Testimony for Committee on Education of the Texas Senate

Improving Teacher Quality

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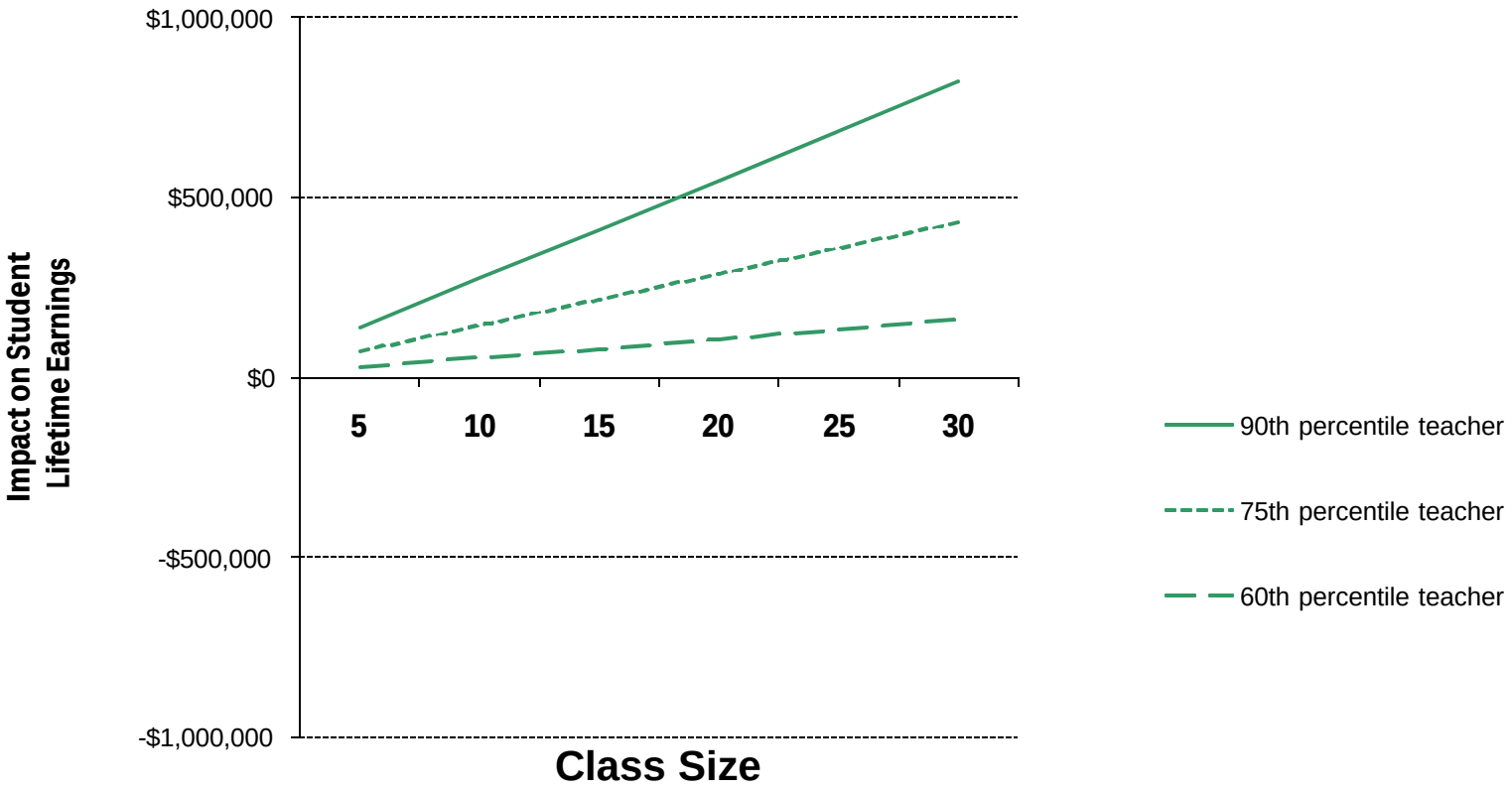
Backdrop of Teacher Quality Discussions

- Teachers most important input
- No identifiable characteristics
  - Master's degrees
  - Experience*
  - Certification
  - Preparation
  - Professional development
- Cannot regulate and pay on characteristics

Demand for Quality: Teacher Impact through Individual Earnings

Impact on Student Lifetime Incomes by Class Size and Teacher Effectiveness (compared to average teacher)



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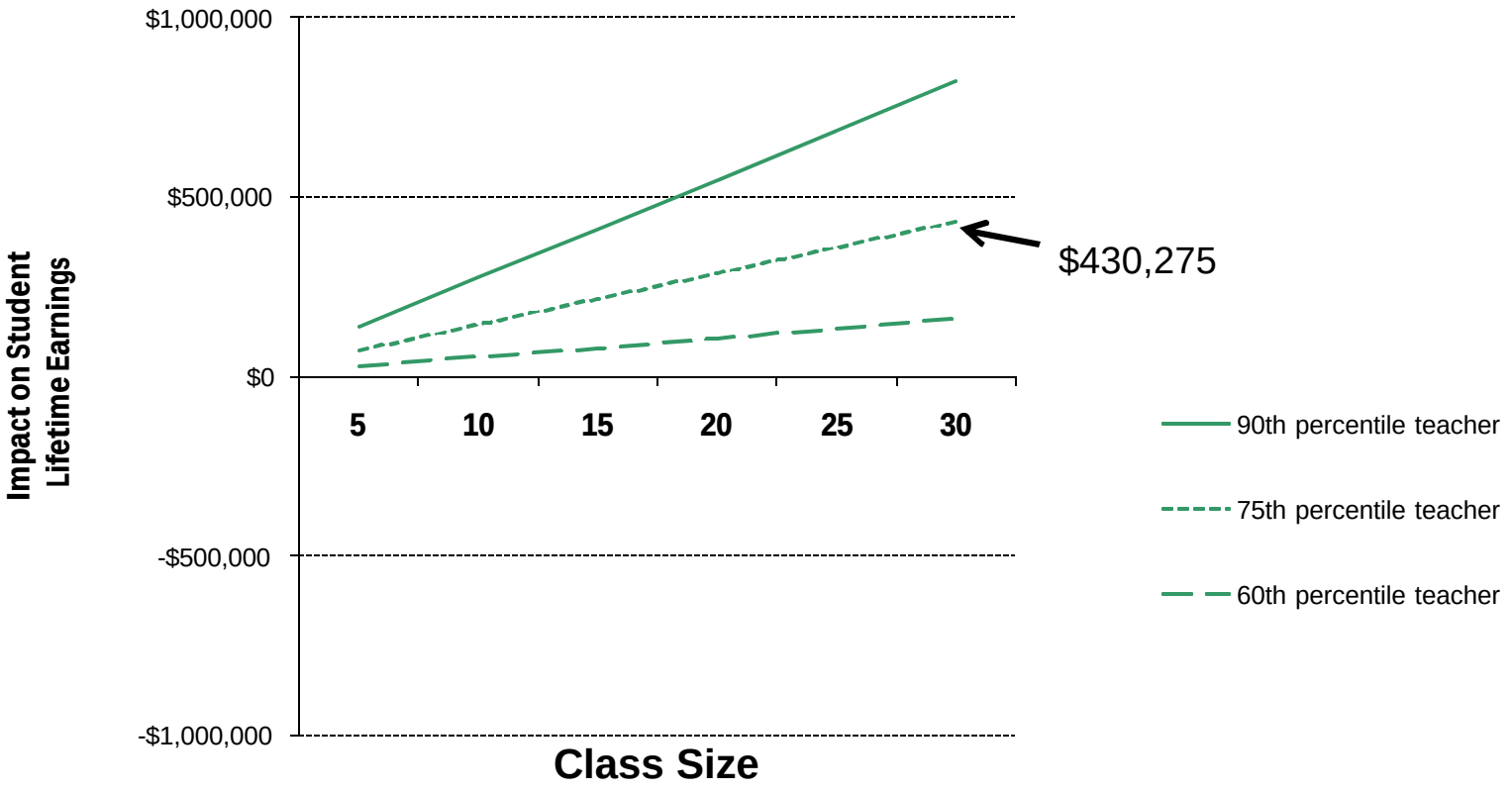

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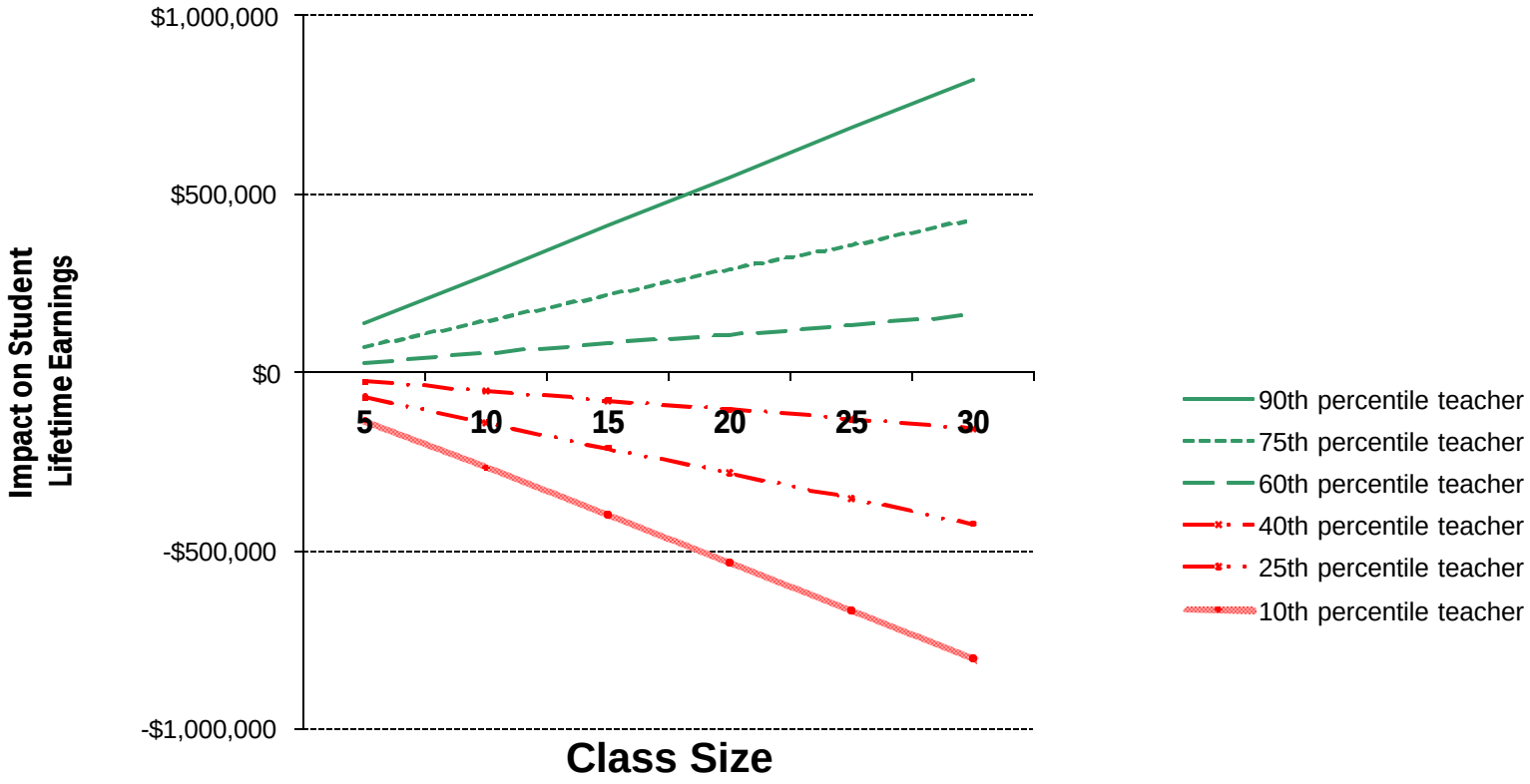

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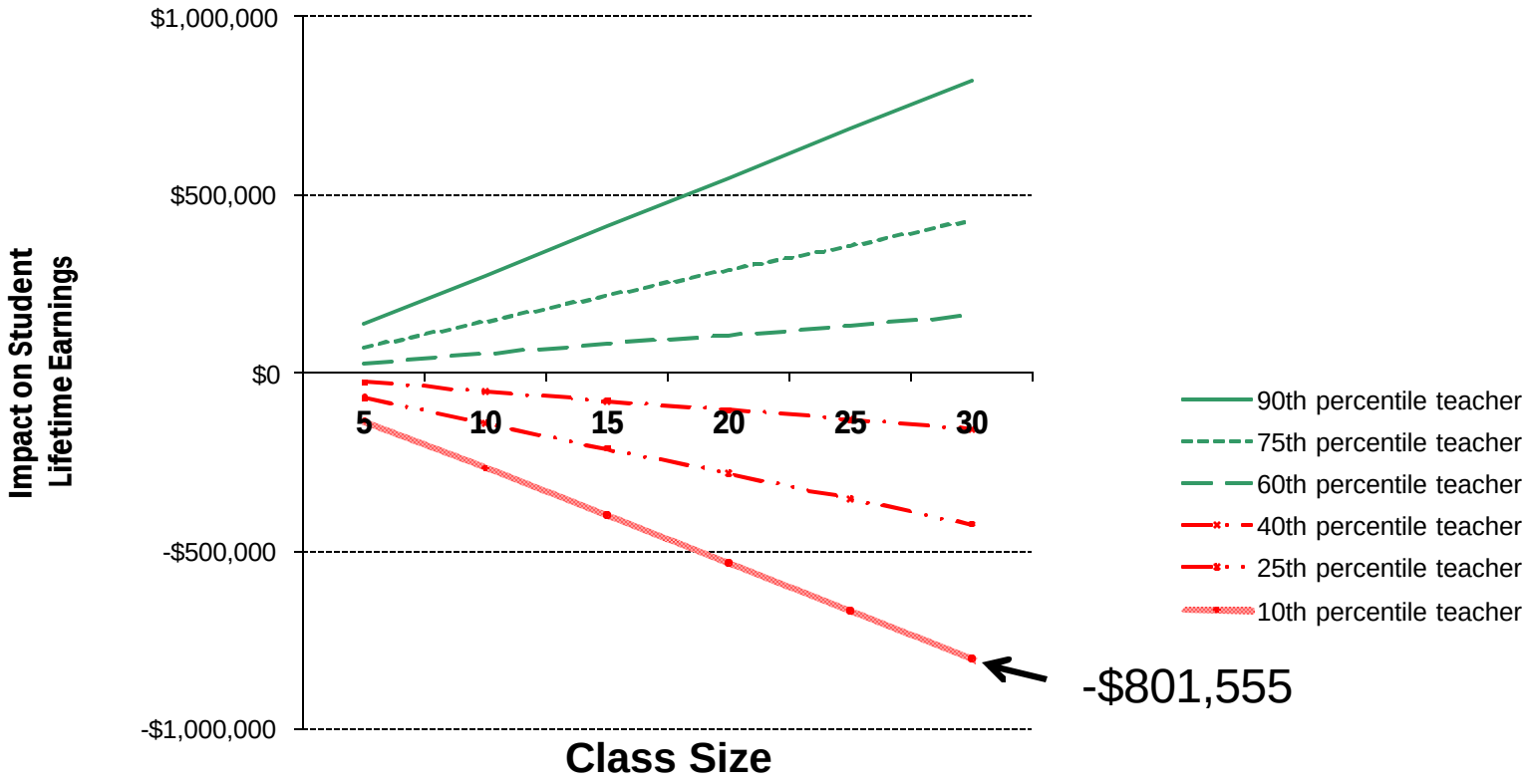
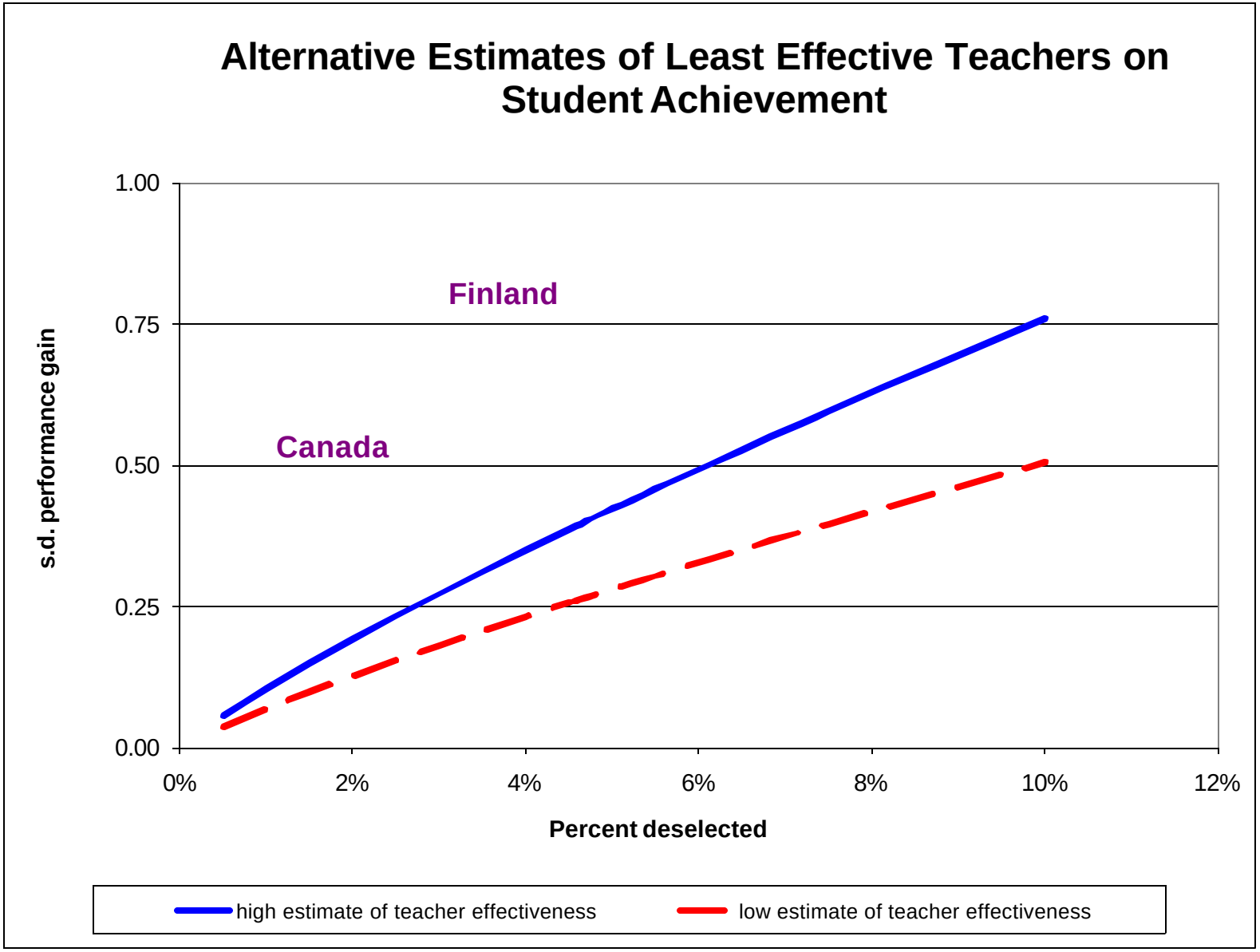
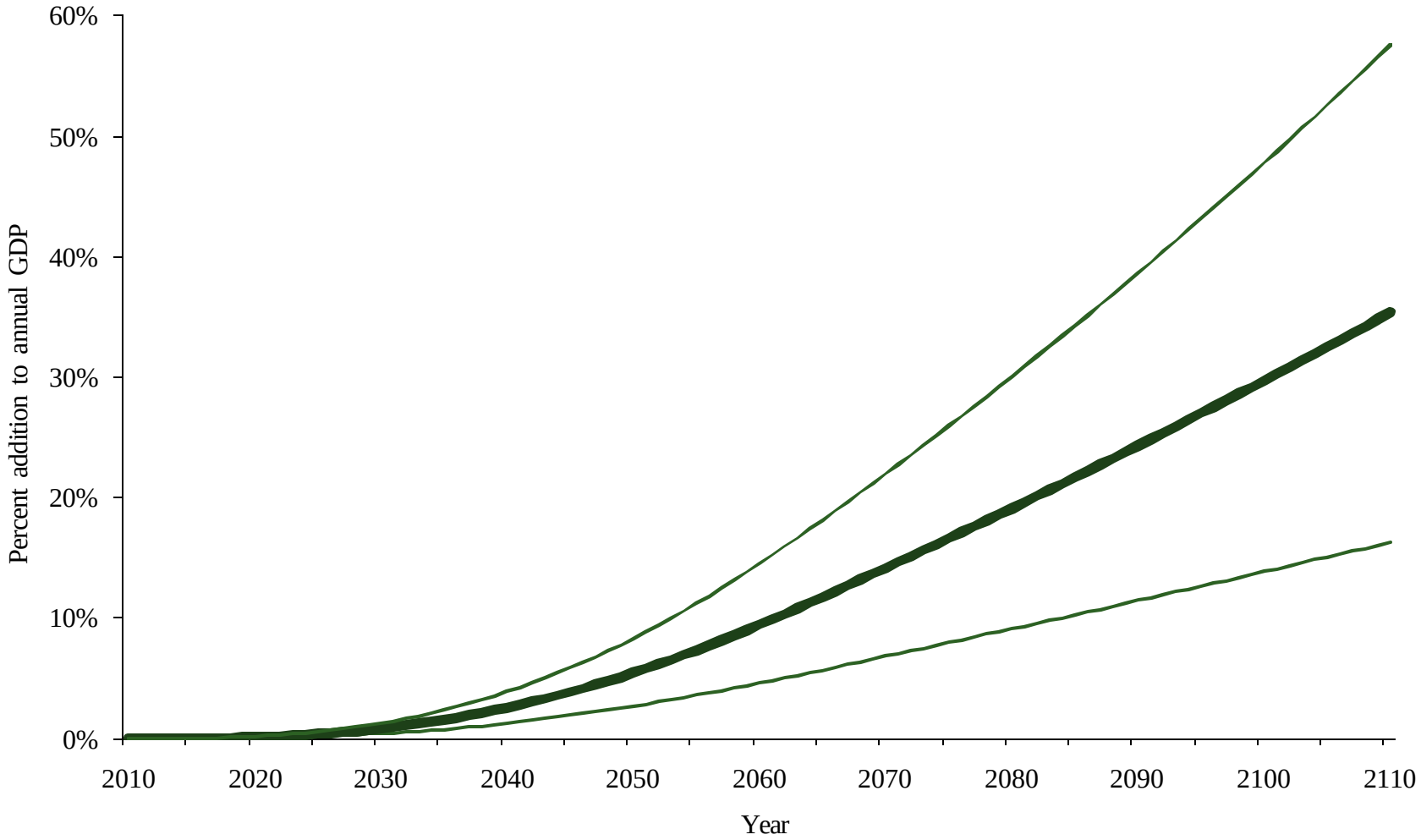


Demand for Quality: Teacher Impact through Aggregate Improvement


Alternative Estimates of Least Effective Teachers on Student Achievement
1.00
0.75
0.50
0.25
0.00
s.d. performance gain
Finland
Canada
0%
2%
4%
6%
8%
10%
12%
Percent deselected
high estimate of teacher effectiveness
low estimate of teacher effectiveness

Annual Gains from 25 PISA-Points Improvement (1/4 std. dev.)



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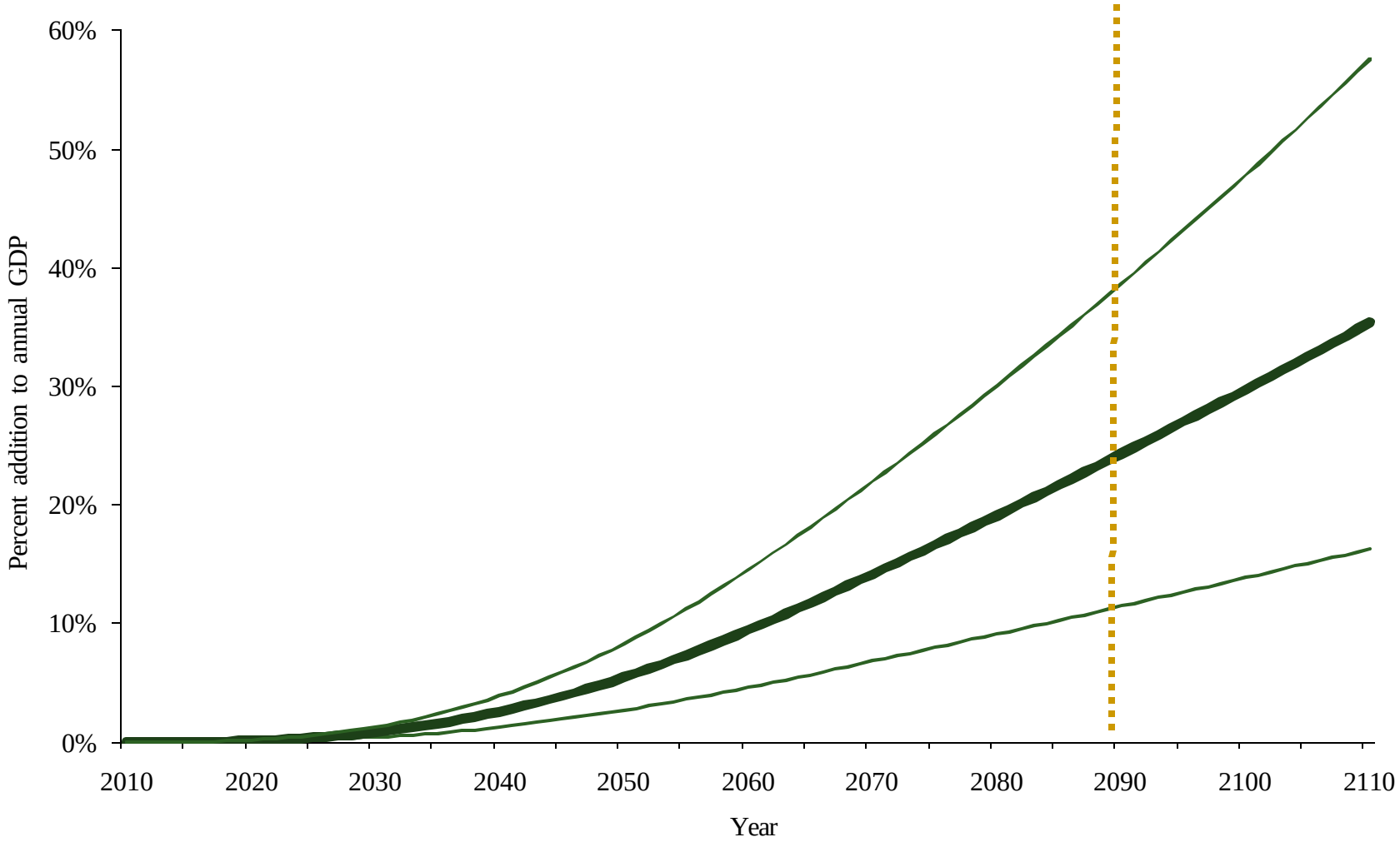
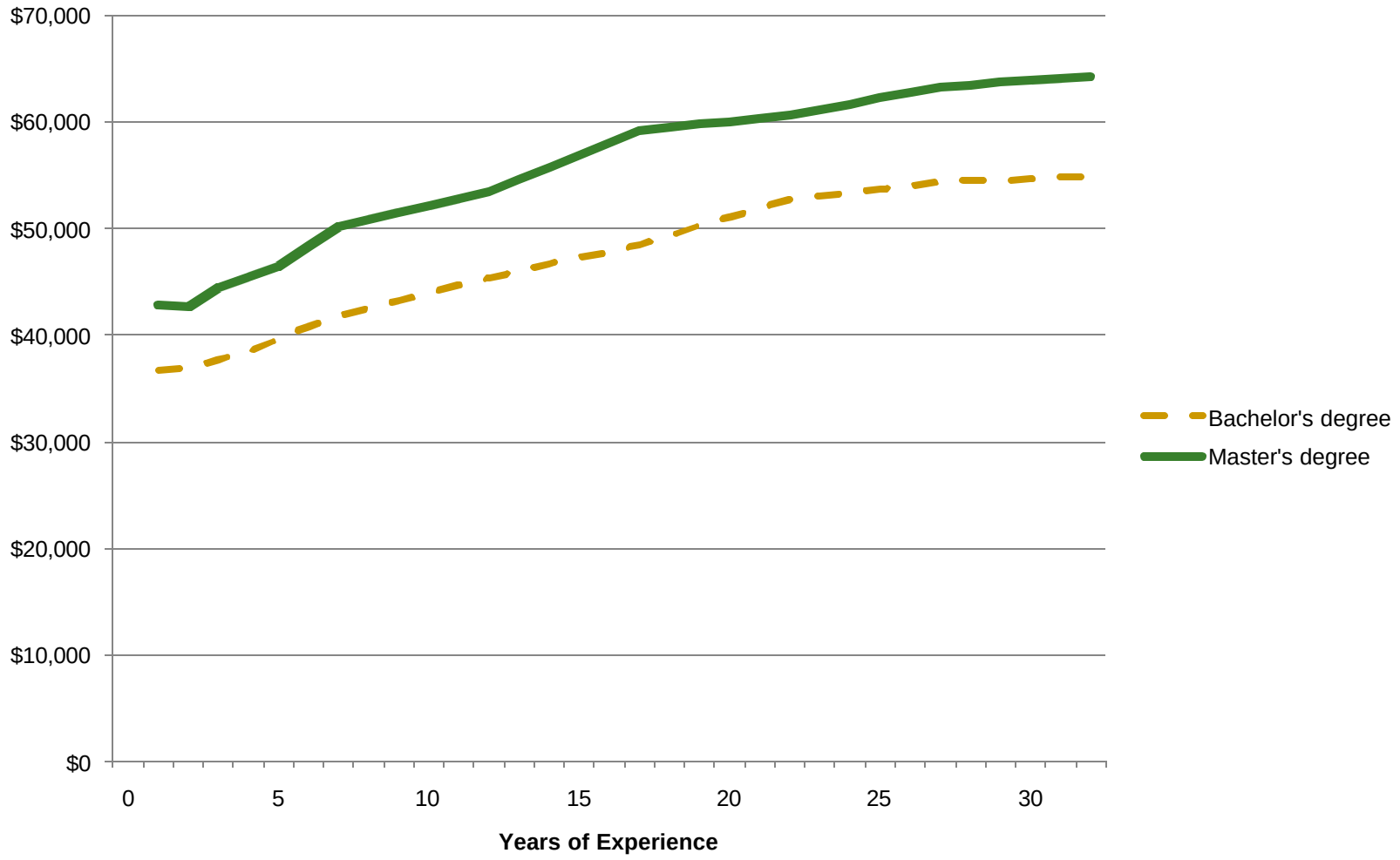


Present Value of Achievement Gains

Achievement change	Present value ($billion)	% GDP
Plus ¼ standard deviation (to UK, Germany; ½ way to Canada)	$40,647	268%
Achievement = Finland	$103,073	678%
Eliminate “below level 1” (< 400 PISA)	$72,101	475%

Inefficiencies in Current Salaries

Average Teacher Salary by Degree and Experience, 2007



Experience and Advanced Degrees

	% of Teachers	% of Salaries
MA or more	53	9.5
Experience > 2 years	85	27

Conclusions

- Gains very large from better teachers
- Difference between effective and ineffective enormous
- Gains justify substantial structural change

Cautions

- Gains only with achievement
- Gains take long time
- "too hard" ⟶ willing to accept large loss

Benchmark Economic Data (2008)

- GDP = $14.5 trillion
- K-12 = 4.6% GDP
- Aggregate K-12 spending = $661 billion
- Average teacher salary = $53,230