

age more for education than do the poorer ones. It is true that this is not a perfect linear relationship. Some States and communities make greater tax efforts for education than do others. Nevertheless, by and large, this relationship holds. The relation between income and expenditures is not a simple one. Thus, for example, rich communities will tend to insist on good education, which in turn will add to the cost of education.

In such a case, statistical methods are unlikely to determine whether changes in income level or quality level are originally responsible for expenditure level changes. A good understanding of the impact of income level changes on education is of paramount importance. In spending his income, a person faces a virtually unlimited number of different goods and services. As his income increases, his spending habits are likely to change, too. Under those circumstances, the question is whether the average person, whose annual income increased by a given percent, will increase his education budget by the same percent, by less, or by more. If for simplicity's sake education expenditures are equated, in a rough way, with the amount of education purchased, the concept of income elasticity of public education becomes applicable. Education demand can be unit elastic, inelastic, or elastic. The question, therefore, is, "How elastic or inelastic is the demand for education?"

TABLE 11.—*Per capita personal income, selected years, 1900–1958*

Year:	<i>Per capita personal income</i>	Year—Con.	<i>Per capita personal income</i>	Year—Con.	<i>Per capita personal income</i>
1900-----	\$199. 2	1930-----	\$624. 1	1950-----	\$1, 506. 2
1902-----	218. 5	1932-----	401. 4	1952-----	1, 739. 0
1910-----	300. 6	1940-----	595. 5	1954-----	1, 784. 5
1913-----	325. 1	1942-----	915. 7	1956-----	1, 965. 3
1920-----	712. 3	1946-----	1, 268. 1	1958-----	2, 030. 3
1922-----	552. 4	1948-----	1, 435. 1		

Sources: Years 1900–1923. National Industrial Conference Board. *Economic Almanac* 1958. New York: Thomas Y. Crowell Co., 1958, p. 401.
1929–57. U.S. Department of Commerce, Office of Business Economics. *Survey of Current Business* 38: pp. 3–17; July 1958. Tables 3 and 4, pp. 6 and 7.
Year 1958. From *Economic Indicators*, May 1959, pp. 2, 3, and 5.

Personal income data and their index numbers are presented in table 11 for a select number of years from 1900 to 1958. Except for the depression years of the early thirties, per capita personal income steadily increased from about \$199 in 1900 to about \$2,030 in 1958, i.e., about nine times.

4. *Physical characteristics*

(a) *Productivity of school system.*—Productivity in general relates output to any or all of the inputs employed in producing goods or service. Since the aim is to learn about the efficiency with which resources are utilized, input as well as output must be measured in physical terms. Perhaps the most common productivity measure is the partial productivity "output per man-hour." Output is related to but one input, i.e., labor, which in the case of education overshadows by far all other inputs. To estimate the net saving of all cost elements, or inputs, and thus the change in overall productive efficiency, output should be related to all inputs, i.e., labor, equipment, physical plant, etc.