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Strategic responses to school accountability measures: It's all in the timing

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Abstract

The adoption of state accountability testing in the 1990s coincided with the movement of some school start dates from September into August. Using data from Wisconsin, this paper connects these phenomena, showing that some low-scoring districts advanced their school start dates to allow their students more time to prepare for exams. I use a 2001 Wisconsin state law that restricted districts to start dates after September 1st to identify the effects of this extra time on student achievement. Extra classroom days are associated with small increases in Math scores for 4th graders, but not average reading or language scores. Extra classroom time may also have increased third grade reading scores for students in the upper portion of the ability distribution.

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1. Introduction

The development of assessment-based accountability programs was one of the key features of education reform in the last decade. By the year 2002, over 30 states offered punishments or rewards to schools based on their students' scores on standardized exams. The provisions of the 2001 federal No Child Left Behind Act include extensive testing requirements, making it likely that accountability policies will continue to play an important role in public education.

Opponents of this assessment policy charge that it leads to a narrowing of the curriculum, or teaching to the test, that decreases overall learning and is unfair to underprivileged students. Advocates of high stakes accountability tests argue that teaching to the test content is appropriate if tests are properly constructed to measure achievement. They claim that a yardstick for student achievement provides teachers and administrators with incentives to help students learn. Empirical studies generally find that the introduction of an accountability program raises test scores.[1]

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[1]e.g. Grissmer, Flanagan, Kawata, and Williamson (2000), Ladd (1999), Richards and Sheu (1992).

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Such analyses often overlook the possibility that low-scoring schools may act strategically, responding in ways not envisioned by policy makers, in order to raise student test scores. The importance of identifying such strategic responses is highlighted by the finding of Jacob and Levitt (2003) that 4–5% of teachers in Chicago helped their students cheat on "high stakes" examinations. They conclude that teacher abetted cheating occurs most often in poorly performing schools.

This paper identifies a seldom-examined strategic response to accountability programs: changes in the school calendar. When faced with low test scores some administrators may move the starting date of their school year forward, so students have more class time before state mandated testing occurs. I find that this change in school calendars is accompanied by an increase in 4th grade math scores. However, the effect is small relative to the total score gains in low-achieving schools, suggesting that most improvement in scores comes from other school actions and mean reversion. Early school start dates are also associated with increased 3rd grade reading scores for top students. However, the pattern of results differs across school district types in a manner that suggests extra school time is not sufficient to raise test scores for districts without adequate resources.

In previous research about the effects of school year length, Pischke (2003) finds that reducing the length of the German school year produced small negative effects on student outcomes. On the other hand, Card and Krueger (1992) and Grogger (1996) find no significant connection between the length of the school year and student achievement.[2] It should be noted, however, that the above studies examine changes in the length of the school year while I consider changes in the number of school days prior to a standardized test, with overall school year length held constant. This is a subtle yet important difference in trying to measure how school time affects achievement that may explain why I find positive benefits to increased school time.

The remainder of the paper is organized as follows: Section 2 briefly explains the institutional background and data, Section 3 presents the analytical methods and results, and Section 4 concludes.

[2]Other studies that find no mean effect include Eide and Showalter (1998) and Rizzuto and Wachtel (1980) on US data and Lee and Barro (2001) on cross country data.

2. Background and data

Beginning in the late 1990s, parents, farmers, and tourism officials in states such as South Carolina, Texas, and Wisconsin complained that school districts were moving the beginning of classroom instruction from traditional dates near Labor Day into the middle of August. Some schools with otherwise traditional calendars adopted start dates as early as August 2nd.[3] The resulting district calendars left the length of the school year unchanged. They merely shifted the timing of the school year from a September–June schedule to an August–May term. Opponents of this shift claimed that the change in the school year was costly for schools, families, and local industry.[4]

Investigating the evolution of school start dates is difficult since most states keep only irregular records of calendar information.[5] Without the ability to follow school start dates over consecutive years it is difficult to determine if there is a causal relationship between accountability testing and the timing of the school year. Of the states that both adopted accountability programs and noticed shifts in the timing of the school year, only Wisconsin kept extensive records of the change in school start dates over time.

There are other advantages to focusing on Wisconsin's experience with changing school start dates. Beginning with the 2002 school year, Wisconsin school districts were prevented by law from adopting start dates prior to September 1st.[6] This law, a result of aggressive advocacy by parent

[3]Despite recent moves toward state control, most states cede authority to make many calendar decisions, such as when to start school, to local districts.

[4]An analysis of the costs of early school start dates is presented by Strayhorn (2000).

[5]For example, the Texas Education Agency collected survey data on the start dates of its 50 largest districts in 1990 and 1999. The 47 respondents serve more than half the students in Texas and illustrate a clear shift in school start dates. In 1990, the majority of the surveyed districts started classroom instruction approximately one week, or five school days, before Labor Day. By 1999 most of the schools had moved their start dates up by at least two weeks. Some schools began class as much as five weeks before the traditional start date. Unfortunately, this survey represents all available Texas data, making a study of the year by year changes in school start dates impossible.

[6]A few districts later received a waiver of the requirement. Most waivers were granted to schools that had externally imposed calendaring requirements such as the International Baccalaureate program (IB). However, the number of waivers was small.