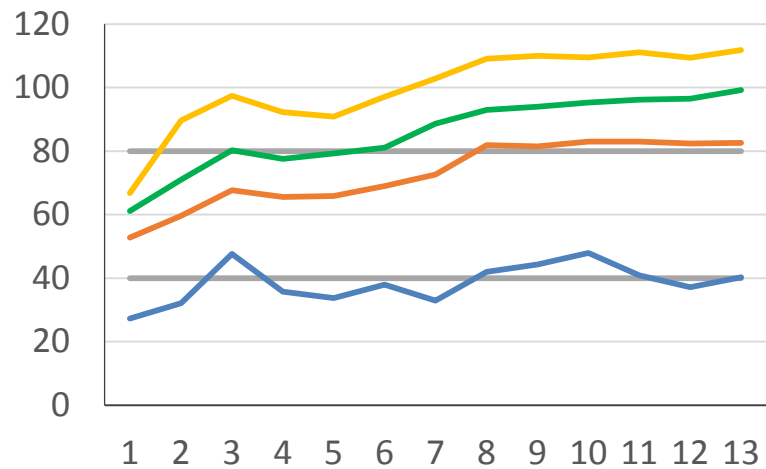


Quintiles 1998 Cohort – No Top Quintile

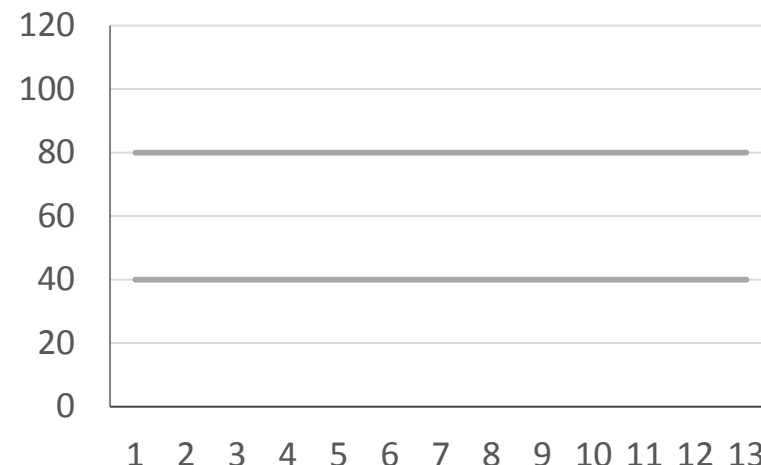
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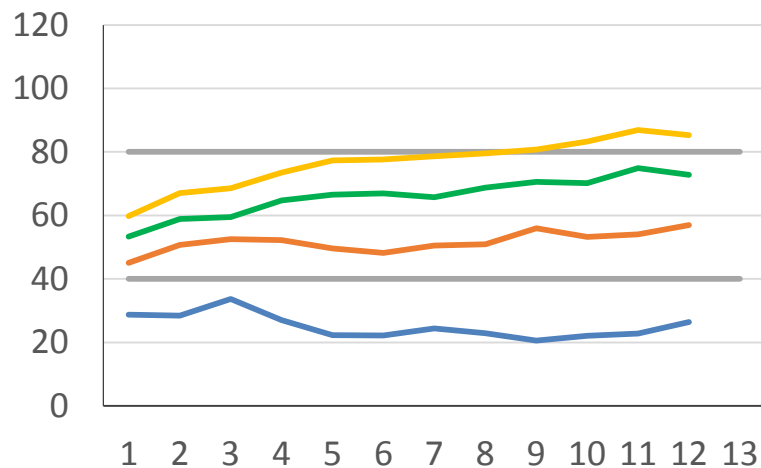
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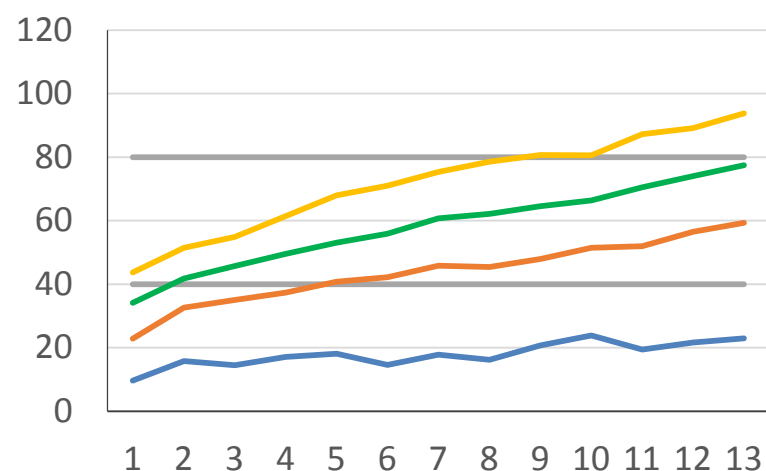
Mathematics and Natural Sciences



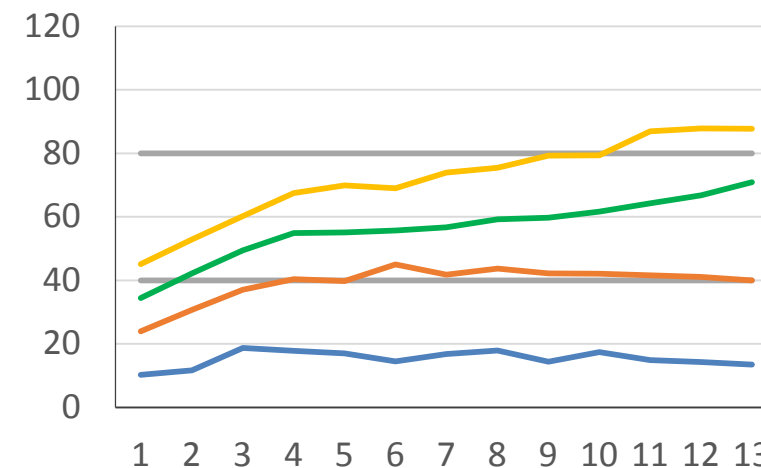
Health



Social Sciences

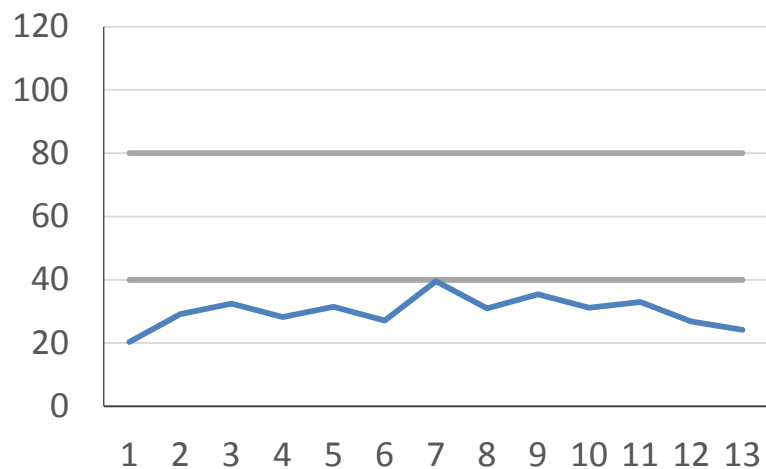


Humanities

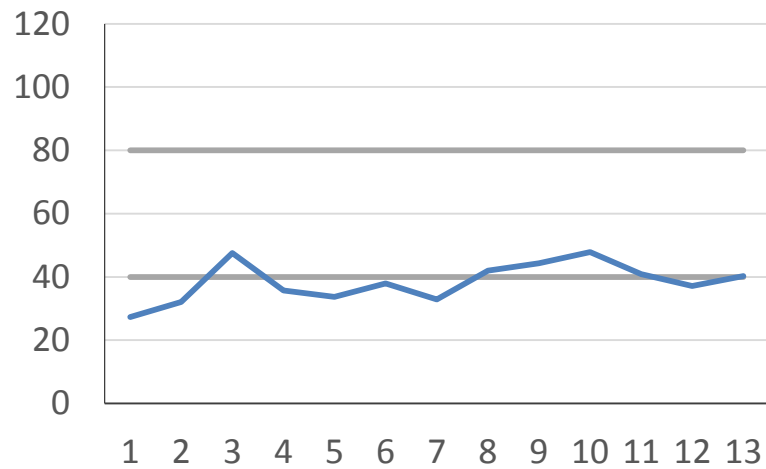


Quintiles 1998 Cohort – Lowest Quintile

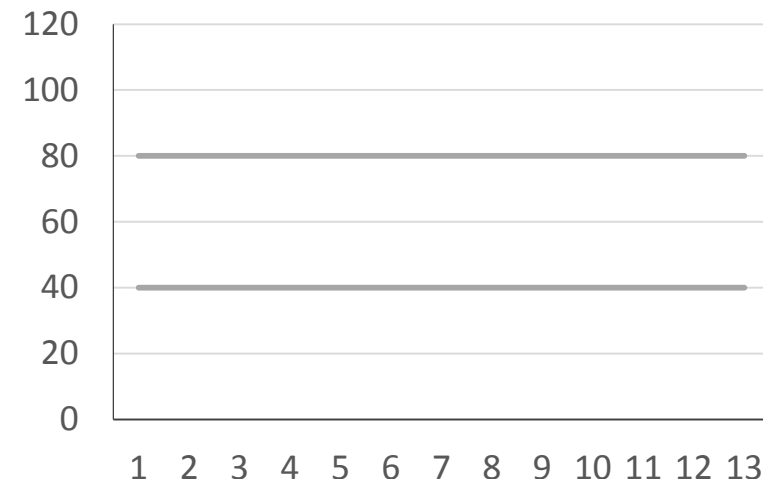
Business



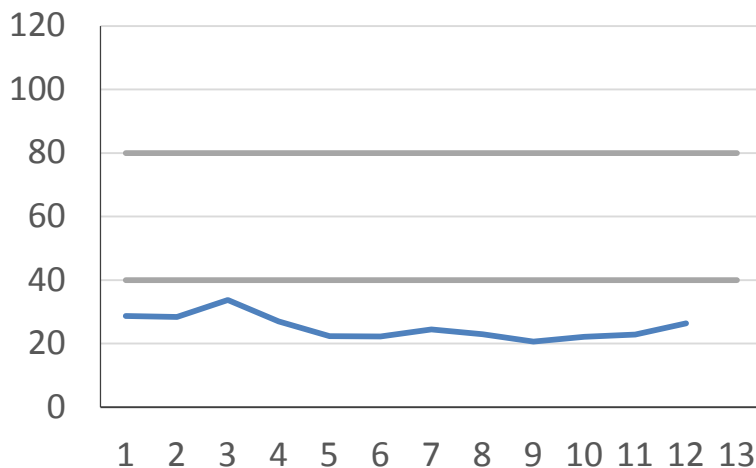
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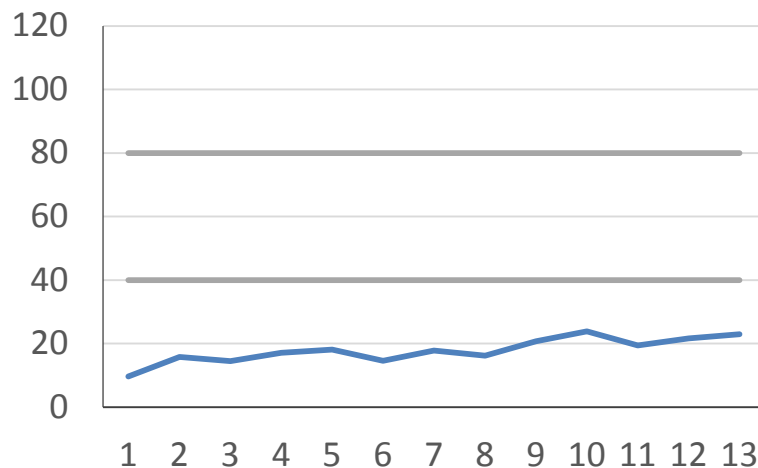
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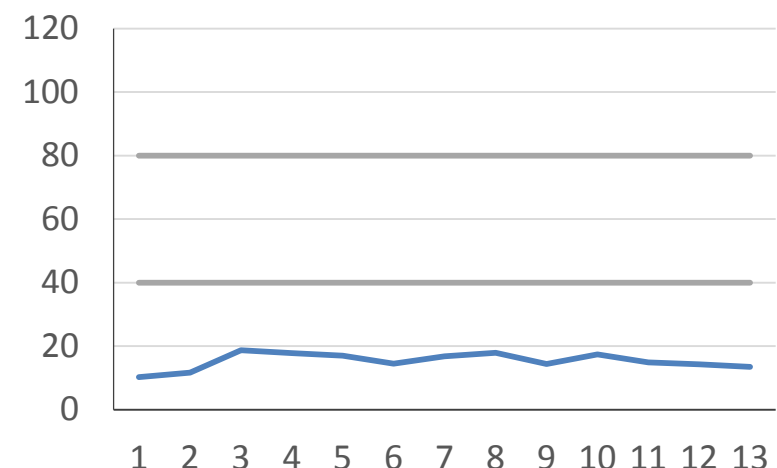
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Social Sciences



Humanities



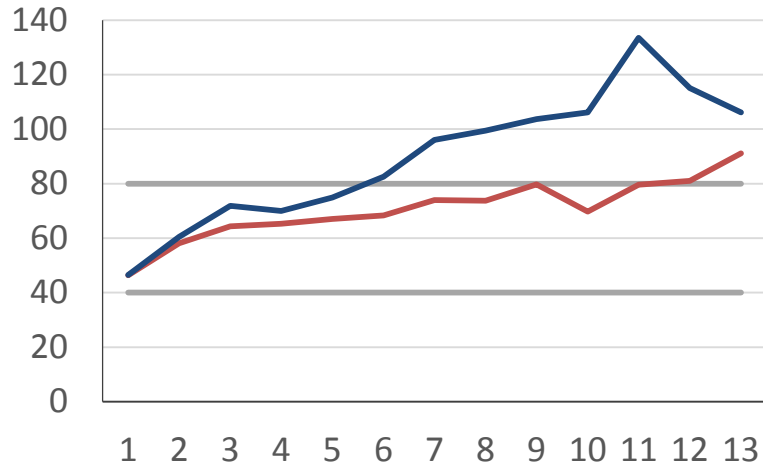
Gender Comparisons

Engineering and Computer Sciences Mean Earnings of 1998 Cohort

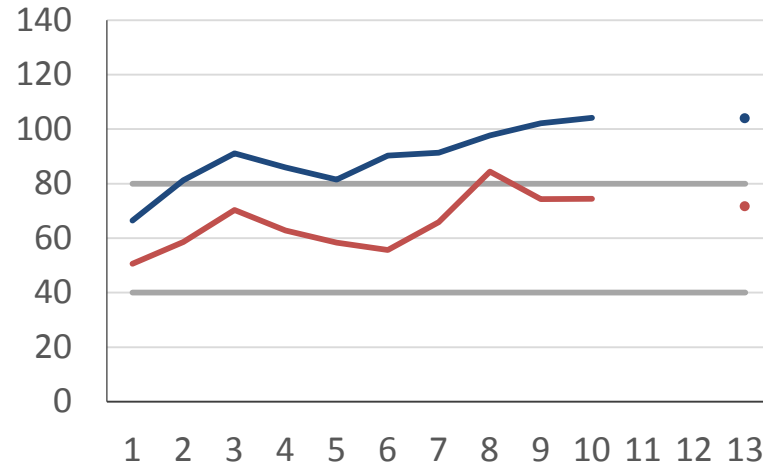


Earnings by Gender of the 1998 Cohort (\$2011)

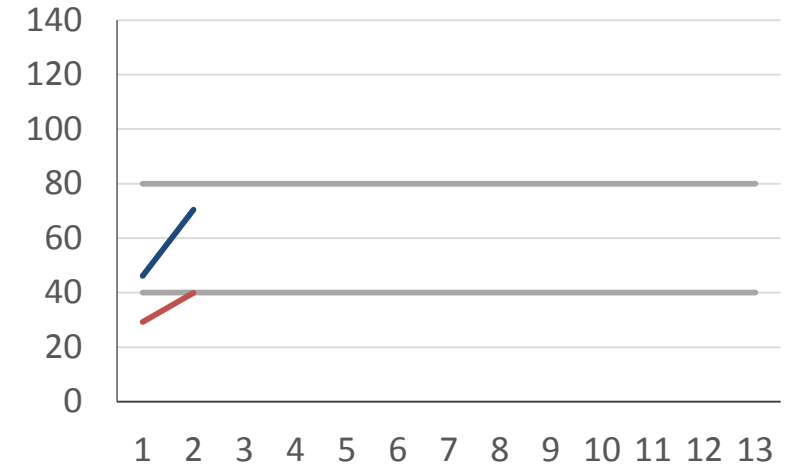
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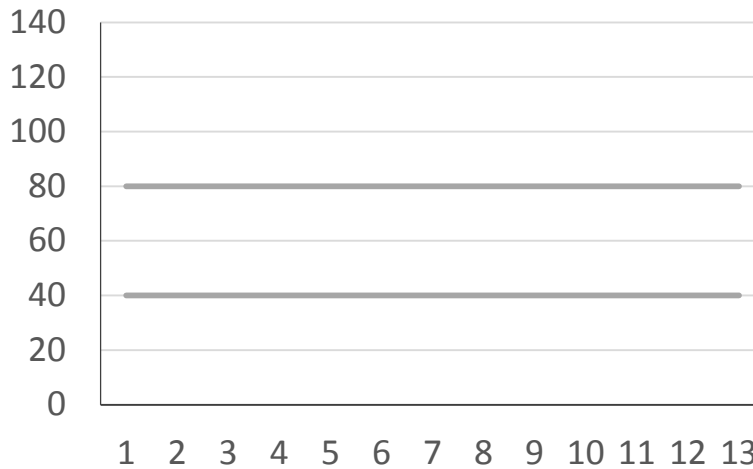
Engineering and Computer Science



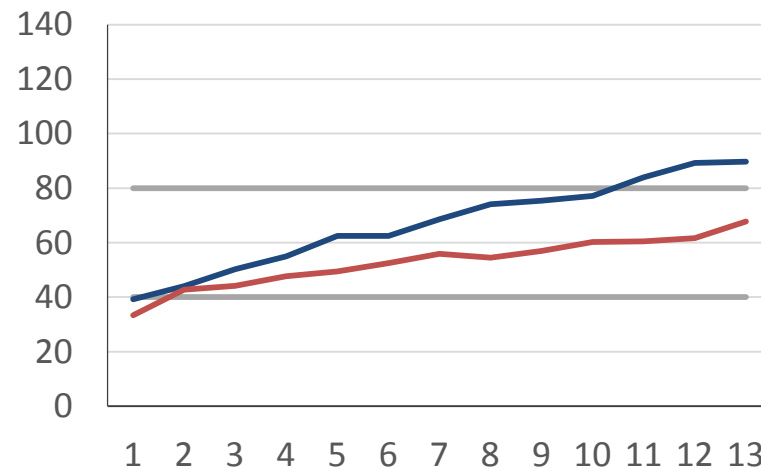
Mathematics and Natural Sciences



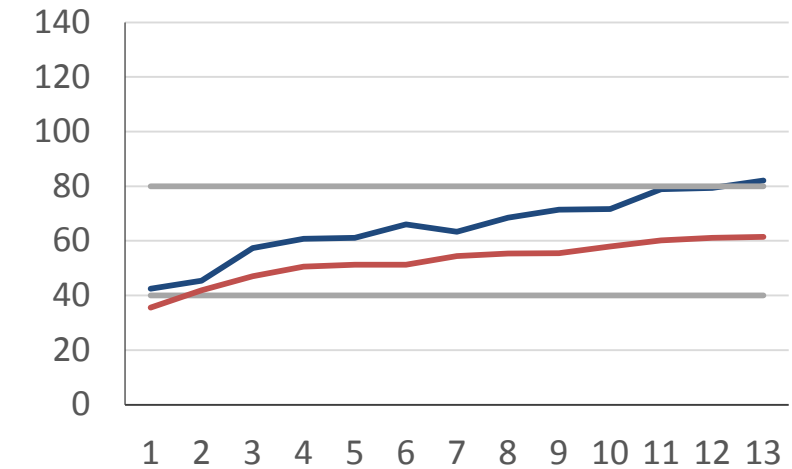
Health



Social Science

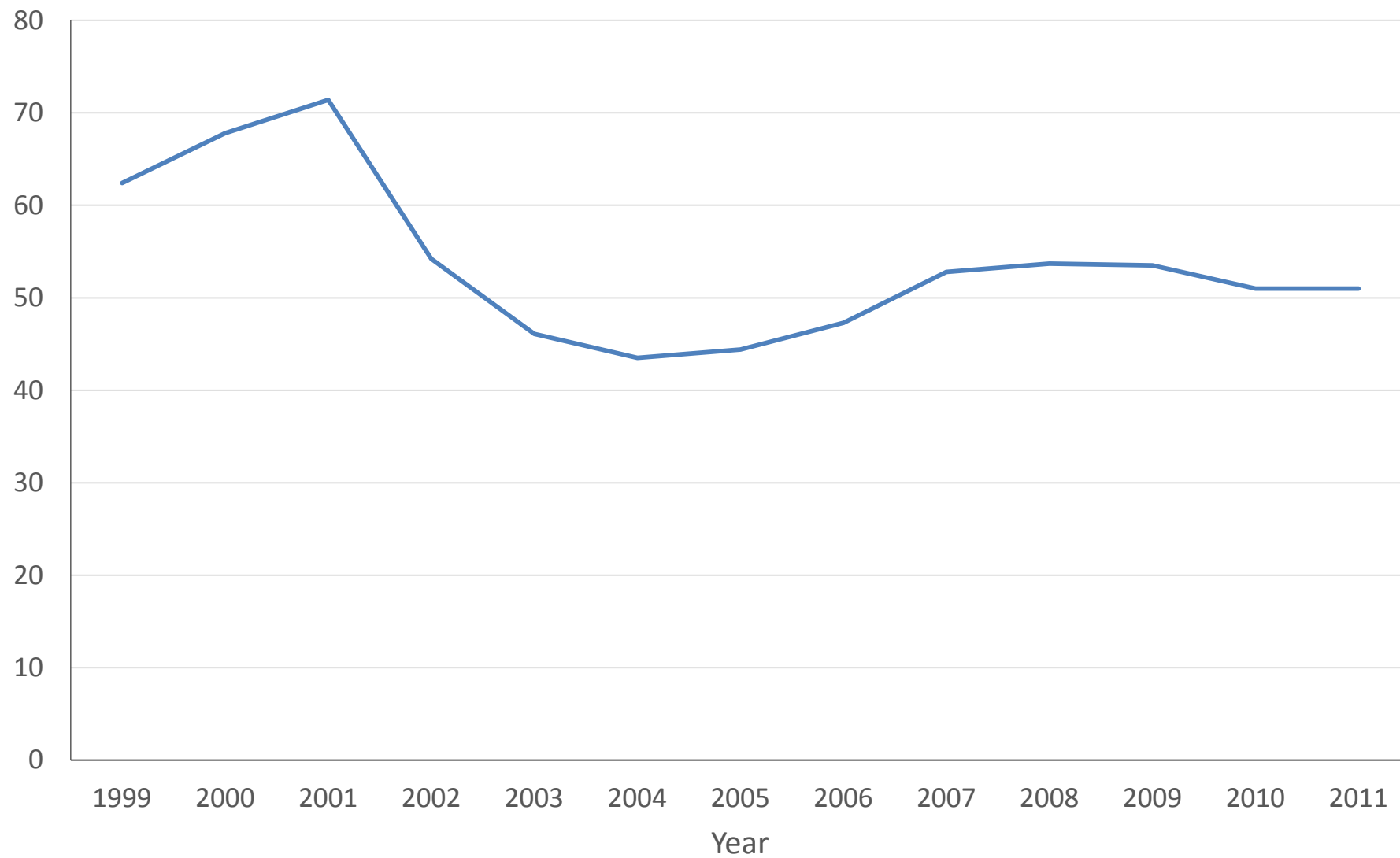


Humanities

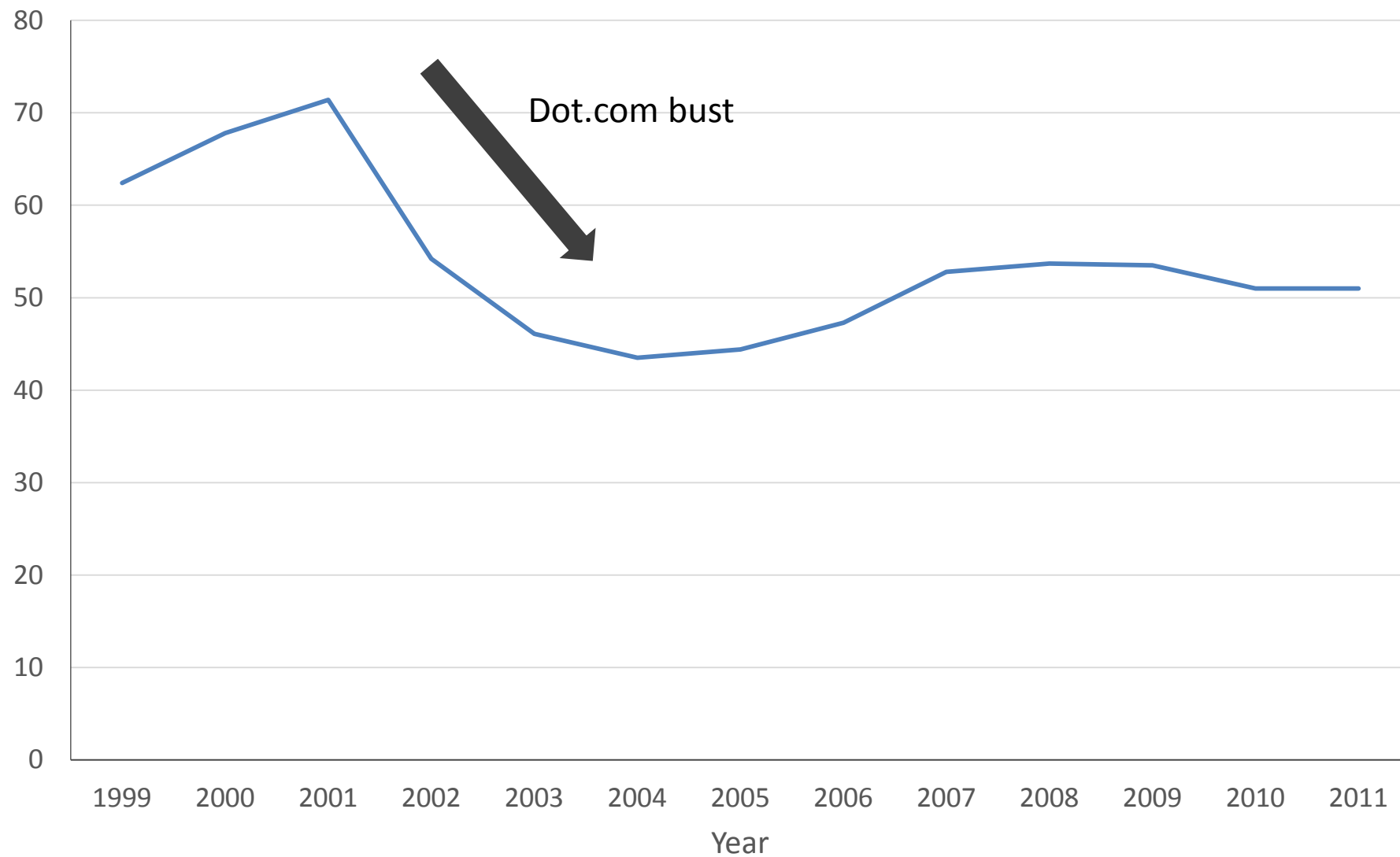


First Year Earnings

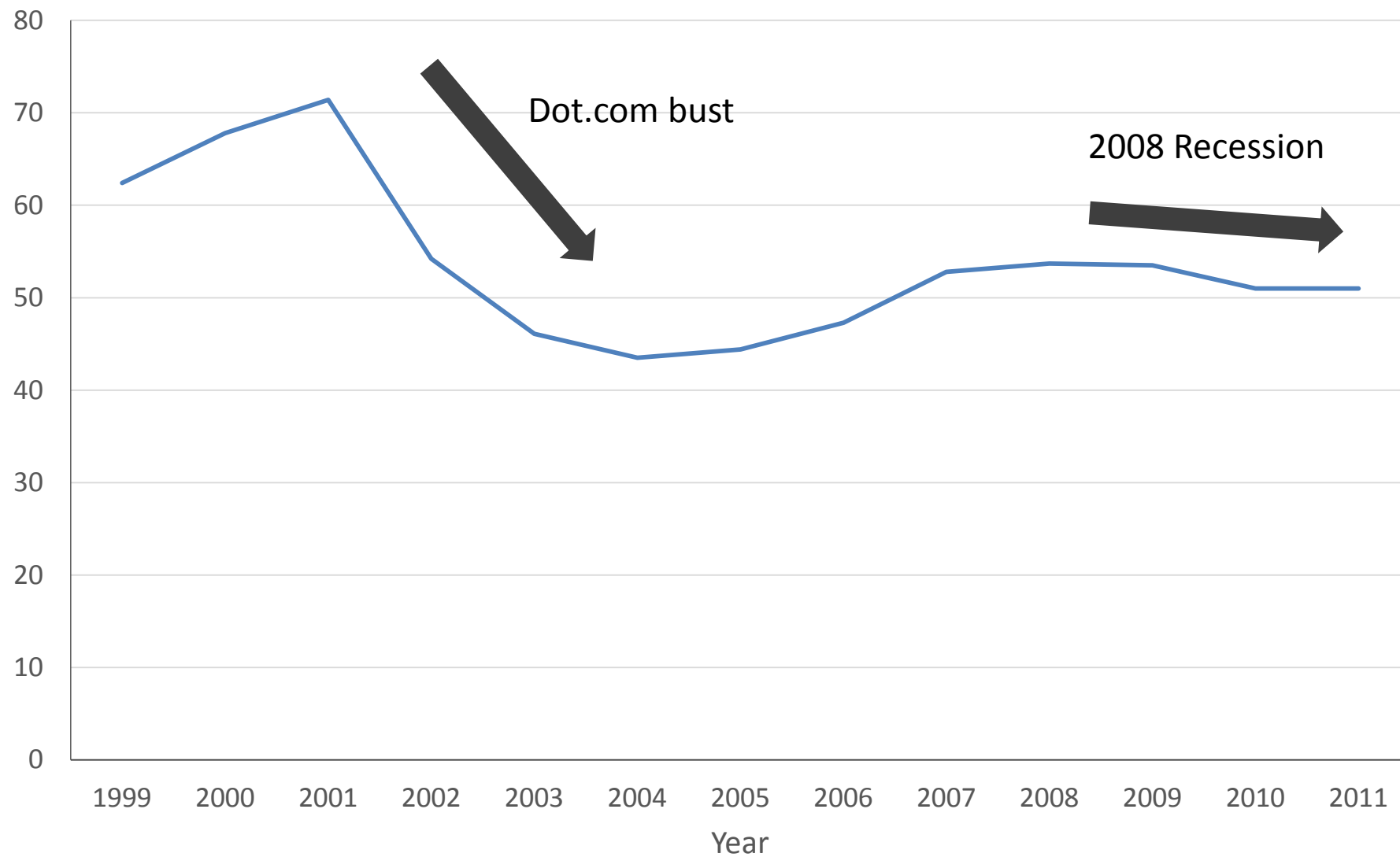
First Year Earnings Engineering and Computer Sciences



First Year Earnings Engineering and Computer Sciences

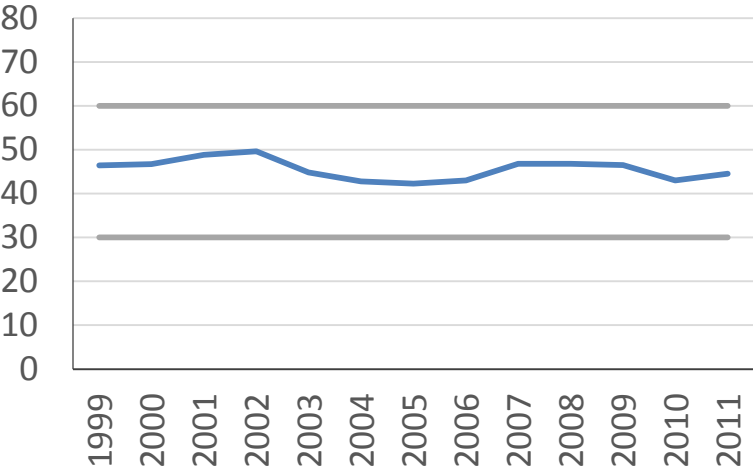


First Year Earnings Engineering and Computer Sciences

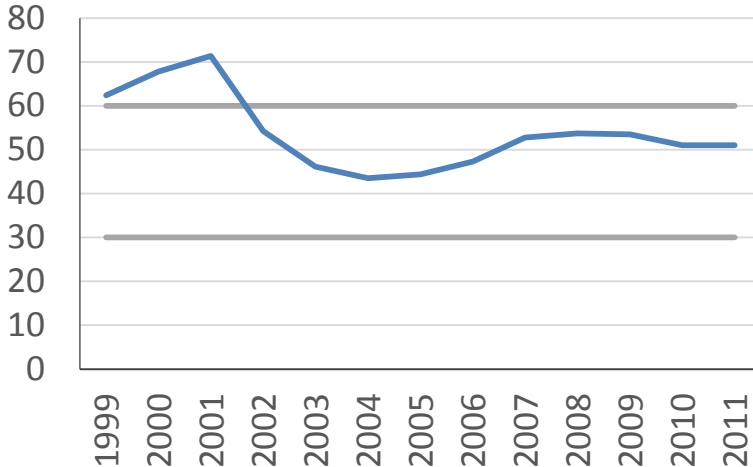


First Year Earnings (\$2011)

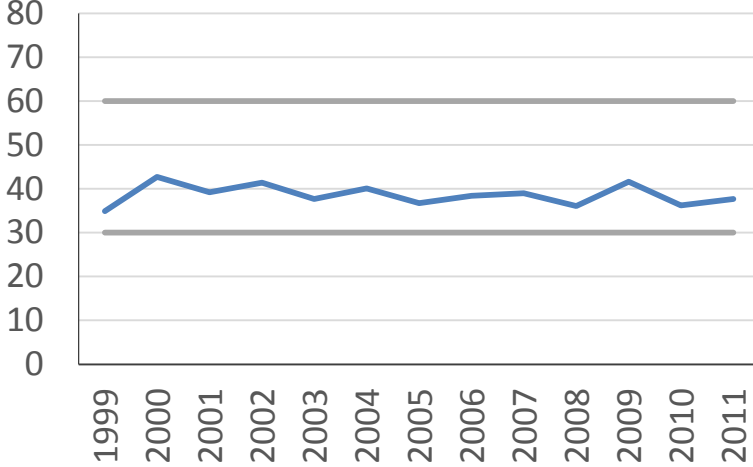
Business



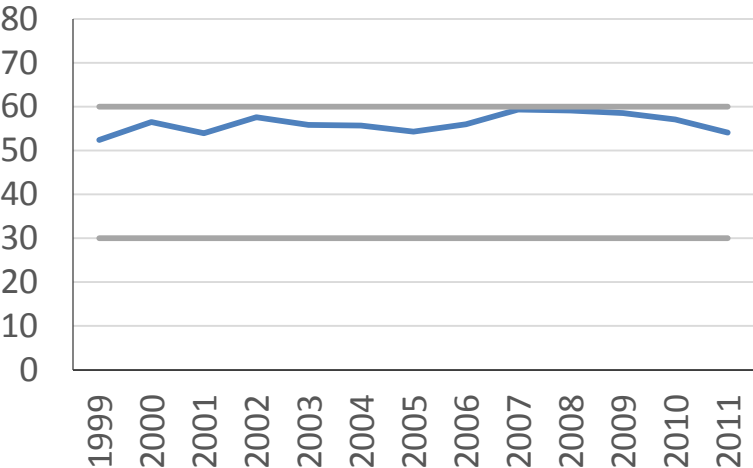
Engineering and Computer Science



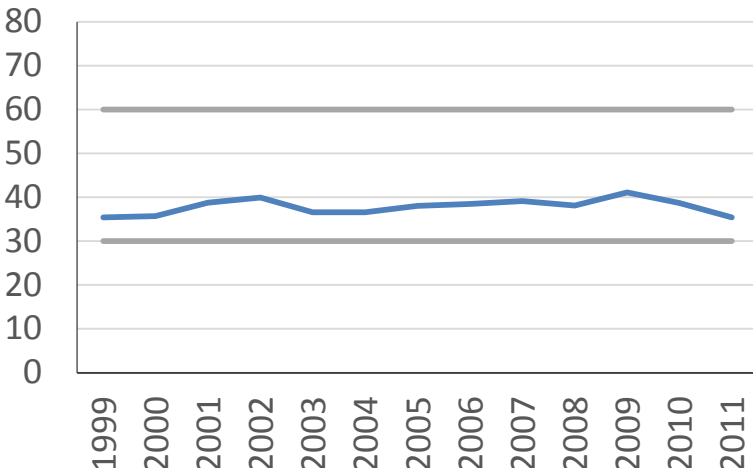
Mathematics and Natural Sciences



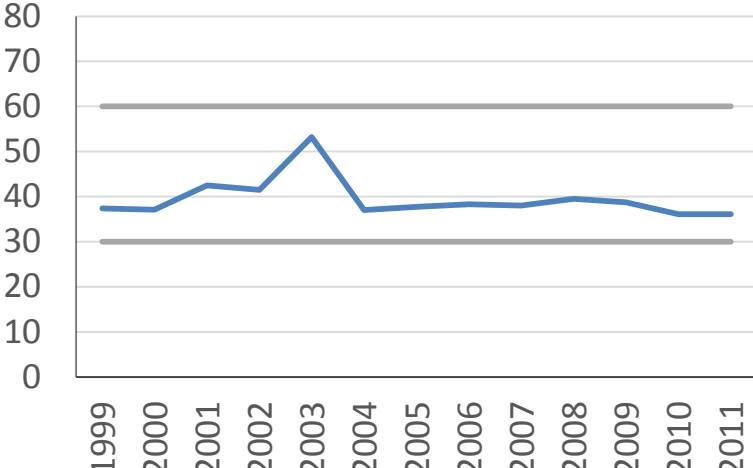
Health



Social Science



Humanities



Next Steps 1 – uOttawa Data Alone

- Student performance (PSE and HS grades) and earnings
- Specific experiences: co-op/transfers/particular courses
- Specific groups: aboriginal/immigrant/international
- Earnings dynamics at the individual level
- Other outcome measures, other samples,. etc.

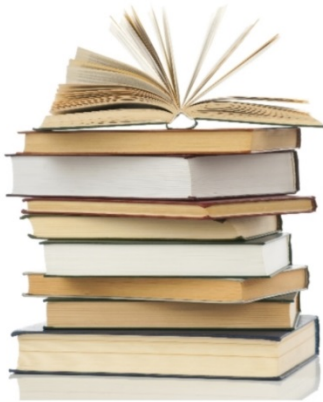
Next Steps 2 – Adding Institutions (Current Planning)

- Larger sample sizes
- Regional comparisons
- Breakdowns at a more detailed program level
- Meaningful employment rates
- And much more...



uOttawa

L'Université canadienne
Canada's university



EPRI

Education Policy
Research Initiative

Initiative de recherche sur les politiques de l'éducation

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Director, Education Policy Research Initiative

Professor, Graduate School of Public and International Affairs

University of Ottawa