fluctuated much less than that of salaries. The number of wage-earning employees may be more readily adjusted to the activity of the industry and wage levels likewise more readily adjusted to the price levels of the products. The percentage of wages to the values added in manufacture was thus only  $3 \cdot 4$  p.c. lower in 1933 than in 1917. The percentage was highest in 1920, when, in the post-war inflation, average wages were highest (Table 24) and the efficiency of production lowest (Table 18).

25.—Percentages of Wages and Salaries Paid to Total Net Value of Manufacturing Production, 1917-33.

Year.	Value Added by Processes of Manufacture.	Salaries Paid.	Wages Paid.	Percentage-		
				of Salaries to Value Added.	of Wages to Value Added.	of Total Salaries and Wages to Value Added.
-	\$	\$	\$	p.c.	p.c.	p.c.
1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1932		89, 287, 158 101,507, 889 121, 892, 144 148, 267, 360 136, 874, 992 136, 219, 171 142, 738, 681 139, 614, 639 143, 056, 516 152, 705, 944 162, 348, 978 174, 770, 879 188, 747, 672 184, 239, 117 186, 810, 794 164, 695, 605 151, 860, 323	420,094,869 480,949,599 496,570,995 583,853,225 381,910,145; 374,212,141 428,731,347 420,269,406 452,958,655 501,144,989 531,583,250 580,428,493 624,302,170 551,853,649 437,734,767 341,187,718 313,701,767	6.9 8.1 8.8 11.3 11.4 10.9 11.1 10.5 10.2 9.9 9.7 9.5 10.5 12.7	31.5 32.9 34.6 31.2 32.7 33.4 33.3 33.6 32.5 31.3 29.7 29.1 28.1	38·2 39·8 41·0 43·4 42·9 42·6 43·6 43·8 42·4 41·6 40·8 41·8 41·8 41·8 41·7

## Subsection 4.—Size of Manufacturing Establishments.

A modern characteristic of industry in all industrial countries has been the increase in the size of the typical manufacturing establishment. The full utilization of highly specialized machinery necessitates large-scale production, while the improvements in transportation have widened the market.

The size of the manufacturing establishment is generally measured either by the number of employees or by the value of product, but each of these methods has The former takes no account of the differences in capital equipits limitations. ment at different times or in various industries and obviously the increased use of machinery, as in the flour-milling industry, may lead to increased production concurrently with a decrease in the number of employees. The latter measure has to be adjusted for changes in the price level; and, as between industries, it makes those which handle expensive raw materials appear to operate on a larger scale. Both measures are subject to two limitations: first, they depend on the fluctuation of business activity and the demand of the consumer; second, over any lengthy period of time there is the difficulty of comparability resulting from changes in the method of the census. Since 1932, for example, due to the difficulty of eliminating duplication in the value of production in central electric stations, as well as the difficulty of apportioning the capital investment as between different cities, it has been found necessary to exclude figures for central electric stations in showing statistics of size of establishment as well as statistics of cities and towns.

Size as Measured by Gross Value of Products.—While in 1922 the 420 establishments each producing over \$1,000,000 had an aggregate value of products of \$1,268,056,129 or 51 p.c. of the total production of all manufacturing industries,