

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

Volume Title: The Labor Force Under Changing Income and Employment

Volume Author/Editor: Clarence D. Long

Volume Publisher: Princeton University Press

Volume ISBN: 0-87014-064-7

Volume URL: <http://www.nber.org/books/long58-1>

Publication Date: 1958

Chapter Title: The Labor Force of Females and the Earnings of Males in Different Income Groups at a Given Time

Chapter Author: Clarence D. Long

Chapter URL: <http://www.nber.org/chapters/c2621>

Chapter pages in book: (p. 82 - 96)

## CHAPTER 5

# THE LABOR FORCE OF FEMALES AND THE EARNINGS OF MALES IN DIFFERENT INCOME GROUPS AT A GIVEN TIME

### *The Labor Force of Wives by Income Group of Husbands in the Same City or Type of Area*

CITIES and states are unsatisfactory units for the study of labor force and earnings; they have been used only because better data were lacking. In the census statistics for 1940 and 1950, however, infinitely superior materials are at hand: namely, wives in the labor force grouped according to the incomes of husbands. These data are classified by color and age of wife and by age of children—information that enables us to eliminate many extraneous elements unfortunately present in inter-area comparisons. Some of the same elements, it is true, may affect even comparisons between income groups within a city since the well-to-do and the less prosperous do not normally reside in the same section of town. Nevertheless cultural patterns and the structure of industry are likely to be more homogeneous *within* a city than *among* cities; this suggests that there may be real advantages in studying the labor force by income groups.

Farm areas were excluded, largely because of defects in the wage and salary materials (Appendix D). All income groups for the rural nonfarm areas however, and for large, medium, and small cities yielded rather similar results (Table 9 and Chart 4). Wives were less apt to work if their husbands were well-to-do than if their husbands were poor—even when the wives were standardized for possession of young children and for age (to eliminate the possibility that the age factor kept wives out of the labor force). The effect of income was, moreover, pronounced. In 1940, the nonfarm labor force of married women ranged from 245 per 1,000 in the lowest income bracket to 64 in the highest, where incomes were \$3,000 or more.<sup>1</sup> Furthermore, the higher the income level, the more women (percentagewise) dropped out with additional prosperity. At the lower range about 0.1 per cent fewer wives were in the labor force if income was 1 per cent higher; at the top of the range the figure was close to 0.9 per cent fewer. The weighted average for all levels was about  $-0.35$  for the United States excluding farm areas and standardizing for age of wife and possession of young children. The unstandardized figure was only slightly different ( $-0.33$ ).

<sup>1</sup> *Census of Population, 1940, Population, The Labor Force (Sample Statistics), Employment and Family Characteristics of Women*, p. 135.

TABLE 9

Variations in Labor Force of Wives Associated with Differences in Earnings of Husbands, United States, 1940  
 (Number of persons by which rate of participation of wives 18-64 in labor force—per 1,000 wives in same area, age, and income group—was reduced for every additional \$100 of wage or salary earned by their husbands in the previous year, and percentage by which the rate was reduced for every 1 per cent addition to the husband's earnings. Husbands had no other income.)

	Income Level					Weighted Averages, All Income Levels <sup>a</sup>	
	\$100- \$00	\$300- 500	\$500- 800	\$800- 1,250	\$1,250- 1,750		\$2,500- 3,250 and over
A. ALL WIVES, STANDARDIZED FOR AGE AND POSSESSION OF YOUNG CHILDREN <sup>b</sup>							
	Reduction per \$100 Additional Income of Husband (persons)						
United States (except farm areas)	-19	-1	+0.3	-8	-8	-5	-6
Metropolitan areas 100,000 and over	-14	-5	-4	-7	-9	-6	-7
Cities 25,000-100,000	-35	-1	-8	-15	-9	-8	-11
Cities 2,500-25,000	-26	-10	-2	-13	-10	-6	-10
Rural nonfarm areas	-19	-3	+6	-7	-8	-3	-5
	Reduction per 1 Per Cent Additional Income of Husband (per cent)						
United States (except farm areas)	-0.08	-0.01	+0.01	-0.30	-0.61	-0.71	-0.35
Metropolitan areas 100,000 and over	-0.05	-0.06	-0.10	-0.27	-0.60	-0.72	-0.42
Cities 25,000-100,000	-0.10	-0.01	-0.14	-0.48	-0.58	-0.94	-0.41
Cities 2,500-25,000	-0.08	-0.12	-0.05	-0.46	-0.76	-0.91	-0.39
Rural nonfarm areas	-0.11	-0.06	+0.23	-0.37	-0.79	-0.60	-0.19

TABLE 9, continued

	Income Level						Weighted Averages, All Income Levels *
	\$100- 300	\$300- 500	\$500- 800	\$800- 1,250	\$1,250- 1,750	\$1,750- 2,500	
<b>B. WIVES WITHOUT CHILDREN UNDER 10 c</b>							
Reduction per \$100 Additional Income of Husband (persons)							
United States (except farm areas)	-11	-3	-2	-6	-11	-7	-5
Metropolitan areas 100,000 and over	-22	-7	-7	-7	-10	-7	-6
Cities 25,000-100,000	-31	-4	-10	-16	-6	-7	-7
Cities 2,500-25,000	-26	-15	-2	-4	-21	-8	-2
Rural nonfarm areas	+7	-3	+5	-7	-9	-5	-2
Reduction per 1 Per Cent Additional Income of Husband (per cent)							
United States (except farm areas)	-0.04	-0.03	-0.03	-0.18	-0.56	-0.66	-0.92
Metropolitan areas 100,000 and over	-0.06	-0.06	-0.12	-0.21	-0.52	-0.66	-1.02
Cities 25,000-100,000	-0.07	-0.03	-0.14	-0.41	-0.34	-0.59	-1.11
Cities 2,500-25,000	-0.07	-0.14	-0.04	-0.12	-1.00	-0.91	-0.85
Rural nonfarm areas	+0.04	-0.05	+0.14	-0.28	-0.72	-0.68	-0.64

TABLE 9, continued

	Income Level						Weighted Averages, All Income Levels <sup>a</sup>
	\$100-300	\$300-500	\$500-800	\$800-1,350	\$1,350-2,500	\$2,500-3,250 and over	
C. WIVES WITH CHILDREN UNDER 10 <sup>c</sup>							
	Reduction per \$100 Additional Income of Husband (persons)						
United States (except farm areas)	-12	-2	+3	-8	-6	-3	-4
Metropolitan areas 100,000 and over	-13	-8	-1	-7	-7	-3	-5
Cities 25,000-100,000	-41	+4	-5	-15	-6	-5	-9
Cities 2,500-25,000	-25	-3	-3	-12	-7	-3	-8
Rural nonfarm areas	-9	-3	+8	-8	-5	-1	-2
	Reduction per 1 Per Cent Additional Income of Husband (per cent)						
United States (except farm areas)	-0.08	-0.04	+0.12	-0.52	-0.91	-0.91	-0.44
Metropolitan areas 100,000 and over	-0.08	-0.16	-0.04	-0.46	-0.92	-0.95	-0.55
Cities 25,000-100,000	-0.15	+0.06	-0.12	-0.68	-0.71	-1.09	-0.57
Cities 2,500-25,000	-0.12	-0.05	-0.09	-0.64	-0.92	-0.93	-0.48
Rural nonfarm areas	-0.09	-0.11	+0.55	-0.60	-1.01	-0.35	-0.15

Source: *Census of Population, 1940, Vol. IV, The Labor Force (Sample Statistics), Employment and Family Characteristics of Women, Table 23, pp. 132-136.*

<sup>a</sup> Weighted by number of wives 18-64 belonging to the various income levels.

<sup>b</sup> Standardized for age and child status on basis of total wives of the United States (except farm areas).

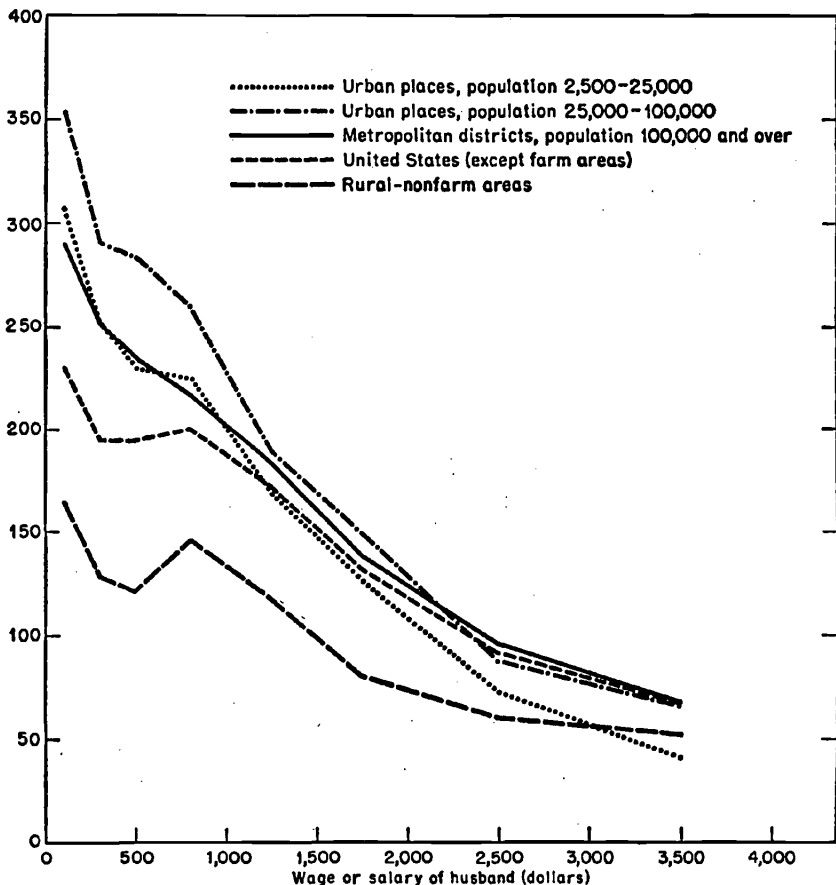
<sup>c</sup> Standardized for age of wives on basis of total wives of the United States (except farm areas).

FEMALE LABOR FORCE AND MALE EARNINGS

CHART 4

Labor Force of Wives and Earnings of Husbands: Various Types of Nonfarm Areas, United States, April 1940

Labor force, per 1,000 of wives aged 18-64 and living with husband. Standardized for age on basis of total wives in same type of area.



Limited to wives whose husband's income (in 1939) was entirely from wages or salary. The income groups are \$1-199; 200-399; 400-599; 600-999; 1,000-1,499; 1,500-1,999; 2,000-2,999; and 3,000 and over. Readings are centered at midpoints of the ranges, except for the open-end class.

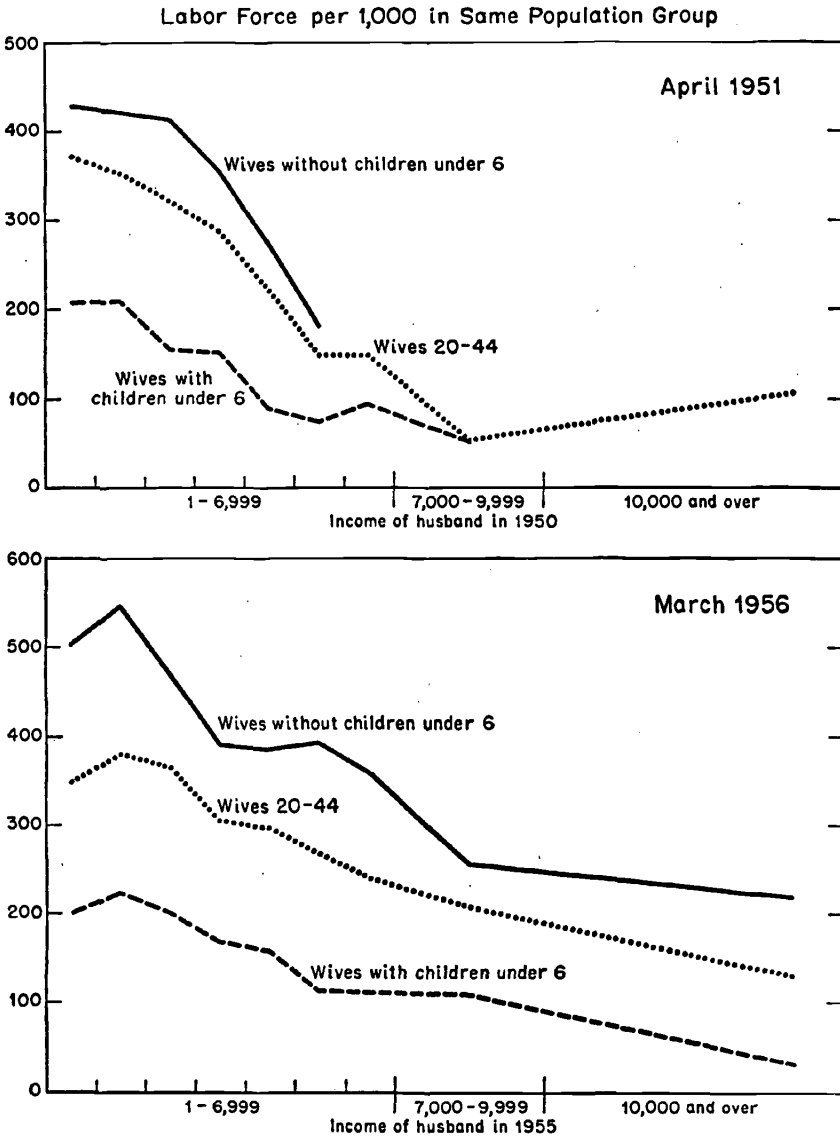
Source: *Employment and Family Characteristics of Women*, as cited in Table 9.

The association varied little among different-sized urban areas, but it was markedly lower for rural nonfarm areas.

The same data for 1940 allow separate analysis for wives with, and without children under 10. The participation of wives without young children had associations with husbands' income very similar to those of all wives (Table 9, Section B and Chart 6). This close similarity

### CHART 5

## Labor Force of Wives with and without Young Children, and Income of Husbands: United States, 1951 and 1956



Source: For both years, "Marital and Family Status of Workers: 1956," *Current Population Reports, Labor Force*, Series P-50, No. 73, p. 14. Labor force not shown where sample base is less than 200,000. Income data are grouped at 500-dollar intervals up to \$5,000, then \$5,000-5,999, 6,000-6,999, 7,000-9,999, and 10,000 and over. Readings are centered at mid-points except for the open-end class.

## FEMALE LABOR FORCE AND MALE EARNINGS

was not surprising, since most wives in the labor force do not have young children and could be expected to dominate the average. Wives *with* young children (Table 9, Section C) showed somewhat different tendencies. Their labor force participation fell more sharply as the husbands' income rose ( $-0.44$  instead of  $-0.32$ )—also not surprising, since this group would be more apt to leave jobs and care for their children, given the advantage of an increase in the husband's income.

At this writing the census has still not published similar tabulations for 1950. The only available data are a table from *Current Population Reports* which covers 1951 and 1956, and refers to wives aged 20-44 (Chart 5). Income groups differ, since the whole schedule of incomes had shifted upward. The table provides no data for younger or older wives or for standardizing for possession of young children. Nevertheless, the unstandardized association for 1951 was very similar to the unstandardized and standardized results for 1940 (Table 10). The associations for 1956 indicate a smaller reduction in labor force participation for wives associated with each higher income group of husband. The decline in the association was, in general, greater for the higher income groups.

These results must be regarded as far more reliable than correlations based on the crude unit of a city, and they would seem to establish a rather overwhelming presumption that, for wives at least, lower labor force participation accompanies higher income.

### *White and Colored Wives by Age of Wife and Possession of Young Children*

The inverse association between wives in the labor force and husbands' earnings cannot be attributed to the presence of higher proportions of Negroes in the lower income groups. It is true that proportionately more Negro wives were in the labor force than white wives regardless of age, number of children, or income—perhaps because Negro women had less security, received lower average earnings, or carried a larger share of responsibility for the family. Yet, both Negro and white wives tended to enter the labor market in relatively fewer numbers, the higher their husbands' earnings. In the case of older women and of those with children under 10, the proportions were all on lower levels; but within each age<sup>2</sup> and child status group—as illustrated by the

<sup>2</sup> *Employment and Family Characteristics of Women*, as cited, p. 132. Mothers of preschool children were more likely to be in the labor force if there were older children to help care for the younger ones. Wives were least apt to work if all children were preschool, more apt if some children were of school age, most apt if no children were preschool. "Employment Characteristics of Household and Married Couples, April 1947," *Current Population Reports, Labor Force, Series P-50*, No. 5, May 7, 1948, p. 3, and Table 7, p. 10.



TABLE 10

Variations in Labor Force of Wives Aged 20-44 Associated with Differences in Income of Husbands in Previous Year, United States, 1951 and 1956

	Income Level (dollars)						Weighted Averages, All Income Levels <sup>a</sup>	
	500-1,500	1,500-2,500	2,500-3,500	3,500-4,500	4,500-5,500	5,500-6,500	6,500-8,500	8,500-10,000 over
<b>April 1951</b>								
All wives, 20-44 <sup>c</sup>	-2	-3	-4	-7	-7	0	-5	+1
With children under 6 years	<sup>d</sup>	-5	<sup>d</sup>	-6	-2	+2	-2	...
Without children under 6 years <sup>e</sup>	-1	-1	-6	-8	-9	...	...	...
All wives, 20-44 <sup>c</sup>	-0.03	-0.13	-0.28	-0.80	-1.48	0	-2.09	+1.31
With children under 6 years	<sup>d</sup>	-0.31	-0.07	-1.44	-0.77	+1.58	-1.49	...
Without children under 6 years <sup>e</sup>	<sup>d</sup>	-0.03	-0.35	-0.80	-1.51	...	...	...
<b>March 1956</b>								
All wives, 20-44 <sup>c</sup>	+3	-2	-6	-1	-3	-3	-2	-1
With children under 6 years	+2	-2	-3	-1	-5	<sup>a</sup>	<sup>a</sup>	-1
Without children under 6 years <sup>e</sup>	+4	-8	-8	-1	+1	-3	-5	-1
All wives, 20-44 <sup>c</sup>	+0.45	-0.58	-0.42	-0.09	-0.45	-0.56	-0.45	-0.49
With children under 6 years	+0.60	-0.18	-0.41	-0.16	-1.32	-0.05	-0.06	-0.94
Without children under 6 years <sup>e</sup>	+0.44	-0.21	-0.43	-0.04	+0.10	-0.48	-0.93	-0.19

Source: "Marital and Family Status of Workers: 1956," *Current Population Reports, The Labor Force*, Bureau of the Census. Series P-50, No. 78, p. 14; *Census of Population, 1950*, Vol. II, Part 1, *United States Summary*, p. 304.

<sup>a</sup> Weighted by the proportion of wives 14 and older belonging to different income levels as reported by the census of 1950.

<sup>b</sup> Number of persons by which rate of participation of wives 20-44 in labor force (per 1,000 wives of same age and income group) was reduced for every additional \$100 of income of husbands in the previous year; and percentage by which the rate was reduced for every 1 per cent addition to the husband's income.

<sup>c</sup> Data could not be standardized for possession of young children. <sup>d</sup> Negligible.

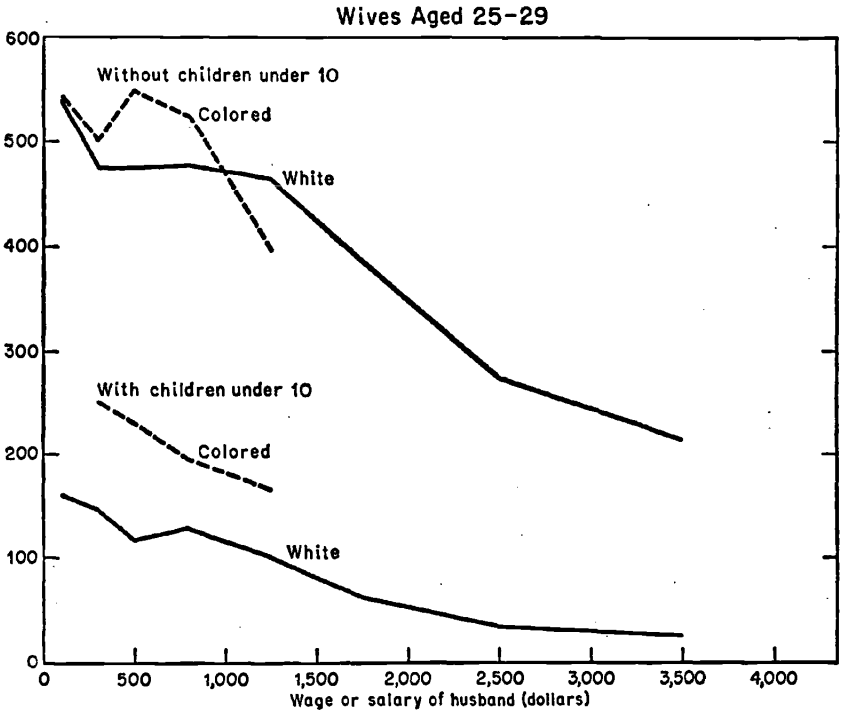
<sup>e</sup> Wives with children under 18 but not under 6; wives with no children under 18 excluded.

FEMALE LABOR FORCE AND MALE EARNINGS

CHART 6

Labor Force of Colored and White Wives with and without Young Children, and Earnings of Husbands: Metropolitan Districts Combined, United States, April 1940

Labor force per 1,000 in same population group.



25-29 and 35-44 groups (Chart 6)—the inverse association persists regardless of color of wife, age of wife, or child-care responsibilities.

*Employment Opportunities*

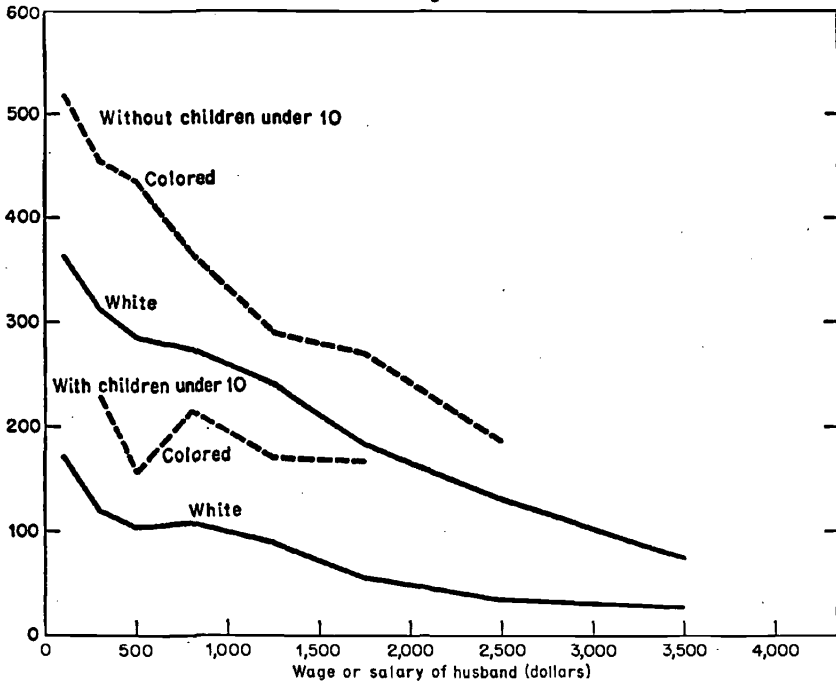
Could the inverse correlation between female labor force and income be really due to the fortuitous effect of differences in job opportunities for women in different cities? A recent study by Nedra Belloc proposes that women, instead of being forced into employment by low earnings, are drawn into it by "abundant employment opportunities," which are measured by the ratio of females employed in manufacturing and domestic service to all females employed.<sup>3</sup> It would seem just as plausi-

<sup>3</sup> Nedra B. Belloc, "Labor Force Participation and Employment Opportunities for Women," *Journal of the American Statistical Association*, September 1950, pp. 400-410.

FEMALE LABOR FORCE AND MALE EARNINGS

CHART 6, concluded

Wives Aged 35-44



Limited to wives whose husband's income (in 1939) was entirely from wages or salary. The income groups are \$1-199; 200-399; 400-599; 600-999; 1,000-1,499; 1,500-1,999; 2,000-2,999; and 3,000 and over. Readings are centered at midpoints of the ranges, except for the open-end class. Metropolitan districts are urban areas with population of 100,000 or over.

Source: *Employment and Family Characteristics of Women*, as cited in Table 9.

ble to argue the reverse. In localities where women are obliged to work because men's incomes are meager, there tends to be a larger proportion of women available for factory jobs or for relatively low-paid domestic employment—attracting manufacturing industries that use female labor, and making it easier for middle- and upper-class women to hire domestic help. In any case, these two occupations have on the average, provided employment for scarcely one in four women; the main opportunities for female employment have always been furnished by stores, banks, insurance and real estate firms, beauty parlors, restaurants, schools, and government agencies.

Fortunately the problem has a solution. If it can be agreed that all women in any one city enjoy about the same job opportunities, the existence of an inverse association between labor force and income *within* the city would demonstrate effectively that the tendency exists and is not the spurious result of variations in opportunity among cities. This is what we find on examining separately each of eleven metropoli-

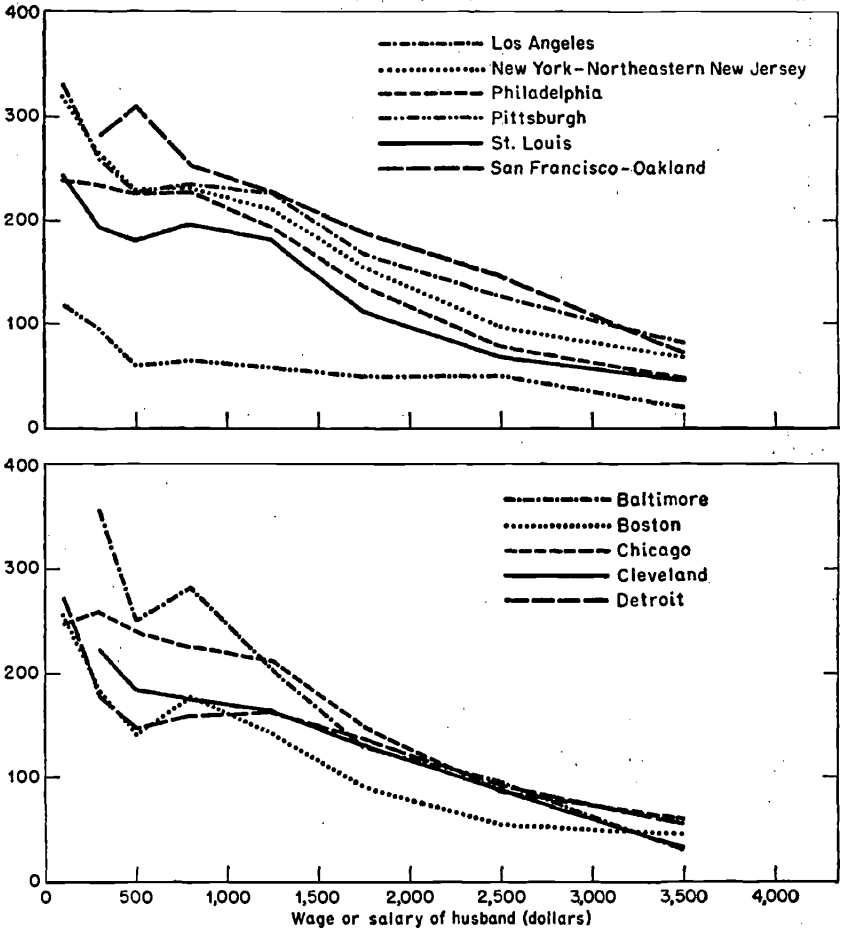
FEMALE LABOR FORCE AND MALE EARNINGS

tan districts of a million population or over (Chart 7). Classified by age, possession of children under 10, and color (for cities with large Negro populations), four or five times as many wives of low-income husbands were in the labor force as were wives of high-income husbands. Moreover, the higher the level of income, the more the participation of wives dropped for every additional \$100 of earnings. This tendency

CHART 7

Labor Force of Wives and Earnings of Husbands: Large Metropolitan Districts, United States, April 1940

Labor Force, per 1,000, of Wives 18-64



Limited to wives whose husband's income (in 1939) was entirely from wages or salary. The income groups are \$1-199; 200-399; 400-599; 600-999; 1,000-1,499; 1,500-1,999; 2,000-2,999; and 3,000 and over. Readings are centered at midpoints of the ranges, except for the open-end class. Large metropolitan districts are those with population of 1,000,000 or over.

Source: *Employment and Family Characteristics of Women*, as cited in Table 9.

occurred for all groups except those in the \$400-999 range.<sup>4</sup> The results do not demonstrate that job opportunities can be discarded as a factor, but they do suggest that the inverse relation cannot be attributed exclusively to them.

A different version of the influence of job opportunities could, of course, be urged—that female labor force participation may at any time tend to be high in those cities where unemployment is low and jobs are easy to get. This possibility was tested for 38 cities by correlating labor force participation rates of white females of various ages with unemployment rates of white men aged 25-44. (Male unemployment rates were used to avoid any tendency for both labor force and unemployment of females to be low merely because unemployed females had been discouraged from the labor market.) The relationship between female labor force and male unemployment appeared generally insignificant. The only exception was the correlation for young women 20-24, which exhibited a tendency that was positive and therefore, if anything, upsetting to the notion that white women would be in the labor force in greater proportion where jobs were easily found. As to colored females, the 23 cities with data for Negroes showed a significant tendency for their participation rates to be higher in cities where male unemployment rates were low and jobs presumably easier for colored women to get. The associations with male unemployment were inverse for all age groups of females and were significant on the 95 per cent level for all age groups except the 20-24 and 65 and older.

#### *Rural Population Density and Size of City*

No sign of any connection between the labor force and density of population was manifested for rural females; in all of the 48 states they were in the labor force without regard to the number of inhabitants per square mile. For example, Connecticut had relatively fewer females in jobs than Georgia, which was one-seventh as thickly populated. A slightly higher proportion of females was gainfully occupied in urban than in rural areas, and in big cities than in small towns; but no association with size of city was shown in the 38 cities, which ranged in population from 100,000 to 7 million, or in the 11 metropolitan districts of 1,000,000 or over, which also varied widely in size. The same findings resulted from a detailed study by color and age of wife, by child status of wife, and by income group of husband, e.g. white wives aged 25-29, with no children under 10, having husbands with a wage or salary of \$1,000-1,499<sup>5</sup> but no other income. Participation in the labor force in the four smallest metropolitan districts did not differ consistently from that in the four largest.

<sup>4</sup> *Employment and Family Characteristics of Women* as cited, pp. 152-163.

<sup>5</sup> *Ibid.* The computations separating white wives from all wives were the author's.

*Education*

Do not well educated persons have a better chance of getting jobs, and are they not therefore more apt to enter the labor force than the poorly educated or the illiterate? This expectation is not completely borne out in the case of wives. According to the 1940 census, married women living with their husbands were distinctly more apt to work if they were college graduates; but no similar association between education and employment was observable among women below the college level, even when they were also analyzed by age, and possession of young children. It is, of course, possible that well educated women had less need to earn money because their husbands were more prosperous on the average, and that the two counter-tendencies—the greater employability of the educated and their less urgent need to work—canceled each other out; but information was lacking for exploration of this possibility.

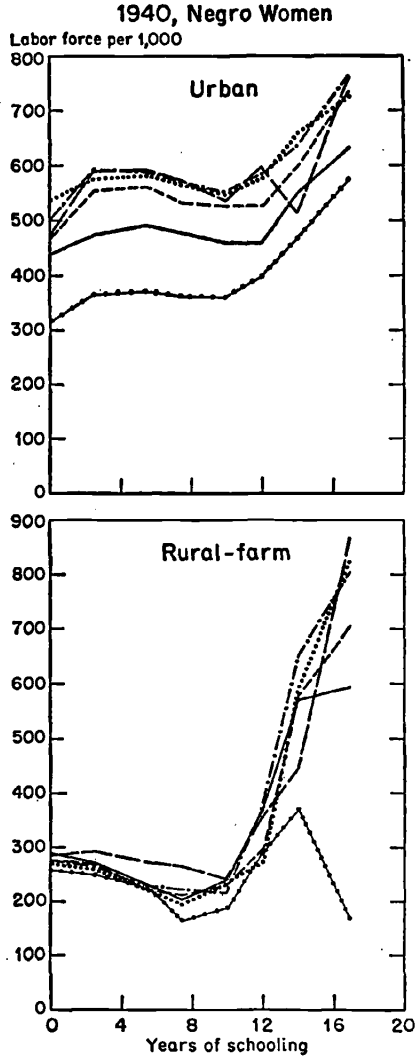
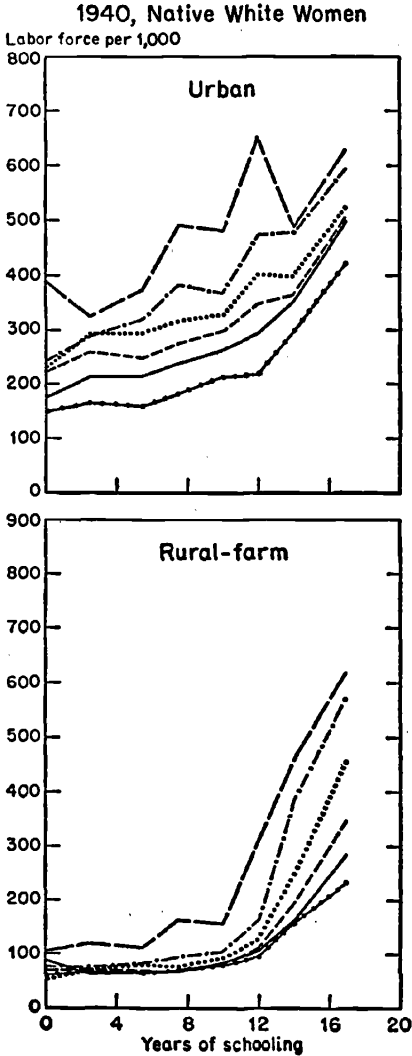
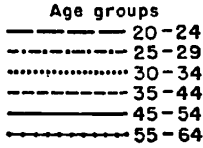
However, for all women, married and unmarried combined, the association between education and participation in the labor force was nothing short of powerful. Chart 8—which traces for 1940 and 1950 the rate of participation of women in the age groups 20–64 by color, by urban or rural-farm residence, and by years of school completed—brings out certain well defined tendencies.

One is that education seems to have been an even stronger factor than age in determining a woman's presence in the labor force. Among both whites and Negroes living in urban areas in 1940, the younger group, 20–24, had 200 more workers per 1,000 than did persons 55–64. Within each age group, on the other hand, women who had graduated from college were in the labor force at a rate typically about 250 or 300 more per 1,000 than those who had only a few years of grade school or no education at all. The patterns were different, however, in rural-farm areas. There age and education had little to do with the participation of persons who had not completed high school, but seemingly much to do with that of high school and college graduates. It may be that rural-farm women with less than a high school education had few chances to get jobs in nearby towns—at least jobs that paid enough to attract them—and that regardless of age or education they either worked on the farm as laborers and unpaid family workers or did no paid labor at all. But rural-farm women with a fairly good education could aspire to many types of jobs in stores and offices, and had greater opportunities the younger they were.

The second characteristic of the relationship with education is that for any given age, residence, or color the participation of females increases slowly with education up to high school, then rapidly up to

### CHART 8

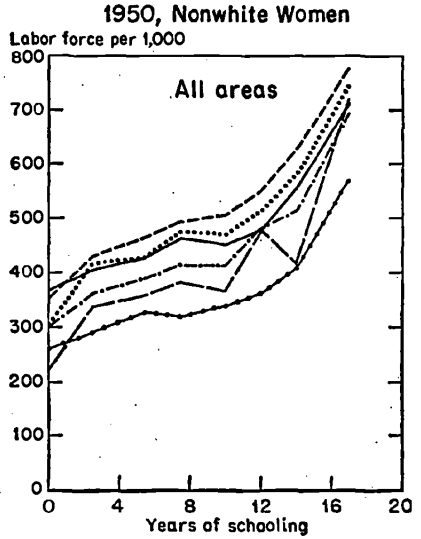
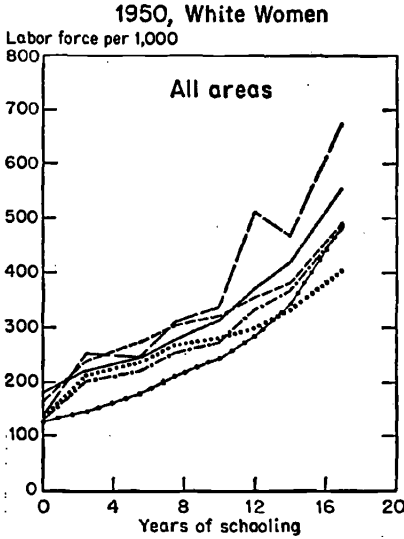
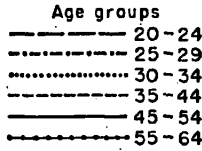
Labor Force of White and Colored Women and Years of Schooling: by Age Group, United States, for Urban and Rural Areas, 1940, and All Areas, 1950



(concluded on next page)

FEMALE LABOR FORCE AND MALE EARNINGS

CHART 8, concluded



Education data are for years of school completed—0, 1-4, 5-7, 8, 9-11, 12, 13-15, 16 and over—plotted at midpoint for the grouped years, except 16 and over.

Source: *Census of Population: 1940, Education, Educational Attainment by Economic Characteristics and Marital Status*, pp. 76-85; *1950, Education, PE No. 5B*, pp. 73-76.

college or beyond. That of males behaves in the opposite way, rising rapidly with education through grammar school, then slowly or not at all through high school or college. The explanation is fairly obvious. Most men must work if they are at all employable, and while their education affects their chances of getting a job, it would influence their decision to stay in the labor force only if it were so deficient as to make getting a job hopeless. On the other hand, females of any age do not automatically enter the labor force. Their decision to work doubtless depends partly on how abundant and attractive are the jobs open to them and these opportunities appear to increase rapidly with education, especially at high school or above. These general patterns held not only for 1940, a year of scarce jobs, but also for 1950.