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Teacher Supply

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Teacher supply is concerned with entry into, exit from, and movement within the teacher labor market—that is, who chooses to teach (and where), who remains in teaching, and what factors influence these choices. Policymakers and education economists are intensely interested in this topic, as teacher effectiveness has been found to be one of the most important school inputs into students' learning outcomes. This entry provides an introduction to research on teacher supply. It begins by noting the importance of teacher labor markets for education policy and describing the general approaches to studying this topic. It then briefly reviews the evidence on long-run trends in the quantity and quality of teachers and factors affecting the supply of teachers. Finally, it closes by describing recent policies intended to improve teacher supply.

Staffing schools with high-quality teachers is an immense, ongoing challenge. According to the [p. 766 ↓] National Center for Education Statistics, there were 3.6 million PreK-12 teachers nationwide in 2009, with annual turnover rates of 16% (8% switching schools and 8% leaving the profession). Turnover rates tend to be particularly high among novice (25%), charter school (24%), and private school teachers (21%), as well as teachers in disadvantaged schools. Such turnover is costly, financially and educationally. An understanding of what motivates graduates to enter and stay in teaching, or to seek and accept employment in a particular school or district, is necessary for crafting policies to obtain desired levels of human capital in teaching.

Teacher supply research approaches the topic from “macro” and “micro” perspectives. Macrolevel studies define the teacher labor market broadly, examining long-run movements into and out of the profession, aggregate shortages and turnover rates, and factors contributing to these phenomena. Microlevel studies define teacher labor markets more narrowly and address the supply of teachers to specific schools, districts, or fields. Teacher supply has *quantity* and *quality* dimensions; most studies are focused on the supply of teachers of a given quality or level of qualifications.

Trends in the Supply of Teachers

The past 60 years have witnessed dramatic shifts in the quantity and quality of teachers. In response to the baby boom, there was a sharp increase in the demand for

teachers in the 1950s–1960s. Between 1955 and 1970, the number of public school teachers nearly doubled, from 1.1 to 2.1 million. Enrollment declined as baby boomers exited the K-12 system, but the size of the teaching force remained roughly constant. This led to a weakened demand for new teachers, an aging of the workforce, and a decline in relative salaries. The size of the teacher workforce has steadily increased since 1990, though the recent recession brought localized reductions in force.

There is also evidence of a long-term decline in the *quality* of graduates entering the teaching profession. Sean Corcoran, William Evans, and Robert Schwab documented a decline in the quality of new teachers between 1960 and 2000, as measured by math and verbal skills, driven by a sharp drop in the percentage of high-achieving women choosing to teach. This decline corresponded with significant changes in the labor market for women, as high-achieving women gained access to professions traditionally held by men.

Factors Affecting the Supply of Teachers

Economics has much to say about factors affecting teacher supply. Potential (and existing) teachers weigh the benefits of entering (or remaining in) the profession against the costs of doing so. Benefits are pecuniary, such as salary and benefits, and nonpecuniary, such as the intrinsic reward of educating children, job security, and having summer months “off.” Costs include the foregone earnings college-educated professionals could earn in other fields (their “opportunity cost”) and explicit costs associated with education, training, and licensing. To the extent teacher training is not transferable to other fields and the candidate is uncertain about her future career plans, there is additional risk associated with this investment.

Factors that theoretically affect teacher supply have been empirically tested in many settings. With respect to the pecuniary benefits of teaching, the noted long-run decline in teacher quality has been linked to relative growth in the earnings of college-educated women outside of teaching and the teacher salary schedule, which has not historically rewarded high performers to the same extent as other professions. Peter Dolton’s review of the literature concludes that teacher supply is highly responsive to salaries,

and many studies have found a relationship between salary offers and average teacher quality.

Nonpecuniary factors are particularly important to teacher supply. Working conditions influence initial entry into the profession, and additional challenges associated with teaching in disadvantaged schools make it difficult for these schools to attract and retain teachers. Research finds that teachers have a preference for teaching close to where they grew up, or in similar districts, compounding the challenge of staffing high-need, urban schools with quality teachers. Fortunately, there is some evidence that bonus pay targeted to teachers in hard-to-staff positions and schools can improve recruitment and decrease turnover in disadvantaged schools.

Future Directions: Policies to Improve Teacher Supply

Many reforms underway in public education are designed to improve the supply of teachers. Most prominently, the structure of teacher compensation is changing, as states and districts experiment with pay that aims to reward high performance. While this approach may make teaching more attractive to academically talented graduates with high-outside-wage [p. 767 ↓] opportunities, it also increases the risk associated with teaching, given more variable earnings. These reforms are relatively new, however, making it difficult to gauge their success.

An alternative approach to improving the supply of teachers is the reduction of barriers to entry through paring back or eliminating traditional certification requirements. The theory is that lower entry costs will increase supply, particularly among high-achieving graduates deterred by traditional licensing. It remains to be seen what effect these reforms will have on aggregate teacher supply and quality, although there is evidence that alternative routes (e.g., the Teach for America program) have been effective in filling shortages in disadvantaged schools.

See also [Hedonic Wage Models](#); [Teacher Compensation](#); [Teacher Experience](#)

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Further Readings

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