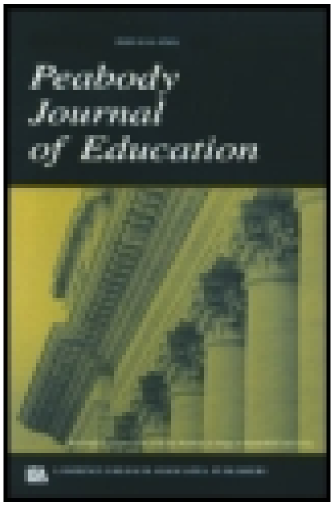

Peabody Journal of Education
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/hpje20

An economic analysis of the teacher shortage

William E. Laird [a] & Donald L. Schilson [b]
[a] Assistant professor of Economics , Florida State University ,
[b] Assistant professor of Education , Ohio University ,
Published online: 02 Nov 2009.

An Economic Analysis of the Teacher Shortage

William E. Laird and Donald L. Schilson*

The purpose of economic analysis is to clarify the world around us and to provide a systematic approach to the solution of problems. In recent years there has been great concern over the critical teacher shortage. This paper discusses some basic aspects of the teacher shortage in terms of elementary economic analysis.

First, the "law" of supply and demand does *not* say that market forces always directly determine prices or wages.[1] Public school teacher's salaries are set by political bodies, and often salaries are *not* set in accordance with market realities. Second, the law of supply and demand *does* state that if price is not set by the market, (or in accordance with market realities), then the market will not clear. This means sellers will be looking for buyers, or buyers looking for sellers—depending on whether price has been set above or below the competitive level. Teachers' salaries have been set below the true market level and so there have been schools looking for teachers. There have not been enough teachers available at prevailing salaries; there has been a shortage in the technical sense. The shortage is related to, and governed by, price.

The element of price explains the apparent paradox of a highly literate society being unable to find enough teachers to instruct its children. It is not surprising that some of the new African nations have difficulty in finding teachers, as some of those nations have comparatively few college graduates. Yet the United States has a high literacy rate and faces a teacher shortage. The shortage in the United States is basically a question of relatively low salaries. This can be illustrated by considering what probably would happen if classroom teachers received, say, $20,000 a year. A "surplus" of teachers would quickly

*The authors are respectively assistant professors of Economics and Education at Florida State University and Ohio University.

[1] In the context of this paper "price" refers to teachers' salaries and vice-versa.

develop.[2] On the other hand, some quantity of teachers would be available at a salary of, say, $100. These would have to be "dedicated" persons with private incomes. The number of teachers would be small, few schools could be operated, and the shortage would be severe.

The existence of the shortage may be judged by considering the typical case of teacher and school. The representative teacher has considerable choice as to the school and the locality in which to work. Many schools consider that they are fortunate if they secure sufficient personnel to start the school year. The number of teachers needed exceeds the number available at the prevailing salaries, thus it becomes a teachers' market.

Economic analysis can clarify the concept of supply as it relates to teachers and market conditions in education. The supply concept refers to a series of price-quantity combinations. At higher salaries, more teachers are available for employment, other things being equal. The price-quantity relationships are portrayed by the familiar supply curve used by economists. The standard graph has price on the vertical axis and quantity on the horizontal axis. The normal supply curve is positively sloped, that is, slopes upward from left to right, showing that higher prices call forth larger quantities. The supply curve depicts the willingness of sellers to make available in the market various quantities at various prices. A supply curve for teachers would portray the market conditions for a given grade or caliber of teacher, judged by some standard such as academic degree held or successful teaching experience. Changes in the willingness of individuals to furnish services would be shown by the curve shifting either to the right, an increase, or to the left, a decrease. The same is true for changes in the number of qualified individuals offering their services. Thus, the supply of teachers of various academic qualifications may be shown by a series of supply curves. The supply conditions of M.A.'s, and B.A.'s could be depicted by two curves. The supply of B.A.'s is larger than the supply of M.A.'s, so the B.A. curve would be to the right of the M.A. curve. For a given salary more B.A.'s are

[2] The surplus situation is sometimes observed in university towns. Supply conditions are such that sufficient numbers of qualified teachers are employed at "lower" salaries than the prevailing salaries in other school districts. Even so, salaries are often higher in these towns than is really necessary. In fact there is usually a surplus of qualified candidates.

available than M.A.'s. In each case the number of teachers available in the market varies directly with salaries offered; at higher salaries more teachers are available. As is true in other markets, a price or wage which calls forth some quantity of a good or service may be too low to provide *enough* of that good or service.

The total remuneration for any occupation is a combination of monetary and non-monetary rewards. This is certainly true in education. Teaching has certain non-monetary advantages such as pleasant environment, associates, and mental climate; but it also has certain non-monetary disadvantages, such as parental apathy, unpleasant student discipline, and burdensome supervisory duties. *Given* these non-monetary aspects, the number of teachers available is predominantly a function of salary. Higher salaries compensate for some of the non-monetary disadvantages of the job. The higher the salary, the more the potential teacher would feel compensated for such distractions. Removing or modifying the unpleasant aspects of any job will tend to increase the number of people available. However, discussions of this aspect of the problem often neglect the point that it is precisely these non-monetary factors which affect the shape of the supply curve, and that it remains true that more teachers are available at higher salaries.

The potential availability of teachers can be observed in a casual way by contemplating the number of college graduates who qualify for, or obtain certificates and the number who actually accept teaching positions. It is reasonable to assume that those graduating with a certificate, and many without it, have some interest in teaching. Thus one can imagine a relatively high salary which would lure a "maximum" number of new graduates into teaching. However, at lower salaries perhaps only one half of the potential number would enter the field.[3] An even smaller percentage of graduates would be recruited at still lower wages. The higher wage tends to compensate for particular disadvantages, and thereby lures larger numbers into the profession.

[3]The one half figure used as an example is a realistic figure. In a study done by one of the authors (Schilson) in 1962, it was found that nearly one half of the graduates from ten colleges in Iowa who met state certification requirements never entered the profession. Many of the feminine graduates married and became homemakers. The remainder listed "other occupations" as their reason. This parallels closely the figure quoted by Richard Meryman in his article, "How We Drive Teachers to Quit" in the November 16, 1962 issue of *Life*. Mr. Meryman states that nationwide, forty percent of the teacher certified college graduates did not go into teaching.

The United States has a high literacy rate and so larger numbers of instructors would be available if standards were lowered. There would be a supply curve for those with just two years of college preparation farther to the right than the B.A. curve.

Economic analysis helps to clarify alternatives: In the case of the teacher shortage three major alternatives can be recognized.

1. If standards for teaching are lowered sufficiently, the "shortage" might be eliminated by employing less qualified personnel. This is commonly done with the "provisional" certificate.
2. If standards are maintained and salaries are held rigid, then the shortage becomes permanent until basic market conditions of supply and demand change.
3. If standards are maintained, the shortage may be eliminated by raising salaries.

These are the basic alternatives facing education today.

Those most interested in "quality education" generally prefer the latter alternative, maintaining teacher standards and eliminating the shortage by increasing salaries to more competitive levels. Unfortunately, legislatures and other agencies charged with appropriating school funds sometimes choose to lower standards "temporarily" by issuing provisional certificates in order to avoid increasing salaries.

This paper has attempted to use economic analysis to interpret the current teacher shortage. It has argued that the shortage is essentially a question of salary and that the supply of teachers is governed by factors not inherently different from those which govern supply in other professions or the supply of goods in other markets.