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Appendix B: Other Studies

Mention should be made at this point of three other studies in which ability measures and educational attainment are available—those of Thorndike and Hagen (1959), Terman and Oden (1947), and Learned and Wood (1938).

The Thorndike and Hagen data are drawn from a group of males who were tested by the Air Force as part of a search for bombardiers, pilots, and navigators in World War II. Although the tests were conducted throughout the war, this sample was drawn from those who took a single form of the test used from June to December 1943. Before taking this test, the individuals first had to pass an Army General Classification Test (AGCT) with a score equivalent to a college sophomore. We have not analyzed these data here since the sample is not representative of the high school graduate population in general.

In 1920, Lewis M. Terman began a study of 1,000 elementary and high school students (in nonrural California) whose IQ placed them in the top 2 percent of intelligence (i.e., their scores were 140 and over in the Stanford-Binet Scale). These students were periodically resurveyed until the end of the 1950s. However, the Terman data involve such a special IQ range that we have not analyzed them in this paper.

The Learned and Wood sample discussed above consists of about 70 percent of Pennsylvania's high school seniors in 1928 (28,000 students). The published data include information on the IQ distribution of the seniors who went to college, to vocational schools, or into various occupations. Separate information is published for males and females in the form of charts, with the 10th, 25th, 50th, 75th, and 90th percentile scores indicated for the various breakdowns. We attempted to convert this to the percentage of people in various IQ classes who entered college.¹ Unfortunately, the regression results were

¹ For each percentile listed above, we take the raw Otis score for the sample as a whole. From the frequency distribution of those entering college, we determine the number of students with raw scores less than the 10th percentile score, greater than the 10th but less than the 25th, etc.

very sensitive to the arbitrary interpolation procedure required to put the data into desired form; consequently we have not included this sample in our analysis. We have, however, used the information from this study to estimate the extent to which schooling affects IQ, as discussed in the analysis of Yerkes' data.

In addition to the data sources described above, we obtained a number of studies that provide some relevant information for our purposes, such as the percent of seniors going on to college by IQ quartile. However, since these studies do not provide enough data points to permit each sample to be analyzed separately, they have been combined with others from corresponding time periods in estimating the selectivity coefficients for the period 1945-1957, and for the 1960s.² A brief description of these studies follows.

- 1 A sample of 1566 Arkansas high school graduates of 1949 reported by Charles G. Morehead (1950). The actual data points, which were combined with others from the 1945-1957 period, are:

A	E_{12}
95.0	57
82.5	52
12.5	14

where A is measured in percentiles and E_{12} is in percent.

- 2 A sample of 1,170 high school graduates of 1960 reported by Charles B. Nam (1962). The data points, which were combined with those of the 1961 Berdie and Hood study and the Project Talent study, are:

E	E_{12}
87.5	67.2
62.5	38.2
37.5	24.8
12.5	15.5

² Additional pieces of information are available in Bridgman (1960). A comparison of our regression equations with these data suggests that they are consistent.