4. Physical characteristics: (*a*) Productivity of school system.
5. Government characteristics.
6. Variety, scope, and quality of education services:
   (*a*) Addition or deletion of services—variety.
   (*b*) More or less of a given service—scope.
   (*c*) Superior or inferior services—quality.

In the following pages each of these factors will be briefly discussed and an effort made to quantify each.

TABLE 7.—*Pupils in average daily attendance (ADA), selected years, 1900–1958*

[In thousands]

Year:	*Pupils in average daily attendance*	Year—Con.	*Pupils in average daily attendance*	Year—Con.	*Pupils in average daily attendance*
1900	10, 633	1930	21, 265	1950	22, 284
1902	11, 064	1932	22, 245	1952	23, 257
1910	12, 827	1940	22, 042	1954	25, 644
1913	13, 614	1942	21, 031	1956	27, 740
1920	16, 150	1946	19, 849	1958	29, 859
1922	18, 432	1948	20, 910		

Sources: U.S. Department of Health, Education, and Welfare, "Biennial Survey of Education in the United States 1954–56," ch. 2, table 20, p. 66; select years not appearing in table 20 of the 1954–56 Biennial Survey were taken from earlier issues of the survey beginning in 1920, on file at the U.S. Department of Health, Education, and Welfare. All figures for years 1900–1956 are actual attendance data and are not estimates. The 1958 figure is an estimate made by the U.S. Department of Health, Education, and Welfare and is based on their annual fall survey.

1. Number of pupils in average daily attendance

Since most public programs are related to the number of pupils in average daily attendance and not to enrollment, the first will be used, whenever possible, to reflect the public school population in this study. In table 7 the number of pupils in average daily attendance for selected years, 1900–1958, are given. During this period pupils in average daily attendance increased from slightly more than 10 to almost 30 million—that is, about 200 percent.

The nature of the functional relationship between population size and expenditures deserves some consideration. It is possible that population increases lead to economies (or diseconomies) of scale. However, in a scale analysis, both school size and the size of the school district need to be considered.

During 1900–1958, the U.S. population grew rapidly; it became increasingly urban in character. Many school districts consolidated. Thus, during the 15 years from 1942 to 1957, more than half of the local districts disappeared.[7] Likewise, the number of one-teacher schools rapidly declined from 190,655 in 1920 to about 26,000 in 1959—that is, by about 86 percent.[8] Still, it must be remembered that during this period, one-teacher schools educated but a very small percentage of all pupils in average daily attendance in the United States.

There exist no data about the size of the average school district. But there is reason to expect that once the effect of changes in urbanization and the accompanying tendency toward somewhat larger school districts is partialed out—for example, by means of multiple regression techniques—a by and large simple linear relation between per pupil expenditures and number of pupils will result. This contention is considered in some detail in the appendix, which examines the general

[7] U.S. Bureau of the Census, "Governments in the United States," No. 1, vol. 1, 1957, p. 1.
[8] National Education Association, "Status and Trends: Vital Statistics, Education, and Public Finance," Rept. 13, August 1959, p. 14.