

This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: The Volume of Residential Construction, 1889-1950

Volume Author/Editor: David M. Blank

Volume Publisher: UMI

Volume ISBN: 0-87014-454-5

Volume URL: <http://www.nber.org/books/bln54-1>

Publication Date: 1954

Chapter Title: Appendix B Description of Procedure for Obtaining Estimates of Urban Residential Construction Based on Population Relationships

Chapter Author: David M. Blank

Chapter URL: <http://www.nber.org/chapters/c7015>

Chapter pages in book: (p. 79)

## APPENDIX B

### DESCRIPTION OF PROCEDURE FOR OBTAINING ESTIMATES OF URBAN RESIDENTIAL CONSTRUCTION BASED ON POPULATION RELATIONSHIPS

AS AN EXAMPLE of the techniques usually employed in obtaining regional estimates, based on simple population expansion, the following description of the procedures used in the Middle Atlantic division is presented. Except for size class III (25,000 to 99,999), 1896-97, and size class IV (2,500 to 24,999) 1890-97 and 1921-29, the estimates for each size class in each year, 1890-1929, in this division were derived by expanding the sample city building totals in each size class by the ratio of the total population in the class to the combined population of the sample cities.<sup>1</sup> The exceptions were cases where no data were available or the samples were too small to be used.

Estimates for size class IV, 1890-95, were based on ratios between seven-year aggregate building rates for size class IV and equivalent rates for size class III in the years 1898-1904.<sup>2</sup> The ratios were:

Dwelling units	0.90
Permit valuation of dwelling units	1.26
Permit valuation of nonhousekeeping facilities	0.58

Estimates for size class IV, 1896-97, were based on ratios between seven-year aggregate building rates for size class IV and equivalent rates for size class II (100,000 to 499,999) in the period 1898-1904. The ratios were:

Dwelling units	0.60
Permit valuation of dwelling units	0.73
Permit valuation of nonhousekeeping facilities	0.83

Estimates for size class III, 1896-97, were derived from ratios between seven-year aggregate building rates of size class III and rates for size class II, 1898-1904. The ratios were:

Dwelling units	0.67
Permit valuation of dwelling units	0.58
Permit valuation of nonhousekeeping facilities	1.43

Estimates for size class IV, 1921-29, were based on arithmetic averages of the ratios between five-year aggregate building rates of size class IV and equivalent rates of size class III, for the two periods, 1910-14 and 1915-19.<sup>3</sup> The average ratios were:

Dwelling units	1.20
Permit valuation of dwelling units	1.40
Permit valuation of nonhousekeeping facilities	0.33

<sup>1</sup> A special adjustment was made in the sample data to take account of permit lapses in New York City. This adjustment is discussed in Appendix F.

<sup>2</sup> Aggregate building rates were calculated as the ratio of construction volume of the size class in question for the seven-year period 1898-1904 to the 1900 population of the size class.

<sup>3</sup> The ratios were based on a ten-year period because it was felt that the 1915-19 period was probably dominated by abnormal relationships due to the impact of World War I. The ratios for each period were calculated separately and then averaged because the rates for each five-year period were based on different population figures, i.e. 1910-14 on 1910 censal population and 1915-19 on 1920 censal population.