

INCREASES IN FEMALE LABOR FORCE ACTIVITY: WHAT SHOULD BE EXPECTED?**T Jean Blocker, University of Tulsa, Oklahoma****BACKGROUND**

Increases in the labor force activity of American women have become a well-studied trend in sociology. In 1900 only 20 percent of American women aged 18-64 were in the labor force. By 1940 the figure had risen to 30 percent. In 1970 about 50 percent of women in this age range were active in the labor force (Oppenheimer 1973). Participation was not synonymous with increased female status in the occupational structure. Rather, it appears that women have remained in highly sex segregated occupations since 1900 (Gross 1969; Bergman, Aldeman 1973; Waldman, McEaddy 1974). The relative occupational status has actually declined since 1950 (Knudsen 1969; Sorkin 1973; Blitz 1974).

Are these trends unexpected? This analysis goes beyond the description of these trends to illustrate the crucial role of the changing age structure in the interpretation of the changing labor force status of females. There are two major questions: 1) How much of the increase in the number of women in the labor force would have been predicted on the basis of changes in the age structure of the United States population, regardless of changes in labor force participation rates? 2) What types of changes in female occupational *status* would have been predicted on the basis of the changing age structure, regardless of changes in female labor force participation rates? The first question centers on the predicted increase in the total number of women employed; the second examines predicted changes in the various categories of occupational change.

ANALYSIS

To answer these questions, comparisons are made between the expected and the reported distributions of females aged 18-64 in the 11 major United States Census occupational categories. The technique used is called the "method of expected cases" (Woodbury 1922; Turner 1949; Chilton 1971; Matras 1973). The technique involves computing the expected incidence of females in each occupational category on the assumption of a fixed 1960 age-specific rate of participation

in the labor force, taking into account only variation in age composition. A comparison of the expected incidence of women in each occupational category with that reported in 1970 provides a measure of the effect of the changing age composition on labor force activity, exclusive of the effects of changing labor force participation rates.

The 1970 expected distributions are based on the computation of 1960 age-specific labor force participation rates for women in each occupational category, and the application of these rates to the females of each age grouping in the major occupational categories. Thus, the 1970 expected distributions reflect the labor force participation by occupational category which would be predicted if the 1960 rates had remained relatively constant and only the number of females in each occupational category had changed. The observed 1970 distributions were taken from data reported in the United States Census of 1970.

Finally, we compute a percentage change in female labor force participation by occupational category which would have occurred if the 1960 age-specific rates had not changed. The results indicate how much of the increased female labor force participation could have been expected reasonably as a result of changes in the number of women aged 18-64 between 1960-1970. The same indication is provided for each occupational category, so that a comparison of female *status gains* in the occupational structure may be assessed.

RESULTS

The data in Table 1 indicate that between 1960-1970, 43 percent of the increased labor force activity of women could have been expected if the 1960 female labor force participation rates had remained constant, and only the age structure had changed. The data also show rather wide variations within the 11 occupational categories.

In the categories of sales workers and operatives, over 50 percent of the increased female labor force activity was predictable on the basis of changing age structure. Thus, less than 50 percent of the increased number of women in these categories may be attributed

TABLE 1: EXPECTED AND OBSERVED FEMALES BY OCCUPATIONAL CATEGORY, 1970

Occupational Category	1960	1970	1970	Increase over 1960		Ratio*
	LFPR*	Expected	Observed	Expected	Observed	
Professional, technical and kindred	52.11	3,052,539	4,368,892	429,895	1,746,275	.25
Managers, administrators except farm	14.33	839,434	982,928	118,427	261,921	.45
Sales workers	29.15	1,707,571	1,889,487	240,698	422,614	.57
Clerical workers	119.79	7,017,150	9,624,167	988,089	3,595,106	.27
Craftsmen and kindred workers	4.76	278,835	490,654	39,507	251,326	.16
Operatives and kindred workers	62.07	3,635,984	3,980,521	512,312	856,849	.60
Laborers except farm	1.98	115,986	258,509	16,649	159,072	.10
Farmers and farm managers	1.92	112,471	61,350	15,622	-35,499	-.44
Farm laborers	4.15	243,102	137,813	34,352	-70,937	-.48
Service workers except private household	51.46	3,014,462	4,347,884	424,333	1,784,755	.23
Private household workers	26.74	1,566,396	909,566	220,773	-436,057	-.51
Total female labor force	389.57	22,820,527	27,051,708	3,214,250	7,445,431	.43

*LFPR = Labor Force Participation Rate.

**Ratio = percent of female labor force activity which would occur if the 1960 female labor force participation rates had remained fairly constant in 1970, and only age structure had changed.

Source: United States Bureau of the Census, 1964, 1973).

directly to increased female labor force participation rates. In a more prestigious occupational category, managers and administrators (except farm), 45 percent of the female increase was expected due to the increased number of women aged 18-64, and not to a tendency to increased female participation in managerial and administrative positions.

About 27 percent of the increase in female clerical workers would have been predicted regardless of changes in womens' labor force participation rates. A similar pattern is found in the professional, technical workers category. Changes in the age structure alone would have led to the prediction of a 25 percent increase in the number of women professional and technical workers between 1960-1970.

Less than a quarter of the female increase in the craftsmen, laborers (except farm), and service worker categories may be attributed to changes in the age structure. In each of these categories, womens' gains are largely due to increased participation rates, and not

merely to an increased number of women aged 18-64.

In the three categories of farmers and farm managers, farm laborers, and private household workers, changes in the female age structure led to predictions of decreased labor force activity. In each case, a decrease in the number of women employed occurred between 1960-1970. In each case, however, approximately half of the decrease would have been predicted, regardless of a decreased tendency for womens' labor force activities to be centered in these occupational categories.

CONCLUSIONS

Returning to the two questions posed at the start, almost half of the increase in female labor force activity which occurred between 1960-1970 was predicable, regardless of changes in labor force participation rates, given the increased number of women aged 18-64. Several observations regarding the predicability of changes in womens' status *within* the occupational structure also emerge

from this analysis.

In the highest occupational prestige category, a quarter of the increase in women professional and technical workers was predictable, given changes in the age structure. This is a relatively low ratio, and it could be interpreted as an indication of increased female occupational status. However, in the managerial and administrative category almost half of the female increase was predictable solely on the basis of age structure changes. Thus, absolute numerical increases in the number of women in the higher occupational status categories must be interpreted with caution.

Women do not appear to have made gains in the categories of craftsmen and laborers. However, the tendency for women to remain in sex stereotyped occupations may be seen in the clerical workers category. The 1960 female employment rates were high in this category, which leads to a high expected number of women in the category in 1970. Yet there were still more females reported than would have been expected.

In the low status and "vanishing" occupational categories of farmers, farm laborers, and private household workers, the absolute number of female workers declined between 1960-1970. However in each case, approximately half of the decrease was predictable. Thus, the numerical decrease in women in these occupational categories does not necessarily indicate decreased female labor force activity in low status occupations.

This analysis illustrates the significance of the changing age composition in the study of changes in female labor force participation. The importance of age composition has most often been acknowledged in demographic and economic studies of women's labor force activities (Bowen, Finnegan 1969). The data presented here indicate that sociological research dealing with the working woman may be misleading unless the age structure of the population under study is given analytical consideration.

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