

National Bureau of Economic Research

A NON-PROFIT MEMBERSHIP CORPORATION FOR IMPARTIAL STUDIES IN ECONOMIC AND SOCIAL SCIENCE

Bulletin 75

1819 BROADWAY, NEW YORK

September 17, 1939

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DIFFERENTIALS IN HOUSING COSTS

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HOUSING COSTS¹ in the United States vary widely with the location and character of residential properties. Within a locality variations are a matter of common knowledge, but the broad limits within which average costs vary between large and small cities and among different regions have not been so generally recognized, probably because of the absence of comprehensive and accurate measures of residential values and rents. Only when these differentials are measured and recognized can full advantage be taken of their significance in dealing with many problems in the housing field.

This Bulletin is concerned primarily with the measurement of these differentials, presenting quantitative estimates, many of which have hitherto been unavailable. It is based largely on *Residential Real Estate*² to be published by the National Bureau of Economic Research. It seeks to show the dollar costs of existing housing; in which sections of the country and types of cities or suburban areas housing is cheapest, in which most expensive; how costs of urban dwellings compare with rural; the costs of old and new houses and of various types of structures, such as apartments, two-family, and single-family dwellings.

Section 1 of this Bulletin emphasizes differentials according to geographic regions and according to density of population. The interrelationship between these differentials is discussed and their relative significance indicated. Section 2 describes other differentials and considers the influence of the more important factors that aid in their explanation and interpretation. These factors include differences arising from the age distribution of existing houses, differences in land costs, in materials used and facilities offered, and such other factors as differences in cost of living and the income levels of the population. Costs of new con-

struction are also discussed briefly. The limitations of available information are indicated and the need for more thorough study of this entire field is stressed.

The quantitative measures of differentials in this Bulletin are primarily in terms of housing existing in 1930, the year of the most recent census. This raises two questions: (1) Are housing costs adequately described by measuring the costs of existing housing alone? (2) Are the differentials revealed for 1930, the year to which most of the basic data relate, indicative of current differentials?

The first question can be answered affirmatively. Although current discussions of housing run chiefly in terms of the cost of new dwellings, most of the houses purchased each year and most of the houses in which people live are not new.³ In the continental United States in 1930, 29,900,000 families were living in approximately the same number of dwelling units. Of these families 23,235,000 were living in nonfarm localities, that is, in cities and small towns and in open country, but not on farms. Dwellings in nonfarm areas, including vacant dwellings, are estimated by the National Bureau at 24,400,000. The preponderance of old houses is best illustrated by the fact that only slightly more than 7,000,000 of the 24,400,000 nonfarm dwellings standing in 1930 were built in the ten preceding years, 1920-29, although the greatest building development in the recent history of American cities occurred during this period. Moreover, in the single year 1929 only 500,000 new dwelling units were erected. Farm dwellings are typically even older than urban. The Farm Housing Survey of 1934 conducted by the Bureau of Home Economics, Department of Agriculture, covering about 10 per cent of the farms of the country, showed that only 15 per cent of the farm houses were built during 1925-34; that 55 per cent were built before 1910.

To the second question the answer must be less definitive.

¹In this Bulletin the term *housing costs* is used principally to mean the cost to users of existing housing. When there is occasion to refer to the cost of new housing the term *construction costs* is used.

²The data in it are derived largely from special tabulations of materials from the 1930 *Census of Population*, Vol. VI, and the *Financial Survey of Urban Housing*, 1934. The data presented relate primarily to value, rent, income, financing and construction, and are given in great detail. They provide many of the figures required for a thorough study of differentials. One of the purposes of this Bulletin is to show the possibility of and the need for such studies.

³Throughout this Bulletin the terms 'house', 'residence', 'dwelling unit', and 'dwelling' are used interchangeably. In every case the technical meaning is 'dwelling unit', including only housekeeping units, not non-housekeeping rooms in hotels, boarding houses, clubs, or institutions. Likewise the term 'apartment' means a family dwelling unit in a multi-family structure containing 3-or-more dwelling units, though it occasionally refers to the structure itself.

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Data as comprehensive as those reported in the 1930 Census cannot again be available until another census reports residential rents or values. Some indication, however, of the stability of differentials between such contrasting years as 1930 and 1934 is afforded by comparing the figures reported for specific cities in the 1934 Financial Survey of Urban Housing with those for identical cities in 1930. Although average housing costs, expressed either as rents or values, dropped about one-third during the period, proportionate differentials among the cities remained fairly constant. It thus seems likely that the differentials prevailing in 1930 still hold, in the main. Values in 1939, though probably not as low as in 1934, are unquestionably lower than those for 1930, by about one-fourth, and this should be kept in mind when interpreting the tables in the light of present costs.

DIFFERENTIALS BY REGIONS AND BY DENSITY OF POPULATION

Regional differentials

Residential values and rents vary widely within a community because of differences in age, type of structure, size, materials and conveniences; the contrasts among different parts of the country are also marked. These regional differences reflect the underlying economic, social, and physical differences arising from climate, unequal natural resources, varying degrees of industrial and agricultural development, differences in income, and the extent of urbanization, as well as local customs and traditions. While this Bulletin is concerned primarily with measuring these housing differentials in monetary terms, it is evident that dollar values both conceal and imply differences in quality, age, and conveniences. They cannot fully reflect qualitative differences, which are difficult to isolate when groups of properties are considered. Thus, the regional values discussed here represent only in part comparable housing facilities in various sections of the country. The more important of the qualitative factors are discussed in Section 2.

If all houses the country over, whether owned or rented, are considered, the most expensive residential area is the Middle Atlantic States—New York, New Jersey, and Pennsylvania—where nonfarm residential values averaged \$7,200 in 1930, 44 per cent more than the national average of \$5,022. Second to the Middle Atlantic States were the industrial states of the East North Central Division—Michigan, Wisconsin, Illinois, Indiana, and Ohio—with an average value of \$5,400, followed by New England and the Pacific Coast, where values were about \$4,900 (Table 1).

Near the lower range of the scale, at a level of \$3,500 and below, were the predominantly agricultural West North Central States, followed by the Mountain and Southern States. The East South Central area had the lowest regional average, \$2,700, only slightly more than half as high as that for the country as a whole, and 63 per cent lower than the Middle Atlantic States.

The same general geographical contrasts appear both for houses that are occupied by their owners and those that are rented, although there is a much wider percentage variation in the values of the former. For the United States as a whole,

TABLE 1
Regional Differences in Values of Nonfarm Dwellings, 1930

	AVERAGE VALUE IN DOLLARS			RELATIVE VALUE		
	All houses	Owner-occupied	Rented	All houses	Owner-occupied	Rented
United States	5,022	5,833	4,347	100	100	100
New England	4,885	6,748	3,467	97	116	80
Middle Atlantic	7,205	7,824	6,759	143	134	155
East North Central	5,376	5,927	4,803	107	102	110
West North Central	3,549	4,253	2,765	71	73	64
South Atlantic	3,397	4,883	2,406	68	84	55
East South Central	2,712	3,846	1,960	54	66	45
West South Central	2,967	3,712	2,412	59	64	55
Mountain	2,886	3,259	2,547	57	56	59
Pacific	4,918	5,765	4,169	98	99	96

owned houses were valued at an average of \$5,833 in 1930, about one-third more than rented, which averaged \$4,347. Top values for both types were in the Middle Atlantic States, where owner-occupied properties averaged \$7,824 and rented properties \$6,759, 34 and 55 per cent above the national figures.

Again, the Southern and Mountain regions were at the lower end of the scale. The lowest regional average for owner-occupied properties was in the Mountain States, \$3,300; for rented dwellings, the East South Central States were lowest, with an average of \$2,000. The reason why the general average value of all dwellings is higher in the Mountain States lies partly in the greater prevalence of ownership there than in the South.

Individual states present even greater differences (see Table A3). New York, with an average value for all dwellings of over \$8,000 in 1930, stands far above other states. New Jersey with \$7,700 and Illinois with \$6,200 rank next highest, closely followed by Massachusetts, Connecticut, Rhode Island, Pennsylvania, Ohio, Michigan, and California. At the other extreme are several Southern and Mountain States, where all residential values averaged less than \$3,000 in 1930.

The range of values for houses usually occupied by their owners, including those for sale, while at a considerably higher level than the average for all dwellings, shows much the same geographical variation. The spread between states is greater for this class of dwellings than for rented properties, ranging from New York's \$9,000 to New Mexico's \$2,200. The extremes arise because in New York State, and particularly in New York City, the high cost of housing limits ownership largely to families whose incomes are far above the average. In only 13 states were owned residences valued above the national average. In 20 states they averaged less than \$4,000.

For rented dwellings values in 33 states were below \$3,000. Only in New York and New Jersey did the average exceed \$6,000; New York's high average of \$7,670 contrasted with South Carolina's low of \$1,539. The range of 1930 residential values by states may be summarized.

TABLE A3
Residential Real Estate, Average Value per Dwelling Unit in Dollars by Tenure, Population Group, State, Geographic Division, and on Farms, 1930

State	TOTAL Population Group*						OWNER-OCCUPIED Population Group*						RENTED Population Group*									
	All non-farm groups		100,000 or more		Farm†		All non-farm groups		100,000 or more		Farm†		All non-farm groups		100,000 or more		Farm†					
	25,000-100,000	5,000-25,000	2,500-5,000	Under 2,500	100,000 or more	25,000-100,000	5,000-25,000	2,500-5,000	Under 2,500	100,000 or more	25,000-100,000	5,000-25,000	2,500-5,000	Under 2,500	100,000 or more	25,000-100,000	5,000-25,000	2,500-5,000	Under 2,500			
United States	5,022	5,064	4,407	3,822	2,734	1,242	5,833	7,795	7,198	6,196	5,399	4,584	3,382	1,511	4,347	4,416	3,832	2,882	1,987	826		
New England	4,885	5,114	4,223	3,963	3,742	2,356	6,748	8,049	6,921	5,833	5,440	5,150	4,472	2,304	3,467	3,750	3,401	2,843	2,710	2,055	2,061	
Maine	3,340	4,737	3,242	3,057	2,013	1,342	4,011	5,333	4,994	4,747	4,280	3,908	2,911	1,539	2,658	3,431	2,918	2,497	2,414	1,118	1,201	
New Hampshire	3,666	3,830	3,793	2,917	3,491	1,841	4,099	5,752	4,988	4,335	3,923	3,716	2,857	1,815	2,877	3,658	3,255	2,616	2,139	1,470	1,470	
Vermont	3,666	3,830	3,793	2,917	3,491	1,841	4,099	5,752	4,988	4,335	3,923	3,716	2,857	1,815	2,877	3,658	3,255	2,616	2,139	1,470	1,470	
Massachusetts	5,022	5,064	4,407	3,822	2,734	1,242	6,748	8,049	6,921	5,833	5,440	5,150	4,472	2,304	3,467	3,750	3,401	2,843	2,710	2,055	2,061	
Rhode Island	4,070	4,868	4,168	3,929	3,208	1,731	4,927	6,188	5,429	4,749	4,280	3,908	2,911	1,539	2,658	3,431	2,918	2,497	2,414	1,118	1,201	
Connecticut	5,357	5,488	5,167	4,163	3,919	3,047	8,027	10,346	8,938	7,753	6,947	6,735	5,123	3,800	3,649	3,718	3,646	3,534	2,880	2,443	2,533	3,549
Middle Atlantic	7,205	7,600	6,762	6,482	5,894	4,287	7,824	9,514	9,052	7,766	7,401	6,753	4,907	2,341	6,759	7,077	6,424	5,545	5,272	4,711	3,210	2,278
New York	8,120	7,537	6,494	7,474	6,014	5,076	9,040	11,106	10,114	7,410	8,245	6,665	5,618	2,401	7,070	8,226	6,238	5,309	4,441	4,092	3,207	2,242
New Jersey	7,633	7,700	8,550	8,020	7,011	5,395	8,930	9,952	11,395	6,653	6,103	7,801	6,168	3,399	6,521	6,578	7,248	6,920	6,196	5,461	4,210	3,038
Pennsylvania	5,617	6,625	5,910	5,397	3,396	2,166	6,183	7,173	7,542	6,701	6,037	4,062	2,116	1,616	5,006	5,670	5,052	4,443	4,307	2,591	2,202	2,202
East North Central	5,376	5,401	4,566	4,079	2,877	1,750	5,927	7,656	7,188	6,221	5,130	4,537	3,102	1,784	4,803	4,996	4,169	3,463	3,225	2,296	1,716	1,655
Ohio	5,138	5,708	4,673	4,483	3,111	1,740	5,973	7,097	6,141	5,090	4,440	3,463	2,478	1,488	4,231	4,688	3,968	3,487	3,459	2,436	1,655	1,655
Indiana	3,882	5,086	4,632	3,809	2,292	1,477	4,254	5,071	4,338	3,585	3,081	2,738	1,738	1,188	3,438	4,313	3,066	3,274	2,726	2,524	1,663	1,438
Illinois	6,165	7,159	6,871	6,433	5,338	4,218	6,859	8,754	8,093	7,018	6,183	4,768	3,202	2,024	5,892	6,431	5,452	4,596	3,877	3,222	2,248	1,831
Michigan	5,886	6,978	5,971	5,216	4,364	2,881	5,914	7,065	6,547	5,699	4,744	4,088	3,084	1,669	5,190	6,183	5,207	4,445	3,399	3,549	2,451	1,699
Wisconsin	4,911	5,095	5,694	4,238	3,914	3,007	5,391	6,065	6,597	4,487	4,020	4,287	3,469	1,977	4,268	5,330	4,553	4,079	3,433	3,212	2,310	1,959
West North Central	3,549	4,214	3,895	3,668	3,159	1,677	4,253	6,088	5,102	4,652	4,254	3,675	2,837	1,827	2,765	3,355	3,264	3,021	2,781	2,431	1,781	1,432
Minnesota	3,928	4,906	4,087	3,538	2,635	1,564	4,097	6,018	5,102	4,867	4,594	4,042	3,033	1,855	2,697	3,460	3,021	2,693	2,680	1,951	1,668	1,668
Iowa	3,415	4,703	4,164	3,910	3,359	2,387	3,998	5,030	4,994	4,747	4,280	3,930	2,986	1,710	2,634	3,127	3,048	2,641	2,565	1,814	1,438	1,438
Missouri	3,859	4,703	4,203	3,951	2,830	2,298	4,975	5,313	5,079	4,799	4,459	3,439	2,738	1,666	2,959	3,424	3,170	2,888	2,658	2,067	1,564	1,564
North Dakota	3,094	4,865	4,368	3,853	2,916	1,828	3,654	5,138	4,861	4,367	4,046	3,085	1,929	1,188	3,107	4,391	3,805	3,535	3,009	2,458	1,739	1,739
South Dakota	3,107	4,865	4,368	3,853	2,916	1,828	3,654	5,138	4,861	4,367	4,046	3,085	1,929	1,188	3,107	4,391	3,805	3,535	3,009	2,458	1,739	1,739
Nebraska	2,470	4,184	3,983	3,681	2,655	1,382	3,822	5,013	4,626	4,283	3,887	3,144	2,180	1,188	2,670	3,212	3,042	2,773	2,490	1,886	1,465	1,465
Kansas	2,843	3,698	3,427	3,266	2,740	1,594	3,273	4,017	4,031	3,742	3,701	3,070	2,516	1,595	2,200	2,685	2,894	2,636	2,567	2,293	1,647	1,647
Middle Atlantic	3,397	4,903	3,589	3,445	2,660	1,672	4,883	7,093	6,496	5,328	4,882	4,283	3,113	1,149	2,496	3,020	2,811	2,435	2,371	1,853	1,270	1,270
Delaware	3,907	5,163	4,993	3,828	3,310	1,920	5,706	7,268	6,891	6,311	5,159	4,478	2,231	1,000	3,366	4,115	3,611	3,257	2,570	2,373	1,724	1,724
Maryland	4,552	5,974	4,706	4,499	3,925	2,183	5,646	6,281	6,831	6,049	6,387	5,159	4,478	2,231	3,296	3,816	3,428	3,211	2,702	2,555	1,828	1,828
District of Columbia	7,025	7,025	6,111	5,568	4,111	2,600	9,555	6,281	6,831	6,049	6,387	5,159	4,478	2,231	3,296	3,816	3,428	3,211	2,702	2,555	1,828	1,828
Virginia	3,334	4,475	3,707	3,438	2,497	1,609	4,549	6,078	5,370	4,632	4,218	3,293	1,652	1,063	2,381	3,393	2,587	2,055	2,152	1,488	843	843
West Virginia	3,016	5,158	4,746	4,145	3,711	1,832	4,549	6,078	5,370	4,632	4,218	3,293	1,652	1,063	2,381	3,393	2,587	2,055	2,152	1,488	843	843
North Carolina	2,813	3,300	3,184	3,104	2,947	1,794	4,016	5,016	4,683	4,070	3,593	3,431	2,875	900	1,945	2,122	3,465	3,120	2,072	1,350	713	713
South Carolina	2,271	3,589	3,181	2,686	2,536	1,496	3,855	4,016	3,853	3,426	3,422	2,991	2,501	900	1,539	2,021	2,082	2,089	1,870	1,115	538	538
Georgia	2,640	4,181	3,933	3,530	2,775	1,672	4,419	5,609	5,072	4,519	3,753	3,454	2,768	835	1,946	3,200	2,211	2,017	1,778	1,477	1,236	380
Florida	3,156	3,972	3,593	3,274	2,774	1,672	4,486	5,797	6,496	4,992	3,557	3,358	2,673	1,233	2,318	3,055	2,965	2,526	3,000	1,015	1,306	450
East South Central																						

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AVERAGE BY STATES ¹	NUMBER OF STATES		Rented
	All Houses	Owned	
Under \$2,000	0	0	6 ²
\$2,000-3,000	15	4	27 ³
3,000-4,000	20	16	7
4,000-5,000	3	15	4
5,000-6,000	7	5 ⁴	2
6,000 and over	3	8 ⁵	2
All groups	48	48	48

¹The separate state figures are in Table A3.

²Principally the 'Old South', Virginia to Arkansas.

³The rest of the South and all the Plains and Mountain states.

⁴Maryland, Delaware, Ohio, Michigan, Wisconsin.

⁵Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Illinois, California.

Regional and state differences presented thus far are all in terms of estimated market values. They indicate levels at which, in 1930, dwellings could be purchased for occupancy or investment. Houses are rented, however, by slightly over half of the American people. For this group rents, rather than values, are of immediate significance. That there is a close, though not perfect relationship between values and rents charged is clear. Over a period, values of rented properties tend to approximate the capitalization of their earning power in the form of rents. Thus, as might be expected, the general pattern of geographical differentials in rents is similar to that of property values. However, rents are better indicators of differentials, partly because rents and incomes are both current items and can be ascertained more accurately.

In 1930 rents for all types of dwellings averaged approximately \$364 per year for the country as a whole, about 8.4 per cent of the average value of all rented properties. By 1934 rents had declined about one-third. For 1938 they were 75.1 per cent of the April 1930 average in representative cities, according to the index of the United States Bureau of Labor Statistics.⁴ The variation between broad regions was wide, ranging from the Middle Atlantic States' high average of \$40 a month to the Mountain States' \$22 and the East South Central States' \$16, the latter about one-half the typical national rent (Table 2). A concentration of high rents is evident in the industrial states of the North and East, the Mid-West, and in California. The highest state average for monthly rents was in New York, \$45, while the lowest average rent was in South Carolina, \$12 (Table B2).

Differentials in cities of different size and on farms

Among the most striking differences in both residential values and rents are those that appear among cities of different size. Aside from exclusive residential suburbs where special restrictions and requirements make for expensive dwellings, housing becomes progressively less costly the smaller the town, reaching a minimum in rural areas. When the Census was taken at the

⁴Index number computed from *Changes in Cost of Living* (Bureau of Labor Statistics, December 15, 1938), p. 6.

TABLE 2
Regional Differences in Rents of Nonfarm Dwellings, 1930

	AVERAGE MONTHLY RENT IN DOLLARS	RELATIVE RENT
United States	30.34	100
New England	29.03	96
Middle Atlantic	39.66	131
East North Central	35.19	116
West North Central	25.60	84
South Atlantic	19.12	63
East South Central	15.69	52
West South Central	19.64	65
Mountain	21.94	72
Pacific	31.64	104

beginning of 1930, before the industrial depression had proceeded far, the average value of all dwellings in cities of 100,000 or more population was \$6,500. In cities of 10,000-25,000 in population values averaged somewhat more than \$5,000. In towns less than 2,500 in population, residences were valued at an average of \$2,700, or about 60 per cent less than in the largest cities. At the extreme lower end of the scale of residential values are farm dwellings. In 1930 they were valued on the average at \$1,240, the country over, including the estimated value of one acre of land.

The extent of these differences on a national basis is most clearly evident from the relation of values in each group of cities to the average for all cities. If the average value of dwellings in all cities over 2,500 in population is taken as 100 per cent, the average value in cities of 100,000 or more in population was about 133 per cent, or one-third above the average. In contrast, the relative value of houses in towns of 2,500 or less in population was only 54 per cent of the average, and on farms only 24 per cent.

All parts of the country present the same general picture of lower residential values in small towns and on farms than in cities. In the Middle Atlantic and New England areas the highest average value on farms approximated \$2,400, whereas dwellings in towns and cities averaged \$4,900-\$7,200 in 1930. In the South the regional low averages of \$600-\$900 contrast with urban averages of \$2,700-\$3,400.

Rented houses are usually valued at lower figures than those occupied by their owners. The value of owner-occupied dwellings in cities of 100,000 or more in population was \$7,795 in 1930 as compared with \$5,751 for rented houses. In towns of 2,500 or less in population the two values averaged \$3,382 and \$1,987. On the average for the United States as a whole, rented houses in small centers were relatively lower in value than those occupied by their owners. The latter dwellings were valued at 54 per cent of the 1930 national average; the tenant-occupied houses at 45 per cent.

The wider variation in values of rented than of owner-occupied dwellings is naturally paralleled by a correspondingly wide range of monthly rents, which averaged \$40 in cities of

TABLE B2

Average Monthly Rent in Dollars, Occupied Nonfarm Rented Dwelling Units by Population Group, State, and Geographic Division 1930

	POPULATION GROUP						
	All groups	100,000 or more	25,000-100,000	10,000-25,000	5,000-10,000	2,500-5,000	Under 2,500
United States	30.34	40.07	31.52	26.88	23.45	20.29	14.10
<i>New England</i>	29.03	32.95	31.46	26.49	21.31	19.10	19.01
Maine	20.53	.....	28.79	22.71	18.72	17.31	15.16
New Hampshire	19.78	.....	22.30	22.06	17.43	18.77	15.25
Vermont	19.39	.....	.....	26.58	22.19	20.98	14.48
Massachusetts	31.52	33.32	34.47	28.15	33.68	19.58	19.74
Rhode Island	26.15	29.62	26.40	19.77	18.16	22.75	15.75
Connecticut	30.20	33.31	31.19	28.38	26.49	20.65	24.65
<i>Middle Atlantic</i>	39.66	46.00	37.76	32.55	30.90	27.55	18.79
New York	45.26	48.73	36.67	31.16	37.75	29.19	23.39
New Jersey	38.20	38.49	42.61	40.68	36.31	31.94	24.58
Pennsylvania	29.26	38.17	33.33	29.66	26.04	25.19	15.12
<i>East North Central</i>	35.19	42.99	35.46	28.95	23.66	22.00	15.47
Ohio	31.03	35.42	36.72	27.14	23.83	23.60	16.41
Indiana	24.78	32.59	27.73	22.74	18.62	17.22	13.22
Illinois	41.30	48.59	38.70	31.92	26.49	21.98	15.15
Michigan	38.06	46.71	36.96	30.87	23.22	24.21	16.51
Wisconsin	30.78	40.27	32.32	32.49	23.59	21.91	15.56
<i>West North Central</i>	25.60	33.50	28.88	26.64	24.32	20.41	14.87
Minnesota	28.40	34.22	.....	28.09	23.55	22.57	16.29
Iowa	23.23	31.52	28.55	27.76	23.10	21.03	15.15
Missouri	28.10	34.39	28.04	25.43	25.69	17.52	13.73
North Dakota	23.52	.....	37.11	34.55	29.16	25.29	15.56
South Dakota	22.18	.....	32.99	30.02	22.33	25.20	16.19
Nebraska	24.26	32.27	31.61	26.83	24.26	20.74	15.75
Kansas	20.52	26.97	25.60	23.24	22.45	19.25	13.75
<i>South Atlantic</i>	19.12	32.41	22.24	18.91	18.49	15.05	10.49
Delaware	27.18	34.02	.....	.....	.....	19.81	17.26
Maryland	26.68	31.55	27.12	24.93	21.77	19.69	16.26
District of Columbia	45.19	45.19	.....	.....	.....	.....	.....
Virginia	18.91	28.05	20.47	22.94	20.00	16.59	11.37
West Virginia	16.46	.....	29.53	26.91	24.40	22.90	10.32
North Carolina	15.14	.....	23.09	16.17	16.29	14.41	9.67
South Carolina	11.94	.....	18.61	15.70	13.38	12.01	8.52
Georgia	15.40	26.53	17.49	15.66	13.87	11.38	9.44
Florida	18.42	25.26	23.46	19.62	23.47	14.76	10.44
<i>East South Central</i>	15.69	23.46	22.19	16.00	15.29	13.62	9.43
Kentucky	17.48	26.41	25.13	18.14	17.50	15.49	9.98
Tennessee	17.31	22.84	22.39	17.69	14.86	13.44	9.75
Alabama	13.59	21.62	19.06	15.01	12.79	11.95	8.44
Mississippi	13.28	.....	20.43	15.72	15.22	13.87	9.92
<i>West South Central</i>	19.64	28.18	23.62	20.92	18.28	16.13	11.62
Arkansas	14.37	.....	22.99	19.91	16.34	13.83	9.75
Louisiana	18.88	25.53	24.46	16.84	14.88	13.26	10.31
Oklahoma	22.06	35.63	24.31	25.22	20.61	17.07	12.60
Texas	20.15	27.11	23.42	19.71	18.19	17.86	12.34
<i>Mountain</i>	21.94	30.97	29.91	28.03	23.23	21.46	14.45
Montana	22.47	.....	31.36	27.60	26.39	22.12	14.89
Idaho	19.01	.....	.....	28.33	23.90	21.24	13.91
Wyoming	21.04	.....	.....	28.44	26.35	25.52	16.16
Colorado	23.91	31.52	25.75	24.91	21.67	18.60	13.88
New Mexico	16.99	.....	29.88	25.47	21.75	20.15	11.96
Arizona	21.70	.....	33.61	.....	21.67	23.17	15.80
Utah	22.74	29.61	25.41	23.12	19.03	20.08	13.99
Nevada	23.98	.....	.....	41.07	27.14	26.39	16.19
<i>Pacific</i>	31.64	37.46	32.52	30.67	26.41	23.10	18.44
Washington	25.40	32.50	24.16	26.34	19.80	20.88	14.12
Oregon	23.56	30.74	25.52	28.46	23.74	20.03	13.75
California	33.77	38.87	33.22	32.37	27.39	24.45	21.06

SOURCE: Residential Real Estate.

National Bureau of Economic Research

100,000 or more in population in 1930, but only \$14 in towns with fewer than 2,500 inhabitants (Table B2). Thus rents in large cities, the country over, were almost three times as high as those in small towns.

In certain parts of the country the contrast is even more marked than in the United States as a whole. In the cities of the South Atlantic States, for example, where the general level of rents is lower than in other parts of the country, the corresponding figures, for large cities and for small towns, were \$32 and \$10 per month. Expressed as relatives of the average for that particular region, rents in large cities were 170 per cent, and those in small towns, 55 per cent.

The extreme contrast in both rents and values is between large cities of the North and small towns in the Southern and Mountain States. Highest rents are paid in the Middle Atlantic States in cities of 100,000 or more in population, including New York City, where monthly rents averaged \$46 in 1930. The lowest typical rents for any region are \$9 in towns under 2,500 in population in the East South Central States, or approximately one-fifth of the rents paid in the large cities of New York, New Jersey, and Pennsylvania. The values and rents in small towns do not indicate the full extent of the difference, because the group of small towns includes many suburbs of large cities which are a part of the metropolitan areas having relatively high living costs. A careful segregation of small towns and villages that are not integral parts of large neighboring cities would show still lower residential values and rents (see Table 14 and footnote 5).

2 OTHER DIFFERENTIALS AND FACTORS RELATING TO DIFFERENTIALS

In Section 1 it is shown that large differentials in housing costs exist both among regions and among areas of varying population density. Other differentials and a limited group of the important factors related to them are now discussed. The precise importance of each factor and its relationships cannot be developed without further detailed study and explanation beyond the scope of this Bulletin.

Site value

A very important factor in differentials in the value of residential properties is the value of the land on which they stand. For new nonfarm properties, site values constitute more than 15 per cent of the total property value. For older properties, site value constitutes fully 20 per cent of total value, after allowance is made for depreciation of the structures. Of the mortgaged residential properties accepted for insurance by the Federal Housing Administration in 1937, the average value was \$6,097, of which the land valuation after the site was improved was \$921 or 15 per cent. The value of the site was highest both absolutely and relatively in the Middle Atlantic region, where site values averaged \$1,154 or 17 per cent of property values. Land value was lowest in the Mountain States at an average of \$539 or slightly over 10 per cent of average property value (Table 5).

Variations in the ratios of site value to total property value also exist in cities of different sizes and types. Although these variations are mild and somewhat irregular, data for new single-family dwellings securing mortgages for insurance by the Federal Housing Administration in 1937 show that land was a greater factor in the total cost of new houses in large cities than in small places, averaging from 13 to 18 per cent in cities above 50,000 in population and from 12 to 15 per cent in smaller towns (Table 6). Likewise land constitutes a smaller part of the property value in

TABLE 5

Average Value of Property and of Land Site, and Ratio of Site Value to Value of Property, New Single-family Houses securing Mortgages accepted for Insurance by the F.H.A., by Geographic Division, 1937¹

	AVERAGE PROPERTY VALUE	AVERAGE LAND VALUE	LAND VALUE AS PERCENTAGE OF PROPERTY VALUE
United States	\$6,097	\$ 921	15.1
New England	6,409	833	13.0
Middle Atlantic	6,826	1,154	16.9
East North Central	7,038	1,021	14.5
West North Central	5,354	680	12.7
South Atlantic	5,652	842	14.9
East South Central	4,886	728	14.9
West South Central	4,834	744	15.4
Mountain	5,183	539	10.4
Pacific	5,637	896	15.9

¹Computed by the National Bureau of Economic Research from data in the *Annual Report* of the Federal Housing Administration, year ending December 31, 1937, Table 33, p. 72.

TABLE 6

Average Value of Land as a Percentage of Average Value of Property, New Single-family Houses securing Mortgages accepted for Insurance by the F.H.A., by Population Group, within and outside Metropolitan Districts, 1937¹

POPULATION GROUP	WITHIN METROPOLITAN DISTRICTS		OUTSIDE METROPOLITAN DISTRICTS
	ALL NONFARM		
Total	15.3	15.9	13.8
1,000,000 or more	16.9	16.9	....
500,000-999,999	17.8	17.8	....
250,000-499,999	15.6	15.6	....
100,000-249,999	13.9	13.9	....
50,000-99,999	13.1	15.8	14.5
25,000-49,999	12.2	16.6	13.5
10,000-24,999	14.9	16.3	12.7
5,000-9,999	15.4	16.8	13.2
2,500-4,999	12.1	15.6	12.8
Less than 2,500	14.8	15.0	14.7

¹Computed by the National Bureau from data in the *Annual Report* of the Federal Housing Administration, year ending December 31, 1937, Table 32, p. 71.

TABLE 7
Average Value of Farm Dwellings, including One Acre of Land, Value of One Acre of Land, and Ratio of Value of Land to Value of Property, by Geographic Division, 1930¹

	Average Value of Property ² (dollars)	Average Value of One Acre of Land	Value of Acre of Land as Percentage of Value of Farm Dwelling, including Acre of Land (per cent)
United States	1,242	35	2.8
New England	2,356	31	1.3
Middle Atlantic	2,375	37	1.5
East North Central	1,750	26	1.5
West North Central	1,677	44	2.6
South Atlantic	876	30	3.4
East South Central	575	26	4.5
West South Central	670	26	3.9
Mountain	1,102	13	1.2
Pacific	1,820	68	3.7

¹ Derived from *Census*, 1930, IV, 60.

² Includes value of farm operator's dwelling and one acre of land.

TABLE 8

Average Value in Dollars of Owner-occupied and Rented¹ One-family Dwellings, by Materials of Construction and Geographic Division, January 1, 1934

	OWNER-OCCUPIED				RENTED			
	All Materials	Wood	Brick	Other	All Materials	Wood	Brick	Other
United States	4,283	3,693	9,298	6,360	3,142	2,798	5,880	3,508
New England	6,186	5,777	18,023	7,552	4,832	4,770	6,835	4,281
Middle Atlantic	5,409	5,074	10,254	6,557	4,459	4,204	5,506	4,681
East North Central	5,592	4,784	12,418	9,502	4,305	3,946	8,982	4,362
West North Central	3,663	3,129	7,690	4,674	2,713	2,461	4,930	3,144
South Atlantic	4,310	3,321	7,310	6,936	3,128	2,497	5,498	3,701
East South Central	3,240	2,760	7,257	6,959	2,567	2,284	6,282	3,298
West South Central	3,632	2,946	6,974	5,458	2,488	2,167	5,102	2,818
Mountain	2,946	2,056	3,619	3,484	2,466	1,731	2,842	2,560
Pacific	3,220	2,953	7,465	4,601	2,726	2,513	4,475	3,273

SOURCE: Weighted totals computed by the National Bureau of Economic Research from the *Financial Survey of Urban Housing*, 1934, for Residential Real Estate.

¹ Owner-occupied, 52 cities; rented, 44 cities.

National Bureau of Economic Research

cities outside metropolitan areas (14 per cent) than in cities within metropolitan areas (16 per cent).

In comparison with urban site values those for farm dwellings are relatively inexpensive, although the values can only be approximated. Ordinarily no specific measured area is assigned as the site and grounds for farm dwellings, and no valuation is

given the site apart from the farm as a whole. Probably the building site of most farm dwellings would be valued above the average for an equal area of farm land. In Table 7, however, the dwelling site is assumed to be an acre in size, and its value is assumed to be the average value per acre for farm land in the region or state. When so estimated the value averages \$35 for all

TABLE 9
Average Monthly Rent in Dollars per Dwelling Unit, by Type of Dwelling,
Population Group, and Geographic Division, 1930

	POPULATION GROUP						
	All groups	100,000 or more	25,000-100,000	10,000-25,000	5,000-10,000	2,500-5,000	Under 2,500
ONE-FAMILY DWELLINGS							
United States	24.15	34.01	29.91	26.17	22.93	19.92	14.04
New England	27.94	35.75	33.75	28.02	22.27	20.07	19.52
Middle Atlantic	31.43	40.55	37.80	32.94	31.20	27.75	18.94
East North Central	29.01	40.03	34.57	28.57	23.43	21.80	15.40
West North Central	22.56	30.82	27.49	25.52	23.44	19.97	14.72
South Atlantic	16.68	28.97	21.13	18.38	17.80	14.71	10.35
East South Central	14.62	21.77	21.08	15.53	14.86	13.27	9.26
West South Central	18.38	26.18	22.41	20.13	17.73	15.71	11.38
Mountain	20.41	28.40	28.56	26.79	22.65	20.99	14.30
Pacific	28.44	34.05	31.06	29.53	25.83	22.61	18.33
TWO-FAMILY DWELLINGS							
United States	27.84	33.73	29.26	25.16	22.21	19.50	13.51
New England	27.20	30.38	29.35	24.66	19.82	18.26	17.96
Middle Atlantic	32.37	35.63	32.89	29.01	27.77	25.24	17.42
East North Central	33.77	37.62	32.84	27.44	22.96	21.59	15.40
West North Central	24.60	28.98	26.14	24.51	22.98	19.78	14.72
South Atlantic	19.20	28.13	20.70	18.19	17.80	14.84	10.56
East South Central	14.58	21.12	20.66	15.37	14.86	13.38	9.45
West South Central	17.89	25.39	21.96	19.92	17.73	15.86	11.61
Mountain	18.81	25.00	25.42	24.10	20.84	19.53	13.45
Pacific	26.56	29.96	27.65	26.59	23.76	21.04	17.22
THREE-OR-MORE-FAMILY DWELLINGS							
United States	44.38	47.34	37.95	33.19	29.72	26.56	18.66
New England	31.71	33.58	31.77	26.40	20.95	18.78	18.42
Middle Atlantic	49.21	50.85	42.34	36.92	34.98	31.15	21.50
East North Central	46.71	48.40	41.81	34.48	28.36	26.28	18.70
West North Central	38.96	41.92	37.50	34.73	31.92	27.06	20.23
South Atlantic	36.81	43.54	31.62	27.54	26.96	21.75	15.49
East South Central	28.13	32.67	31.53	23.36	22.36	19.84	13.86
West South Central	33.41	39.14	33.59	30.05	26.65	23.63	17.22
Mountain	33.21	37.82	37.98	35.76	30.00	28.06	19.14
Pacific	43.68	45.34	41.31	39.32	34.63	30.30	24.44

SOURCE: Residential Real Estate.

Differentials in Housing Costs

farms in 1930, less than 3 per cent of the average total property value. The Pacific region was highest, with an indicated value of \$68 for the dwelling site, or 3.7 per cent of the average total property value, and the Mountain States were lowest, with \$13 or 1.2 per cent.

Materials used in construction

One of the chief differences in value of dwellings is that associated with the basic material of which they are built. The most obvious difference is that between wood and brick. A comparison of the values of one-family dwellings in 52 cities reported by the Financial Survey of Urban Housing showed an average for owner-occupied dwellings of \$9,300 for brick and \$3,700 for wooden structures (Table 8). Rented dwellings in 44 cities averaged \$5,900 for brick and \$2,800 for wood. The regional pattern for costs by kind of material is generally similar to the variations in cost for all dwellings, being highest in the North East and lowest in the West and South. An indeterminate part of these differences in values is due to such causes as differences in finish and size. For example, brick dwellings are usually larger than wood, and also have a higher value per room. In the sample the average values per room in brick and wooden buildings were respectively \$1,230 and \$600 for owned, and \$900 and \$500 for rented dwellings.

Type of structure

Although differentials between regions and between large and small cities characterize all types of dwellings, the type of the structure introduces an additional variation. In general, apartments rent for more than single-family houses, while two-family houses have the smallest rent of all in many regions but not in the country as a whole. In 1930 dwelling units in apartment structures rented at a monthly average of \$44 for the country as a whole, two-family houses at about \$28, and single-family properties at \$24. There are several reasons for this relative scale of rents: (1) apartment buildings large enough to provide accommodations for many families are concentrated to a considerable degree in large cities in the northern and eastern states, where all properties are higher priced, with higher land values and higher construction costs; (2) a larger proportion of apartments than of single-family houses is of recent construction; (3) apartment buildings are more frequently made of brick or steel and concrete than of wood, usually a cheaper form of construction, and they have more elaborate central heating, plumbing, and other equipment.

The rents of apartments in multi-family dwellings that house three or more families in cities of 100,000 or more in population averaged \$47 in 1930, in comparison with \$19 in small towns of less than 2,500 in population. Rents of one-family houses ranged within narrower limits, from \$34 in large cities to \$14 in small towns (Table 9). This suggests a fair degree of similarity between the construction of one- and two-family houses. Similar differentials appear in the values of dwelling units of different type, values in large cities being generally higher than in small towns (Table 10).

TABLE 10

Average Value of Rented Nonfarm Dwelling Units by Type and Population Group, April 1, 1930

	All groups	POPULATION GROUP					
		100,000 and over	25,000-100,000	10,000-25,000	5,000-10,000	2,500-5,000	Under 2,500
All Types	4,347	5,751	4,416	3,832	3,347	2,882	1,987
1-family	3,596	5,101	4,475	3,940	3,409	2,924	2,048
2-family	3,693	4,539	3,849	3,316	2,913	2,537	1,663
3-or-more family	6,212	6,744	4,891	4,146	3,686	3,210	2,115

SOURCE: Residential Real Estate.

Facilities

Cost differences among dwelling types are accentuated by differences in the frequencies with which the types include facilities and conveniences as a part of the property. The Real Property Inventory showed a wide range in the percentage of dwellings possessing certain conveniences and facilities in different cities and in different parts of the country. For example, baths were provided in 88 per cent of four Pacific Coast cities and in 85 per cent of five Middle Atlantic cities, but in only 49 per cent of four East South Central cities. Since these accommodations are a part of the dwelling unit, they enter into the cost of construction and hence are reflected in the value of the property and in rents, especially in apartments.

Urban residences are notably better provided with facilities than those on farms. A survey of farm dwellings in 303 counties by the Bureau of Home Economics, in 1934 reported baths in 11 per cent, as compared with 76 per cent of urban residences in 64 cities as shown by the Federal Real Property Inventory (Table 11). The outlays for these additional accommodations often make substantial differences in the total values of the dwellings.

Closely allied to cost differences occasioned by additional construction expense for facilities are the apparent differences in rents arising from the cost of one or more facilities or services that may be either included or excluded in fixing the nominal charge. Where these differences in quotation practice are not taken into account, apparent differentials may appear to exist because of failure to recognize the actual cost of providing housing space as distinct from conveniences that may accompany the space. A summary of 51 cities covered by the Financial Survey showed that the charges most commonly included in rent were for water and garage. The percentages of dwellings having seven designated facilities are: Furnishings, 10.3; Electricity, 7.9; Gas, 6.2; Water, 57.9; Heat, 15.4; Mechanical Refrigeration, 7.2; Garage, 32.3.

The substantial nature of these charges for facilities is illustrated by data for 11 cities in the Financial Survey in which com-

	NET ANNUAL RENT FOR SPACE (IN DOLLARS)		COST OF FACILITIES AS PERCENTAGE OF: GROSS RENT NET RENT FOR SPACE	
	GROSS ANNUAL RENT	NET ANNUAL RENT FOR SPACE	GROSS RENT	NET RENT FOR SPACE
One-family dwellings	257	234	8.9	9.9
Two-family dwellings	238	210	11.4	12.9
Apartments	330	249	24.7	33.9

parisons are made among the principal dwelling types. About 9 per cent of the gross rent of one-family dwellings was a charge for facilities, and about 25 per cent of the gross rent of apartments.

Community services and improvements

Streets, paved walks, drainage systems, and other public improvements are provided in varying degrees in large and small centers. Their costs also vary. Large cities have paved streets and

TABLE II

Percentage of City and Farm Dwellings having various Facilities, 64 Real Property Inventory Cities and Farm Dwellings in 303 Counties, by Geographic Division, 1934

	INDOOR WATER BATHS ³	MECHANICAL REFRIGERATION	LIGHTING		COOKING		CENTRAL HEATING SYSTEM	RUNNING WATER ⁴	
			Gas	Electricity	Gas	Electricity		Total	Hot and Cold
<i>Total</i>									
64 Real Property Inventory Cities	76.5	82.7	17.0	0.2	90.6	69.4	3.9	50.5	91.9 66.9
303 Counties Farm Housing Survey	11.2	8.5	2.4	1.1	17.8	2.3	1.9	8.6	24.1 7.7
<i>New England</i>									
6 Real Property Inventory Cities	79.8	91.3	12.2	0.3	96.7	72.8	1.1	49.3	97.3 53.5
13 Counties Farm Housing Survey	29.9	29.4	10.6	0.3	57.5	1.9	3.6	29.9	81.5 26.3
<i>Middle Atlantic</i>									
5 Real Property Inventory Cities	85.5	91.5	14.7	0.3	96.3	87.2	0.4	76.8	97.2 81.3
2 Counties Farm Housing Survey ¹	41.9	37.5	15.6	1.3	68.9	11.0	5.1	52.2	92.7 38.7
<i>East North Central</i>									
8 Real Property Inventory Cities	81.0	88.0	17.1	0.2	96.0	86.6	0.5	71.7	93.4 77.3
42 Counties Farm Housing Survey	13.5	10.3	2.3	2.6	26.7	4.5	2.6	23.4	26.9 8.8
<i>West North Central</i>									
10 Real Property Inventory Cities	78.0	82.7	19.8	0.2	95.6	82.0	1.3	69.2	90.9 69.6
60 Counties Farm Housing Survey	12.8	8.8	2.3	0.7	18.1	1.9	1.0	17.0	23.8 8.0
<i>South Atlantic</i>									
11 Real Property Inventory Cities	63.3	70.0	17.7	0.4	75.4	49.9	3.2	31.6	85.5 46.1
56 Counties Farm Housing Survey	5.5	4.9	1.8	1.0	10.4	1.4	0.8	1.5	12.9 4.0
<i>East South Central</i>									
4 Real Property Inventory Cities	48.8	63.2	10.7	0.1	66.8	32.6	1.1	17.5	83.4 32.5
34 Counties Farm Housing Survey	3.0	2.5	1.1	0.3	5.0	0.4	0.3	1.0	6.3 2.2
<i>West South Central</i>									
7 Real Property Inventory Cities	71.6	73.9	17.2	0.3	81.4	78.7	0.3	3.8	85.1 61.6
44 Counties Farm Housing Survey	7.3	3.6	1.6	0.8	6.6	1.7	0.6	0.3	14.8 1.7
<i>Mountain</i>									
9 Real Property Inventory Cities	76.6	79.3	19.0	... ²	94.5	40.7	13.8	37.8	92.5 76.3
33 Counties Farm Housing Survey	15.3	11.9	3.9	0.3	27.9	1.8	5.1	4.8	40.0 13.2
<i>Pacific</i>									
4 Real Property Inventory Cities	88.1	89.8	20.1	0.1	97.7	54.5	17.4	48.1	97.2 87.0
19 Counties Farm Housing Survey	51.0	41.5	8.5	2.0	73.0	9.6	15.0	5.7	115.6 45.7

SOURCE: *Federal Real Property Inventory*, 1934, U. S. Department of Commerce; *Farm Housing Survey*, 1934, Bureau of Home Economics, U. S. Department of Agriculture, 1939.

¹Middle Atlantic represented by 2 counties only in New Jersey.

²Less than one-tenth of one per cent.

³Installed bathtubs and separate showers not built over bathtubs.

⁴Running water inside a residential unit; the percentage of units having cold water alone may be obtained by subtracting the percentage having both hot and cold from the total.

walks, while small towns frequently have gravel streets or no surfacing and less expensive sidewalks. These services and improvements provided through public taxation or special property assessments usually enhance the value of properties in larger and richer communities more than in smaller towns. Although it is evident that public improvements vary with the size of the city, little or no quantitative information with which to measure the effects of these improvements on housing costs is available.

Age of structures

One of the most important factors responsible for the differences in cost at which housing may be purchased or rented is the age of the structure. Houses similar in size but of different ages represent different levels of current value. Though a structure 20, 30, or more years old is still useful as a dwelling, its value because of style, location, or need for repairs is materially less than when first built. In 22 of the cities covered in the Financial Survey of Urban Housing in early 1934, new dwellings of all types built in the four years 1930-33 were currently valued at 40 per cent more than those built in 1890-99, and nearly 20 per cent more than those built in the 1920's, when construction costs were much higher than in the depression years of the early 1930's (Table 12). The contrast would be even greater if costs of buildings constructed in 1939 were compared with average values of all houses now standing.

TABLE 12

Ages and Values of Houses, 22 Cities, January, 1934

DATE OF CONSTRUCTION	AVERAGE VALUE (IN DOLLARS)	INDEX OF VALUES (1930-33 = 100)
1930-1933 (4 years)	5,656	100
1920-1929	4,781	85
1910-1919	4,152	73
1900-1909	3,559	63
1890-1899	3,288	58

SOURCE: *Financial Survey of Urban Housing*, 1934.

Average values are unweighted and include 75,831 houses, both owner-occupied and rented, in 22 cities.

The age distribution of houses varies from city to city and is in itself a major factor in city and regional differentials. The Financial Survey in Syracuse, N. Y., for example, found that about 70 per cent of the structures existing in 1934 were built before 1920, while in San Diego, California, only 39 per cent were built before 1920.

Availability of financing

A part of the difference in the values of houses in various localities is due to the relative availability of credit. In general, financing facilities are best in cities and poorest in small towns and for dwellings on farms. Cities commonly have specialized

institutions for making loans on residential property. The existence of more properties in a homogeneous area and within easy access of the lender is conducive to the development of financing facilities designed to provide maximum convenience to the prospective builder or purchaser. The financing machinery so established may be used to make loans which are larger in amount, and are offered at lower rates, for longer terms, and with more favorable amortization than is possible where these conditions do not exist. The borrower who has ready access to credit can buy or construct a given dwelling by the payment of a smaller amount for interest and principal, or command a better property with the same amount of funds. In such circumstances there is usually a tendency on the part of the prospective home-owner or landlord to build or buy houses costing the maximum value that may be carried with the means available. Thus lower interest rates and more favorable terms are conducive to more expensive houses.

Houses on farms are the least favorably situated with respect to the securing of financing. The dwelling is usually part of the farm property and is occupied by a family connected with the farm's operation. Usually the value of the dwelling is less than the value of the farming land. The entire property, rather than the dwelling alone, constitutes the unit to be exchanged and financed, and in most such transactions the dwelling is a minor item in the value of the whole enterprise. This fact makes the farm dwelling less desirable, if not totally unacceptable, as security for a loan.

Construction costs

Most of the factors responsible for differentials in housing costs enter also into the cost of new construction; and the data on the cost of new dwellings show differentials similar to those existing for old houses. For example, the average cost per dwelling unit for 33 Public Works Administration projects completed between 1934 and 1938 in 26 cities is shown in Table 13 to have been \$4,472 for 16 northern projects and \$3,568 for 17 southern projects. This difference of about one-third reflects the more solid construction and the higher average standard of housing common in the colder parts of the country.

More detailed evidence of differentials is found in reports on building permits made to the Bureau of Labor Statistics. A special tabulation for 1937 by regions and size of city indicates that the Middle Atlantic states usually have the highest average for building permits and the East and West South Central the lowest (Table 14).⁵ Also the average tends to vary directly with the size of the city.

⁵Data in Table 14 are presented separately for satellite cities, that is, those adjacent to and essentially dominated by a large metropolitan district, and non-metropolitan district cities in order to show that for cities of the same size, the type of community must be taken into consideration. Satellite cities (for discussion of such cities see *Bulletin 65, Nonfarm Residential Construction, 1920-1936*, David L. Wickens and Ray R. Foster) definitely tend toward higher average values, marked differences appearing in every region and in almost every group of cities.

TABLE 13

Average Cost per Dwelling Unit in Dollars, 33 Completed Public Works Administration Projects in 26 Cities, 1934-1938, by City, Geographic Division, Northern and Southern Groups, and by Race or Color of Occupants¹

	DWELLING UNITS							
	White		Negro		White and Negro		Total	
	Number ²	Average cost ³	Number ²	Average cost ³	Number ²	Average cost ³	Number ²	Average cost ³
<i>2 New England Cities</i>	442	\$4,488					442	\$4,488
Cambridge, Mass.	294	4,452					294	4,452
Stamford, Conn.	148	4,559					148	4,559
<i>5 Middle Atlantic Cities</i>	2,592	5,291	912	\$4,431			3,504	5,067
Buffalo, N. Y.	660	5,640					660	5,640
New York City, N. Y.	1,674	5,014	583	4,665			2,257	4,924
Atlantic City, N. J.			277	3,900			277	3,900
Philadelphia, Pa.	258	6,195					258	6,195
Wayne, Pa.			52	4,632			52	4,632
<i>5 East North Central Cities</i>	3,185	4,267	1,593	3,561			4,778	4,032
Cleveland, O.	{ 654	3,380						
	{ 620	4,210						
Toledo, O.			579	3,811			1,853	3,792
Indianapolis, Ind.			266	4,732			266	4,732
Chicago, Ill.	{ 925	4,758	748	2,951			748	2,951
	{ 468	5,195						
Milwaukee, Wis.	518	3,739					518	3,739
<i>16 Northern Projects</i>	6,219	4,709	2,505	3,878			8,724	4,472
<i>5 South Atlantic Cities</i>	604	2,688	1,135	2,690	336	\$4,598	2,075	2,998
Charleston, S. C.					214	4,922	214	4,922
Columbia, S. C.					122	4,031	122	4,031
Atlanta, Ga.	604	2,688	675	2,487			1,279	2,582
Jacksonville, Fla.			217	3,000			217	3,000
Miami, Fla.			243	2,977			243	2,977
<i>6 East South Central Cities</i>	1,076	4,456	1,338	3,224	287	4,530	2,701	3,854
Lexington, Ky.					287	4,530	287	4,530
Louisville, Ky.	213	4,498					213	4,498
Memphis, Tenn.	449	4,847	636	3,734			1,085	4,195
Nashville, Tenn.	314	4,354					314	4,354
Birmingham, Ala.			544	2,913			544	2,913
Montgomery, Ala.	100	2,934	158	2,245			258	2,512
<i>3 West South Central Cities</i>	622	4,226					622	4,226
Enid, Okla.	82	4,677					82	4,677
Oklahoma City, Okla.	358	4,221					358	4,221
Dallas, Tex.	182	4,032					182	4,032
<i>17 Southern Projects</i>	2,302	3,930	2,473	2,979	623	4,567	5,398	3,568
<i>33 Projects</i>	8,521	4,499	4,978	3,431	623	4,567	14,122	4,126

¹ SOURCE: Primary Data for Individual Projects, Bureau of Labor Statistics, Division of Construction and Public Employment (mimeographed release) 'Pertinent Facts Concerning Construction of 33 Federal Low-Cost Housing Projects Financed from P. W. A. Funds' (subject to revision), May 2, 1938. City and divisional averages computed by the National Bureau of Economic Research and weighted by number of dwelling units.

² Social and recreational units contained in space that might have been utilized for dwelling units have been considered as dwelling units.

³ Based on cost of dwelling units without facilities rather than construction contract price.

Differentials in Housing Costs

TABLE 14

Average Value of Building Permits for Housekeeping Dwelling Units, Satellite Cities and Non-Metropolitan Districts, by Population Group and Geographic Division, 1937

	POPULATION GROUP					
	100,000 and over	50,000-100,000	25,000-50,000	10,000-25,000	5,000-10,000	2,500-5,000
	SATELLITE					
United States	3,868	5,469	4,940	5,458	5,248	5,204
New England	3,454	7,065	5,349	5,590	4,772	5,109
Middle Atlantic	5,813	5,496	7,524	5,908	5,905	5,099
East North Central	4,372	5,763	4,363	7,438	6,923	7,213
West North Central			4,827	3,756	4,098	3,960
South Atlantic			3,057	4,703	6,115	3,655
East South Central			2,408		3,058	
West South Central				1,680	5,401	4,255
Mountain					1,644	
Pacific	2,966	4,407	3,442	3,948	3,437	4,383
NON-METROPOLITAN DISTRICT						
United States		3,123	3,478	2,702	2,515	2,504
New England		3,658	7,192	3,389	3,901	3,350
Middle Atlantic		4,789	4,927	4,277	3,568	5,448
East North Central		3,734	3,793	3,100	3,498	3,983
West North Central		3,220	2,821	3,063	2,872	3,156
South Atlantic		3,082	3,110	2,409	2,814	2,382
East South Central		2,848	2,064	1,737	1,869	2,145
West South Central		2,616	3,091	2,072	1,920	1,677
Mountain		2,288	3,152	3,171	2,056	1,766
Pacific		4,453	3,216	2,621	2,514	2,005

SOURCE: Computed from unpublished Number of Dwelling Units Provided and Permit Valuation data from the U. S. Bureau of Labor Statistics.

In addition to being influenced by the same factors that affect housing costs, new construction costs reflect differences in costs of materials and labor. Proximity to the source of materials probably accounts for part of the lower building costs in small centers and on farms, as well as in the Pacific Northwest and parts of the South where the source of lumber is nearby. Rural areas are also less likely to have or to use the most expensive materials. Moreover, in areas where brick or stone construction predominates material costs are usually higher than in areas where simple frame dwellings suffice.

Variations in labor costs are of considerable importance in accounting for differentials in new construction costs. In large cities labor costs of nearly all building trades are commonly much higher than in small centers or on farms. Comparisons of wage rates in Cleveland and in the adjoining counties extending outward for 100 miles indicate that they vary with the degree of organization of labor (Table 15).⁶ If the lower rates in the smaller

⁶These comparisons may be affected by differences in details of building in large and small localities.

towns imply less specialization and less technical skill they would probably affect the quality of structures and consequently their value.

Another set of reports indicating the effects of differences in labor and material costs, particularly regional differences, is provided by the Federal Home Loan Bank Board's estimates of the

TABLE 15

Hourly Wage Rates for Carpenters, Bricklayers, and for All Occupations in the Construction Industry, in Cleveland, Ohio, and in Four Counties South of Cleveland, 1936¹

DISTANCE FROM CLEVELAND (MILES)	CLEVELAND	COUNTY			
		MEDINA	WAYNE	HOLMES	COSHOC-TON
		15-35	35-55	55-70	70-90
		(DOLLARS PER HOUR)			
<i>Carpenters</i>					
Union	1.25	1.00	0.80		0.85
Non-Union	0.75	0.63	0.59	0.48	0.60
<i>Bricklayers</i>					
Union	1.37	1.25	1.25	1.25	1.25
Non-Union		0.93	0.80		0.82
<i>All occupations</i>					
Union	1.13	0.97	1.12	... ²	0.83
Non-Union	0.66	0.64	0.59	0.50	0.61

¹From unpublished data collected by the U. S. Bureau of Labor Statistics.

²Data given for bricklayers alone.

cost of building the same standard house in representative cities. These reports indicate the same general differences among cities in various parts of the country as those shown in this Bulletin with the exception of some of the cities in the Mountain states, where values and rents of existing dwellings are relatively low but new construction is relatively costly because of special local conditions. Cities in the Middle Atlantic states report high costs, averaging \$5,829 for 10 cities, and nearly \$6,100 for 22 North Central cities. Southern cities show the lowest cost with an average of \$5,400 for 15 South Atlantic cities and \$5,600 for 5 East South Central cities. As is to be expected, the differentials are less marked for a new house of standard specifications than for existing dwellings, which reflect wide local variations in standards of living.⁷

⁷Data for the 79 cities for which costs are estimated by the Federal Home Loan Bank Board are published in the Federal Home Loan Bank Review. The house on which costs are reported is a detached 6-room home of 24,000 cubic feet volume, principally of frame construction, with garage, unfinished cellar and attic, fireplace, heating, plumbing, and electric wiring. Reported costs include compensation insurance, contractor's overhead, transportation of materials, and 10 per cent builder's profit. Costs do not include land, planting, walks, driveways, architects' fees, building permit, financing charges, or sales costs.

Income levels

The amount spent on housing is usually related to income, although within income groups there are wide variations. Farm dwellings on the average are valued below urban partly because the money income available to farm families for living averages less than that for urban. Similarly differentials in housing costs between North and South are closely connected with income and wage differences in the two areas.

A striking example of the effect of income levels on housing costs is the use of less costly housing by certain population groups whose income levels are notoriously low. For example, a large part of the southern differential in housing costs is a reflection of the greater number of negro families in the South. Further evidence of the influence of different sizes of income is shown in the wide difference between costs of newly constructed dwellings provided for white and negro families (Table 13). In every city for which data are available, the average cost of negro dwelling units constructed by the Works Progress Administration is lower than that of dwelling units for white families. The average cost of 8,500 units built for white families was \$4,500; that of 5,000 units built for colored families, \$3,400. Although a part of this difference was due to the greater number of colored families in the South where all construction costs less, the tendency for new construction to be influenced by the standard customary in the area or for the group is evident when costs within the same areas are compared. White dwelling units on the northern project cost \$4,700 and negro units \$3,900. A similar difference appeared on the southern projects where white units averaged \$3,900 in cost and negro units about \$3,000.

Cost of living

Since housing constitutes a substantial item in family budgets—at the lower income levels 15 to 25 per cent of total expenditures—housing differentials are pertinent in cost of living studies. These differentials may also be treated as a function of variations in the cost of living. The consistency of the relationship between housing cost and total expenditures for living is indicated by the study of intercity differences in the cost of living by the Works Progress Administration, 1933.⁸ In 59 cities, with the total cost of living varying from \$1,130 in Mobile, Alabama, to \$1,415 in Washington, D. C., housing cost, including water, ranged from \$158 in Portland, Oregon, to \$342 in Washington, D. C. The average percentages of housing cost to total cost of living in the same group of cities ranged from 13 in Portland, Oregon, to 24 in Washington, D. C.

Examination of the data shows that some cities rank high in total cost of living but low in housing cost, and vice versa. For example, New Orleans ranks first in cost of living among 6 West South Central cities but fourth in housing cost; while Peoria, Illinois, ranks sixth and first respectively among 8 East North Central cities. If housing cost is correlated with cost of living ex-

⁸*Intercity Differences in Costs of Living* (Works Progress Administration, March 1935), Appendix Table 2.

cluding housing cost for all 59 cities, the coefficient of rank correlation is only .46. Further analysis, and perhaps better cost of living studies, are of course required before the full significance of such measures can be determined. Here it is possible to do little more than suggest that housing differentials are less closely associated with differences in other living costs than might be expected.

The existence of differentials is a pertinent fact in the planning of measures designed to provide adequate housing. If government subsidies are to be provided, satisfactory regional allocation of federal funds cannot be made without knowledge of regional differentials. Nor can long range housing programs, private or public, be set up without more complete analysis of such factors as the economic resources available to meet and sustain the costs of housing and more complete knowledge of where housing improvements are most needed.

3 SOURCES OF DATA AND METHODS

The principal source of the material presented in this Bulletin is the forthcoming book, *Residential Real Estate*. In fact, since Tables A3 and B2 are taken from it the numbering is retained; and since the methods used will be there set forth in detail they are summarized only briefly here.

The 1930 Census of Population provided data on the number of families by rent and value groups. These data were supplemented by estimates of vacant dwelling units and units unreported. A special tabulation of the data for 139 representative towns and cities gave information concerning average values and rents, by groups. The estimate of aggregate rents, by type of dwelling, was converted into estimated total value of rented property by use of Financial Survey of Urban Housing data showing the relation between rents and values, as reported by tenants and landlords for the same classes of properties. From total values and rents were derived average values and rents for each population group, by geographic divisions and states. The primary data on costs of new construction were obtained by the Bureau of Labor Statistics. Appreciation is expressed to Herman Byer of that Bureau for use of special tabulations. Values of farm dwellings and farm land were derived from the 1930 Census of Agriculture through computations by the National Bureau of Economic Research. Grateful acknowledgment is made to Ray R. Foster who assisted in preparing the basic material, to Melvin F. Miller who made most of the computations, and to W. H. Shaw for assistance to the staff advisory committee.

As did *Bulletin 65*, this Bulletin presents some results of the major study, *Real Estate Financing and Economic Stability*, which was initiated at the request of the Social Science Research Council (Committee on Credit and Banking, Division of Industry and Trade) and has been carried on, with its support, by the National Bureau. The manuscript on *Residential Real Estate* is being circulated among the Directors of the National Bureau and will be sent to the printer upon their approval. The publication date and price will be announced later.

THE BULLETIN

The next issue of the Bulletin, now in press, will be a statistical study of the Pattern of Consumer Instalment Debt, by Ralph A. Young and Blanche Bernstein. With 22 tables and 9 charts it is so large that it will be given two numbers, 76-77. Presenting findings developed from a study of the use of instalment credit for the purchases of commodities it is the first of a series of Bulletins and books giving results of the first project, initiated in 1938, under the program of research in finance supported by special grants from the Association of Reserve City Bankers and the Rockefeller Foundation. Two books, *Personal Finance Companies and their Credit Standards*, and *Sales Finance Companies and their Credit Standards*, are well along toward the publication stage. The first has been approved by the Directors of the National Bureau and will soon be sent to press; the second is being read by the staff advisory committee. A third, *Government Agencies of Consumer Instalment Credit*: the Federal Housing Administration and the Electric Home and Farm Authority, is about to be submitted to the staff advisory committee. Titles of other studies including one on commercial banking and consumer financing and one on consumer financing and economic fluctuations, will be announced later.

Bulletin 76-77 is based on data obtained from the Study of Consumer Purchases, a Works Progress Administration project conducted by the United States Bureau of Home Economics and the United States Bureau of Labor Statistics in cooperation with the National Resources Committee and the Central Statistical Board.

RESEARCH ASSOCIATES, 1939-1940

Funds appropriated by the Carnegie Corporation for grants-in-aid have made possible the appointment of three new research associates: George H. Evans, Jr., of Johns Hopkins University; Geoffrey H. Moore of Rutgers University, and Allen W. Wallis of Stanford University. The term of Moses Abramovitz of Harvard University has been prolonged one year. Joel Dean of Indiana University, who has been Executive Secretary of the Conference on Price Research and is writing a Bulletin on *Cost Behavior in a Manufacturing Enterprise* (a Statistical Analysis), will join the faculty of the University of Chicago this autumn.

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