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OF WOMEN CLERICAL WORKERS

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Summary:

Few women, even today, remain in the labor market full time all their adult
lives, and few give as high a priority to market work as men generally do.
This paper investigates the impact of various patterns of labor force parti-
cipation on the wage rate of female clerical workers, the single largest
occupational category for women. It was found that while the effect of such
variables as years of experience, years of hometime, percent time worked,
and education is relatively modest, number of years with current employer
has a large positive effect, and having been a service or blue collar worker
has a significant negative effect. Over-all we conclude that a young woman
who considers only the immediate effect of her labor market decisions during
the early stages of her life cycle seriously underestimates their total long
run results.

Labor Force Participation Patterns and Earnings of Women Clerical Workers

Introduction

The labor force participation of women has continued to increase dramatically. Virtually all work outside the home for part of their lives. But even today very few follow the typically male pattern of entering the labor market after completing their education and training, to remain there full time till retirement. Most women tend to work part time and/or withdraw from the labor force on one or more occasions during their working lives.

Recently attention has been focussed on the extent to which intermittent labor force participation influences the accumulation of human capital and hence the earnings of women. Various calculations have been made of the effects on wage rates of the timing and duration of work interruptions or part-time work, as well as length of tenure on the present job. Attempts have also been made to estimate the reduction in investment caused by anticipated discontinuities.[1]

The question we want to explore is related to the issues mentioned above, yet the focus is somewhat different. We are concerned not so much with explaining how past decisions influenced women's earnings, but rather with providing information which will enable women to plan their future. Hence there will be less emphasis on variables which, while they have explanatory value, are not readily subject to manipulation, and more on those that can be adjusted at will. For instance, it is of little use to know that being married has a depressing effect on a woman's earnings, unless a woman is prepared to remain single or get divorced for this

reason. It is far more useful to know that diminished labor force participation and the greater tendency for married women to permit their husbands to determine where they live may contribute significantly to lower earnings. Or again, a woman who wants to have children and is unwilling or unable to remain in the labor market during the child rearing years will not be helped much by the knowledge that her market value depreciates rapidly when she drops out at the birth of the first child. It will be considerably more useful to know, in this era of planned parenthood, whether it is costlier to have her family early or late. Similarly it would be helpful to know whether it is better to have the children close together and drop out of the labor market for a time, or space them out and remain in the labor market part time.

Since there is evidence that the impact of variations in patterns of labor force participation varies considerably by occupation, it appeared useful to examine a single occupational category. We have chosen to examine the situation of the largest female occupation, namely clerical workers.

Section I of this article briefly states the main reasons why the earning power of women over their lifetime is a matter for concern. Section II discusses recent studies on work interruptions and earnings. Section III describes the survey conducted to obtain a detailed earnings history for a sample of women clerical workers. Section IV contains the analysis of the data obtained. Finally, Section V contains a brief summary and some conclusions.

I. Importance of Earning Power Over a Woman's Life Cycle

While marriage alone is no longer likely to keep women from working outside the home, most of them are inclined to interrupt or reduce their labor force participation because of what are still generally referred to as "their" household responsibilities.[2] This is not surprising in view of the following facts. Women tend to earn less in the labor market than men of the same age, experience and education, and furthermore are likely to be married to men who are older and somewhat more highly educated than they are. Earnings of young women tend to be low because of lack of experience, while the value of their non market work is relatively high during the years when there are young children in the home. Last, but not least, the double burden of work and household tasks on young women is substantial during the child rearing period, since men typically do very little of the work at home.[3]

But what are the long run costs to the family and the woman herself if she chooses to drop out of the work force?[4] We know that the value of household work declines rapidly as the children get older, enter school and leave home. But during this same period, while she is out of the labor force, her value in the market may decline to the extent that it may never be worthwhile for her to reenter. As a result her lifetime economic contribution to the family is likely to be considerably lower than that of the woman who remained in the labor market or reentered it after a brief interruption. Such a woman may also feel bored and relatively useless in her later years.[5]

As the woman's contribution to the household declines, her status within the family is also affected unfavorably, especially since her

husband's earnings are likely to increase for much of this period. A
number of studies have found that the wife who makes no financial contri-
bution to the household has considerably less influence within the family
than the one who does.[6] If the marriage should not work out, the wife
may be reluctant to terminate it because she cannot get a good job, and
for the same reason she faces grave problems if the husband decides on a
divorce. The family will also have difficulties if the husband loses his
job or becomes incapacitated, since the wife will not be able to earn much.

Beyond the risks for the people directly involved, women, especially
those with children, are likely to become a public burden when they are
unable to earn a living in case the need arises. Households headed by
women possessing little work experience constitute a vastly disproportion-
ate share of the welfare population. Thus, there are potentially serious
societal as well as individual costs due to interruptions in women's labor
force participation.

II. Review of Recent Work on Intermittent Labor Force Participation and Earnings

Since panel data have made available better information on the ex-
tent and timing of women's labor market participation, a number of re-
searchers have put them to use to test human capital models of wage
determination as well as to explain the difference in male and female
earnings. To the extent that this research is relevant to our concerns
it will be reviewed here.

The pioneering work in this field is that of Mincer and Polachek [1974]. One of their innovations is the segmenting of women's work experience and home time before or after particular life cycle events. Thus they divide women's work life into e_1 = years of work before first child; e_2 = years of work after first child; e_3 = current job tenure; h_1 = home time after first child; and h_2 = other home time.[7]

Several issues may be raised with regard to this approach. It implies that not merely the chronological pattern of labor force participation determines earnings, but the timing of the first child (though not the date of marriage, possibly divorce, or the birth of additional children). Second, the model fits women with various life-styles into a pattern constructed according to the traditional life cycle of "the woman."[10] Third, no distinction is made between part and full time work, though other researchers, using similar data, found the former associated with significantly smaller coefficients for e_2 and e_3 [Jones and Long, 1978]. Fourth, as Sandell and Shapiro, [1978] point out, M-P have blurred the important distinction between general and specific investment in human capital. Fifth, as Corcoran [1977] points out, M-P's results may be influenced by the fact that their sample is restricted to women between the ages of 35 and 44, many of whom only recently reentered the labor force. Last, but not least, M-P's work was also challenged by S-S [1978] on the grounds that there were errors in the original data. (M-P [1978] responded by suggesting that errors remain in the sample used by S-S.)

M-P's main findings are that women's human capital depreciates significantly when they are out of the labor market for the interruption

associated with the birth of the first child, and that they accumulate more human capital when working after that interruption than before.

S-S themselves develop a segmented earnings function, different from that of M-P primarily in that they combine all the years of work experience since the birth of the first child, $e_2 + e_3$, and that they use a set of "corrected" data. Their results do not support the hypothesis that earnings increase more rapidly during the post child period, and they indicate a rate of depreciation of earning power as a result of home time only one third that found by M-P.

M-P respond by saying, on the one hand, that differences between S-S estimates and their own are unlikely to be statistically significant, and, on the other hand, that related studies on other data tend to corroborate their own results. They go on to demonstrate that panel data for 1967-71 show a higher rate of depreciation, particularly for women who were out for three years. The difficulty with these findings is that they are open to the interpretation suggested by Corcoran, namely that salaries are likely to be temporarily low shortly after reentry.

This leads us to the third main set of contributions to the topic of the effects of intermittent labor force participation, namely Corcoran [1978] and Corcoran and Duncan [1977]. Corcoran's study, based on data from the Michigan Panel Study of Income Dynamics of 5,000 families, uses a model with segments of market work and home time that are not directly tied to other events in the woman's life cycle. They are merely specified as (1) years between school and work, (2) pre-interruption work experience, (3) length of most recent interruption, (4) post interruption experience prior to working for present employer, and (5) employer tenure. This

approach puts due emphasis on labor force participation itself, and avoids
the awkward linkage with events in a woman's personal life. The model also
takes account of part-time versus full-time work, if only by introducing
the proportion of years the woman worked full time.

While Corcoran finds virtually no negative effect for other home time,
she claims to find a large negative effect for white women for years out
of labor force between the ompletion of schooling and the first job. In
fact what she calls "years between school and [starting] work" is the com-
bined length of time spent not working after school completion and prior
to taking present job. This misspecification raises doubts about Corcoran's
finding that wages are only slightly affected by work interruptions.

Corcoran also duplicates M-P's approach with a subsample of her
population and gets similar results to theirs. But, as mentioned above,
she ascribes them to the restricted age range of that subsample. Her
interpretation gains support from the results of Russell Roberts,[11]
whose sample members are aged 30-50 compared to 30-44 for M-P's sample.
His coefficients for home time are also small relative to those found
by M-P.

Corcoran and Duncan, using a newly available source of data, namely
the ninth wave of the Michigan Panel Study of Income Dynamics, which
included questions on training content of job, absenteeism, self-imposed
restrictions on job, location, work hours and work plans, once again found
that continuous labor force attachment had only a small, though significant,
positive effect on earnings. It is also interesting to note that the other
variables mentioned above showed no significant effect at all.

What, then, can we conclude from this review of the literature? We appear to be left with substantially conflicting results in the various studies: M-P [1974] found a rate of depreciation of 1.5 percent per year for "home-time associated with marriage or the birth of the first child" for white married women, spouse present, (0.2 percent for those with less than high school education, 1.3 percent for those with 12-15 years of schooling, 2.3 percent with 16 years or more of schooling). They also concluded that women's investment in their own capital is substantially higher when they reenter the labor market after the home years associated with their first child than during their earlier years of labor force participation. S-S on the other hand found a rate of depreciation of about 0.4 percent for home-time, and no evidence of greater investment in general training in the years of labor force participation after the birth of the first child than before. M-P [1978] rebut that "A standard test will clearly not distinguish between our depreciation of 1.2% and theirs of .8% [sic]." They also use new data to show atrophy of 1 percent for one, 3.6 percent for two and 19 percent for three years of home time! Corcoran's findings, on the other hand, of an atrophy rate of .9 percent for "years between school and work" and .1 percent for the most recent interruption, points to a considerably lower average rate of atrophy, at least for an age group that is not so heavily weighted with women who have recently returned to the labor force. Nor did she find much evidence to support the importance of expectations of work commitment on capital accumulation.

These conflicting findings make it difficult to decide what contribution career interruptions make to the explanation of the earnings gap

between men and women. They are, on the whole, even less useful in pro-
viding the sort of information that would help a young woman to make
rational decisions about her career. Let us assume, for instance, that
M-P's conclusions about high atrophy rates are correct. This alone does
not tell us whether it is advantageous to drop out early or later, whether
it makes much difference that you work 25 percent time or 75 percent time,
whether it matters how often or for what reason you change jobs. Or,
assume that Corcoran's conclusions about low or non-existent atrophy rates
are correct. A woman who stays out of the labor market still falls behind
one who is employed because she fails to accumulate human capital during
this time, and if $e_1 \neq e_2 \neq e_3$ it makes a difference what her pattern of
labor force participation has been. These are, however, the kind of ques-
tions young people confront, and the kind of questions we shall address.
At the same time we also hope to shed further light on some of the contro-
versial issues discussed above.

III. <u>Survey of Labor Force Participation and Earnings of
Clerical Workers at the University of Illinois, Urbana</u>

In Spring 1977 a list was obtained of all female clerical employees[12]
age 35 or older at the University of Illinois, Urbana-Champaign. Since
we were concerned about the accuracy of retrospective data, we chose a
group whose reported earnings could be validated. Their salaries were
published annually in the Report of the Trustees of the University of
Illinois through 1976 and we were able to get 1977 salaries from payroll
data. Of the total group, 238 were chosen by random process for tele-
phone interviews and the remaining 697 were sent mail questionnaires.[13]
Twenty six members of the sample were no longer here. Of the remainder

95.6 percent (220) telephone interviews were completed and 44.6 percent
(296) of the mail questionnaires were returned. To check on possible
non-response bias for the mail respondents we compared 4 important
characteristics with those of respondents to telephone interviews. Mean
level of education was 13.2 years for both groups, difference in mean
age was not significant, 50 years for the former, 49 for the latter.
On the other hand mean number of jobs held was significantly lower for
mail respondents, 4.6 as compared to 5.5, as was monthly salary, $721
as compared to $786.

The rate of completion by the respondents to the question on current
salary was 90 per cent, for past salaries 76 percent, for family income
95 percent, and for all other questions in excess of 99 percent. Infor-
mation was requested about all past and present jobs, as well as the
usual classifying information.

A comparison of self-reported with published salary data for 1977
and earlier years shows that there is no statistically significant dif-
ference in the degree of accuracy of retrospective as compared to current
information, though the proportion of no responses is far lower for the
latter. These results are reported in detail in another paper (Ferber
and Birnbaum, 1979).

Using workers in a single establishment for purposes of our study
has the obvious drawback that they may not be representative of the
larger population. On the other hand this approach automatically controls
for location and any factors that may be peculiar to a single employer.

IV. Analysis and Results

Using the data from our survey we propose to test a number of hypotheses which will help to shed light on the issues discussed in Section II with respect to the depreciation of human capital during home time, and the accumulation of human capital during the time spent in the labor market. The information obtained should also be helpful to young women in planning the allocation of time between household and labor market.

1. Home time is expected to have a negative effect on the wage rate. This is widely attributed to the depreciation of human capital during time spent out of the labor market.

2. It is expected that time spent at home between the completion of formal schooling and labor market entry has a particularly detrimental effect on the wage rate. According to Corcoran "women who view themselves primarily as wives and mothers may be those likely to delay starting work, and perhaps these motivational differences persist over time". (Corcoran, 1978, p. 58)

3. The wage rate is expected to increase rapidly after reentry. One explanation for this would be that women might expect to stay in the labor market after their interruption and thus invest more in their human capital.

4. Years with the present employer are expected to be very valuable. This might be due to specialized knowledge gained and/or seniority provisions which simply reward employees for longevity itself.

5. The reason workers change jobs is expected to have an effect on the wage rate. Quitting a job for family or personal reasons would

be expected to have a negative effect. Leaving one job to take another, however, is expected to influence the wage rate positively, to the extent that higher wages are an incentive for the change.

6. Having worked in "lower" occupational categories is expected to have a negative effect on the wage rate of clerical workers. This might be due to less useful experience acquired, or to stigma attached to inferior jobs. It would not be expected that "higher" jobs would have a positive effect on the wage rate since in this case, as well, less valuable experience might be acquired than in the clerical occupation itself. Furthermore, there might well be a selection bias. A person who begins in the professional or managerial category and becomes a clerical worker is not likely to have been a great success in her former occupation.

7. It is expected that percent time worked during the years in the labor market is positively related to the current wage rate. This may be attributed to greater accumulation of human capital.

8. Length of job search is expected to be positively related to wage rate. The higher wage is presumably a return to this form of investment in human capital.

9. Another hypothesis, basic to the human capital interpretation of earnings, is that workers who expect to stay in the labor market longer are more willing to accept a lower beginning wage than those who plan to remain only a short time. They sacrifice present earnings in return for training which will enable them to earn more in the long run than they otherwise would.

10. It is expected that additional years of education beyond high school are not highly rewarded within the clerical occupation. (Virtually every member in our sample had at least 12 years of schooling, so we cannot test the effect of fewer years.) It is likely that there would be a negative selection bias. Women who have a great deal of education and nonetheless accept clerical work are likely to be less able and/or less highly motivated than those who attain professional or managerial positions. [Hirsch, 1978]

In studies not restricted to a single occupation [e.g., M-P, 1974] the level of education of workers was found to interact with other variables such as experience and home time. This was interpreted to show that more highly educated workers tended to accumulate more human capital. We shall examine whether data for women in a single occupation show similar results.

In order to examine these hypotheses and to determine the effect of various patterns of labor force participation on earnings, we have developed a model which, like those discussed in the literature review, divides both home time and work experience into segments. But our discussions are based entirely on considerations of labor force participation, not on other life cycle events.[15] This does not imply that marriage and the birth of children are not likely to influence a woman's earnings. It does imply that a woman's family status effects her earnings indirectly, to the extent, for example, that she works fewer years or less than full time, or permits her husband's moves to determine her location.[16] Thus we divide years of experience into e_1 = number of years worked before the most recent work interruption; e_2 = number of years worked since the

most recent work interruption, but before working for the present employer; e_3 = number of years worked for the present employer. Home time is divided into h_1 = number of years after leaving school before taking first job; h_2 = all other home time.

Other variables included are total number of years of experience squared; percent of time worked during years in labor market since completion of schooling;[17] percent of time working presently; number of years of education; the number of times a worker left a job for each of the following reasons: was laid off, to stay home with family/ pregnancy, moved to a different city/town, for personal health reasons, to return to school or to take another job.

The results of this regression, shown in Table I, help to shed light on a number of the hypotheses mentioned above.

1. Like other researchers, we find that home time tends to have a significant negative effect, even after years of experience have been taken into account. This supports the hypothesis that there is attrition of human capital during periods spent out of the labor market. The coefficient is, however, a very modest -0.2 percent for home time after the first job, raising considerable doubt about the high estimates of M-P and other researchers they cite. Corcoran's suggestion (echoed by J-L) that a sample not terminated at an early age is likely to lead to lower estimates of depreciation during home time would appear to be a plausible explanation.

At the same time it must be recognized that our sample is restricted to clerical workers, and it is entirely reasonable to suppose that cler- ical skills atrophy less during a period when they are not used than those

TABLE I

Salary Function of Female Clerical Workers Age 35 and Over
Dependent Variable = ln FTE Salary per Month
(N = 400)

Variable	Unstandardized Regression Coefficient	Mean	Std. Dev.
Number of years worked before most recent break, e_1 [#]	.00544	2.74	5.22
Number of years since most recent job break, before present employer, e_2 [##]	.00855**	4.85	5.92
Number of years with present employer, e_3	.02492**	11.40	7.46
(Number of years worked)^2	-.00009	389.94	352.83
Number of years between completing school and first job, h_1	-.00348**	2.94	8.70
Number of years of other home time, h_2	-.00210*	9.09	8.01
Percent time worked for years in labor market	.00138	94.30	11.63
Percent time working on current job	.00117	96.81	11.86
Number of years of education	.01799**	13.16	1.77
Spent time in occupation other than clerical 1 = yes, 0 = no			
Professional	.00738	0.10	0.30
Managerial	-.06729	0.01	0.10
Sales	-.05231	0.07	0.25
Blue collar	-.12914**	0.04	0.21
Service	-.11111**	0.09	0.29
Number of times left job because			
Laid off	-.00538	0.10	0.32
To stay home with family/pregnancy	.01367	0.22	0.42
Moved to different city/town	-.01274	0.06	0.25
For personal health reasons	---	0.01	0.10
To return to school	---	0.012	0.05
To take another job	.04744**	0.18	0.38
Adjusted R^2	.43994		

[#] For those who never dropped out of the labor market, e_2 is the total
number of years of experience, before present employer.

[##] For those who never worked elsewhere, e_3 equals the total number of
years of experience.

*Significant at the 5% level.

**Significant at the 1% level.

for instance, of a physician, a scientist, or an accountant. Therefore our estimate would be expected to be relatively low. On the other hand, 37.5 percent of all women in the labor force are in the clerical occupations.

2. The results are similar for years between finishing school and first job and for all other home time. The coefficient is -.03 for the former, while it is -.02 for the latter. Since the difference is not nearly as large as that found by Corcoran, our findings cast doubt on her conclusion that not entering the labor market right after finishing school is particularly detrimental to a woman's earnings in later years, at least for those in clerical occupations. Nonetheless, the fact that the coefficient is greater leaves open the possibility that lack of employment during that time represents a low degree of career commitment or inability to find a job, either one of which is likely to have a negative effect on career development and earnings in later years.

3. The coefficient for e_1 is positive, but small and not statistically significant. The fact that the coefficients for both e_2 and e_3 are higher and significant is consistent with M-P's hypothesis that women invest more in their human capital after they finish the child rearing period (or when they do not leave the labor market, since our $e_2 + e_3$ equals years in the labor market for women who never dropped out) and reenter the labor force on a permanent basis. But two issues discussed in the previous section must be considered here. First, as S-S point out, e_3 represents the accumulation of specific as well as general capital, and must therefore be considered separately. Second, the tacit assumption that women who enter or reenter the labor market after age

30 are not likely to interrupt their labor force participation again is not particularly realistic. Of the 405 respondents in our survey who had ever dropped out of the labor market (56 were in continuously since completing their schooling), 159 or 34 percent, had been out of the labor force for one year or longer at least once after the age of 30. Furthermore, of the 345 respondents 40 years or older, 53 or 15 percent had been out of the labor force for a year or more at least once after the age of 40. It would therefore be reasonable to expect that some of the respondents presently in the labor force will still drop out in the future.

We, therefore, suggest that it is probable that e_2 is greater than e_1, not so much because women are more willing to invest in their human capital only after they reenter the labor market permanently—a minority enters permanently from the beginning, and many more continue intermittent participation throughout their working lives—but rather that their earnings are temporarily depressed for a time after reentry.

We also investigated whether the value of experience varies depending on whether it is accumulated early or late, independent of when and if there are labor force interruptions. We did this by running a regression similar to that in Table I, but breaking down experience into FTE years worked during the first 10 years after completing schooling, and FTE years after that period. (Years with current employer was used as an additional variable.) There was no statistically significant difference between the coefficients of the two variables.

4. Our findings confirm the high value of long service with the present employer. This is hardly surprising, particularly in view of the fact that our sample consists of civil service workers. Longevity per se

is generally rewarded in such an institutional setting, in addition to whatever the rewards may be to specialized knowledge that long time employees have accumulated.

5. Our results do not give support to the hypothesis that personal reasons for leaving a job have a negative effect on earnings. Only having moved to another city has a negative coefficient, and it is not statistically significant. It may be that the main detrimental effect of such behavior shows up in terms of having more home time and less experience in the labor market, both of which in turn do influence earnings.

Quitting one job to take another one does have a significant positive effect. The implication of this result is that women are more likely to change jobs to improve their earnings prospects than appears to be generally believed, rather than only to improve their work environment, accommodate family needs, or other non-pecuniary reasons.[18]

6. The regression in Table I shows that clerical workers who have previously been in either blue collar or service occupations are likely to earn less, as was expected. However, having been in other occupational categories has no statistically significant effect. Experience acquired in these other occupations may have little relevance to clerical work, and there may be a negative selection bias for workers who moved from professional or managerial to clerical occupations. However, these women would at least be free of the stigma of having been in a "lower" occupation.

7. There is no significant evidence of any effect of having worked part time on the accumulation of human capital. It should be noted that in an otherwise similar regression which does not include percent worked in present job (the simple correlation between these two variables is .4)

the coefficient for percent time worked while in the labor market is
significant at the 5 percent level. But it is equally true that the
same regression without percent time worked during years in the labor
market is found to have a statistically significant positive coefficient
for percent worked in present job. Based on this information, the only
safe conclusion is that a woman who has been working part-time and does
so at present may be expected to have a lower wage rate, but it is
not possible to separate the impact of the two factors.

We do, however, have some additional information with respect to the
impact on wage rate of currently working part-time. A regression with
first salary as the dependent variable, shown in Table II, used percent
time working as an independent variable. The results show that the co-
efficient is significant but negative. In other words, earnings increase
less than proportionately as a woman works a larger proportion of time.[19]
While these results appear contradictory, they can readily be explained.
Full-time equivalent earnings of part-time as opposed to full-time workers
are presumably determined by supply and demand, which would reasonably
be expected to vary at different times and in various places. When most
workers would prefer to work full-time, part-time workers may obtain
a premium. But in a relatively small community with a large university
there would be a large supply of part-time workers among students, student
wives and faculty wives, causing their wage rates to be relatively low.
There is no reason why the opposite could not be true elsewhere.[20]

Based on all this evidence, our conclusions must be very cautious.
There is some reason to believe that less capital is accumulated by
part-time than full-time workers, but the coefficient is in any case

TABLE II

Function for First Salary of Women Workers

(Depdendent variable = ln FTE first salary in 1977 dollars)

(N = 252)

Variable	Unstandardized Regression Coefficient	Mean	Std. Dev.
Number of years of education	.04074**	13.05	1.61
Number of years since completing education	.00078	3.00	6.83
Number of months searched for job	.00296	0.57	1.93
Percent time working in first job	-.00590**	94.50	16.95
FTE years worked for 10 years after taking first job	-.01137**	5.98	3.45
Occupational category: clerical = 0, other = 1			
Professional	.29944**	0.10	0.30
Managerial	.00052	0.004	0.06
Sales	-.15580	0.05	0.21
Blue collar	.28593**	0.03	0.19
Service	-.21263**	0.09	0.29
R^2	.22807		

*Significant at the 5% level.

**Significant at the 1% level.

very small. Thus a clerical worker who had been employed half-time would be expected to have a wage rate only about 7 percent lower than one employed full-time. This is, however, an occupation where experience counts relatively little. To the extent that people who have worked part-time in the past are also more likely to work part-time currently, the effect of current part-time work may serve to reinforce or to offset the negative effect of lower capital accumulation. The one conclusion we can reach is that accumulating the same amount of full-time equivalent experience by working part-time continuously is likely to be preferable to dropping out entirely and working full-time for the remainder of the period. The penalty for working part-time is, at most, small, but the worker's experience is somewhat more valuable when she works continuously, and considerably more valuable when she works for the same employer.

8. When length of job search was included as an independent variable in a regression similar to that in Table I, it was not statistically significant. While such a result appears inconsistent with the theory which considers search a form of investment in human capital, and hence predicts a higher wage rate as a result of longer search, the result is not really surprising. We have no way of distinguishing between those who took a long time to find a job because they held out for better terms, and those who took a long time because the job market and/or qualifications were poor. A person from the latter group would be increasingly likely to settle for a poorer job as job search becomes longer. In view of these conflicting forces the absence of any net effect might be the most likely overall outcome.

9. The regression shown in Table II provides support for the hypothesis that workers who expect to remain in the labor market are willing to accept a lower beginning wage than those who anticipate dropping out. (While our data only show the extent to which workers were in the labor force, it is reasonable to assume that expectations at the beginning of the period were related to later behavior.) When first salary is the dependent variable (expressed in 1977 dollars, by using salaries for full-time female clerical workers as a deflator[21]) the coefficient for full-time equivalent years worked during the 10 years after beginning the first job has a statistically significant negative coefficient. This may reasonably be interpreted as evidence that women to some extent correctly anticipate labor force participation for some years ahead, and are more willing to accept a lower paying job with better prospects when they intend to work for a larger proportion of the time.[22]

It should be noted, however, that these data must not too readily be used to explain the difference between the earnings of men and women, nor do they shed light on differences between women in later years, i.e., that those who accept lower initial salaries, later reap corresponding benefits. There is no evidence whatever that men earn lower first salaries, relative to their qualifications, than women. On the contrary, men's earnings generally are somewhat higher from the beginning of the first job.[23] As far as earnings of women are concerned, when beginning salary (in 1977 dollars) was entered as an additional variable in the regression in Table I, it was not statistically significant, and made no contribution to the explanation of current salary. One is tempted to conclude that women who expect to remain in the labor force are more willing to invest

in their human capital than those who do not, but that there is no
evidence these investments pay off. It may be, however, that we have
not found the right test to uncover the evidence.[24]

10. The direct effect of education, as seen in Table I, is rela-
tively small, 1.8 per cent per year of education. To determine the
effect of level of education on the other variables, we ran separate
regressions identical with the regression in Table I for workers with
12 years of education or less and more than 12 years. Results are shown
in Table III. A Chow test shows that the two regressions are signifi-
cantly different from each other.

The first differences to be noted support M-P's hypothesis that
experience is more valuable the higher the level of education [M-P, 1974].
We find that e_2 and percent time worked while in the labor force are posi-
tive and significant only for women with more than high school education,
and that the coefficient for e_3, while positive and significant for both
groups is larger for the more highly educated. On the other hand we find
that years between completing schooling and first job, h_1, have a signi-
ficant negative effect only on the less educated group. It might be that
not entering the labor market right after school is less likely to be
associated with a lack of career commitment for women with more schooling.
The very fact of having obtained more education is likely to be associated
with higher career aspirations. But we also find that other home time,
h_2, has a negative coefficient for both groups and, while it is signi-
ficant only for women with no more than high school, the coefficient is
larger for the more highly educated. Thus our evidence tends to give some,
albeit weak support to M-P's hypothesis.

TABLE III

Salary Function of Female Clerical Workers Age 35 and Over by Level of Education. Dependent Variable = ln FTE Salary

Variables	Unstandardized Regression Coefficient					
	Years of Schooling < 12 (N = 225)			Years of Schooling > 12 (N = 174)		
		Mean	Std. Dev.		Mean	Std. Dev.
Number of years worked before most recent break, e_1	-.00198	2.82	5.36	.00672	2.63	5.36
Number of years since most recent job break, before present employer, e_2 ##	.00115	5.21	6.31	.01082*	4.38	5.36
Number of years with present employer, e_3	.01769**	11.61	7.15	.02792**	11.12	7.85
(Number of years worked)	.00004	411.11	355.42	-.00012	362.33	348.52
Number of years between completing school and first job, h_1	-.00662**	3.13	8.53	-.00152	2.69	8.94
Number of years of other home time, h_2	-.00274*	8.93	7.78	-.00317	9.29	8.32
Per cent have worked for years in labor market	-.00023	94.24	11.96	.00285*	94.37	11.21
Percent time working on current job	.00150	97.60	10.33	.00046	95.79	13.56
Spent time in occupation other than clerical 1 = yes 2 = no						
Professional	-.43273	0.03	0.16	.06164	0.20	0.40
Managerial	-.14584	0.01	0.09	.09035	0.01	0.11
Sales	.32699	0.09	0.28	-.20739**	0.04	0.20
Blue collar	-.12240**	0.06	0.23	-.14948*	0.03	0.17
Service	-.12075**	0.11	0.32	-.08203	0.07	0.25
Number of times left job because						
Laid off	.00942	0.11	0.34	---	0.10	0.30
To stay home with family/pregnancy	.02371	0.22	0.42	-.02944	0.23	0.42
Moved to different city/town	-.06239	0.06	0.23	-.03844	0.07	0.26
For personal health reasons	---	0.02	0.13	---	0.00	0.00
To return to school	---	0.00	0.00	-.02611	0.01	0.08
To take another job	.00714			-.07488**	0.17	0.38
Adjusted R^2	.49242			.43793		

For those who never dropped out of the labor market, e_2 is the total number of years of experience before the present employer.

For those who never worked elsewhere, e_3 equals the total number of years of experience.

*Significant at the 5% level.

**Significant at the 1% level.

The one other difference between the two regressions in Table IV is that having been in a service occupation has a significant negative effect on workers with only a high school education, while having been a sales worker has a significant negative effect on the earnings of the more highly educated women. This may be accounted for at least in part by the fact that among the less educated group 31 percent had been in service occupations while the comparable percentage for those with more schooling is only 10 percent.[25] But it is also true that 26% of those with few years of school had been sales workers, and only 15 percent of the more highly educated group. Could it be that the sales occupation is regarded on the same level as the lower clerical jobs, more often held by the less educated, but are looked upon as inferior to the higher level clerical positions?[26]

On the whole, then, we do find that the level of education does interact with a number of the other variables so that the full effect of education is not indicated by the relatively small coefficient in Table I. Regressions similar to those in Table III with years of schooling as a variable, however, show that education is no longer a significant variable within these groups. The explanation for those with no more than high school education is obvious. There is almost no variation in years of schooling. Virtually all women in this group had completed high school. In the more highly educated group there is a considerable variation in the number of years of schooling, so there must be a different explanation for the absence of significance of years of schooling. It is plausible that additional education beyond some college is not highly rewarded in the clerical occupation.

Summary and Conclusions

On the assumption that the effect of variations in labor market behavior may differ considerably between occupational categories, we chose in this pilot study to collect data on women clerical workers and to examine their case in depth. The fact that the sample consists of employees of a single institution (a large Midwestern University) has the usual advantages and drawbacks of firm level data, plus the additional peculiarity that this employer dominates the labor market, but also offered the unusual opportunity of validating some of the earnings data. It is to be hoped that larger studies of other groups will follow.

For this group of workers, both the gains from experience prior to the current job and the atrophy resulting from home time were found to be quite modest. Furthermore it makes no difference whether the interruptions come sooner or later after entering the labor market, except to the extent that number of valuable years with current employer is affected. Last, it makes little, if any difference whether some of the home time comes right after completing school and before entering the labor market.

Nonetheless, the effect of the individual variables add up so that there are appreciable differences in earnings among these clerical workers. Compare, for instance, two women age 38, both with 12 years of schooling, completed at age 18. Ms. X has worked full-time the 20 years since, twice quit a job in order to take another one, never left a job for personal reasons, and has been 10 years with the present employer. Ms. Y worked full-time for 5 years before her most recent job break, took out 10 years for homemaking, has worked full-time for her present employer since. Our

regression predicts that the former will earn \$167 more per month than the latter. This is an appreciable difference in a group whose mean monthly earnings are \$750.

What advice can we give to a young woman who wants to be able to earn a decent salary doing clerical work during the middle and later years, when she is likely to be in the labor market, whether by choice or necessity?

First, she is likely to do considerably better if she does not flounder from one occupational category to another, even though it may seem expedient at the time to take any available work. Unless she has reason to believe that the particular job will not impede progress in the clerical occupation in the long run, she will do better to keep on looking. Having spent time in an "inferior occupation" appears to be costly. While our data do not show positive returns to longer job search per se, it is clear that finding a job that contributes to, rather than detracts from, career development is likely to be worthwhile.

Second, leaving one job for another, has its pros and cons. Valuable specialized experience with the current employer is lost. But, in our sample, the average gain from such a switch compensates for the loss sustained by moving 8 years of experience from e_3 to e_2. This obviously does not mean that a high return should be expected every time a person leaves one job for another, since presumably those who stand to gain most by changing jobs are the ones most likely to do so. On the other hand, none of the other reasons for leaving a job have any direct effect on wage rate in later years. Only to the extent that the worker loses experience, including valuable experience with the current employer, and

does experience some atrophy during the time she is out, is there any penalty for quitting for personal or family reasons.

The third conclusion we can reach is that a woman is likely to do better if she stays in the labor market part-time than if she drops out entirely, even if she accumulates the same amount of FTE experience. This is so because her experience will count as more valuable e_2 or even e_3, rather than part of it falling into the relatively worthless category of e_1. Hence a young couple will do better if they plan their family and sharing of housework so that the woman can avoid dropping out of the labor market entirely. For instance, a woman who worked for 10 years, then dropped out for 5 years and returned to the labor market for 10 years may expect to earn $80 less per month than one who worked for 25 years continuously, 10 of them part-time, assuming that all their other characteristics, including years of tenure with present employer, are the same. If staying in the labor market were associated with longer tenure with current employer, the difference would be far greater, $247, if the latter had been with the same employer all along.

Last, what about the woman who wants to, or feels she must, take out time to be a full-time homemaker? We have seen that depreciation of her capital during home time is about the same whether she drops out early or late, and that it does not make much difference whether she does so before or after taking her first job. But we must remember that e_2 is somewhat more valuable than e_1, and e_3 is substantially more rewarding than either of the other types of experience. Hence there is some advantage to taking home time early, which will ensure greater

accumulation of e_2 and at least provide the opportunity for accumulating more e_3.

In addition to these specific suggestions for clerical workers, our main advice to young women in general would be to consider the effect of their labor market behavior on the future as well as the present. A worker who fails to search for better opportunities and forfeits existing opportunities for the benefit of her family, and drops out of the labor market for an extended length of time, is giving up considerably more than the present income she foregoes. This is not to say that with complete knowledge of the full long run implications some women would not continue to make choices which reduce their future earning power. But they are entitled to know what the full costs are. Others are likely to make changes in their lifestyles on the basis of this better information and improve the prospects for a more rewarding job in their middle and later years considerably.

Footnotes

[1] Corcoran, Mary, "The Structure of Female Wages," American Economic Review, May 1978, Vol. 68, No. 2, pp. 165-70. Corcoran, Mary and Greg J. Duncan, "New Evidence on Earning Differences Between the Races and Sexes." Unpublished paper, 1978. Mincer, Jacob and Solomon W. Polachek, "Family Investments in Human Capital: Earnings of Women," Journal of Political Economy, March/April, 1974, 82, S76-S108. Mincer, Jacob and Solomon W. Polachek, "Women's Earnings Reexamined." Journal of Human Resources, forthcoming. Sandell, Steven H. and David Shapiro, "The Theory of Human Capital and the Earnings of Women: A Re-Examination of the Evidence," Journal of Human Resources, forthcoming. Sandell, Steven H. and David Shapiro, "Work Expectations, Human Capital Accumulation, and the Wages of Young Women." Unpublished paper, August, 1977. Polachek, Solomon W., "Occupational Segregation: Theory, Evidence, and a Prognosis." Paper presented at the Conference on Women in the Labor Market, Barnard, October, 1977, also deals with the extent to which women tend to enter occupations where there is less penalty for discontinuity, and concommitantly lower rewards for experience. This is not, however, a topic addressed in this study, so no further reference will be made to this paper.

[2] E.g., Suter, Larry E. and Herman P. Miller, "Income Differences Between Men and Women," in Changing Women in a Changing Society, Joan A. Huber (ed.), University of Chicago Press, 1973, point out that only 7 percent of women 30-44 years old in 1967 had worked every year since leaving school.

[3] See, for instance, Robinson, John P., How Americans Use Time: A Social-Psychological Analysis of Everyday Behavior, Praeger, Special Studies in U.S. Economy, Social and Political Issues, 1977; Walker, Katherine E. and William H. Gauger, "The Dollar Value of Household Work," Information Bulletin No. 60, Ithaca, N.Y., New York State College of Human Ecology.

[4] The issues involved here are discussed at greater length in Ferber, Marianne A. and Bonnie G. Birnbaum, "The 'New Home Economics': Retrospects and Prospects," The Journal of Consumer Research, Vol. 4, June, 1977, pp. 19-28.

[5] Lack of satisfaction with the housewife role is documented in many studies. See, for instance, Feld, Sheila, "Feelings of Adjustment," in F. I. Nye and L. W. Hoffman (eds.), The Employed Mother in America. Chicago, Rand McNally, 1963. Oakley, Ann, "The Sociology of Housework," in Family in Transition, Second Ed., A. S. Skolnick and J. H. Skolinck (eds.), Boston, Little Brown and Co., 1977, and Sullerot, Evelyne, Women, Society and Change, World University Library, 1974.

[6] For instance, Blood, R. O., Jr. and D. M. Wolfe, Husbands, Wives: The Dynamics of Married Living, Glencoe, Ill.: Free Press, 1960.

[7]Mincer and Polachek (1974), Table 4, p. 590.

[8]One reason to question the pivotal importance of the birth of the first child is that of our sample of 380 clerical workers aged 35 or over who have children, only 151 (40%) left the labor force during the year their first child was born or during the preceding year. As many as 171 (45%) did so two or more years before the birth of their first child, 34 (9%) one or more years after, and 24 (6%) never did so.

[9]The use of both e_1 and e_2 for women with no children must be assumed to be an error. Mincer and Polachek (1974) Table 4, p. 590.

[10]"The woman" leaves school, enters the labor market, gets married, drops out of the labor market when the first child arrives and reenters when finished with "her child-rearing responsibilities." When a woman does not fit this pattern (and many women do not) we set such odd results as e_1, which stands for job experience before the birth of the first child, representing total years for those never married.

[11]Table 1 in M-P (1977) reproduced from Russell D. Roberts, "Simulation Model of Women Under Social Security: Estimation of Labor Supply Relationships," October, 1976.

[12]Those in nominally professional positions which are de facto the top of the clerical hierarchy (e.g., administrative aide, administrative secretary, personnel officer, etc.) were also included. Virtually all of them were promoted after long service in clerical positions. Excluding them would ignore the rewards to the most successful women in this occupational category.

[13]The larger number for mail questionnaires was chosen to reduce cost of the study. A second questionnaire was sent to all those who failed to return the first.

[14]Space was provided for a total of 14 jobs. Only two respondents exceeded that number, resulting in incomplete information for them.

[15]If the effect of life cycle events on labor force behavior were identical for all women this distinction would not be important. We found, however, that in a regression with per cent of time spent in the labor force as the dependent variable, number of years married, and the sum of the number of years each child spent in the home, explain only about one fourth of the variation.

[16]To test for possible independent effect of marital status and "number of child years" we ran the regression in Table IV-1 with these two variables added. Neither was significant. We also introduced current marital status, with similar results.

[17]Calculated as FTE number of years worked, divided by total number of years in labor market since completed schooling.

[18] While we developed no hypothesis for the effect being laid off would have on earnings, it is interesting to note that the coefficient for this variable is not statistically significant. It appears reasonable to interpret this as evidence that being laid off is not, in general, a reflection on the individual concerned. For if it were, it would be expected that they would earn less later on.

[19] It should be noted, however, that part-time workers almost invariably get fewer, if any, fringe benefits. So the gain implied by our results may be offset or more than offset.

[20] The proposition that part-time workers may or may not be penalized gains some support from the finding of Corcoran [1978] that percent time worked had no effect on hourly earnings for a national panel. Neither our nor their study takes into account that part-time workers may get fewer fringe benefits.

[21] Since this deflator was available only since 1939 this regression includes only respondents who took their first job in 1939 or later.

[22] It might also be suggested that women with higher earnings work less because of the income effect. In view of the generally accepted importance of the substitution effect for the labor supply of women, this explanation appears to carry little weight.

[23] See, for instance, George E. Johnson and Frank P. Stafford, "The Earnings and Promotion of Women Faculty," American Economic Review, Dec. 1974, pp. 888-903.

[24] For instance, we considered running the regression only for workers who had never dropped out of the labor force and had always been in the clerical occupation, but our sample was too small to use.

[25] We also investigated the possibility that this difference may be accounted for by more highly educated women being found in more high status occupations within this category, but our data do not bear this out.

[26] Twenty three percent of the highly educated group, but only 8 percent of the other are in the top categories of administrative secretary, administrative aide, personnel officer, etc.

Bibliography

Blood, R. O., Jr. and D. M. Wolfe, Husbands, Wives: The Dynamics of Married Living, Glencoe, Ill. Free Press, 1960.

Corcoran, Mary, "The Structure of Female Wages," American Economic Review, May, 1978, Vol. 68, No. 2, pp. 165-70.

_____, and G. J. Duncan, "New Evidence on Earning Differences Between the Races and Sexes," Unpublished paper, 1978.

Feld, Sheila, "Feelings of Adjustment" in F. I. Nye and L. W. Haffman (eds.) The Employed Mother in America, Chicago, Rand McNally, 1963.

Ferber, M. A. and B. G. Birnbaum, "The 'New Home Economics': Retrospects and Prospects," The Journal of Consumer Research, Vol. 4, June 1977, pp. 19-28.

_____ and Betty Kordick, "Differentials in Earnings of Ph.D.'s," Industrial and Labor Relations Review, Vol. 31, No. 2., January 1978, pp. 227-38.

_____ and B. G. Birnbaum, "Retrospective Earnings Data: Some Solutions to Old Problems," Public Opinion Quarterly, Spring 1979.

Hirsch, B. T. "Earnings, Occupation and Human Capital Investment," Atlantic Economic Journal, Vol. VI, No. 2, July 1978, pp. 31-9.

Johnson, G. E. and F. P. Stafford, "The Earnings and Promotion of Women Faculty," American Economic Review, Vol. 64, No. 6, pp. 888-903.

Jones, E. B. and J. E. Long, "Women and Part-Week Work," Part II, Technical Report, March 1978.

Mincer, Jacob and S. W. Polachek, "Family Investments in Human Capital: Earnings of Women," Journal of Political Economy, Vol. 82, March/April 1974, pp. 76-108.

_____, "Women's Earnings Reexamined," Journal of Human Resources, forthcoming.

Oakley, Ann "The Sociology of Housework," in A. S. Skolnick and J. H. Skolnick (eds.), Family in Transition, second ed., Boston, Little Brown and Co., 1977.

Polachek, S. W., "Occupational Segregation: Theory, Evidence, and a Prognosis." Paper presented at the Conference on Women in the Labor Market, Barnard, October 1977.

Robinson, J. P. How Americans Use Time: A Social-Psychological Analysis of Everyday Behavior, Praeger, Special Studies in U.S. Economy, Social and Political Issues, 1977.

Sandell, S. H. and David Shapiro, "The Theory of Human Capital and the Earnings of Women: A Re-Examination of the Evidence," Journal of Human Resources, forthcoming.

Sullerot, Evelyne, Women, Society and Change, World University Library, 1974.

Suter, L. E. and H. P. Miller, "Income Differences Between Men and Women," in J. A. Huber (ed.) Changing Women in a Changing Society, University of Chicago Press, 1973.

Walker, K. E. and W. H. Gauger, "The Dollar Value of Household Work," Information Bulletin No. 60, Ithaca, N.Y., New York State College of Human Ecology.

M/D/125