



Industry/University
Cooperative Research
Centers

IUCRC Program Findings from the Center Structure Database

DRAFT RESULTS: FY2014-2015

*Data collected from 73 out of 73 total active centers

Trends from Center Structure Database: 1980-2015

*Leonchuk, L., McGowen, L.C., & Gray, D.O.
North Carolina State University*



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Overview

- Data collection methodology and timeframe
- Number of Centers through 2015-2016
 - Slides 10
- Detailed analyses through 2014-2015 (structural, process, outcome)
 - Slides 11-35
- CISE and ENG breakdowns
 - Slides 36-43
- Comparison by program Phase (I, II, III)
 - Slides 44-56



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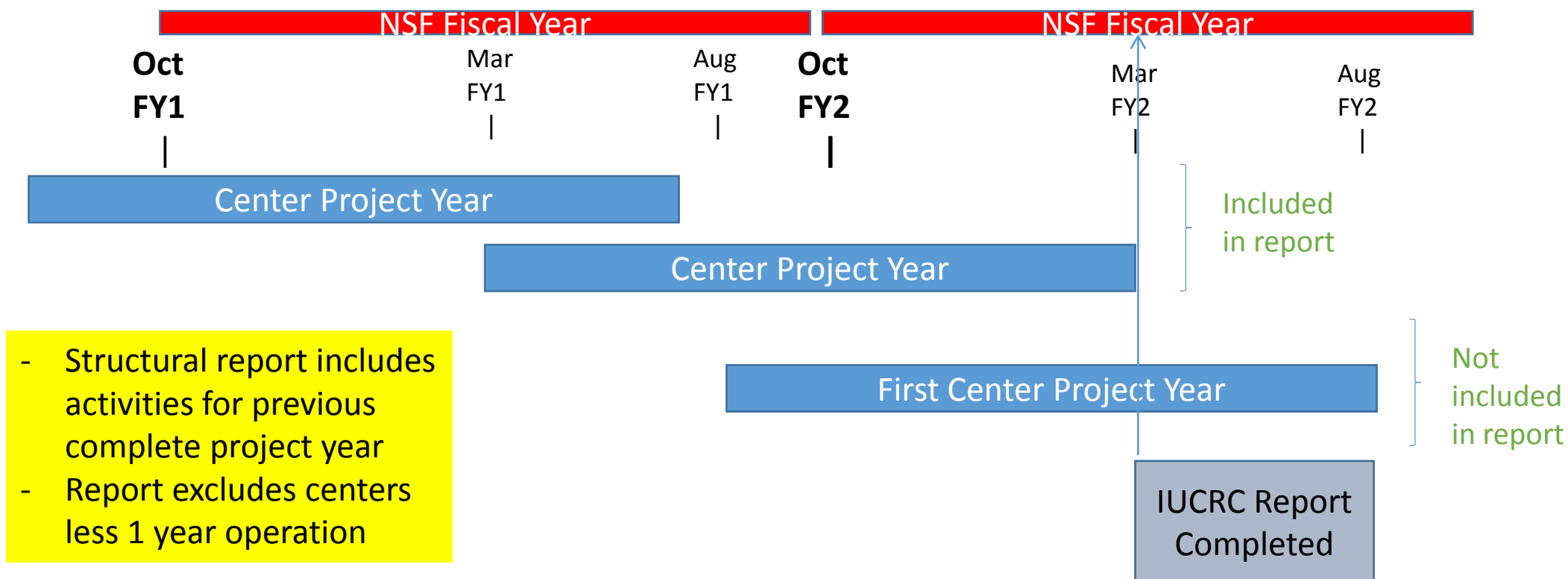
Methodology

- Collection of 2014-15 structural data from centers and sites delayed until spring 2016 due to new solicitation
 - Centers were asked to report on “last complete project year”
 - Some variables changed this year (trends adjusted to standardize)
- Data on number of funded centers collected from NSF (through 2016)
 - Does not include centers or sites funded under new solicitation!
- Reporting issues:
 - Issue of how to count centers under NCE (no cost extension) will need to be addressed in the future (e.g., between phase NCE; end-of-funding NCE)
 - Report considered “draft” until centers given last opportunity to review data



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NSF and Center Budgeting Life Cycle

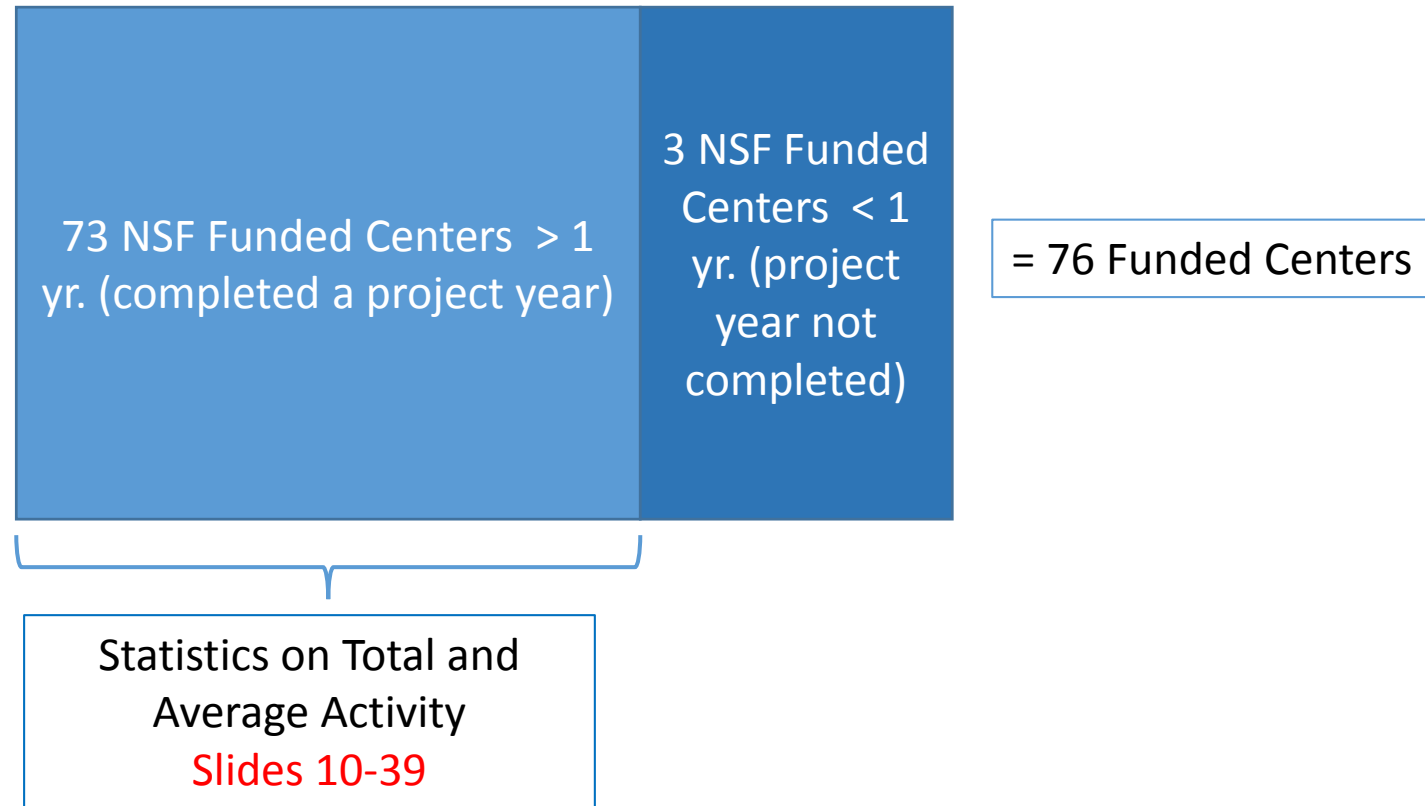


Understanding Center Count and Activity Statistics Through 2015



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FY 2015

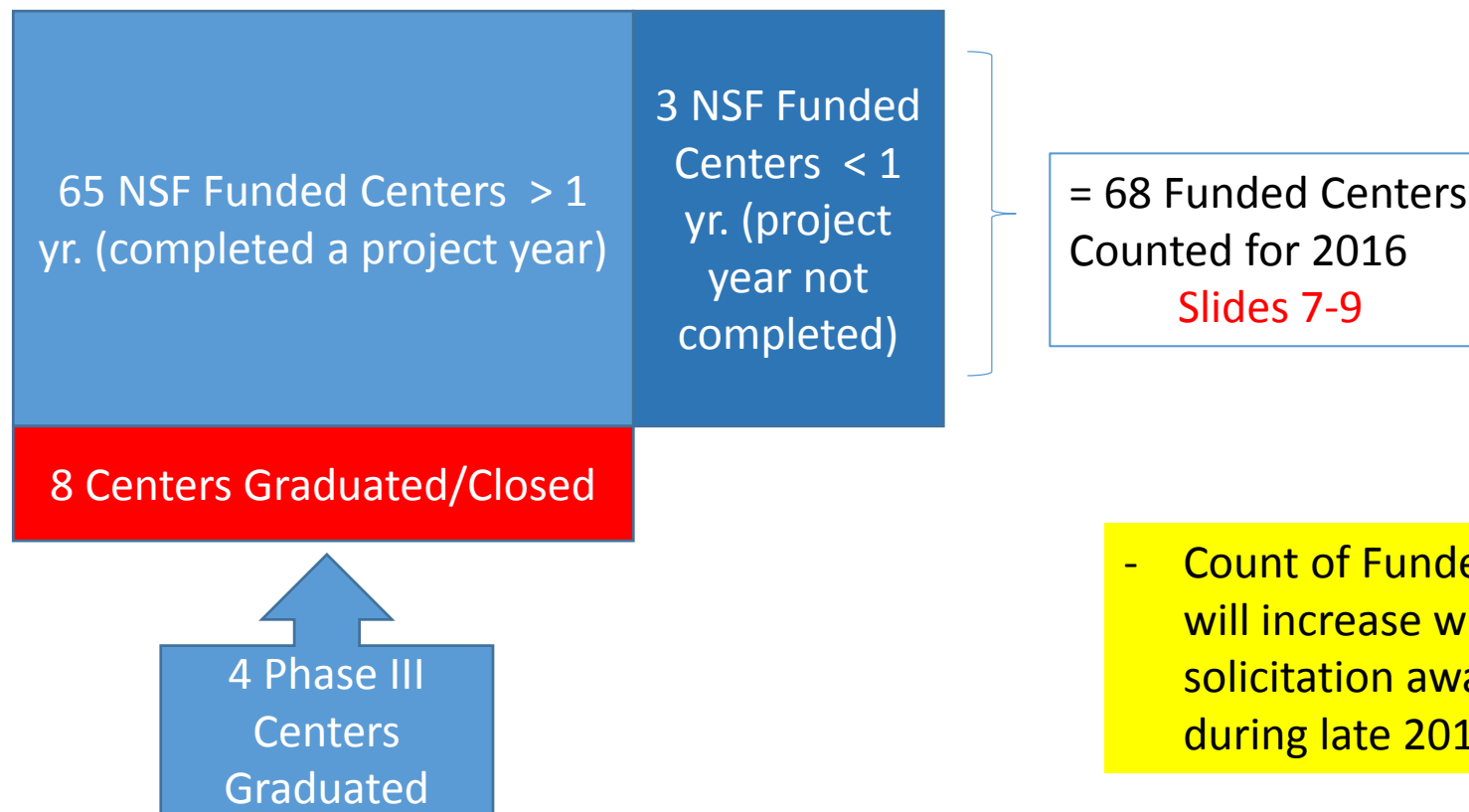




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Understanding Center Counts Through 2016

FY 2016





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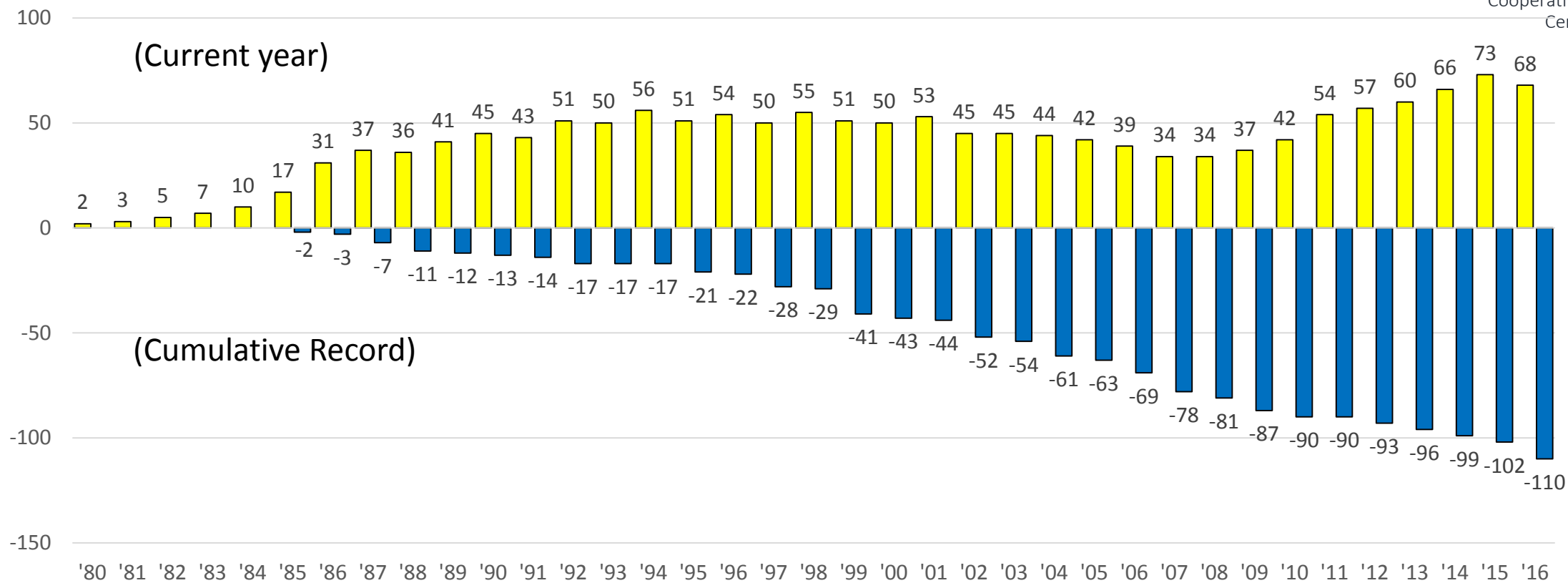
2015-2016 Graduated & Closed Centers

- Centers are included in this report, but were in their last year of funding as of FY14-15 and are no longer actively funded under the IUCRC grant
 - Advanced Processing & Packaging Studies: OSU, NCSU
 - Design of Analog/Digital Integrated Circuits: OSU, U WA, WSU
 - Electric Vehicles: Transportation & Electricity Convergence: UTA, TXA&M
 - Friction Stir Processing: BYU, UNT, SDSMT, USC
 - Nondestructive Evaluation: ISU
 - Power Systems Engineering Research Center: ASU, Cornell, TXA&M, WSU, UWM, ISU, WSU, UIUC, GIT, Howard, UCB
 - Safety, Security, Rescue Research Center: UMN, UNCC, DU, Upenn
 - Silicon Solar Consortium: NCSU, GIT



Center Life Cycle Through 2016*

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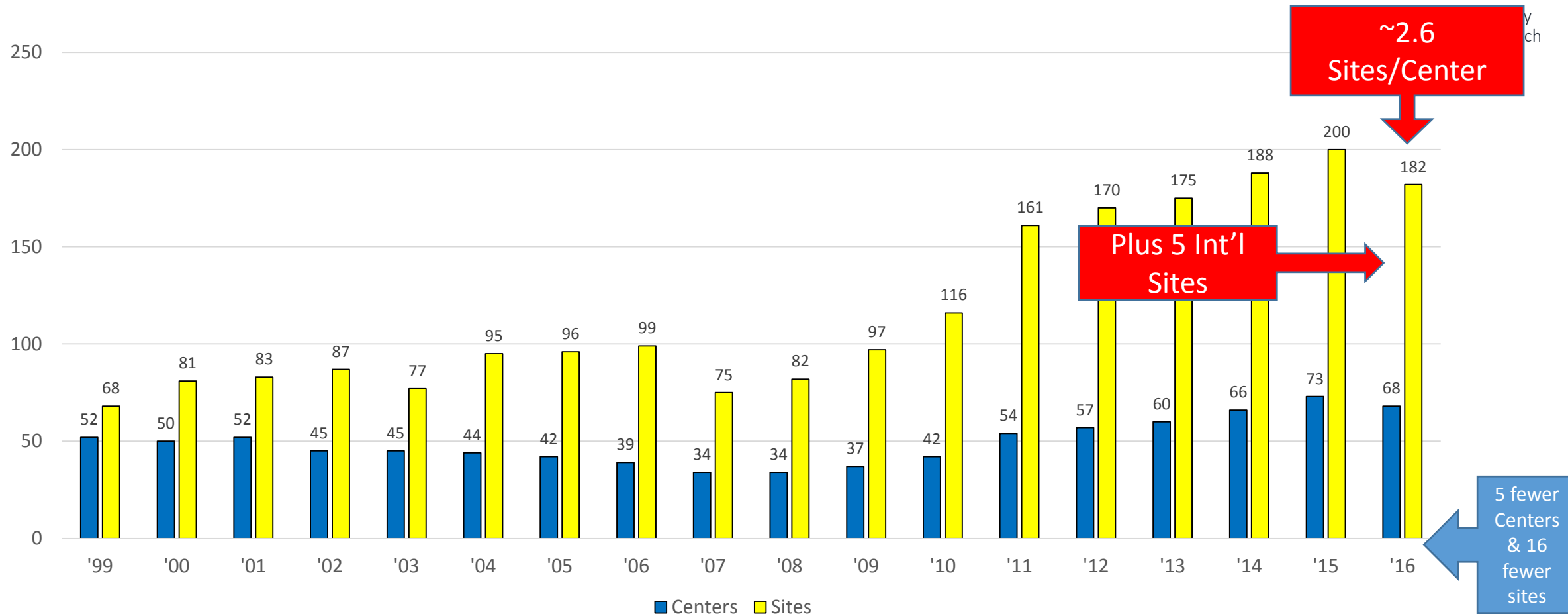


■ Active Centers ■ Phased Out Centers

*Data Current for FY2016; Count of current centers reflects those with ≥ 1 year of operation



ACTIVE CENTERS AND SITES BY YEAR*

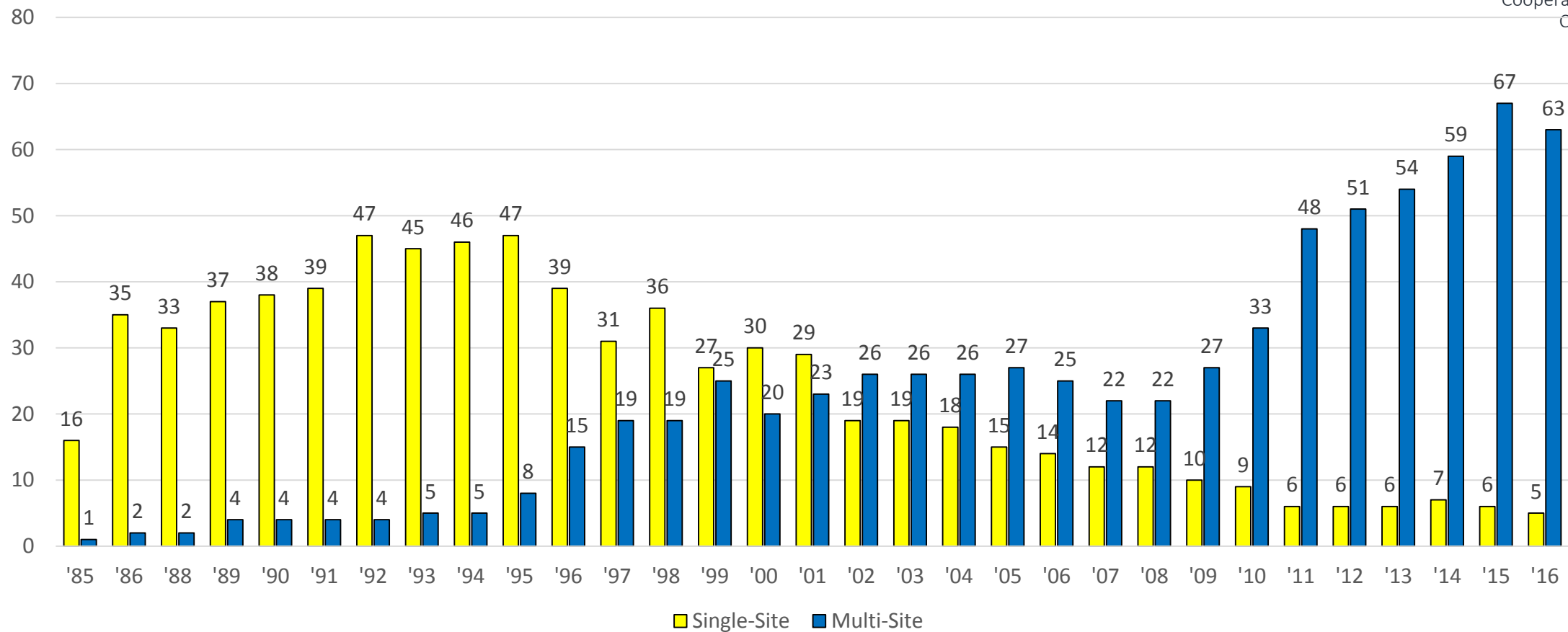


*Data Current for FY2016



Single & Multi-Site Centers*

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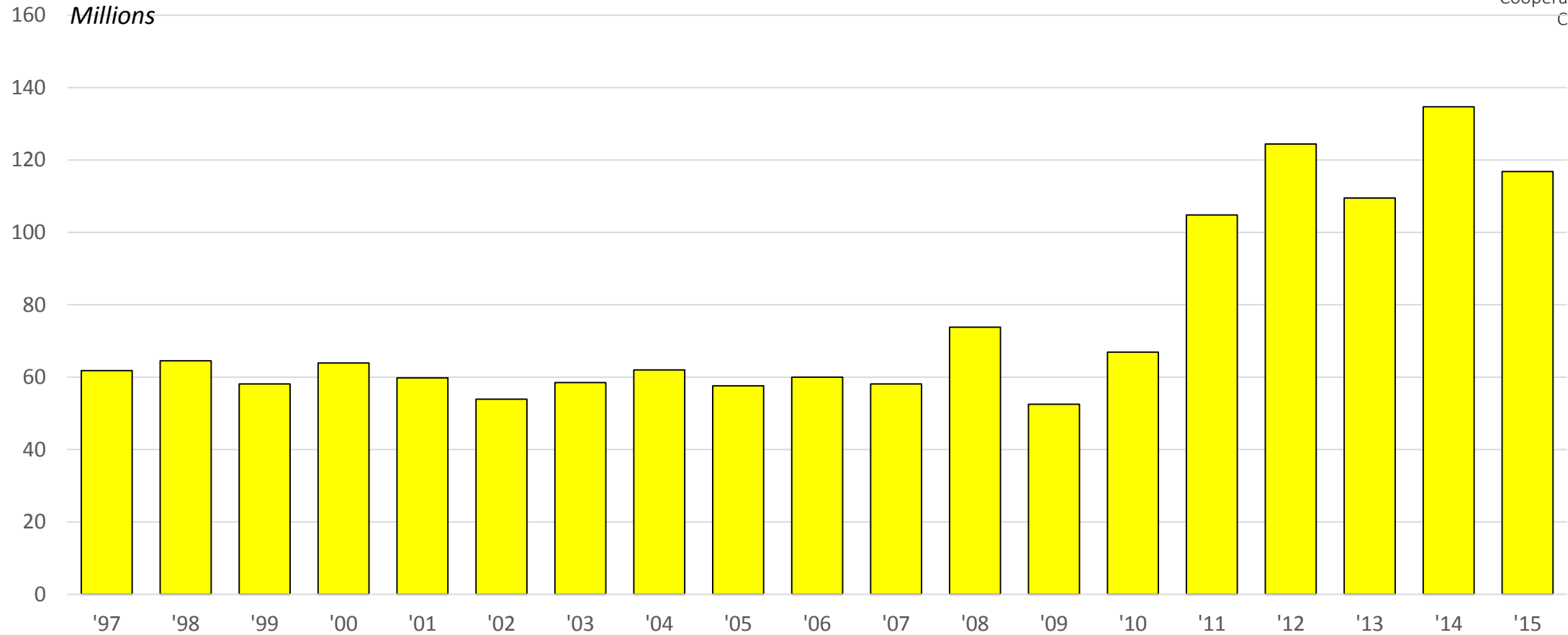


*Data Current for FY2016

Total Program Funding*



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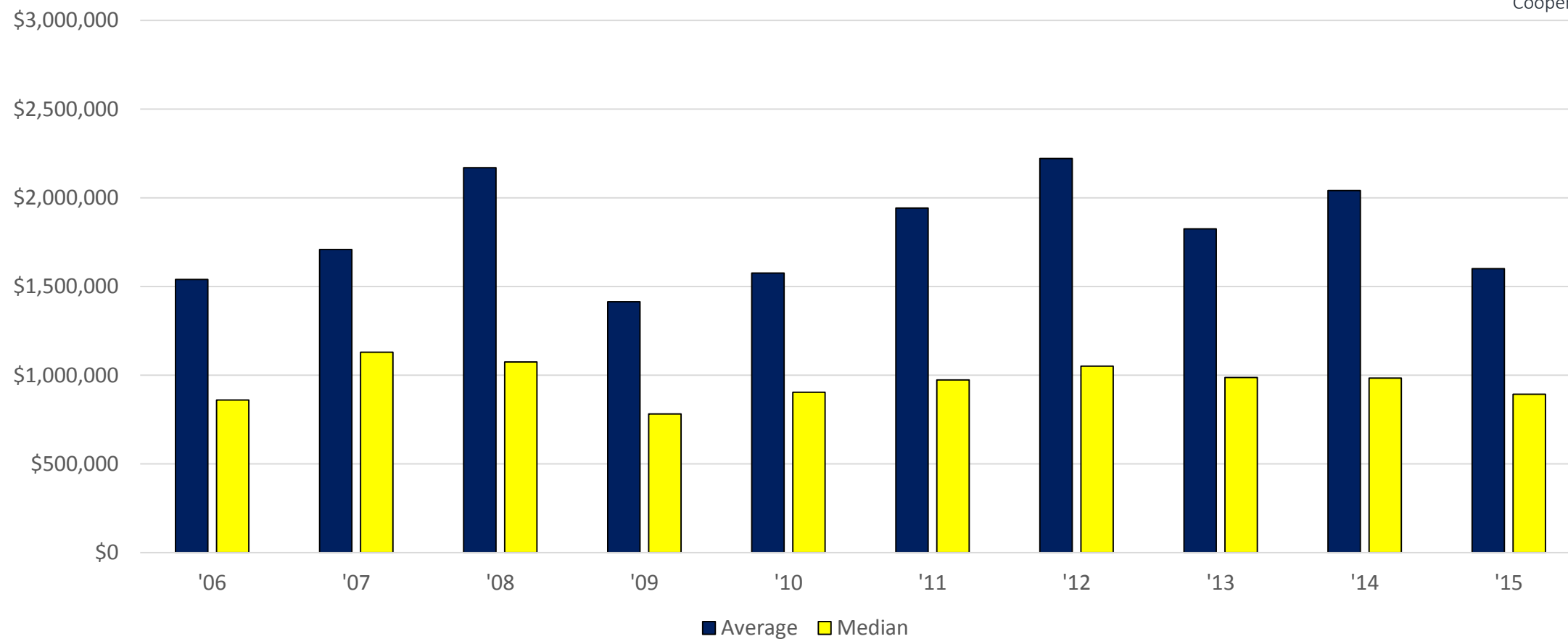


*Univ. & Other Cash Excluded



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Average & Median Total Center Funding*

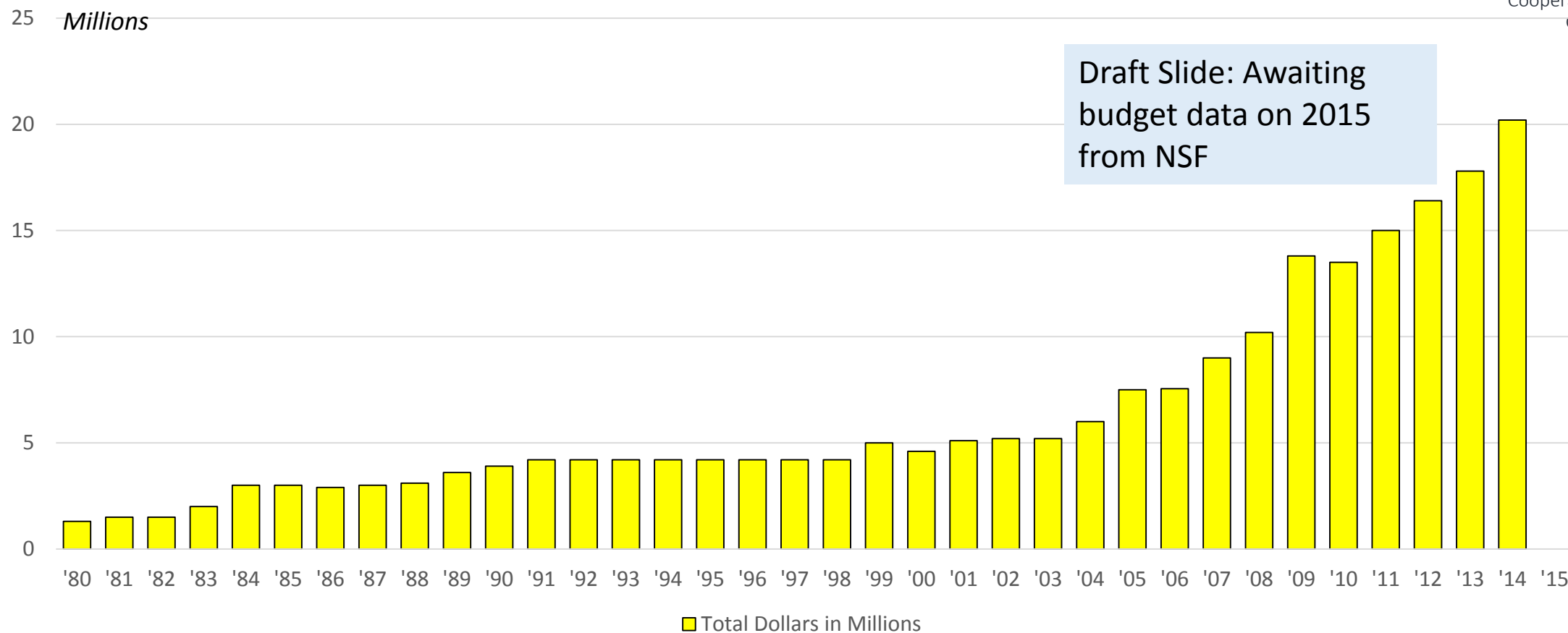


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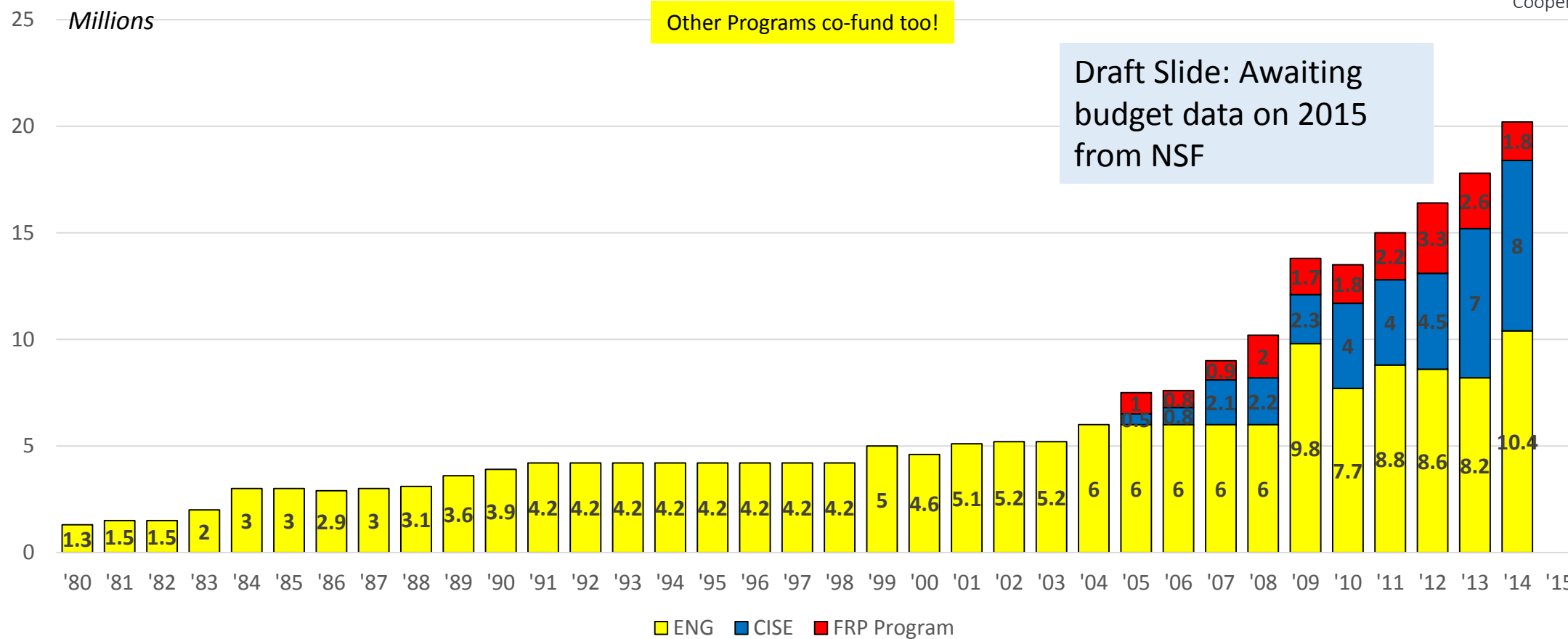
NSF Budget by Year





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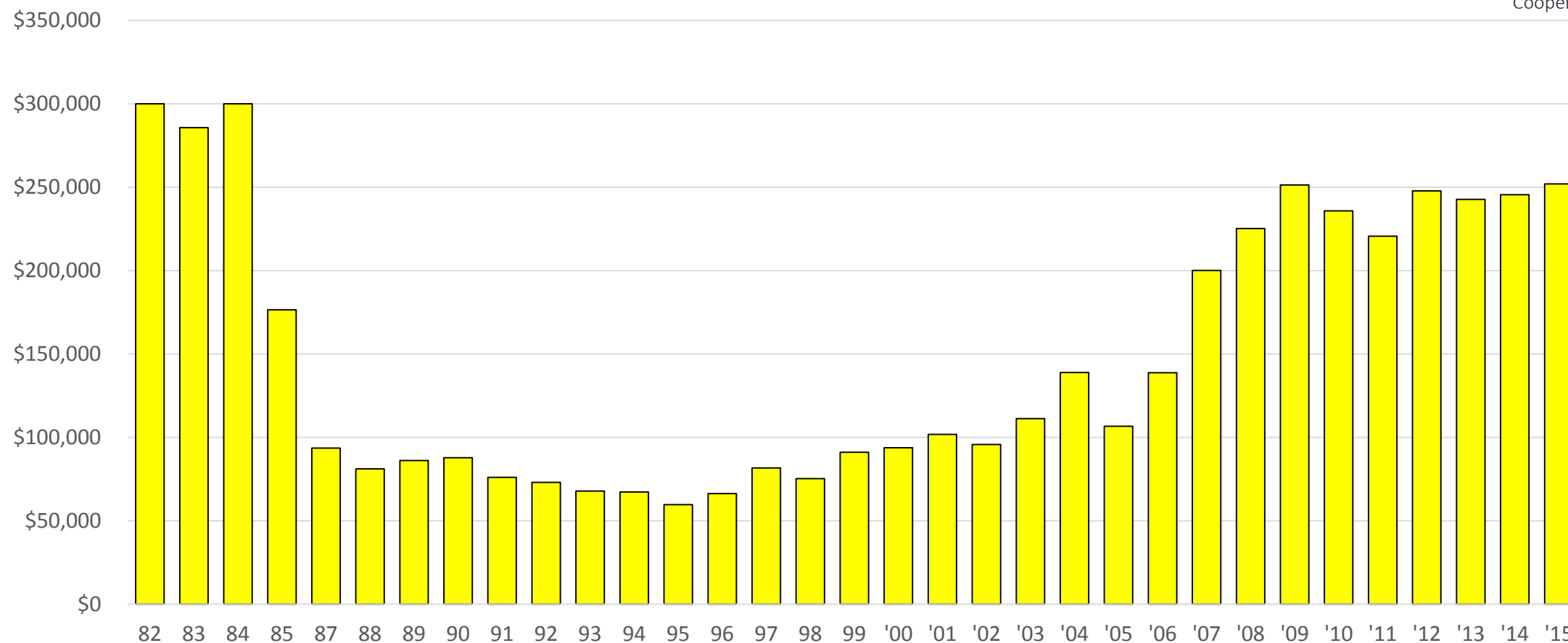
NSF Budget by Year





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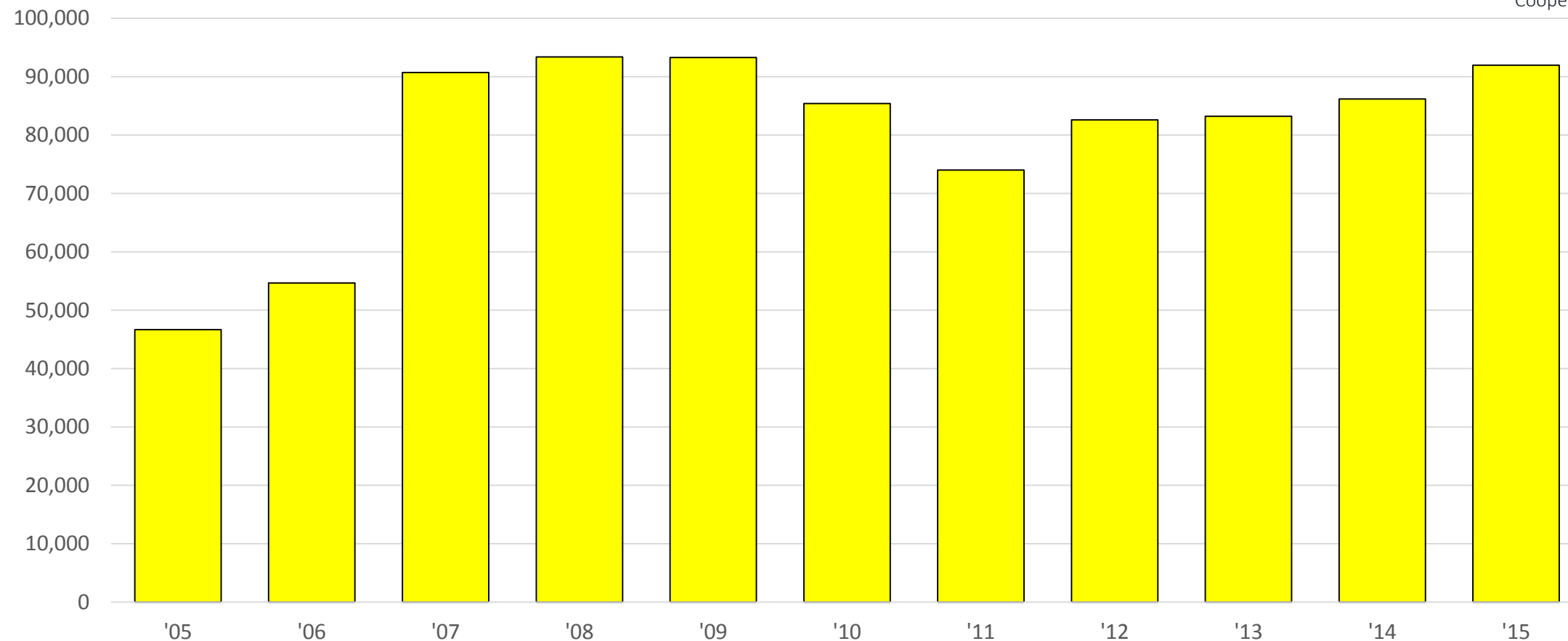
Average NSF IUCRC Awards & Supplements per Center





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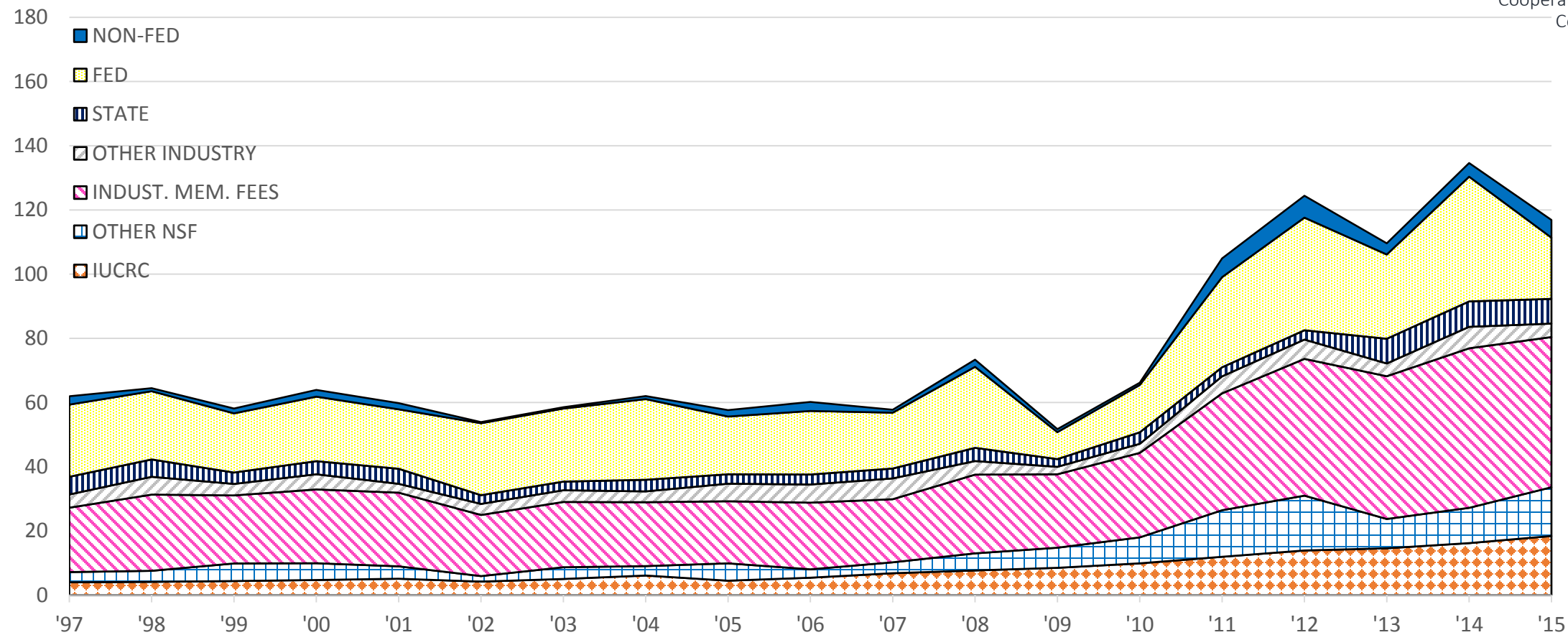
Average NSF IUCRC Funding per Site





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Total Funding by Source in Dollars*

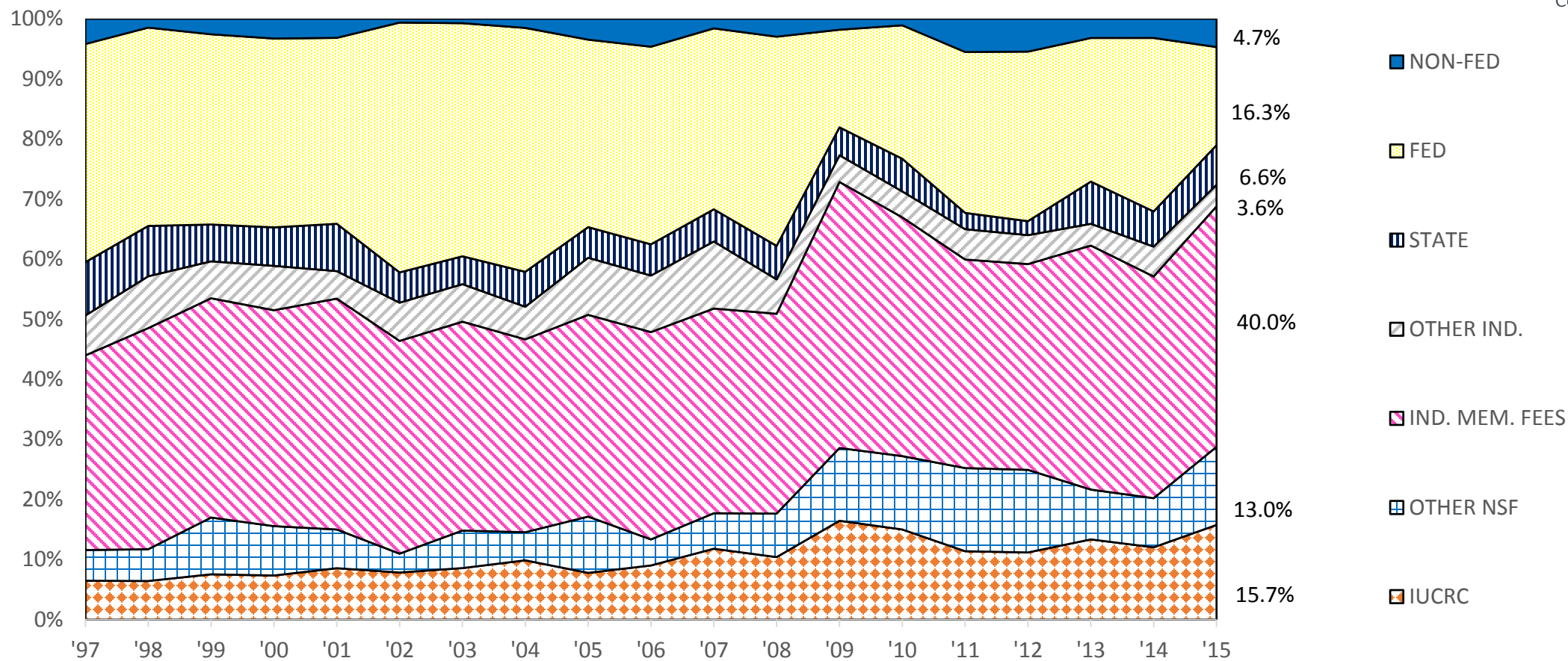


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Total Funding by Source in Percentages*



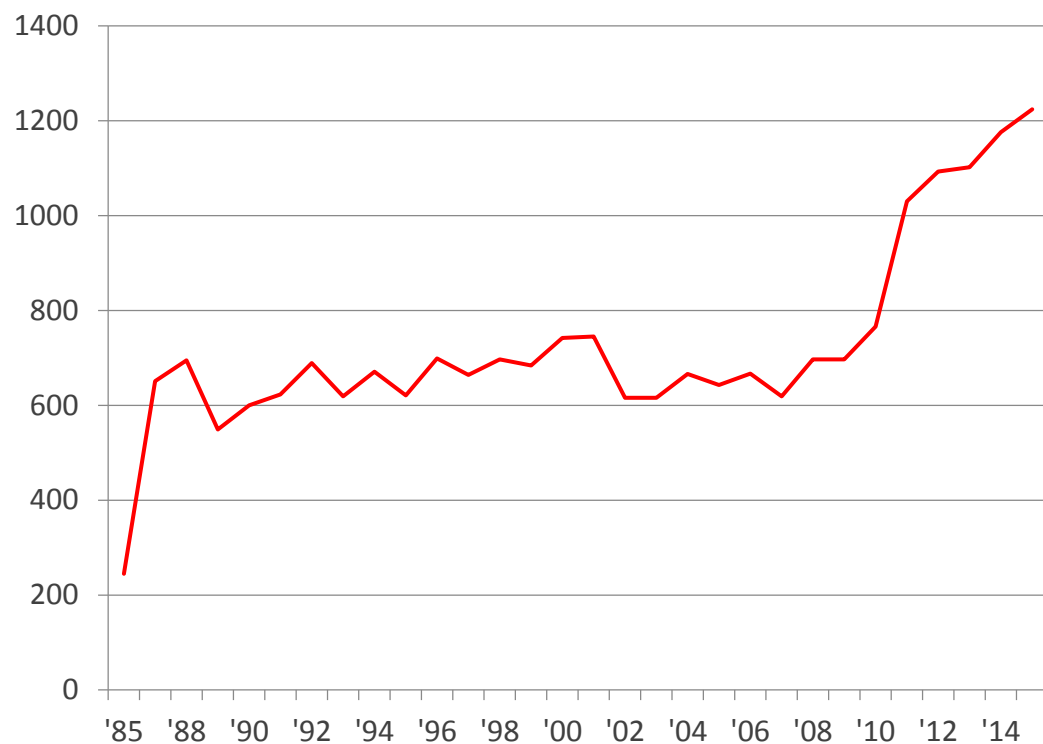
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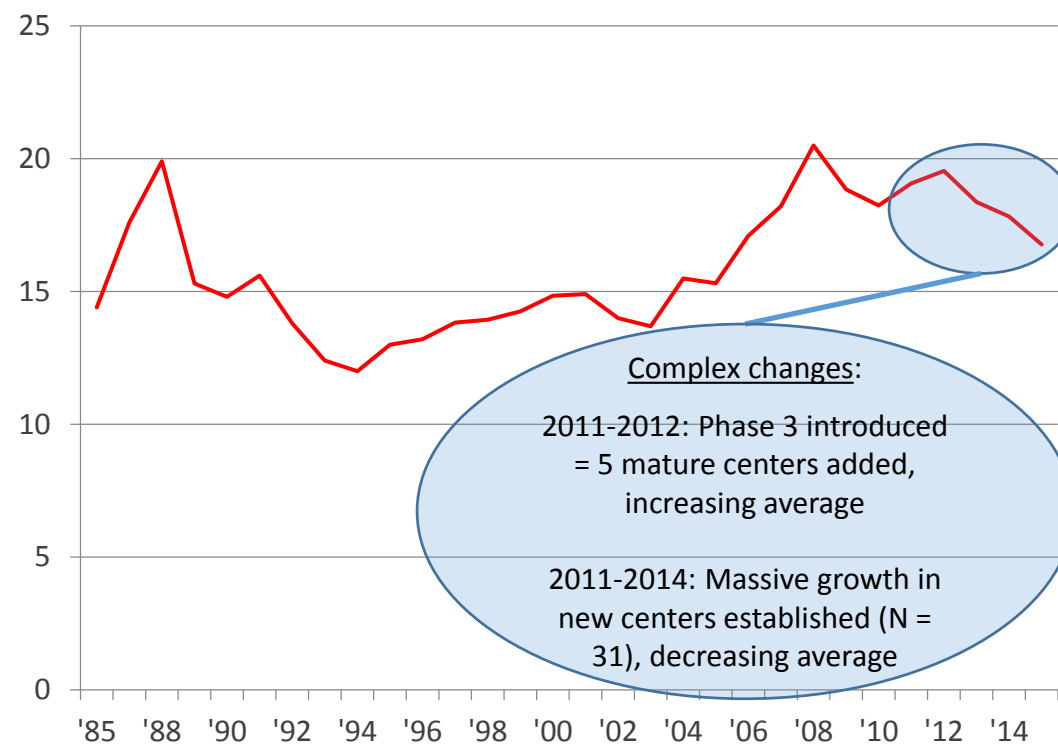
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Industrial Memberships

Total Number of Memberships



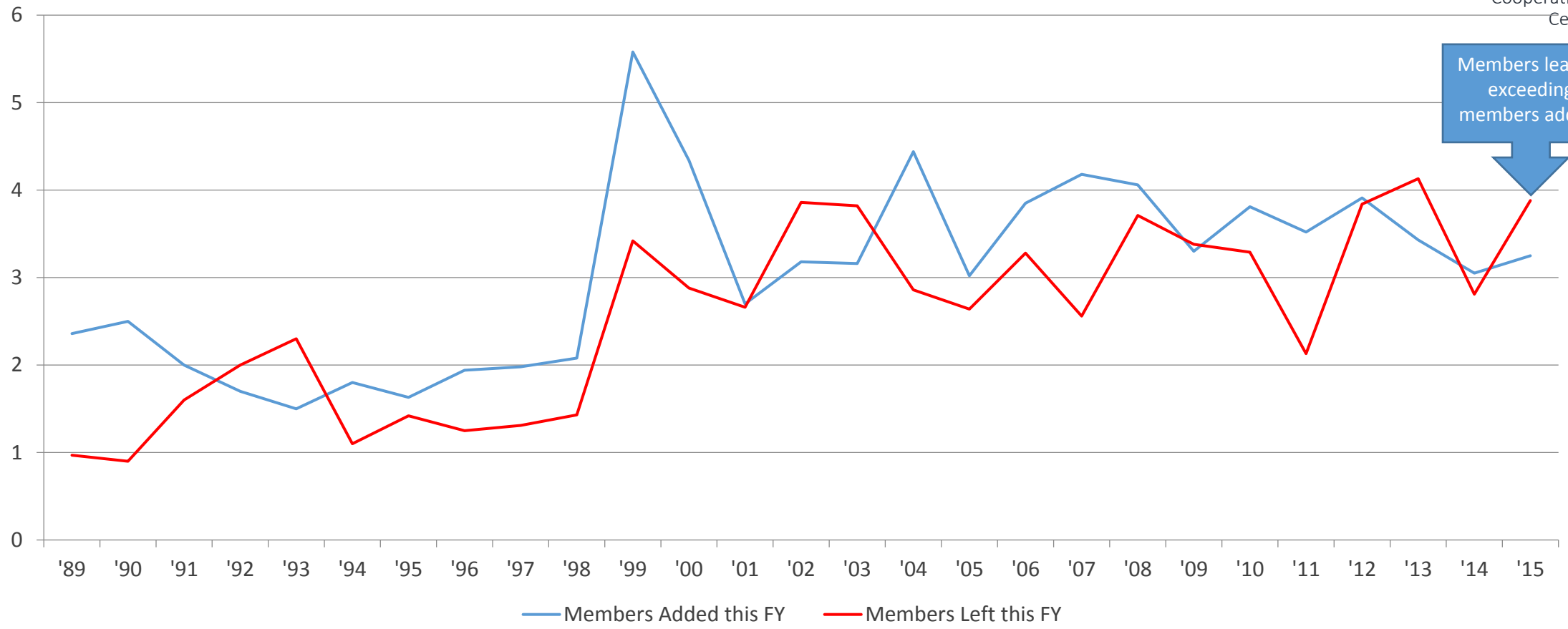
Average Number of Memberships





Average Membership Turn Over

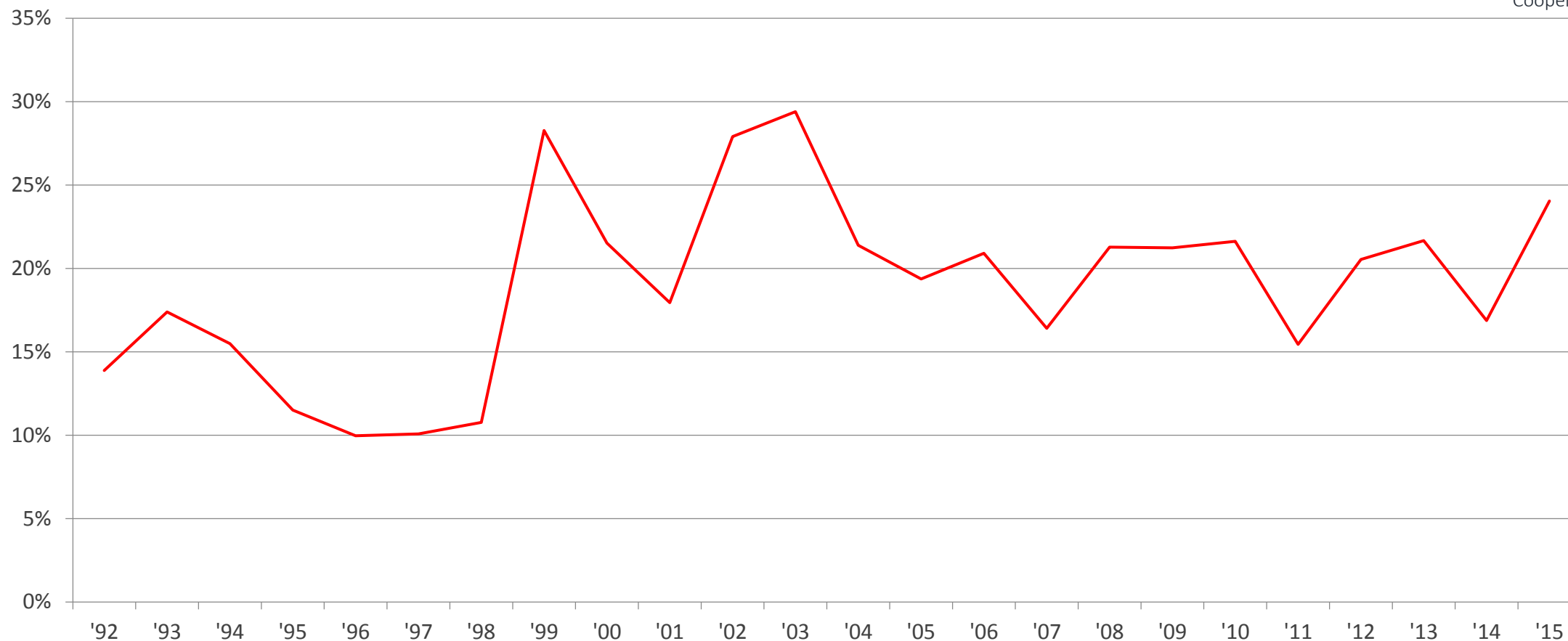
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Member Turnover Rate

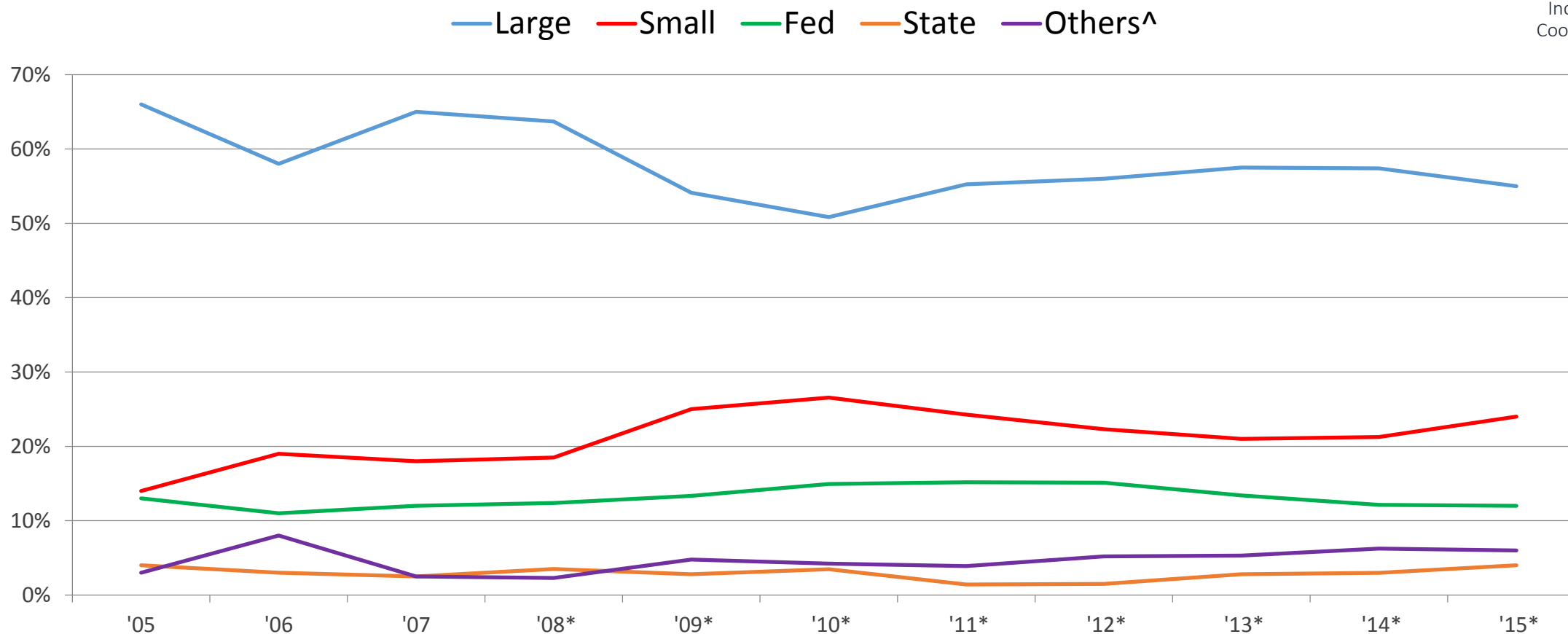


Turnover % = Members terminated in “year X+1” / Total members in “year X”



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Member Composition 2005-2015*



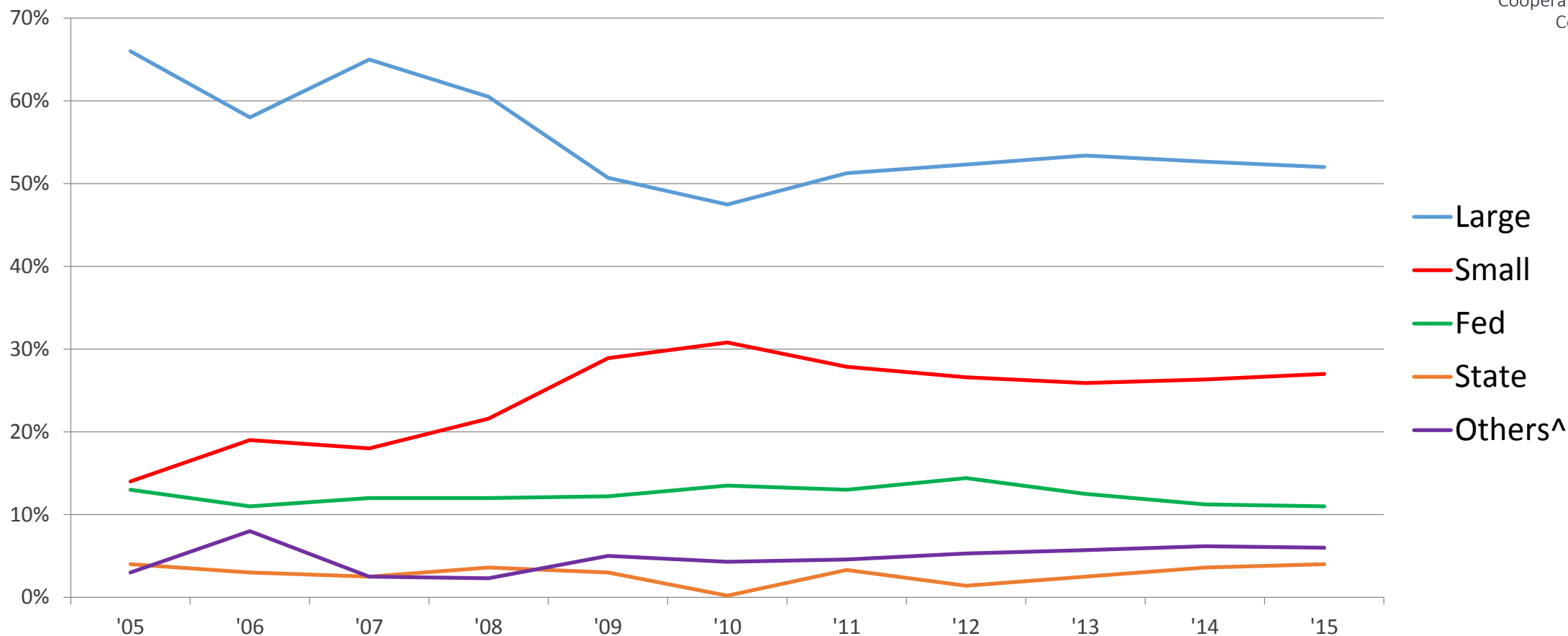
*Years Advanced Forestry excluded as a small business outlier: '08=36, '09=49, '10=57, '11=66, '12=71, '13=77, '14=86, '15=71.

^ Categories comprising Others include: non-profit, non-US gov't, and other org.



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Member Composition 2005-2015



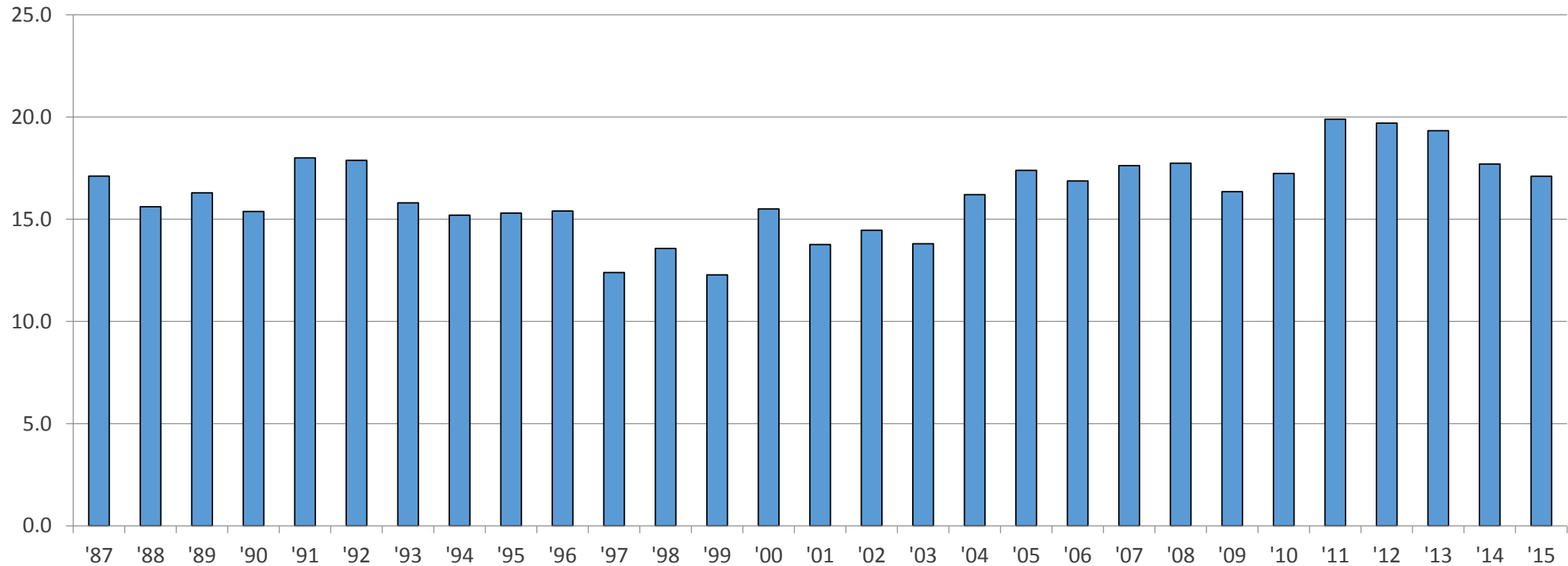
^ Categories comprising Others include: non-profit, non-US gov't, and other org.

Average Number of Researchers per Center



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Faculty & Post Doc Researchers

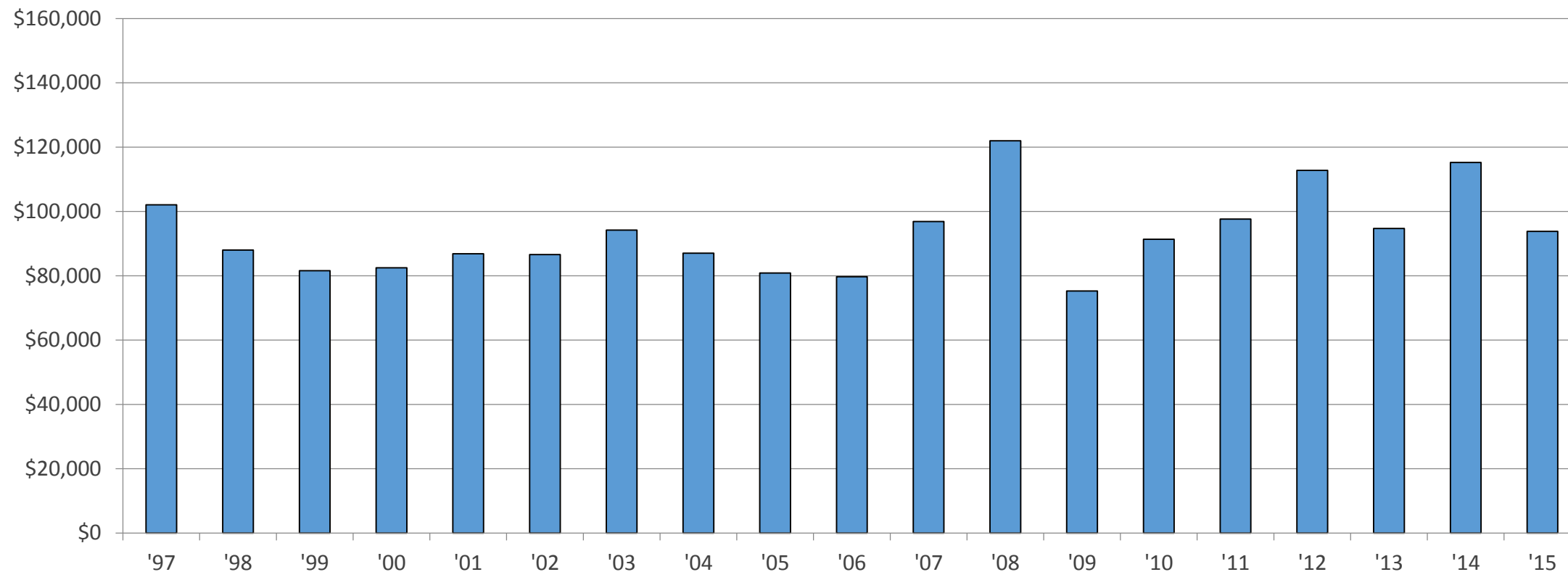




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Total Funding per Researcher*

Total Dollars per Researcher

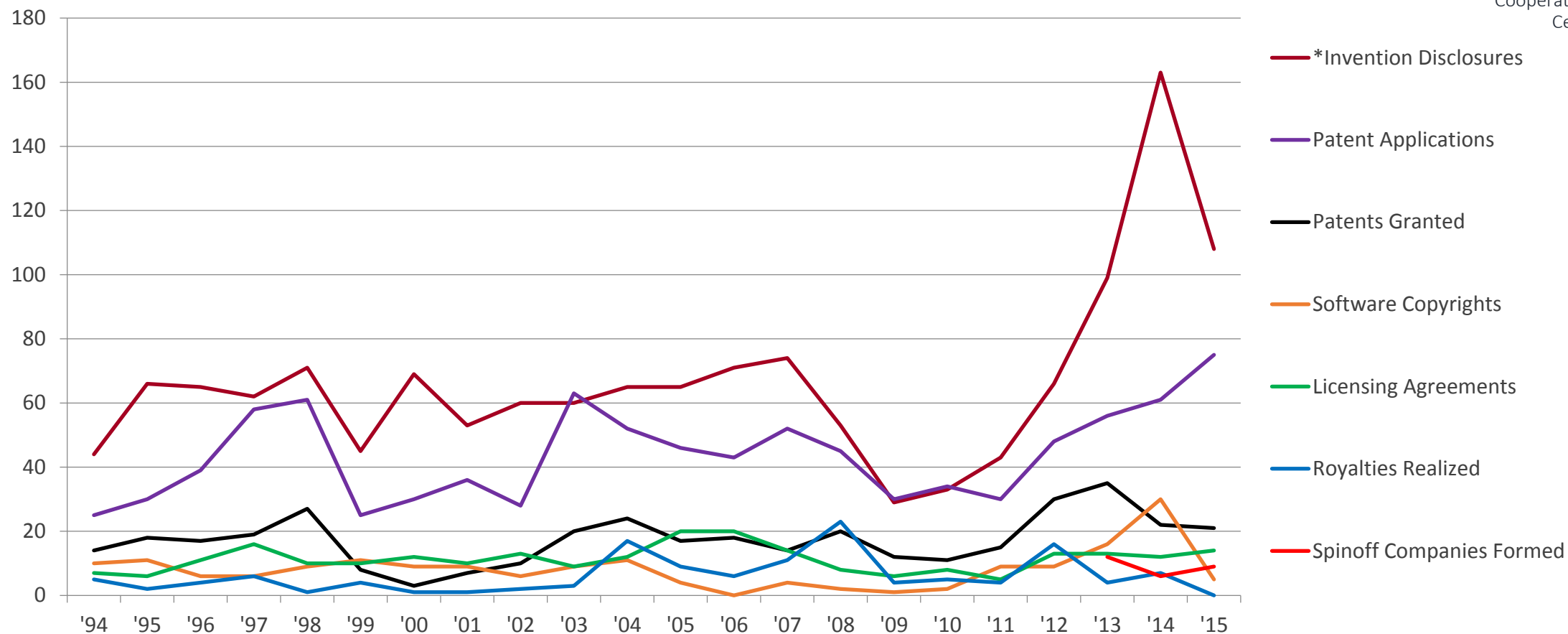


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Total Intellectual Property & Commercialization Events 05-15

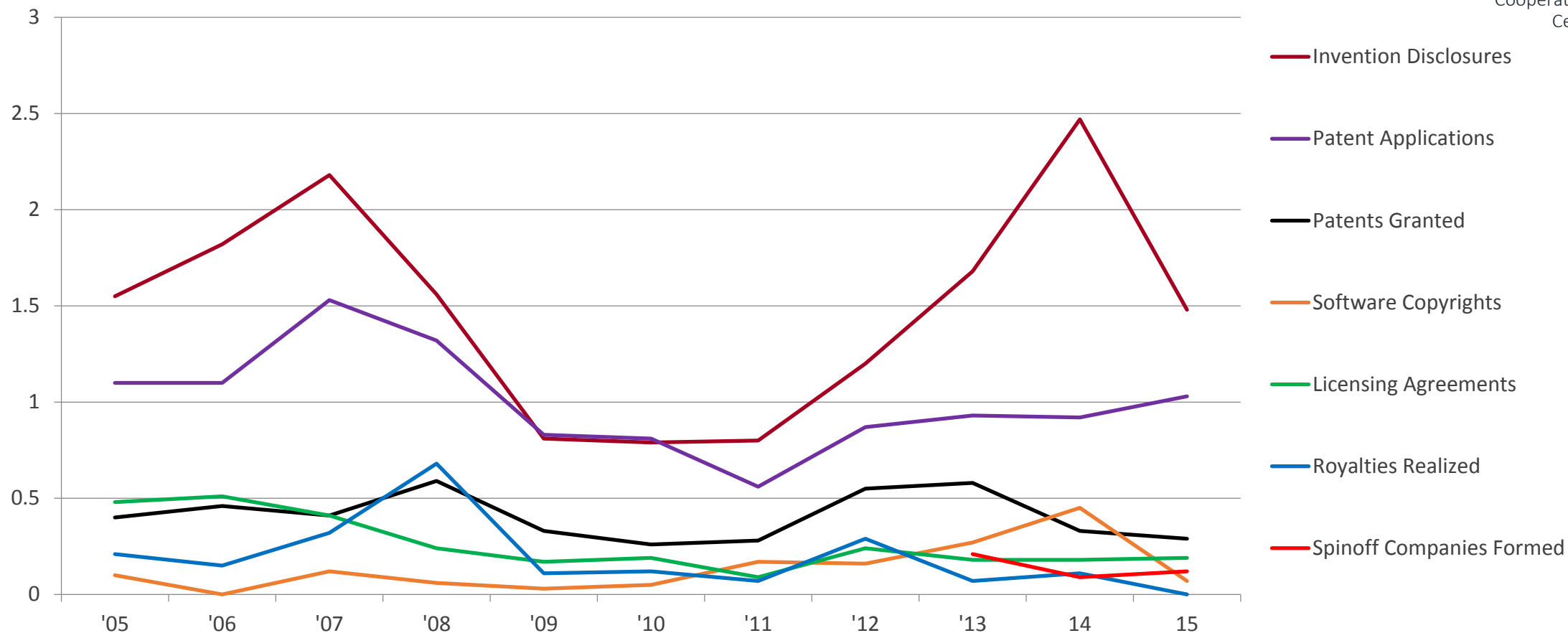


*Invention Disclosures Outliers: 2014: CVDI = 40, BSAC = 20, E-Design = 12, CITeR = 17. 2015: BSAC = 32



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Average Intellectual Property & Commercialization Events 05-15

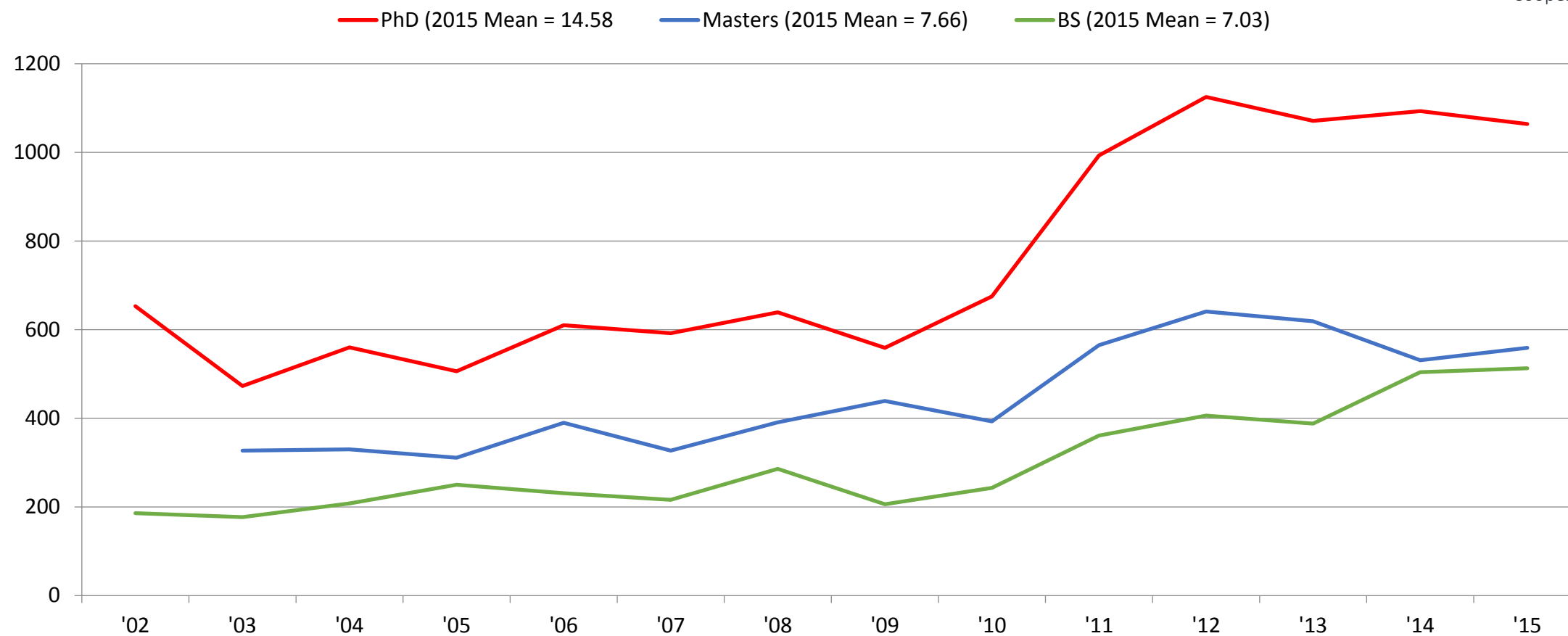


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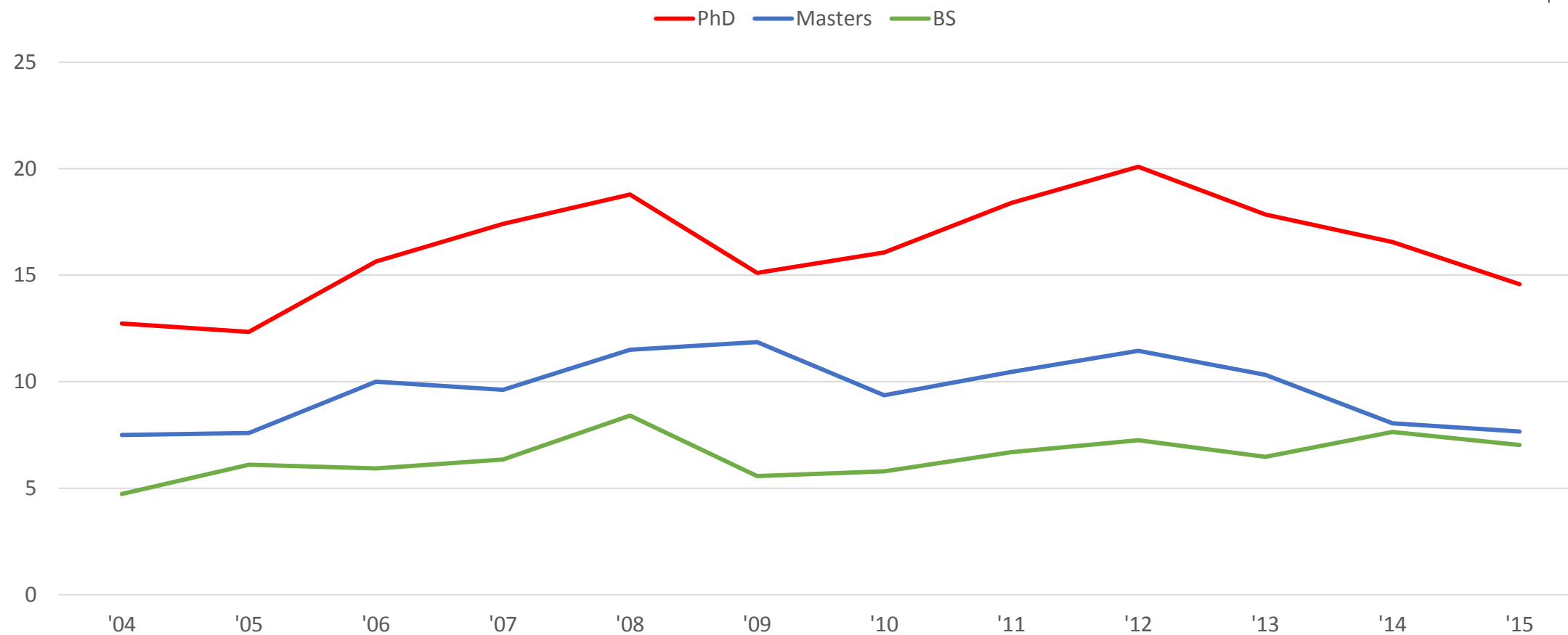
Total Students Trained





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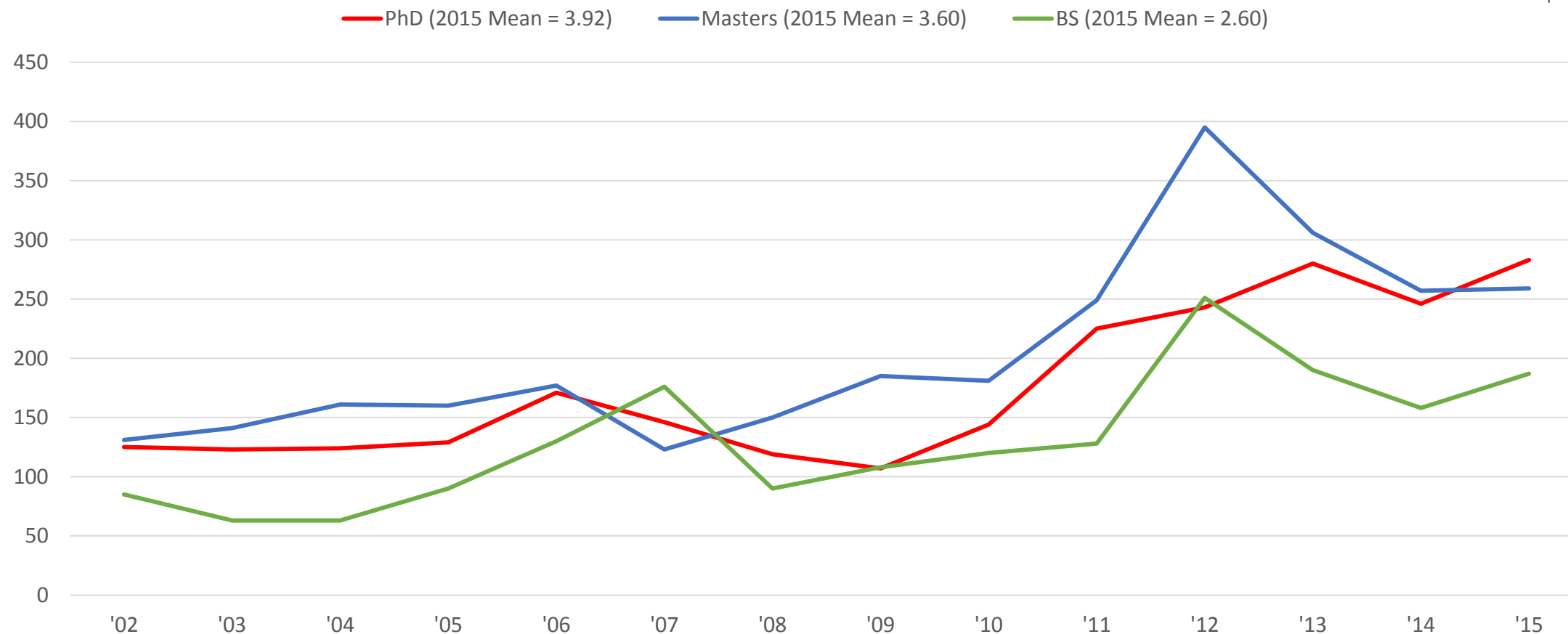
Average Students Trained





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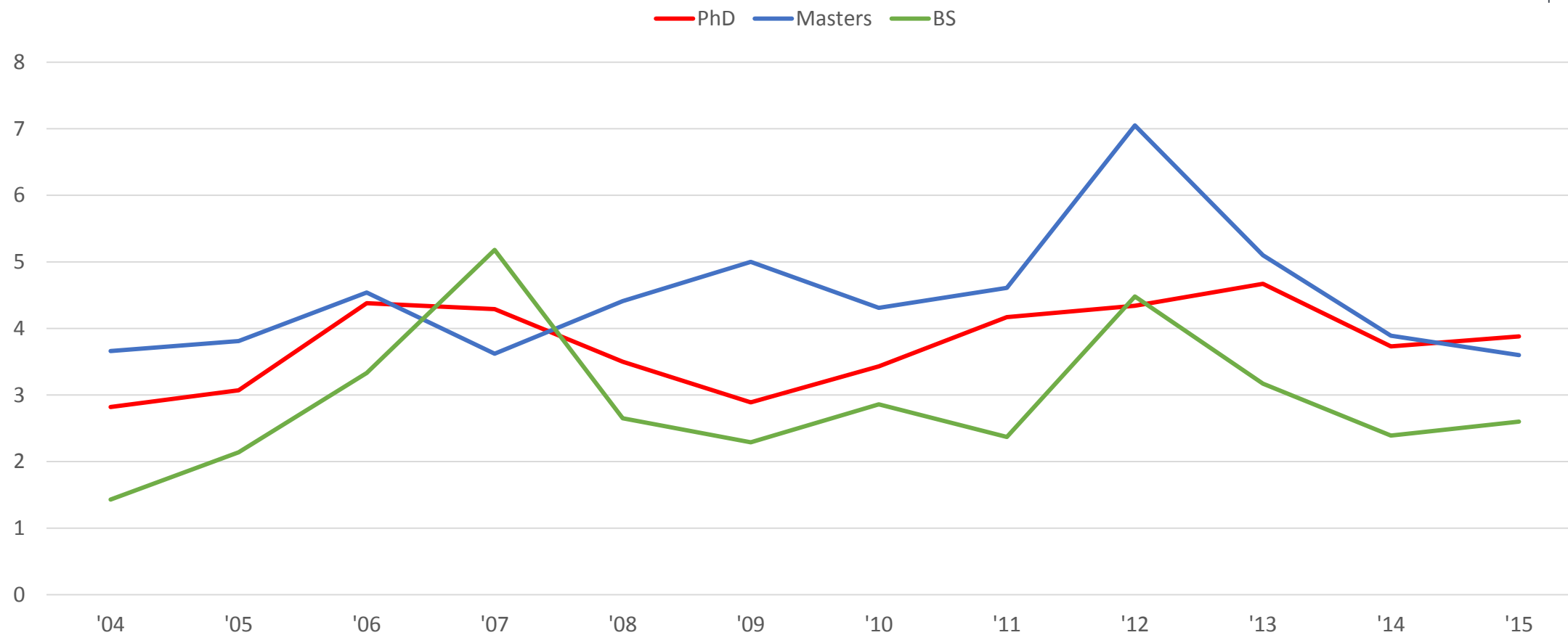
Total Students Graduated





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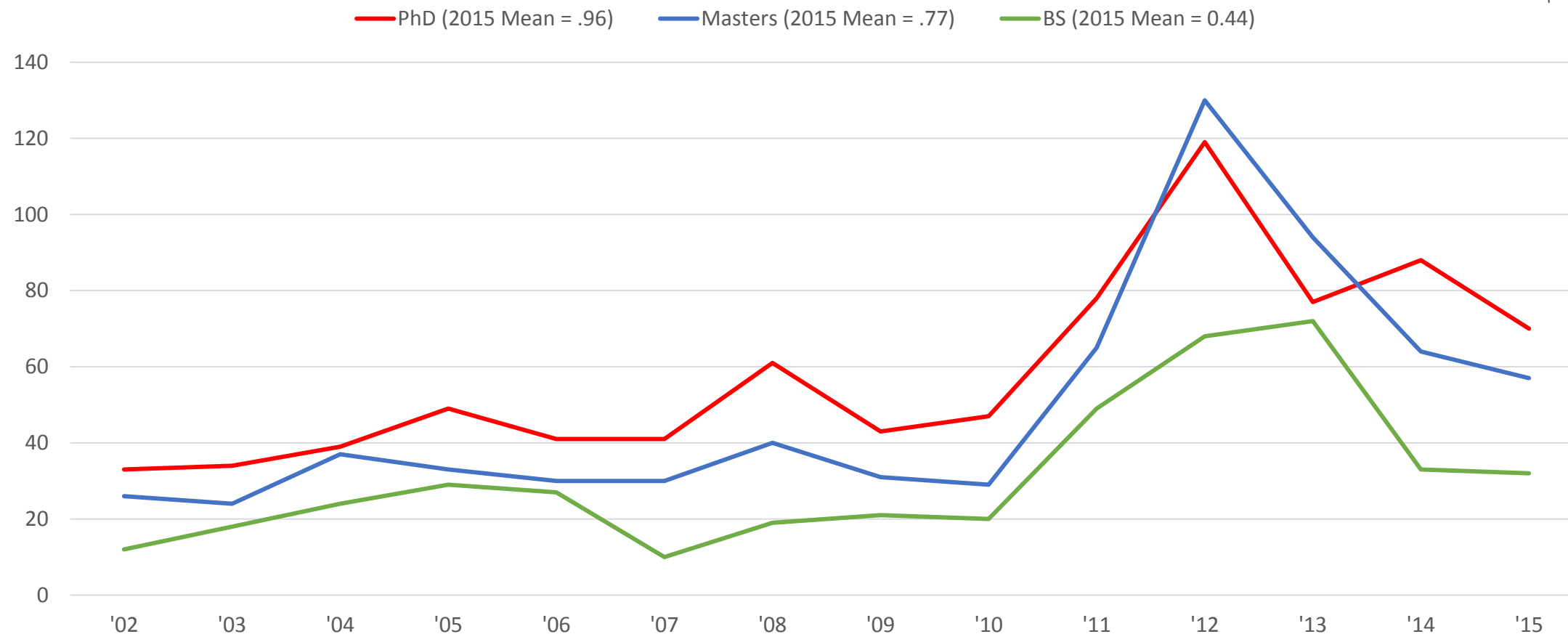
Average Students Graduated





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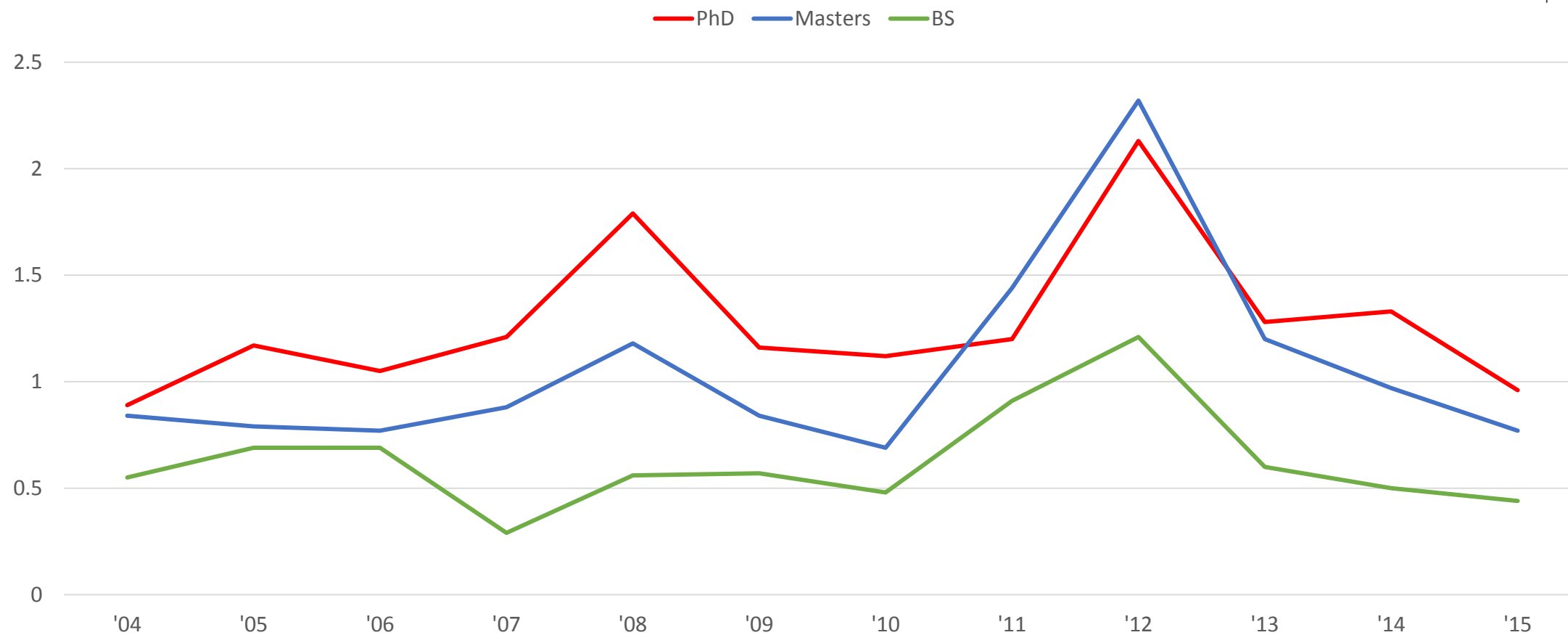
Total Students Hired by Members





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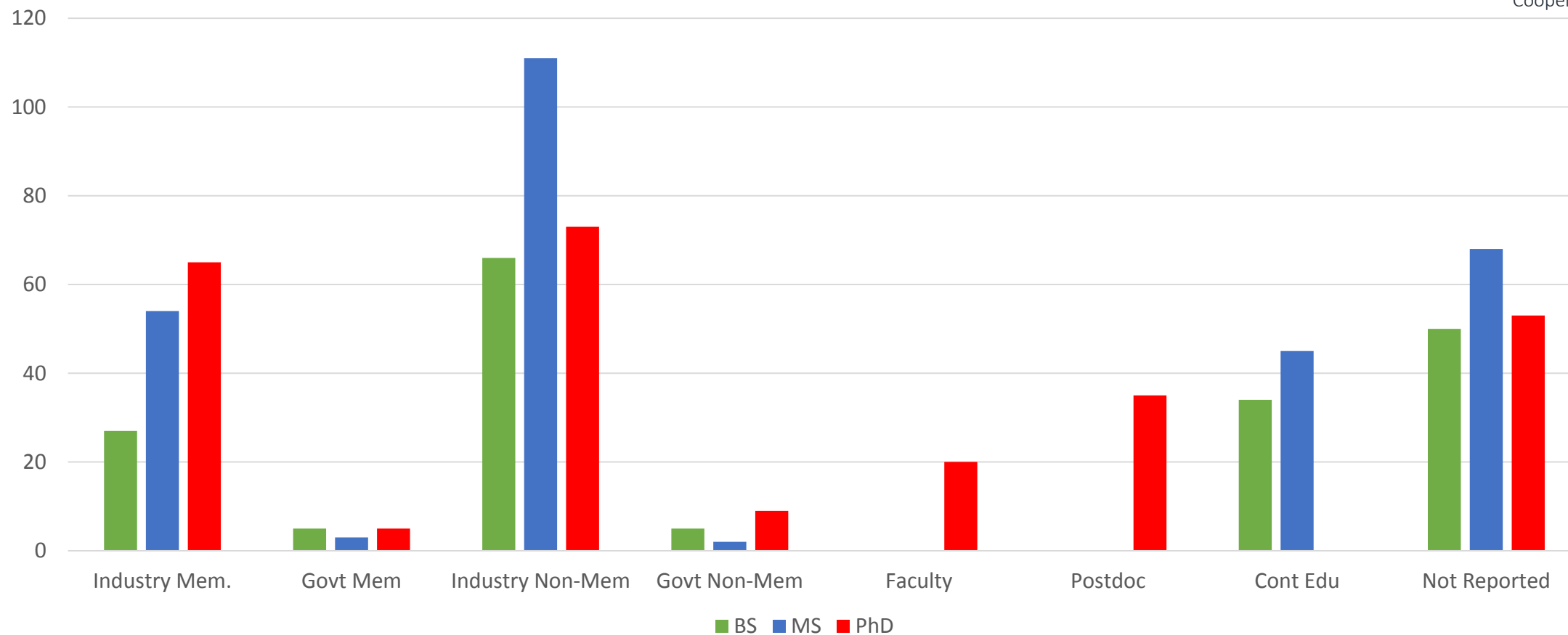
Average Students Hired by Members





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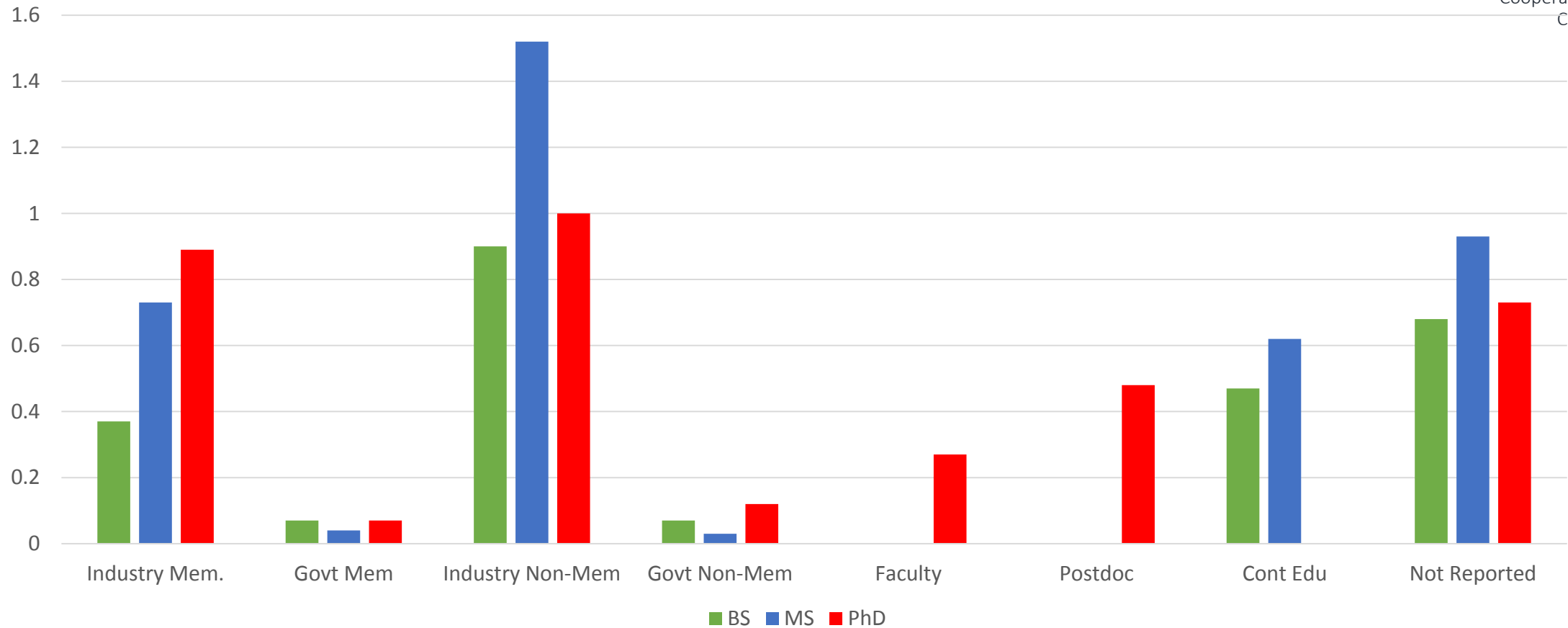
IUCRC Alumni Career Outcomes: Total Students Hired



IUCRC Alumni Career Outcomes: Average Students Hired



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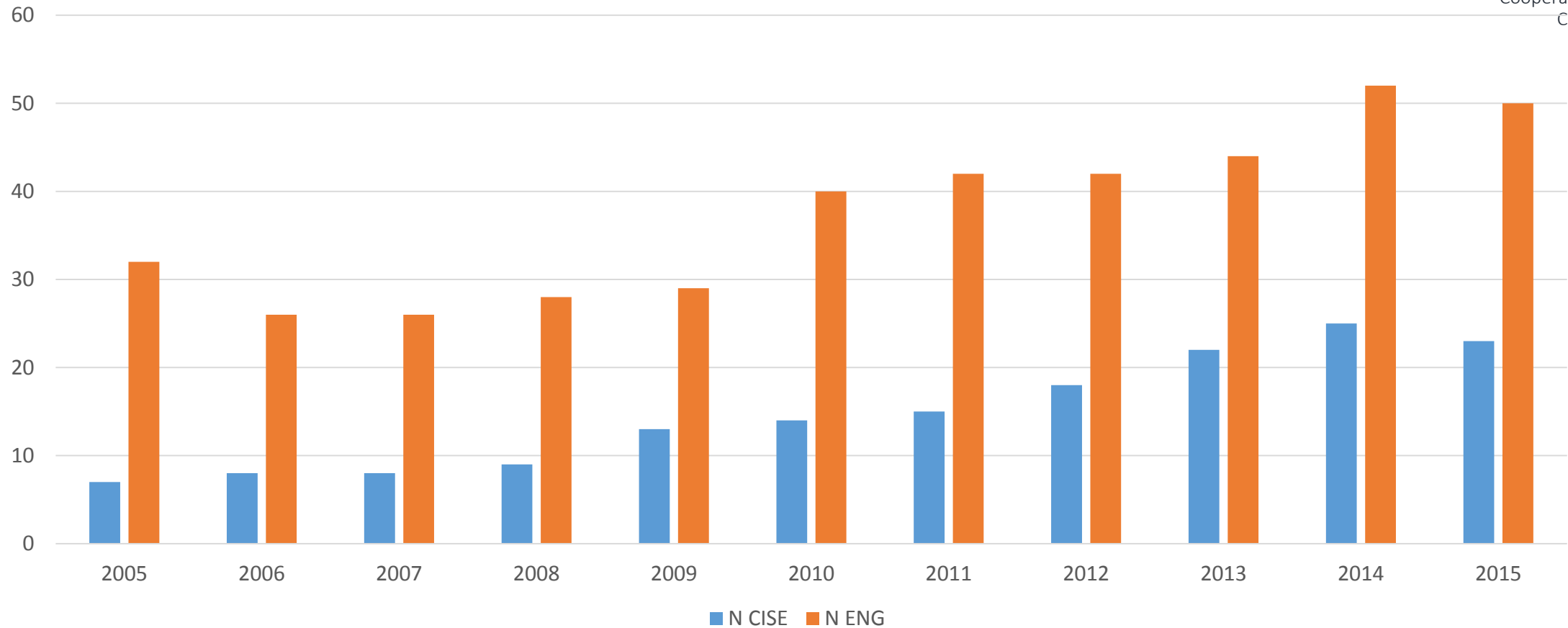
CISE & ENG Partnership

Some Comparisons and Recent Trends

Growth in N of CISE & ENG Centers over time



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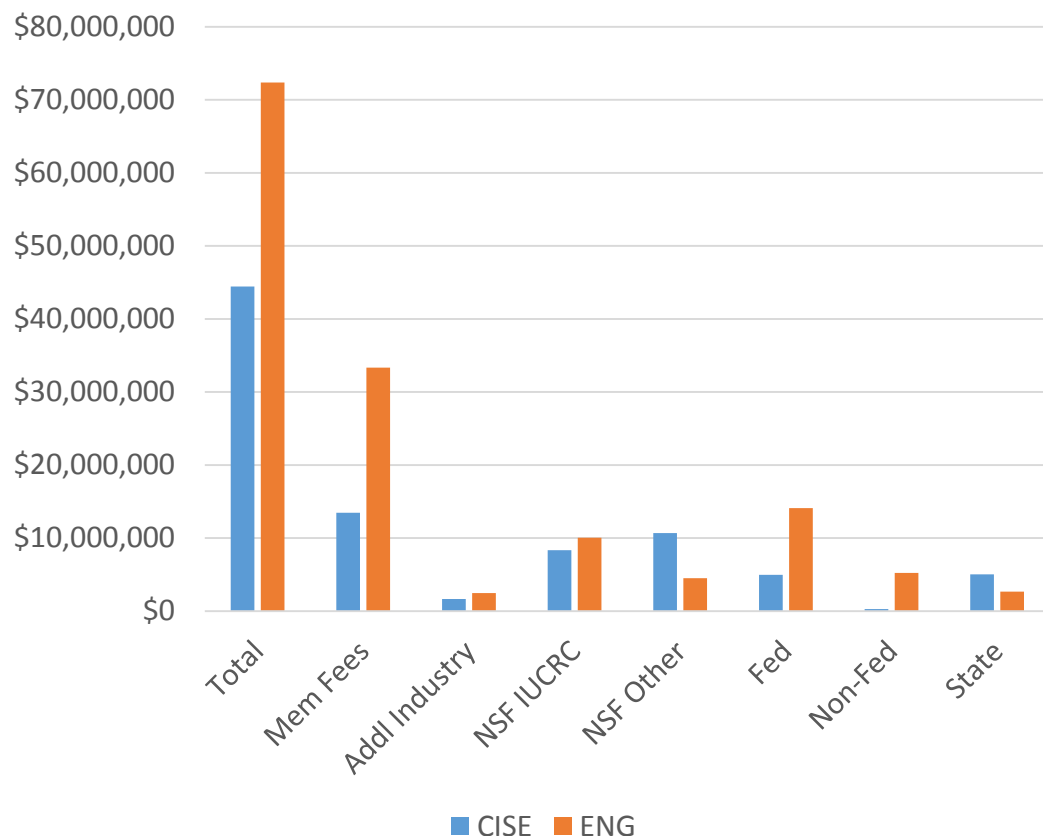




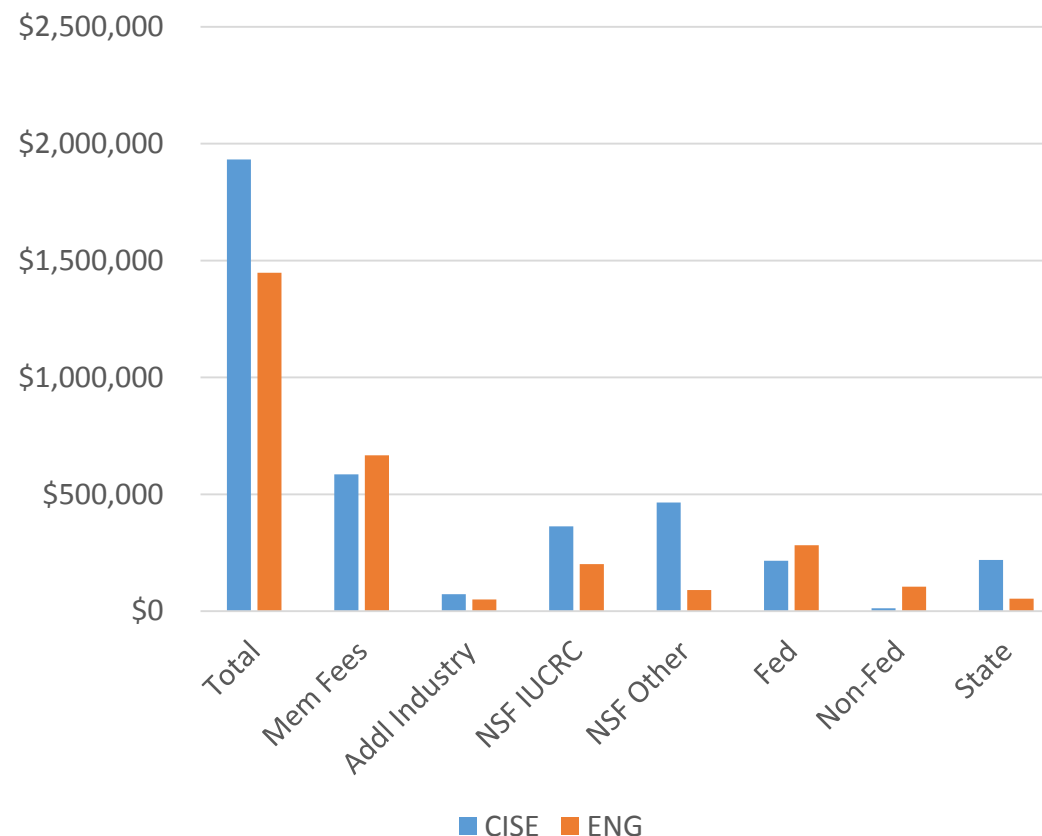
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2015 CISE & ENG: Funding by Source

Total Dollars



Average Dollars

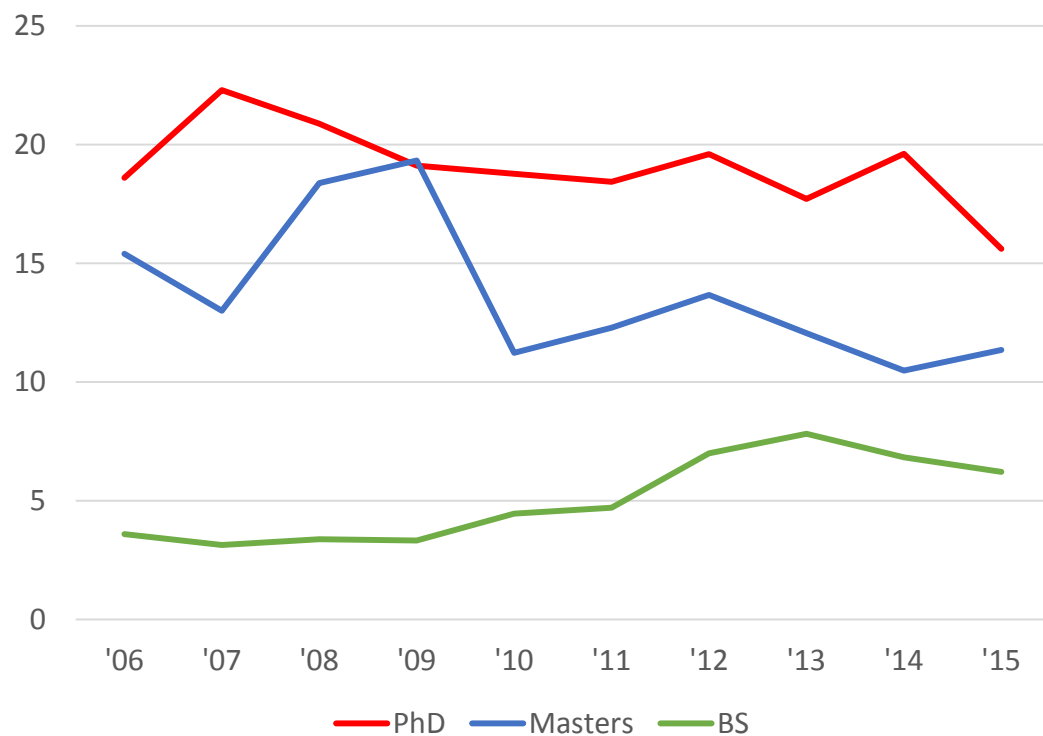




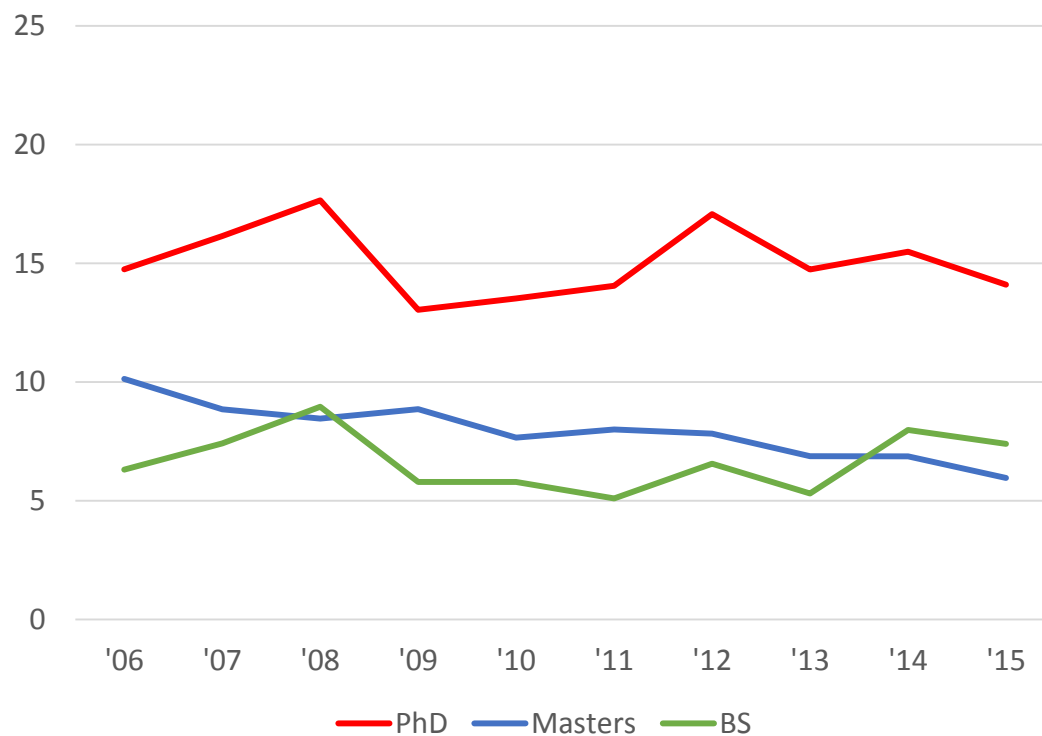
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CISE & ENG: Average Students Trained

CISE



ENG

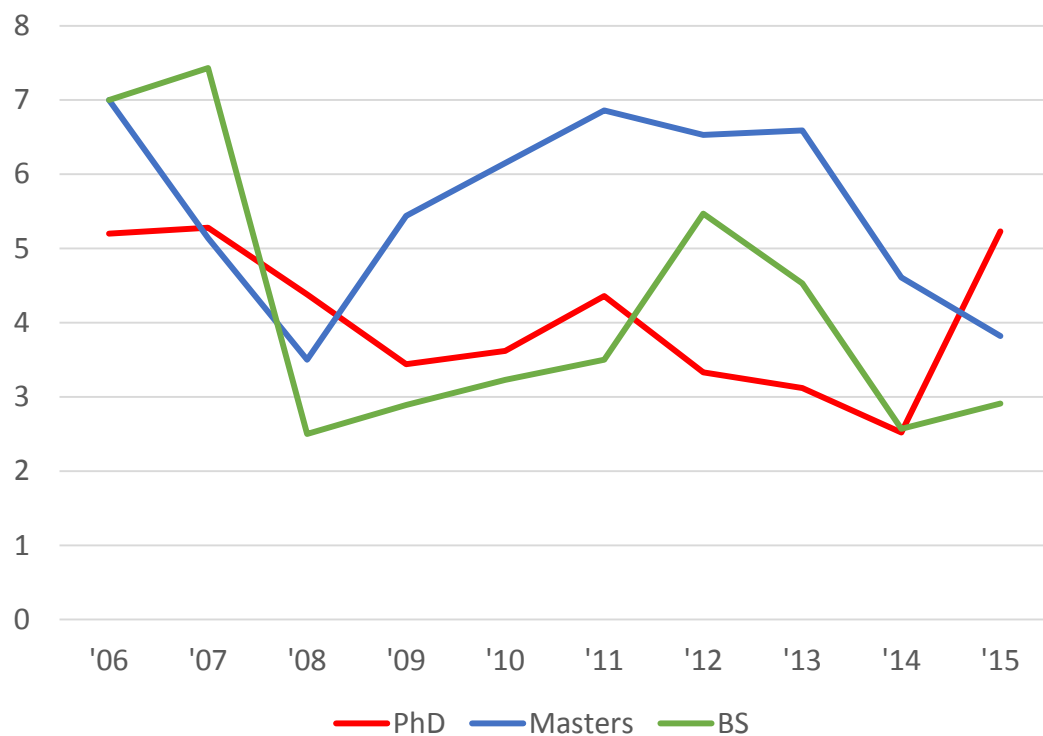




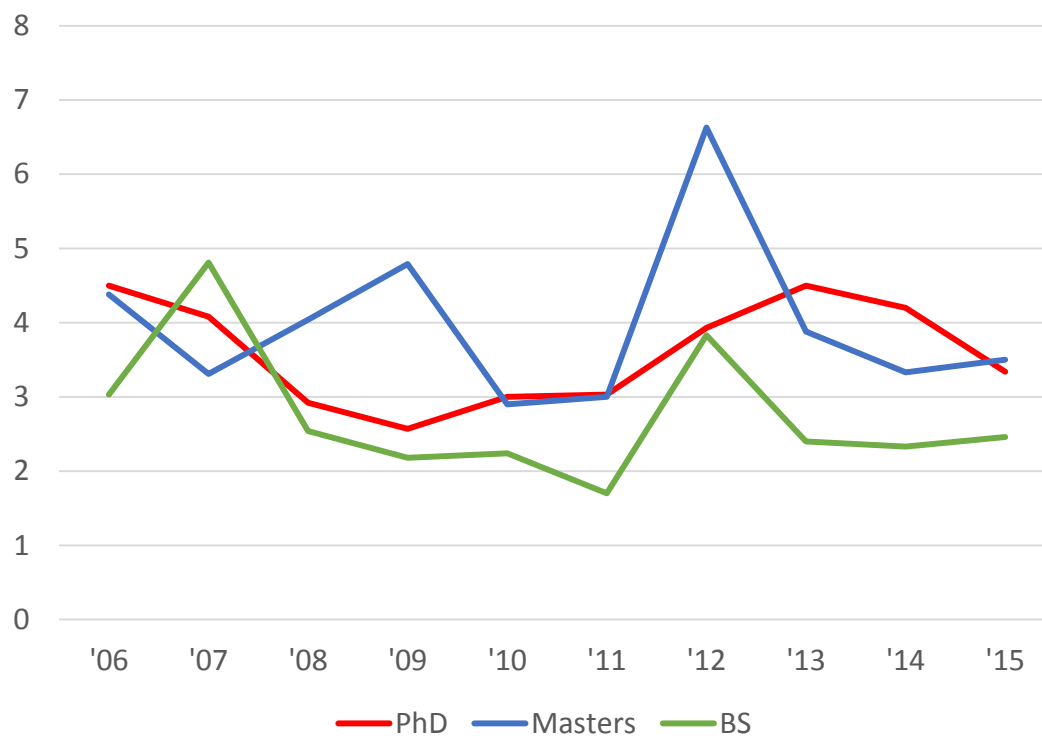
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CISE & ENG: Average Students Graduated

CISE



ENG

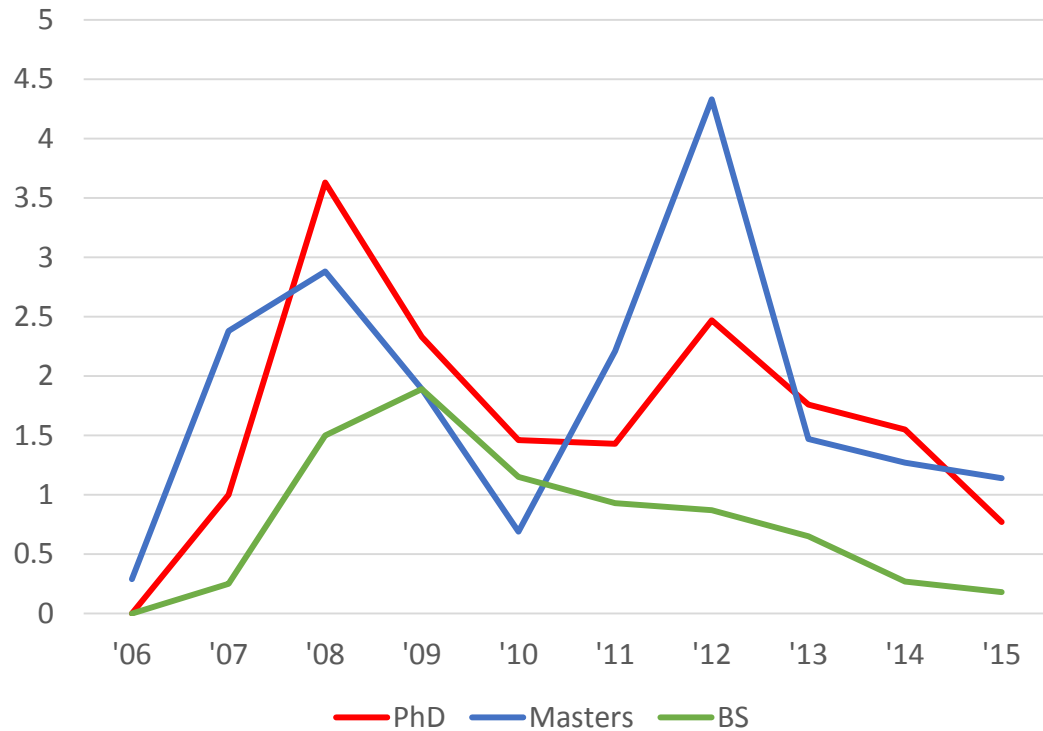


CISE & ENG: Average Students Hired by Members

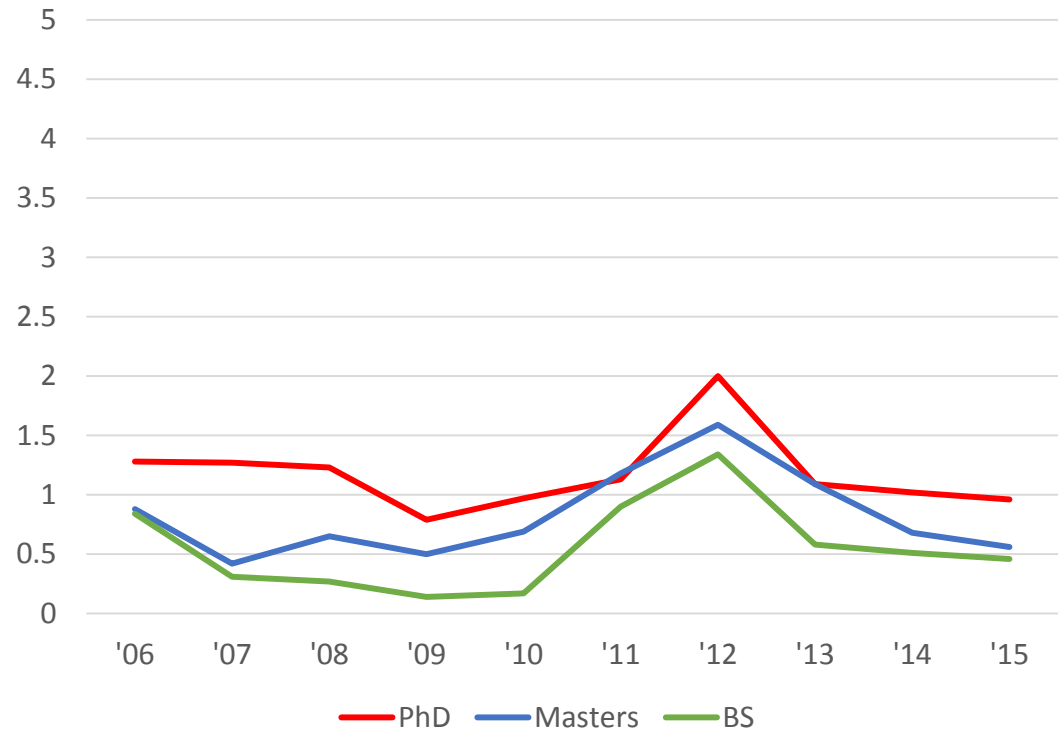


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CISE



ENG

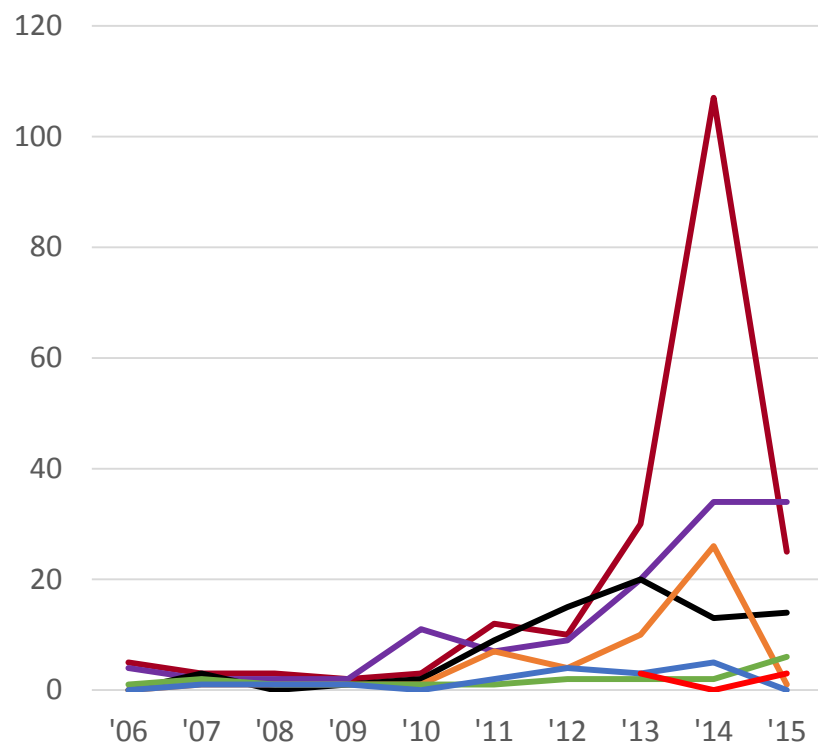




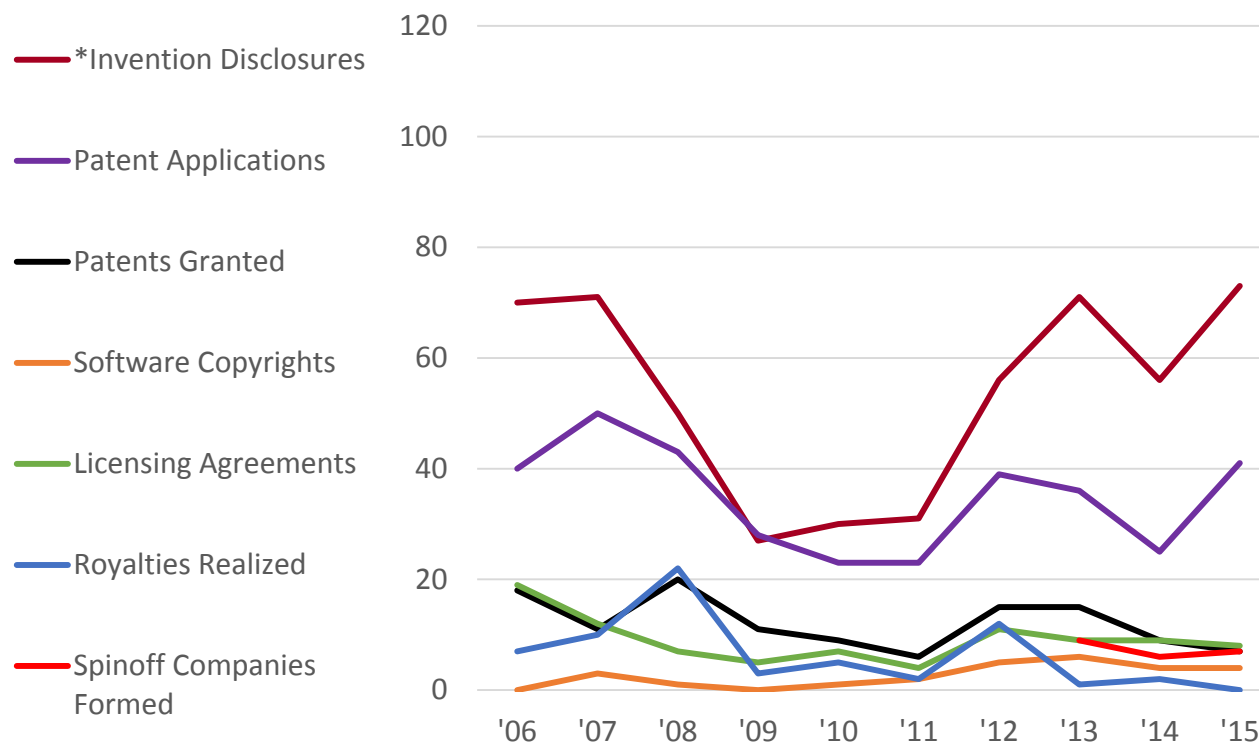
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CISE & ENG: Total Intellectual Property & Commercialization Events 06-15

CISE



ENG



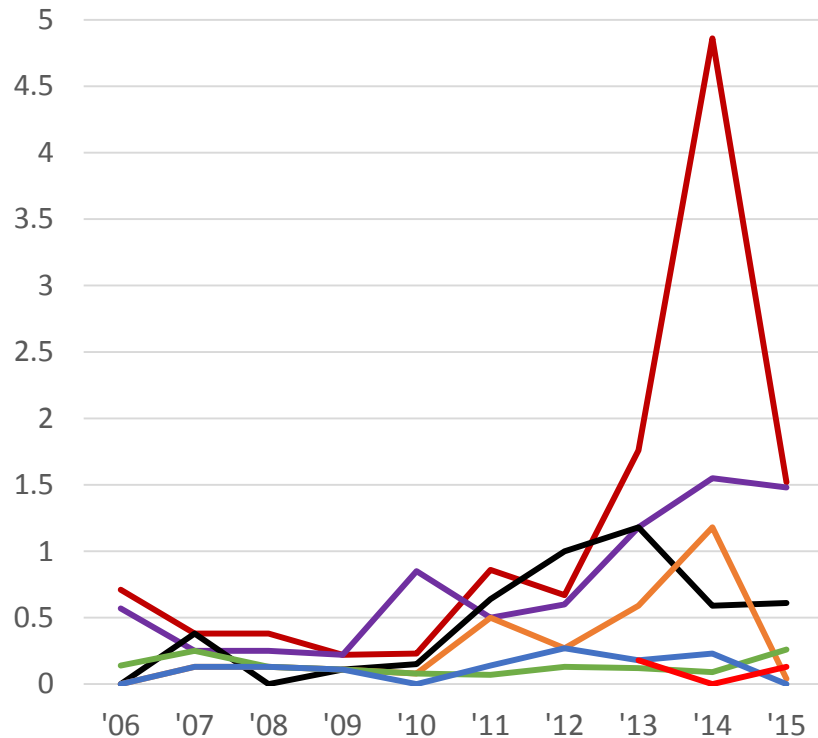
*Invention Disclosures Outliers: CISE 2014: CVDI = 40, CITeR = 17, E-Design = 12. ENG 2014: BSAC = 20. ENG 2015: BSAC = 32.

CISE & ENG: Average Intellectual Property & Commercialization Events 06-15

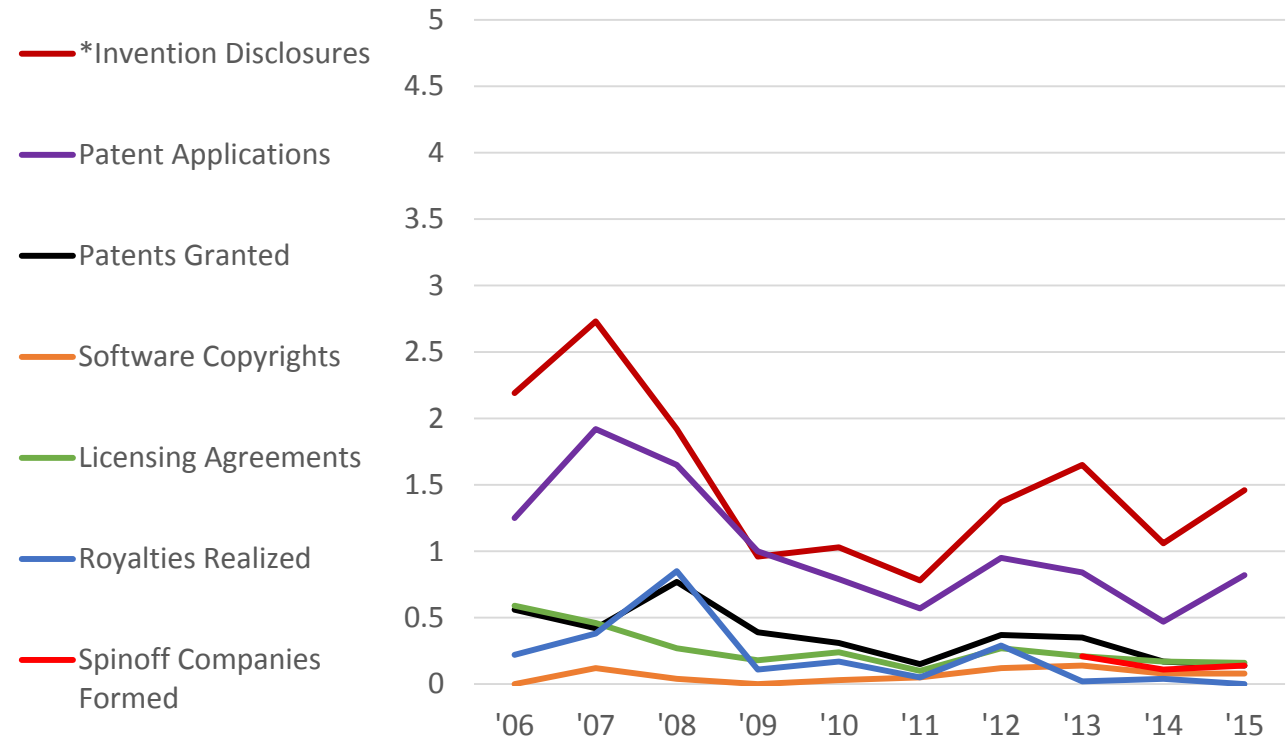


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CISE



ENG



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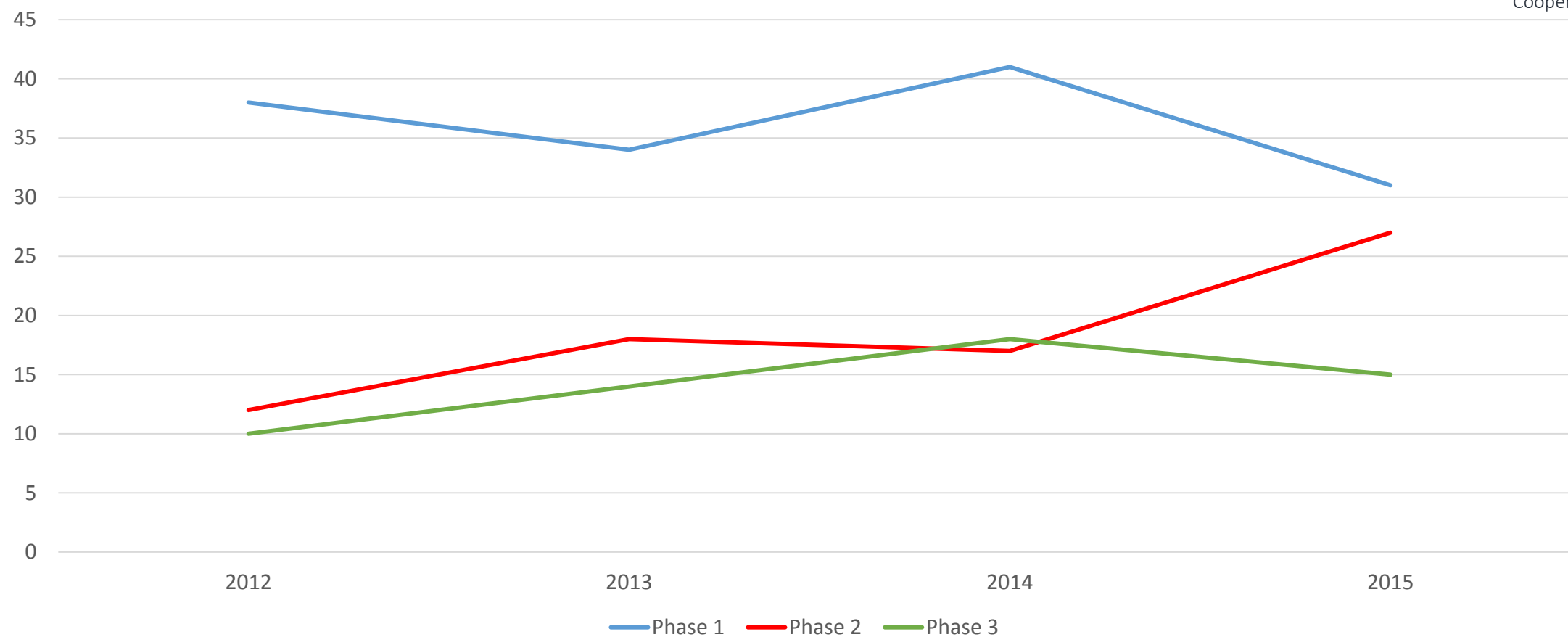
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2015 Phase-based comparison



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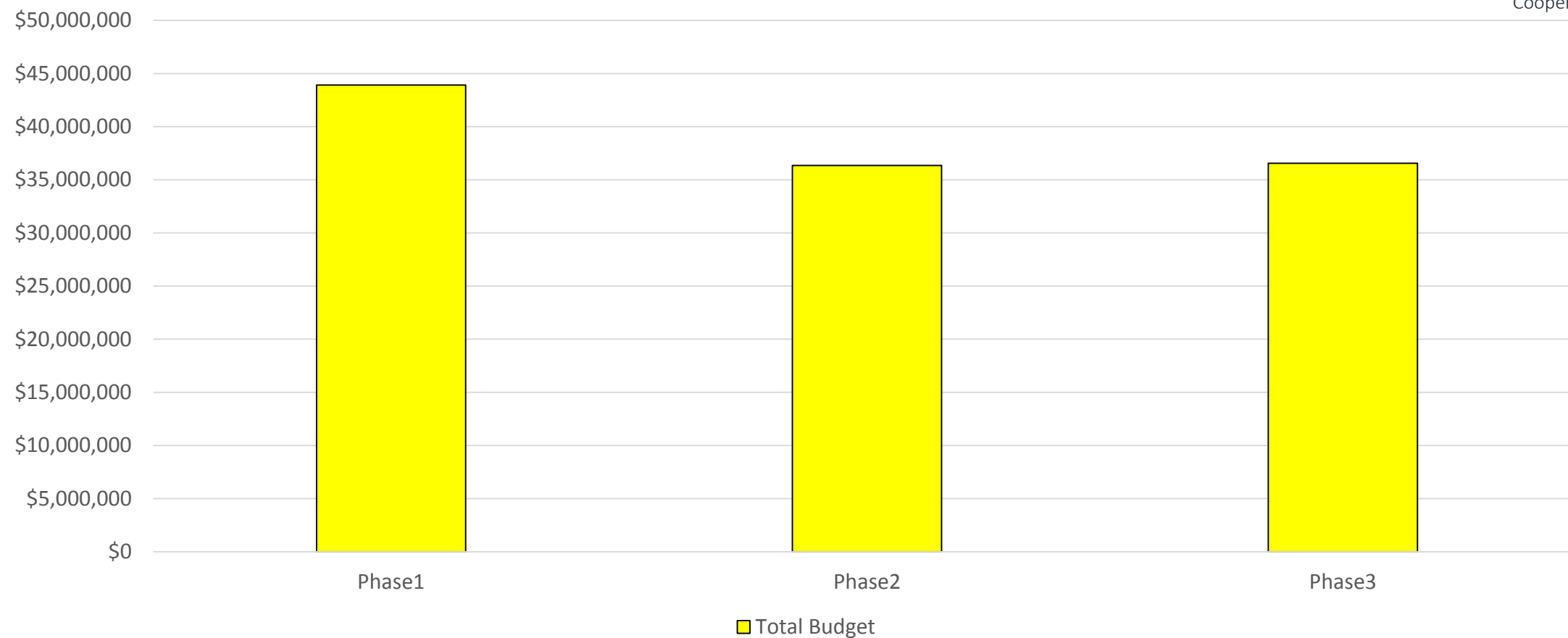
N of Centers by Phase





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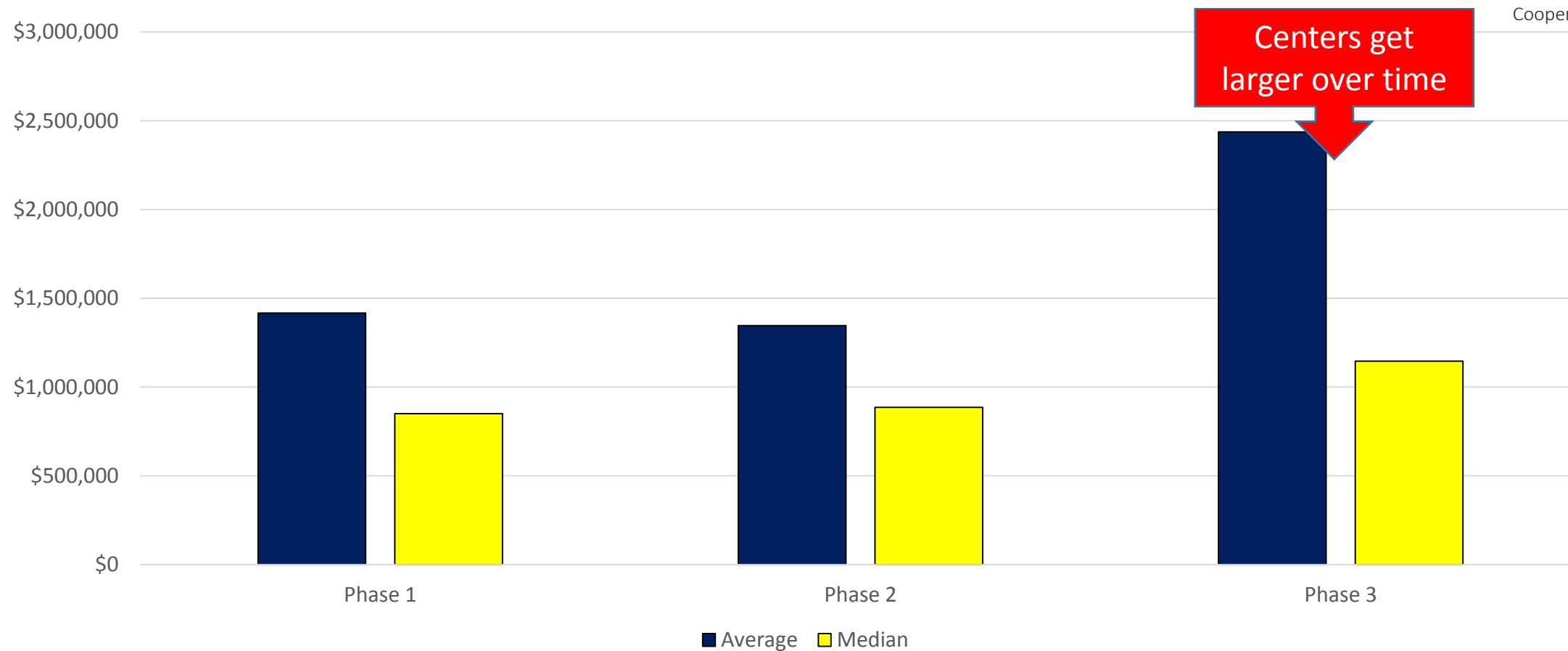
Total Program Funding





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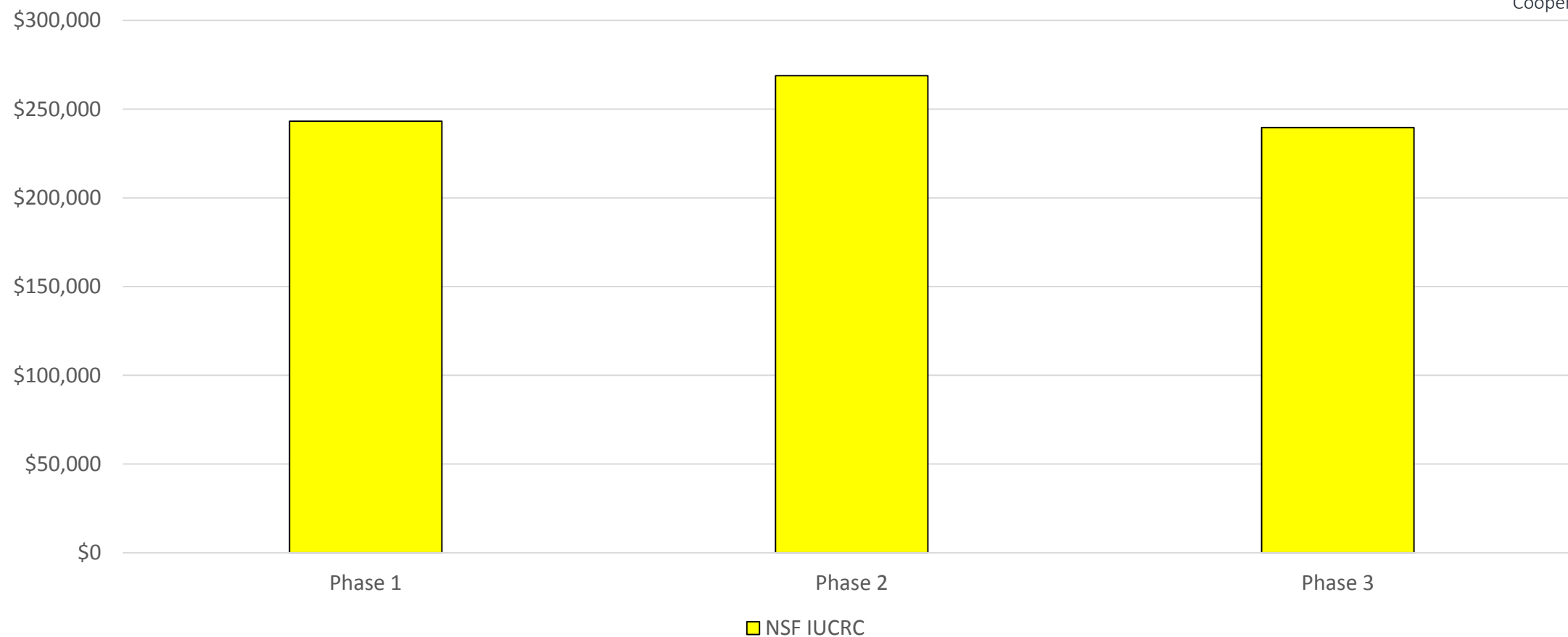
Average & Median Total Center Funding





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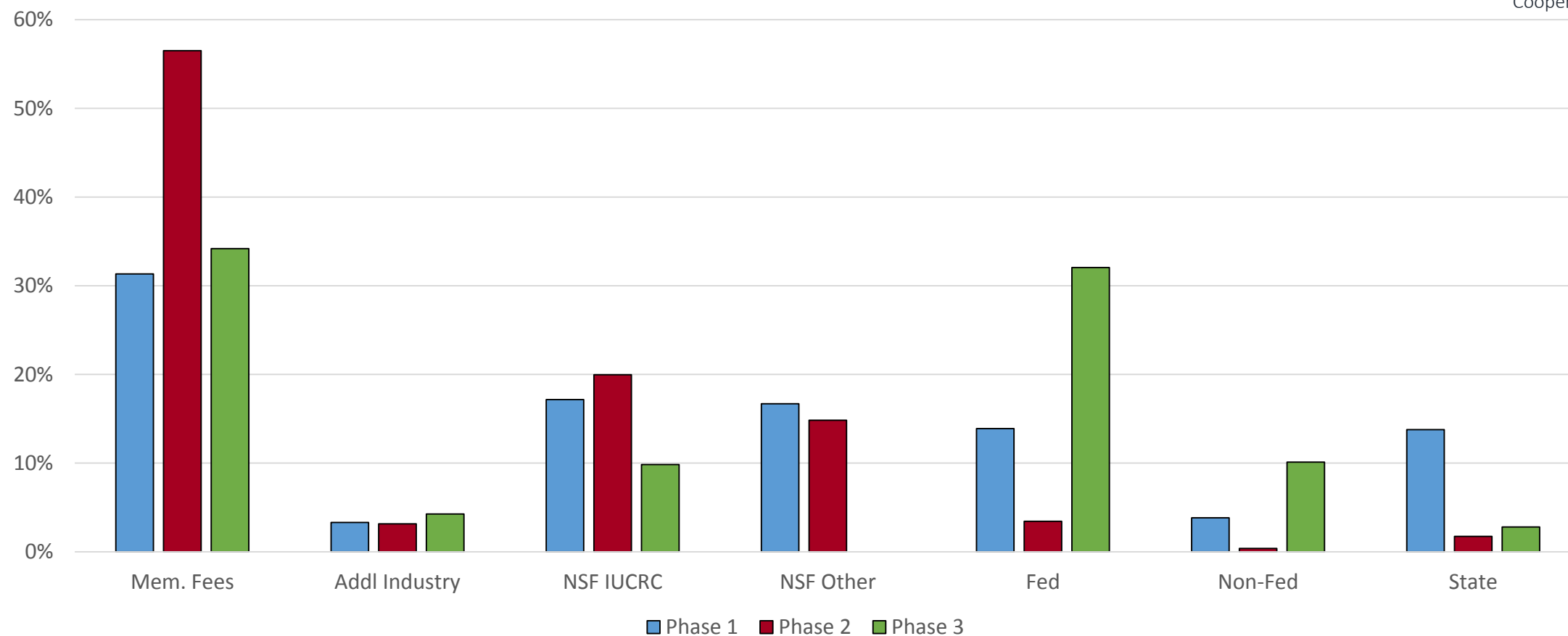
Average NSF IUCRC Awards & Supplements





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Total Funding by Source in Percentages

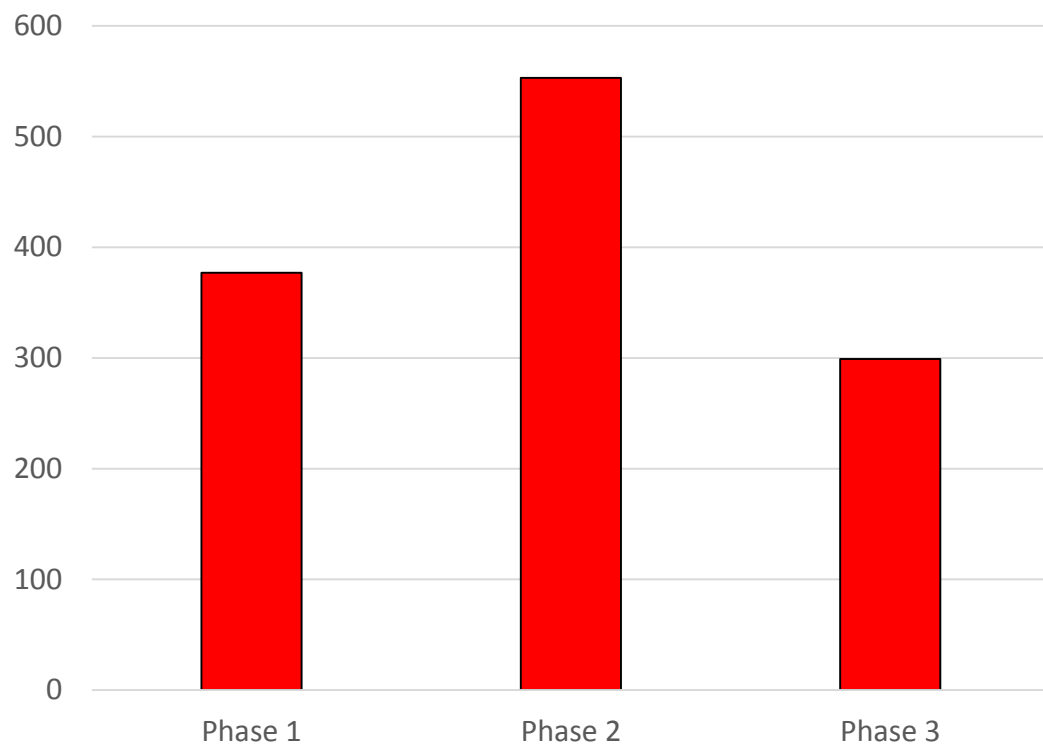




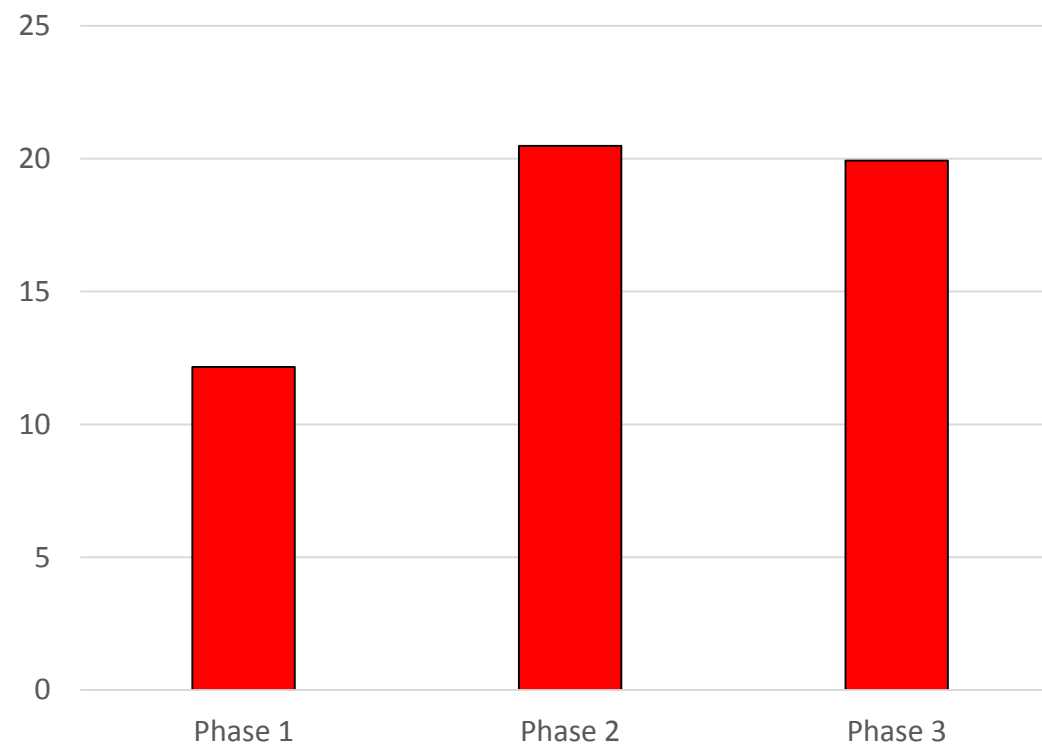
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Industrial Memberships

Total Number of Memberships



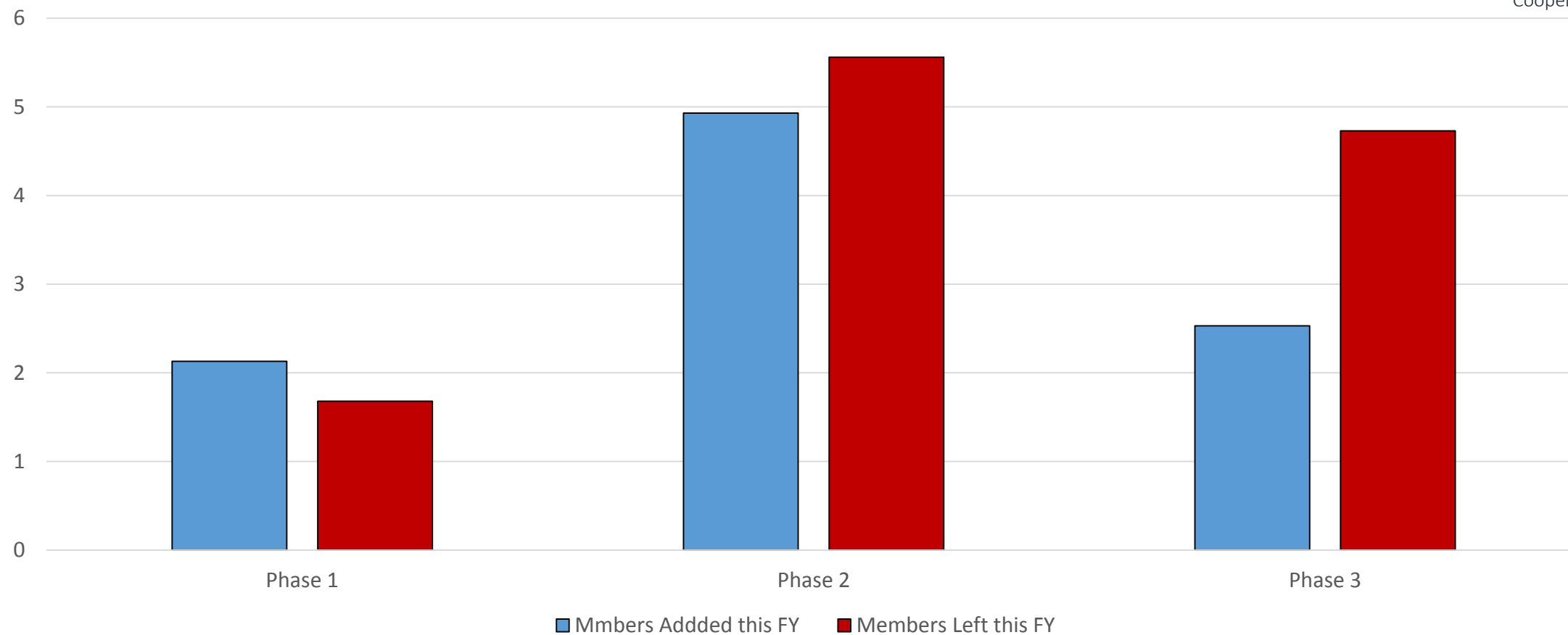
Average Number of Memberships





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Average Membership Turn Over

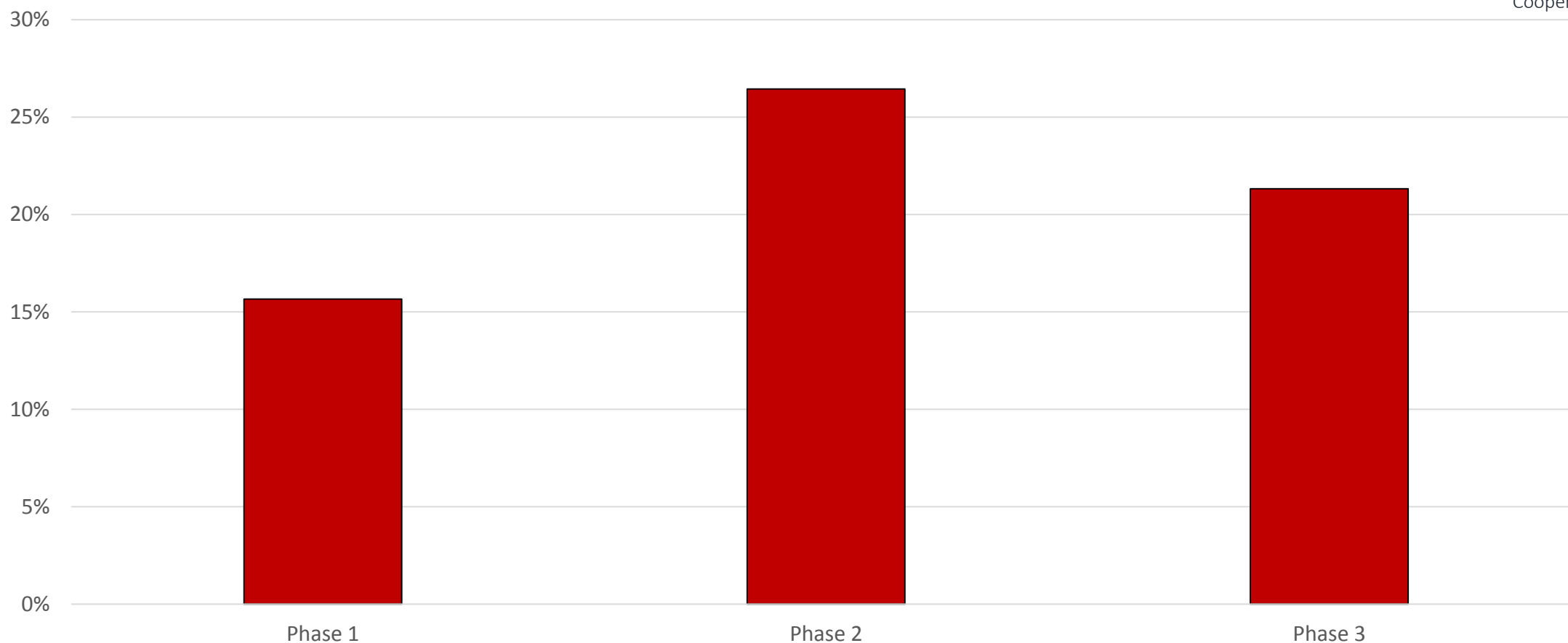


*Newly funded Centers' members are not counted as Members Added



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Member Turnover Rate

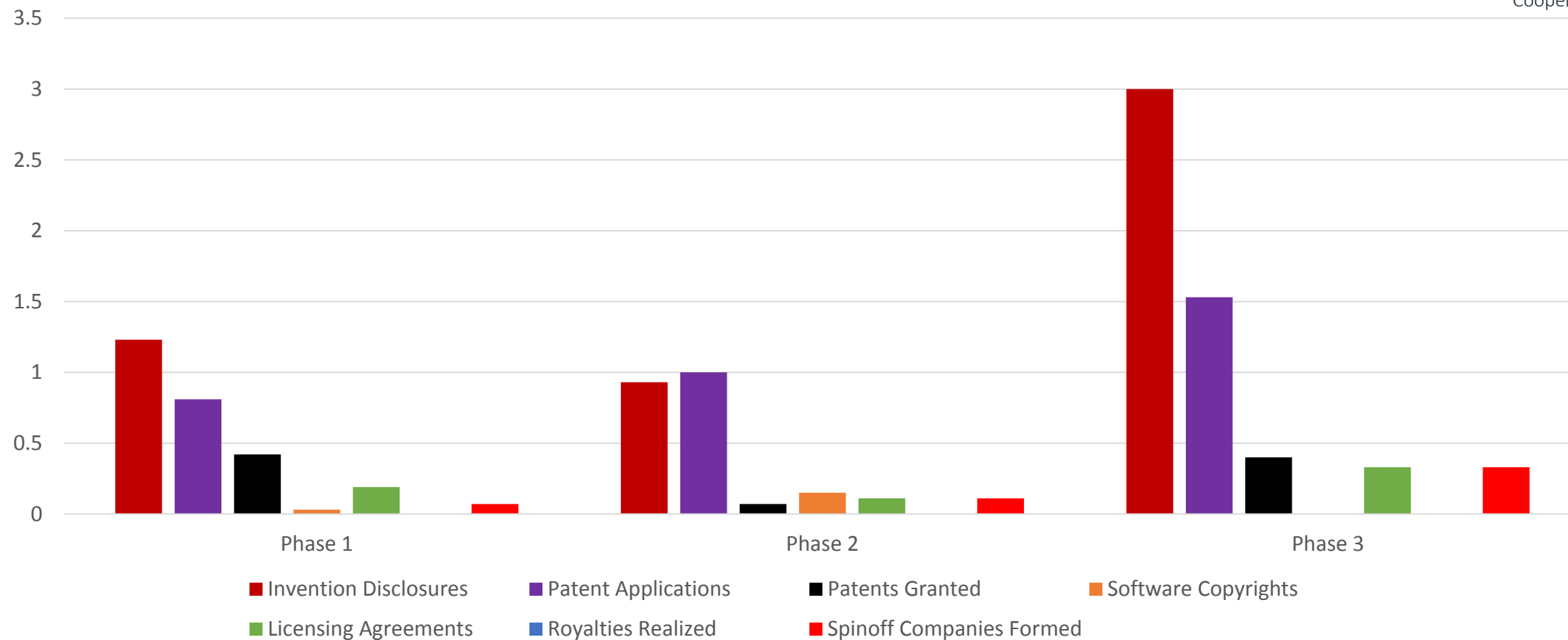


Turnover % = Members terminated in "year X+1" / Total members in "year X"



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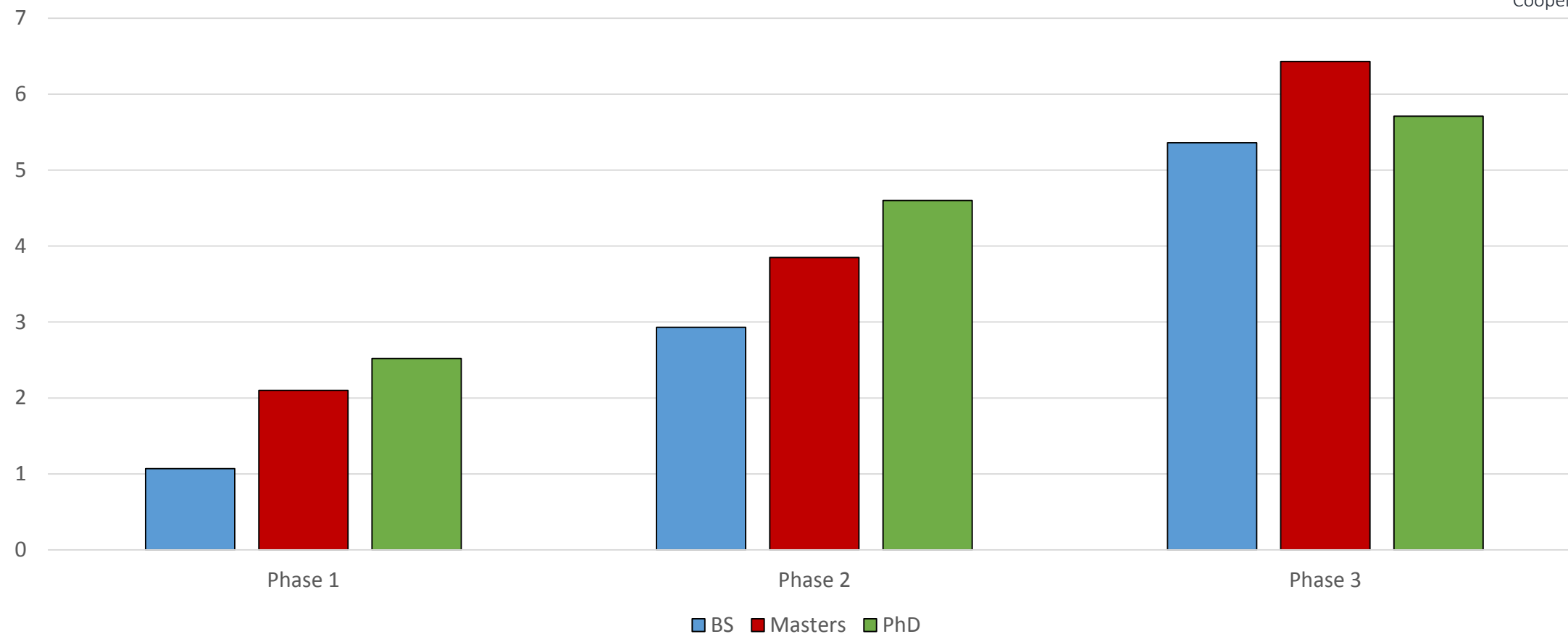
Average Number of Intellectual Property & Commercialization Events





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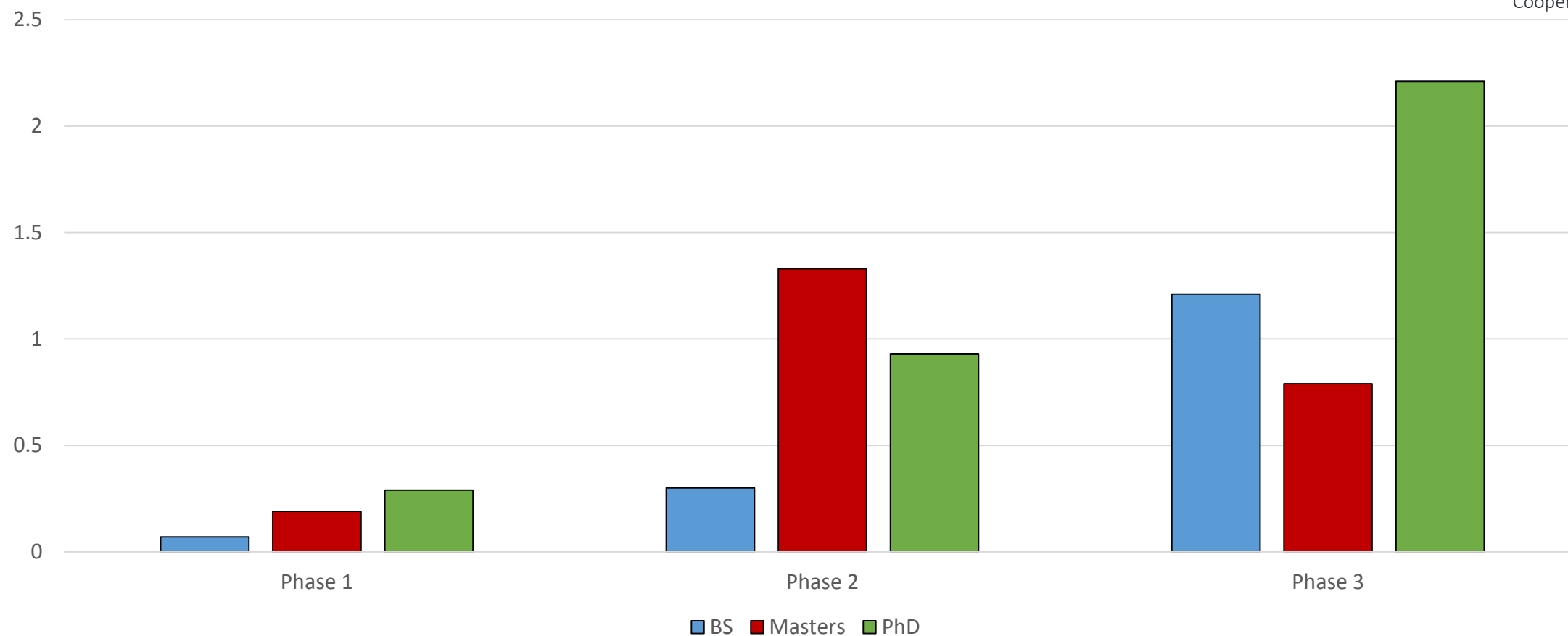
Average Students Graduated





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Average Students Hired by Members





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Questions?