

Abstract Title Page
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Title:

Trends in Income-Related Gaps in Enrollment in Early Childhood Education: 1968 to 2013

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Abstract Body

Limit 4 pages single-spaced.

Background / Context:

Description of prior research and its intellectual context.

The academic achievement gap between children from the lowest- and highest-income families appears to have risen in recent decades in the United States (Reardon, 2011). Such income-related disparities in academic skills are already present when children enter elementary school, suggesting that the explanation for changing gaps can be traced to changing experiences in children's earliest years.

In this paper, we explore to what extent changes in enrollment in center-based early childhood education have contributed to this trend. Motivating our analysis are two stylized facts: early childhood education, particularly when it is high-quality, is associated with higher levels of school readiness and subsequent achievement; and historically, children from low-income families have been less likely to be enrolled in such programs than their more affluent peers (Magnuson & Waldfogel, 2005). If income-related gaps in enrollment have widened over time (or if early childhood education has become more consequential for later achievement), then such trends may have played a role in increasing income-related gaps in school achievement. Conversely, if gaps in enrollment in early childhood education have narrowed (or if early childhood education has become less important for later achievement), then such trends may have acted to reduce gaps in achievement.

Purpose / Objective / Research Question / Focus of Study:

Description of the focus of the research.

Using data on family income and school enrollment from the annual October Current Population Survey (CPS), we document the trends in enrollment in center-based early childhood education, which we refer to as preschool, for 3- and 4-year old children from 1968 to the present, to examine to what extent gaps in enrollment between low-, middle-, and high-income children have widened, narrowed, or remained the same. The October CPS data do not include information on quality or hours in education, but we briefly consider available evidence from published data about whether income-related inequality in quality or hours in early childhood education has changed over this period. We also review published data to examine the extent to which enrollment in early childhood education has become more or less consequential for later school achievement over this time period.

Setting:

Description of the research location.

We study enrollment in early childhood education in the United States, from 1968 to the present.

Population / Participants / Subjects:

Description of the participants in the study: who, how many, key features, or characteristics.

We use data on 3 and 4 year old children, from the October Current Population Survey. The survey is large and nationally representative.

Intervention / Program / Practice:

Description of the intervention, program, or practice, including details of administration and duration.

Preschool-age children in the United States participate in many different types of early childhood education programs as well as informal child care arrangements. The former category includes any form of school or center-based care (including preschools, day care centers, nursery schools, Head Start programs, and state or local prekindergarten programs), whereas the latter includes informal child care in the child's home or another person's home (by a babysitter, nanny, relative, non-relative, or family child care provider). We discuss in the paper how the October CPS measures preschool, how it compares to other datasets, and how we handle a change in the early education question in 1994.

Research Design:

Description of the research design.

We describe trends over time in the share of 3- and 4-year-old children enrolled in early childhood education (which we refer to as preschool for brevity), by income quintile.

Specifically, we graph the gap in the percent enrolled between two specific income groups. To do so, we ran a series of regression models in which we predicted a child's enrollment in early childhood education as a function of the family's income quintile group. For example, to estimate the gap in enrollment between children in Q1 and Q3, we ran a regression model for children from those two income groups, including a dummy variable for Q3 (so that Q1 was the reference category), with data pooled for three consecutive years. The coefficient on Q3 indicates the difference in the enrollment rate between children in Q3 and children in Q1 for that three year period. Similar regression models were used to produce estimates comparing enrollment in Q5 and Q3, and Q5 and Q1.

Data Collection and Analysis:

Description of the methods for collecting and analyzing data.

We use secondary data from the October Current Population Survey.

Findings / Results:

Description of the main findings with specific details.

Overall, we find growing income-related gaps in enrollment in early education for 3- and 4-year-old children in the 1970s and 1980s, followed by stable (for 3-year-olds) or declining (for 4-year-olds) gaps thereafter.

Gaps between low-income children and their middle-income peers (the Q1-Q3 comparison) are relatively modest and about the same size they were 45 years ago. Gaps between high-income children and the middle-income group are larger and reveal some evidence of the groups pulling

apart over time for 3-year olds although not for 4-year olds. But by far the largest gaps are seen when we compare children from the most affluent families to those from the lowest income group (the Q5-Q1 comparison). Here the gap in enrollment for 3-year-olds is larger now than it was 45 years ago – although not as large as it was at its peak in the 1980s. The comparison for 4-year-olds is perhaps more encouraging, in that the gap now is not larger than it was 40 years ago, and smaller than it was in the 1980s.

Conclusions:

Description of conclusions, recommendations, and limitations based on findings.

Such sizable and persistent gaps in an investment believed to affect school readiness should be of concern. But it is not yet clear how consequential these gaps are for subsequent gaps in school achievement (or gaps in other outcomes). Our analysis points to different trends for 3- and 4-year olds, so the implications of these trends will depend on the relative importance of enrollment at these two ages. Moreover, we note that our analysis is limited, in that we do not have data about changes in quality, hours, or the effects of early education on later achievement.

If growing inequality in early childhood education enrollment is contributing to widening inequality of school achievement, there may be a role for policy remedies. But at this point, it is not clear what the appropriate policy response should be. There is not a consensus in the field as to the relative merits of universal vs. targeted early childhood education policies. The recent expansion of public prekindergarten programs can perhaps be seen as a compromise between these two policy positions. Often such programs, while universal, are phased in beginning in the most disadvantaged communities and schools, to ensure that when funds are limited, the most disadvantaged children are served first. Our analysis suggests that these expansions, focused on 4-year-olds, have increased the share of children enrolled in recent decades and have likely helped reduce gaps in enrollment. But, it is also clear from the data presented in this paper that sizable disparities in early enrollment still remain.

Appendices

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Appendix A. References

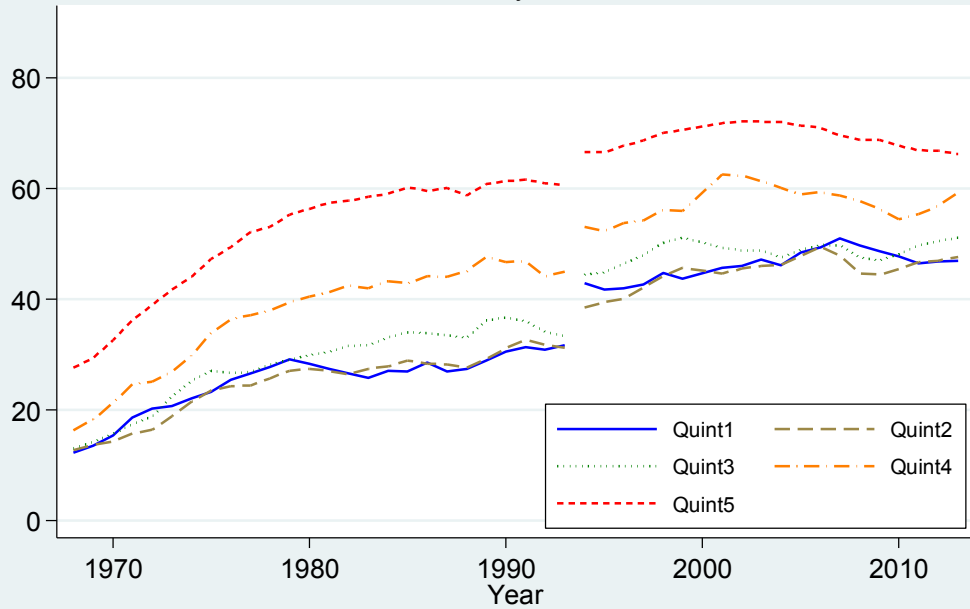
References are to be in APA version 6 format.

Magnuson, Katherine & Jane Waldfogel (2005). "Child Care, Early Education, and Racial/Ethnic Test Score Gaps at the Beginning of School". The Future of Children 15(1): 169-196.

Reardon, Sean (2011). "The Widening Achievement Gap between the Rich and the Poor: New Evidence and Possible Explanations." In Greg J. Duncan & Richard J. Murnane (Eds). Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances. New York: Russell Sage Foundation.

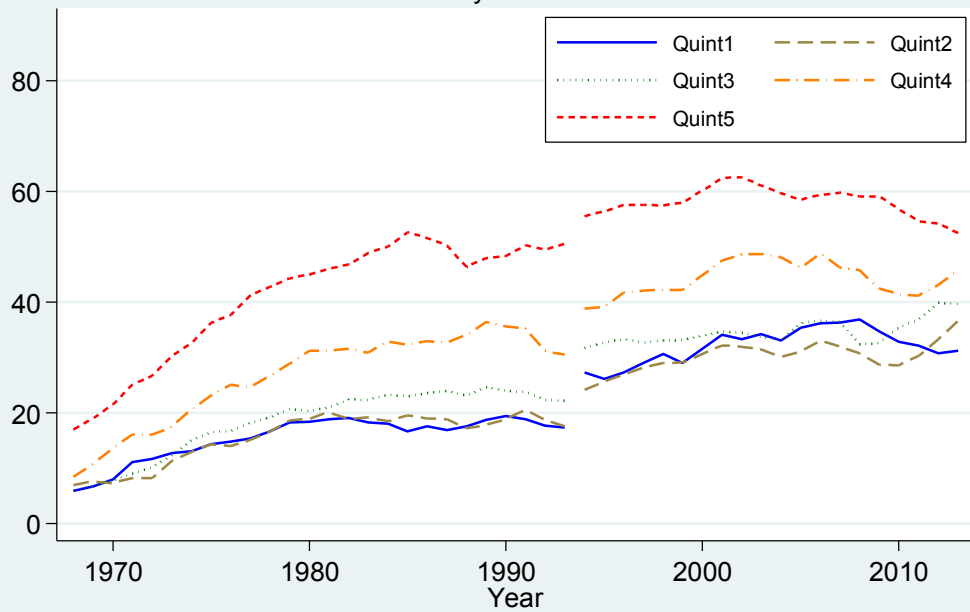
Appendix B. Tables and Figures
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Figure 1: Percent of children enrolled in preschool by family income quintile:
 3- and 4-year olds



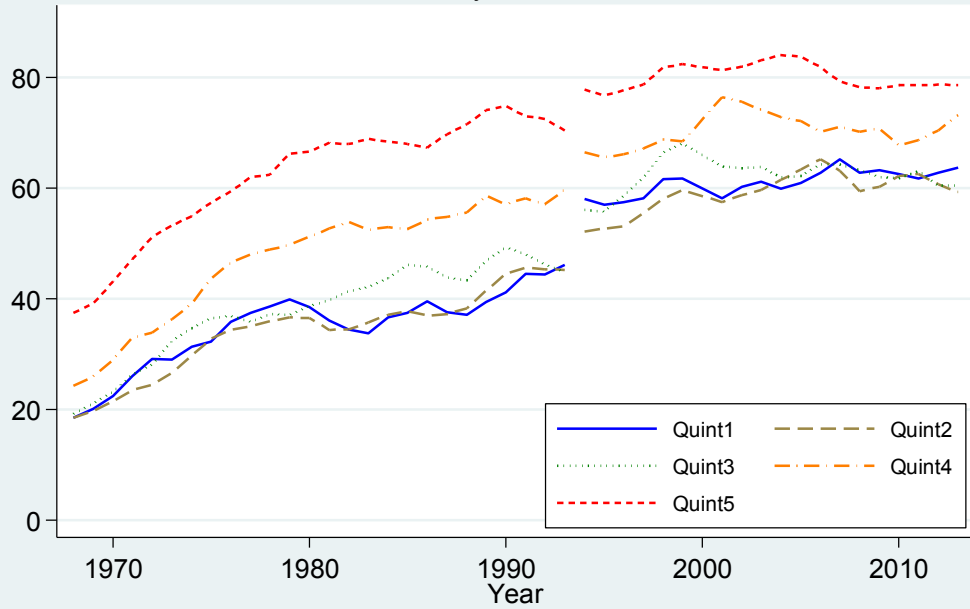
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 2: Percent of children enrolled in preschool by family income quintile:
 3-year olds



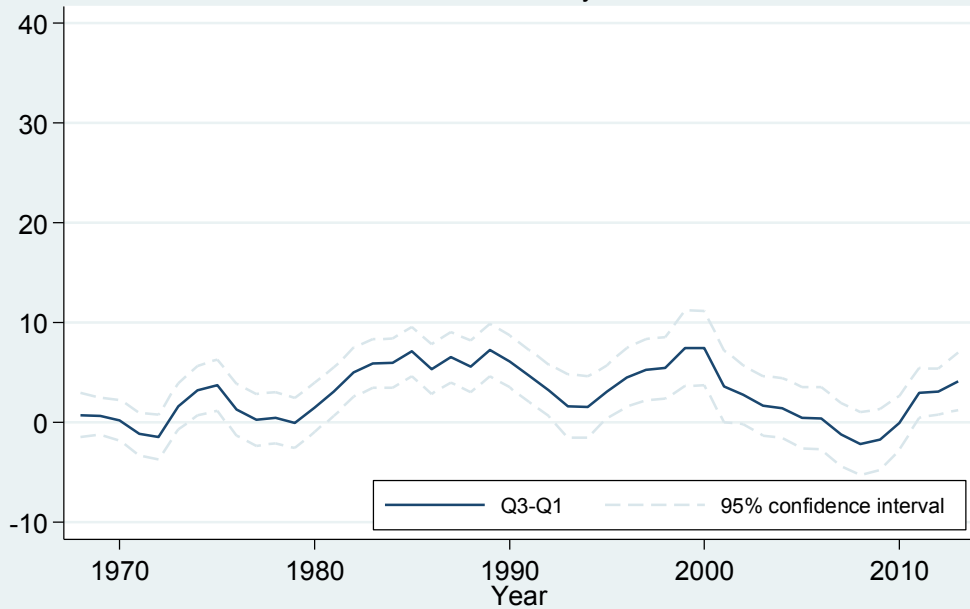
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 3: Percent of children enrolled in preschool by family income quintile:
4-year olds



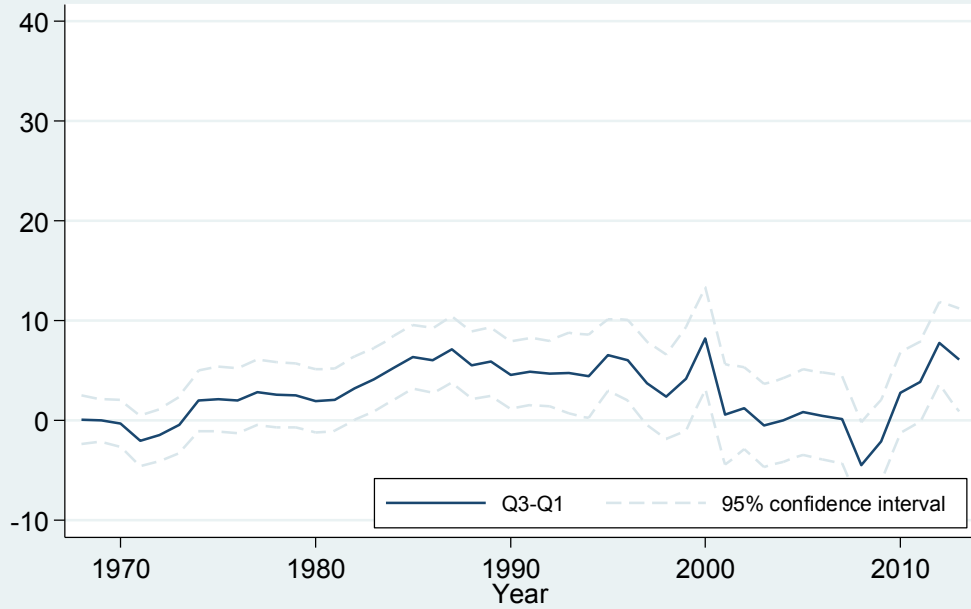
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Figure 4: Preschool Enrollment Gaps between First and Third Income Quintile:
Q3 vs Q1, 3- and 4-year olds



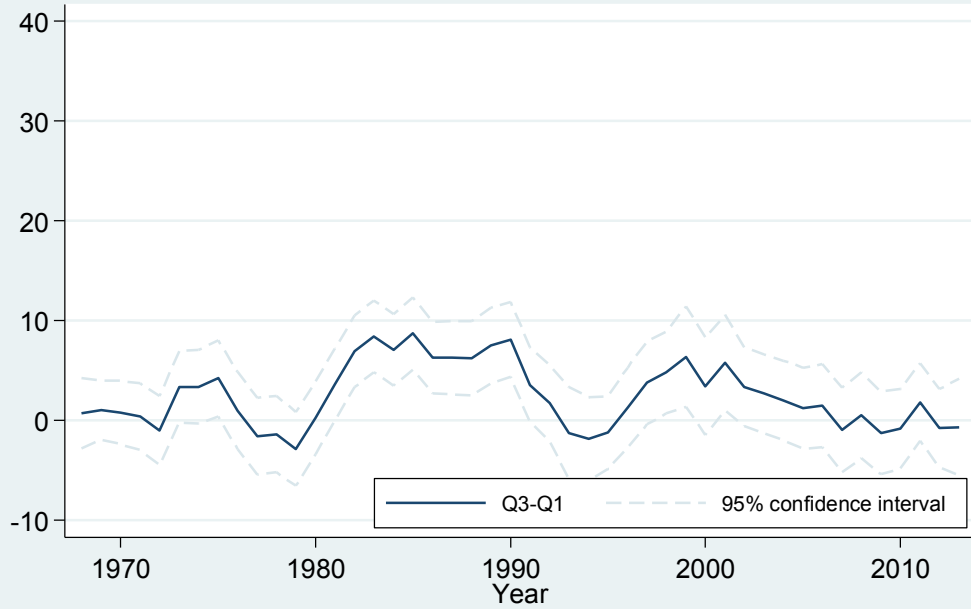
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 5: Preschool Enrollment Gaps between First and Third Income Quintile: Q3 vs Q1, 3-year olds



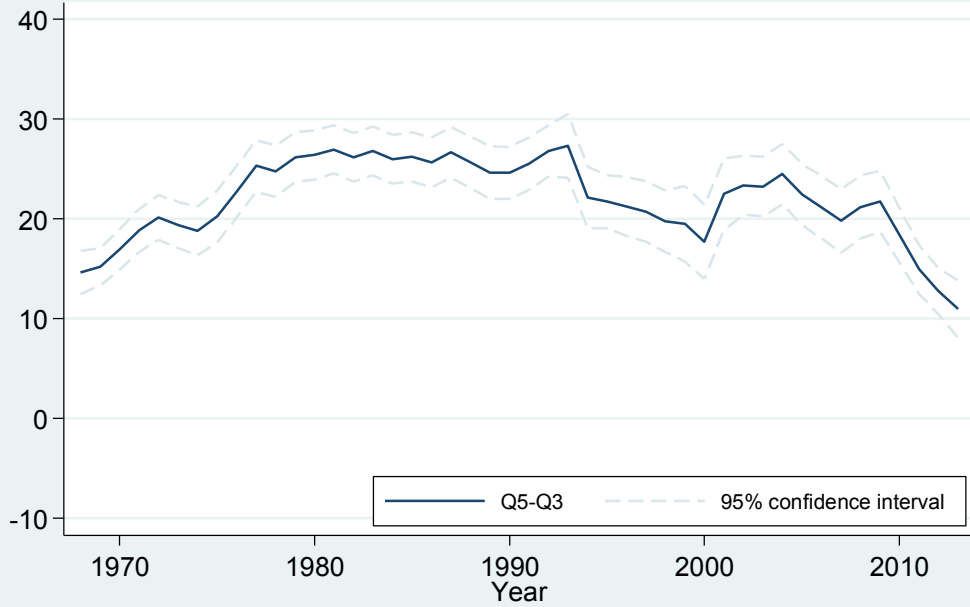
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 6: Preschool Enrollment Gaps between First and Third Income Quintile: Q3 vs Q1, 4-year olds



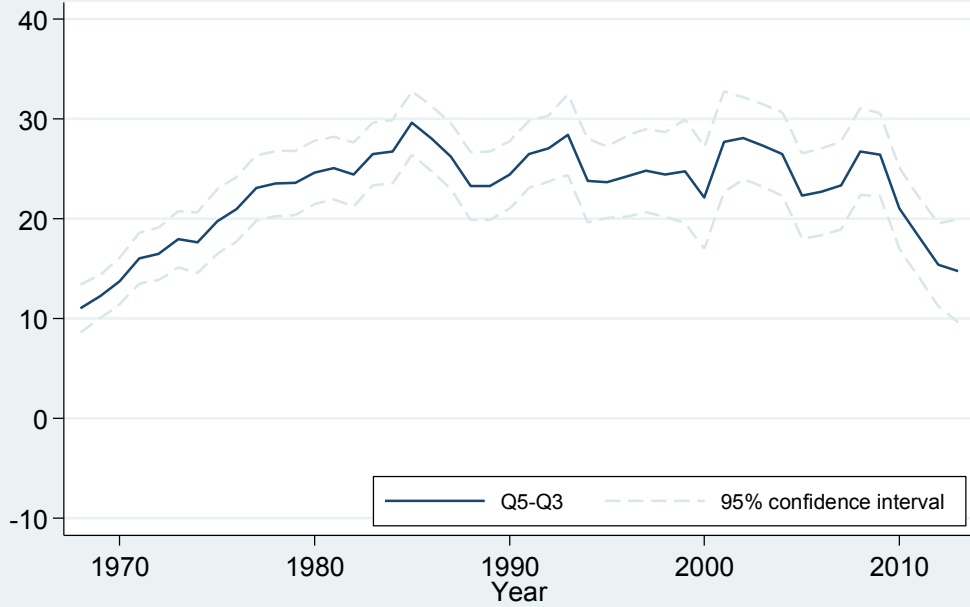
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 7: Preschool Enrollment Gaps between Third and Fifth Income Quintile: Q5 vs Q3, 3- and 4-year olds



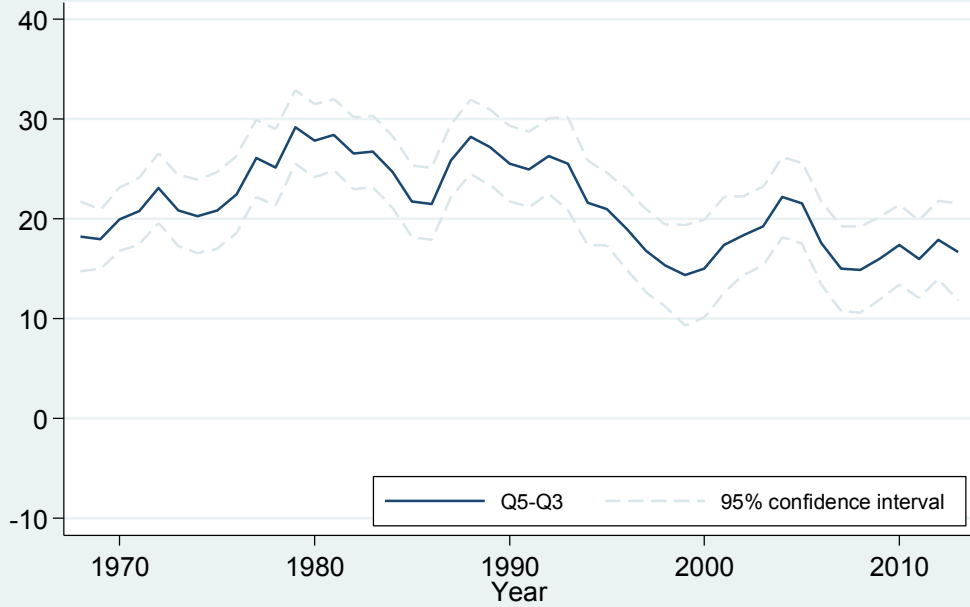
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 8: Preschool Enrollment Gaps between Third and Fifth Income Quintile: Q5 vs Q3, 3-year olds



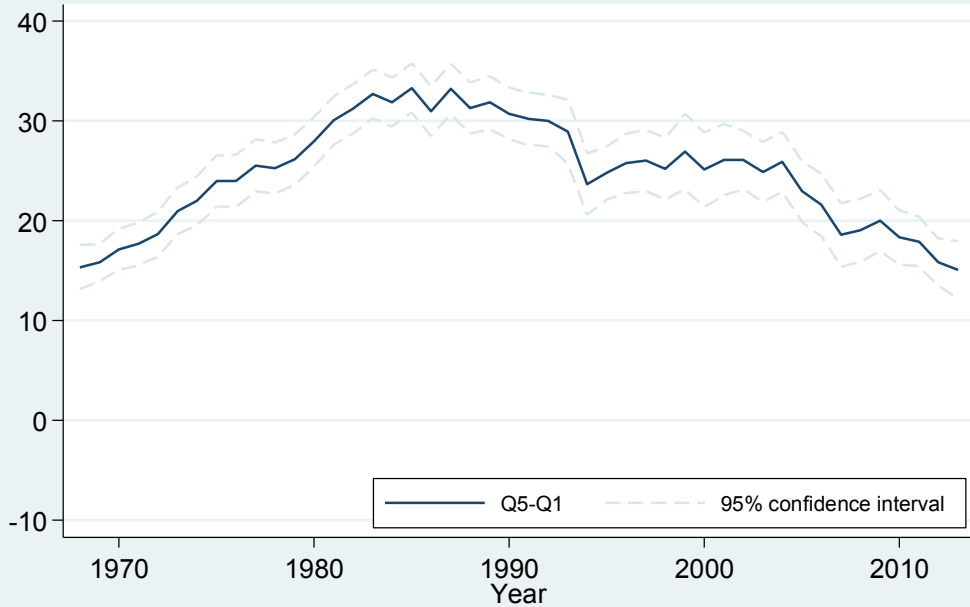
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 9: Preschool Enrollment Gaps between Third and Fifth Income Quintile: Q5 vs Q3, 4-year olds



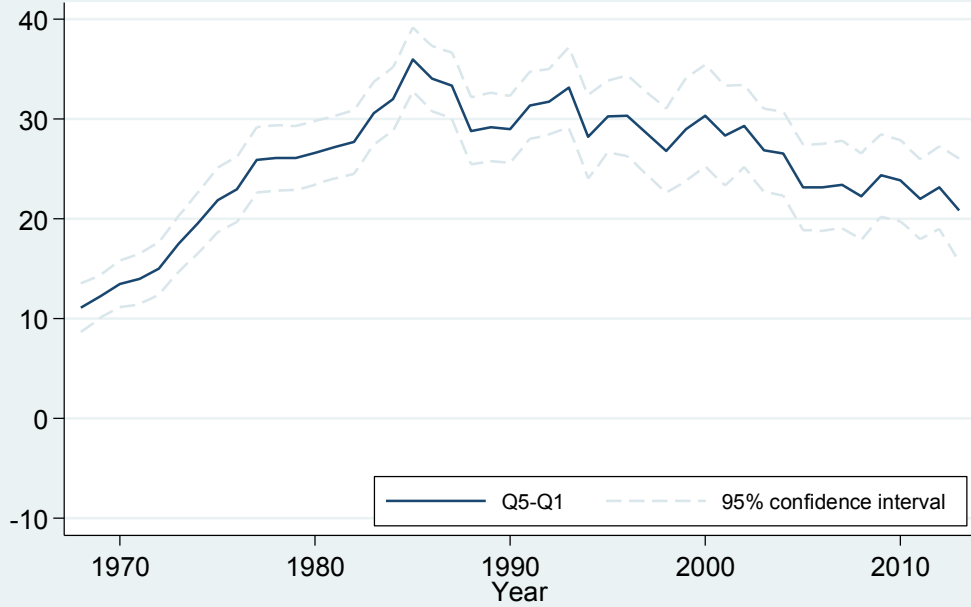
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 10: Preschool Enrollment Gaps between First and Fifth Income Quintile: Q5 vs Q1, 3- and 4-year olds



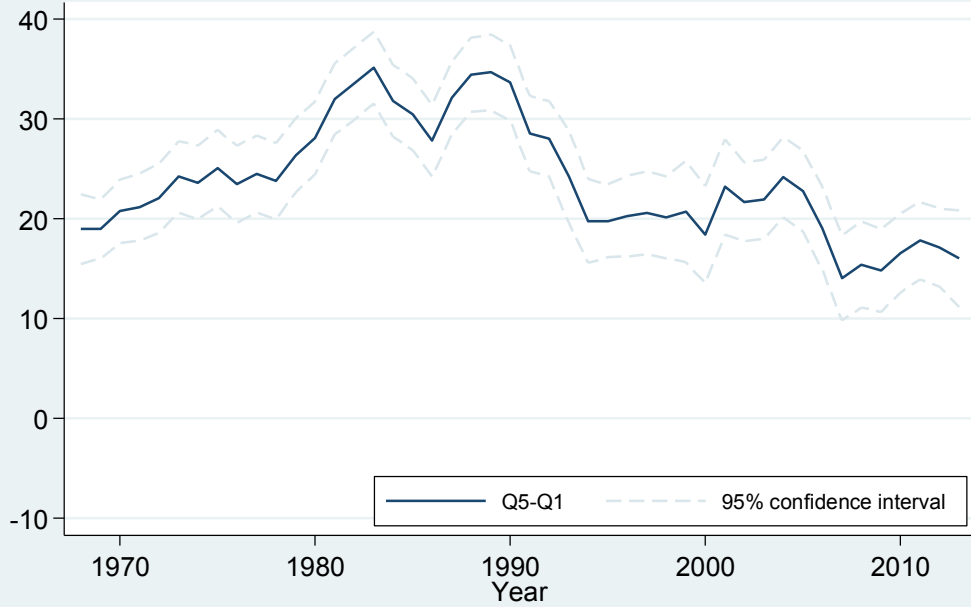
Note: Data from October CPS, data shown are from 3 year moving averages

Figure 11: Preschool Enrollment Gaps between First and Fifth Income Quintile:
Q5 vs Q1, 3-year olds



Note: Data from October CPS, data shown are from 3 year moving averages

Figure 12: Preschool Enrollment Gaps between First and Fifth Income Quintile:
Q5 vs Q1, 4-year olds



Note: Data from October CPS, data shown are from 3 year moving averages