Unpaid Lunch Debt in Durham, NC

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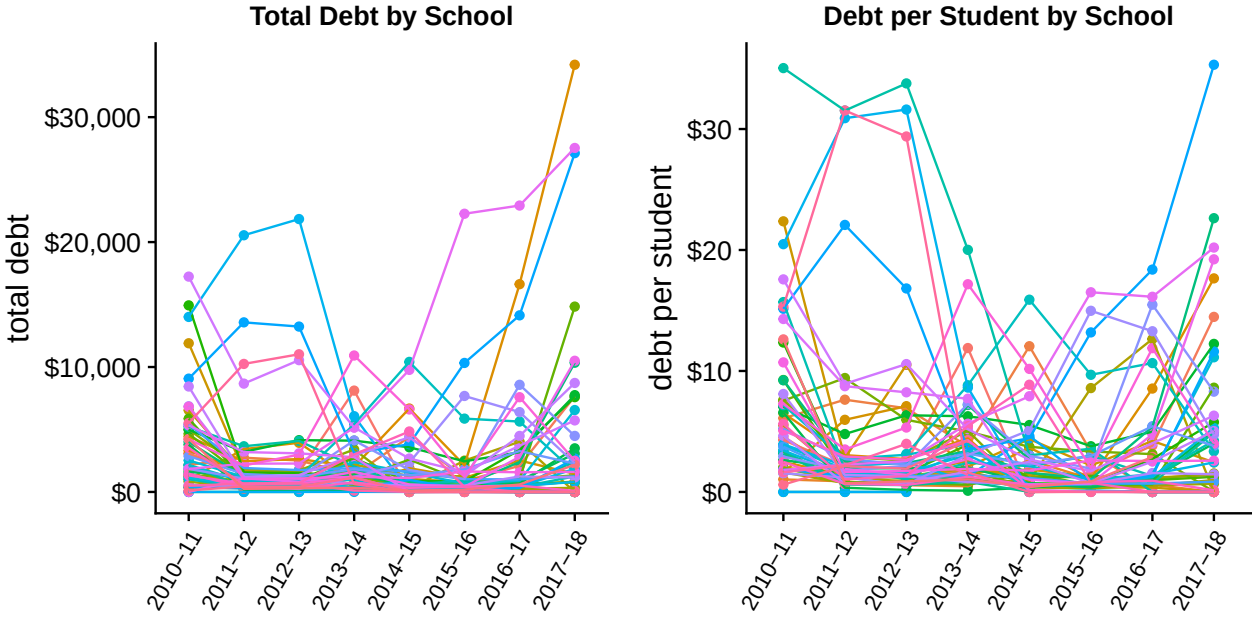
Introduction

When families can't afford to pay for student lunches, school districts foot the bill. But with major cuts to educational funding in North Carolina—where some schools don't even have enough funds to pay for students' textbooks—this means school districts can wrack up tens of thousands of dollars in debt. In Durham, students with five or more unpaid lunches only receive a juice and a sandwich instead of a hot lunch. This lends its way to "lunch shaming", where students who can't afford pay skip the meal altogether to avoid the embarrassment of eating a cold lunch. This is a major issue, since student performance in school is directly tied to access to quality food.

Data Sources

- End-of-Year unpaid meal data from James Keaton, director of child nutrition services at DPS.
- All free/reduced price lunch data was obtained from ncpublicschools.org
- 2010-11 through 2015-16 demographic data was obtained from the NCES ELSI table generator, code 91803
- 2017-18 ADM data from ncpublicschools.org's Average Daily Membership and Membership Last Day by School

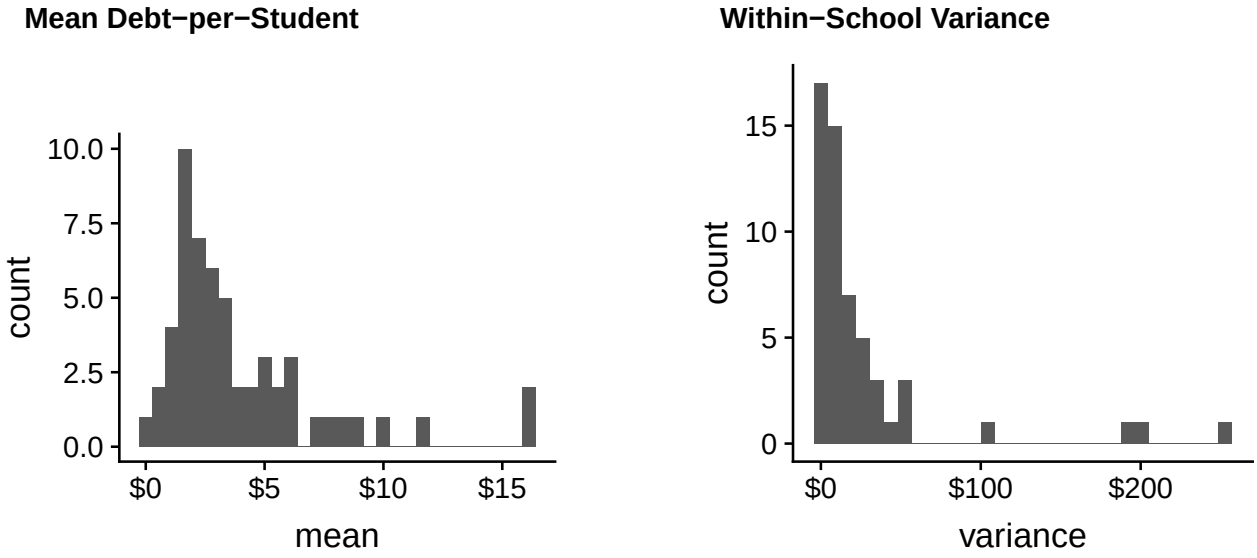
Exploratory Data Analysis



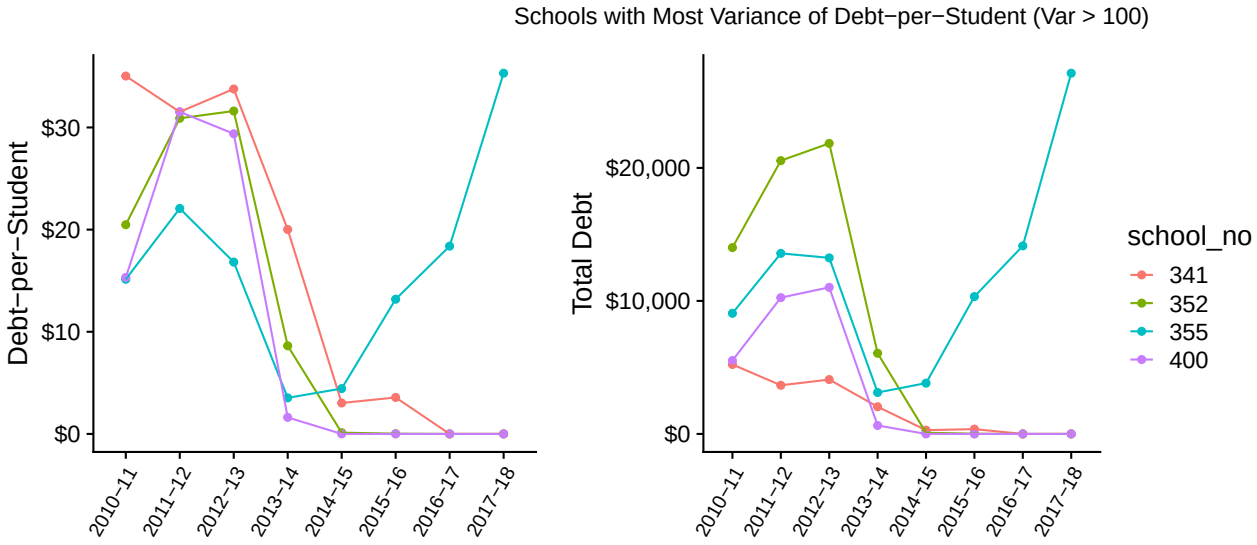
There's a lot of fluctuation in debt-per-student and total debt by school over time. Let's try to see which schools have the most variation in debt-per-student, and highest average debt-per-student.

I also looked at the mean and variance of debt per student by school. This gives us a sense of *how* much debt per student fluctuates within in each school. Schools with a high variance should be looked into—perhaps

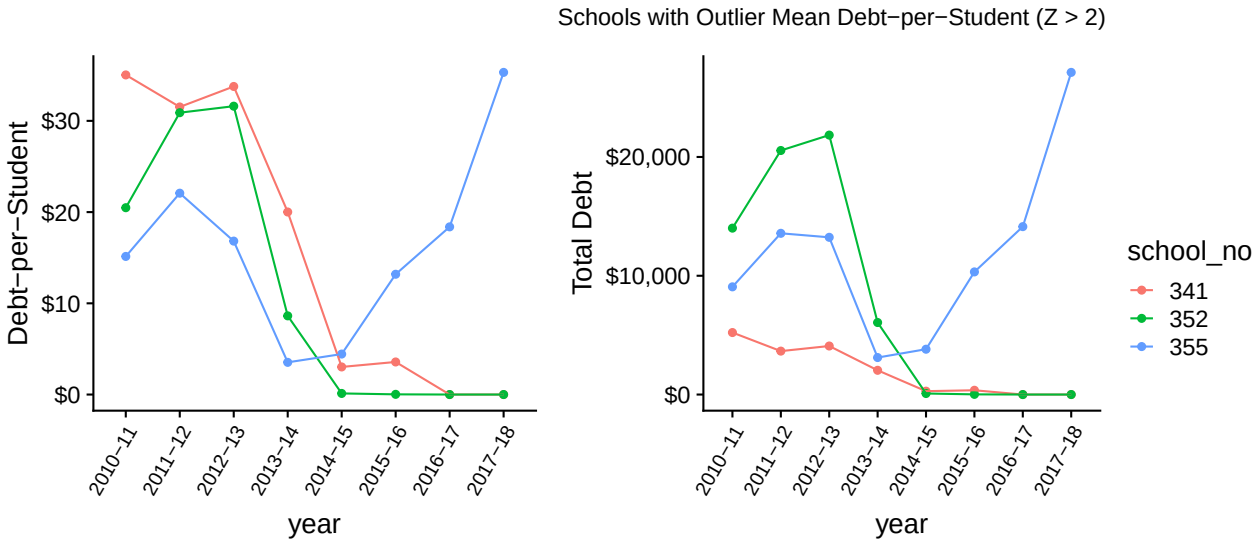
fluctuations in debt are tied to CEP status? Or someone bailing a school out of debt? Similarly, schools with a generally high mean debt per student are of interest. Why are these schools struggling more than others?



There are definitely some outliers in our data when it comes to variance of within-school debt per student and mean debt-per-student. Let's pull any schools that fall greater than 2 standard deviations from the mean (proper outliers) and see what their debt-per-student looks like longitudinally.



Let's also look at schools with outlier values for mean debt.



FOR NEXT WEEK: - get 2010-11, 2011-12, 2012-13, 2013-14 and 2017-18 CEP data - ask about when school lunch data pulled - get demographic data for 2016-17 and 2017-18 academic years - double check datasets for conflicting ADM/counts

- external factors (paying off debt, CEP status)
- how to track people paying off debt/dates?
- think about fairly comparing schools
- LONG TERM: can a student graduate with debt? are they barred from anything? what are consequences besides food?