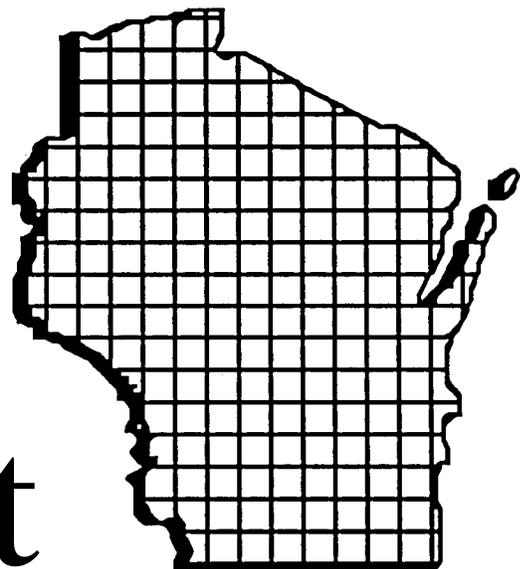


Wisconsin

Policy
Research
Institute

Report



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**Income Success
Among Former
Wisconsin Welfare
Recipients**

Work Matters Most

REPORT FROM THE PRESIDENT:

This is the final of three studies we have published on the economic conditions of poor, working mothers in Wisconsin. This project is under the direction of Professor Sammis White, who has spent thirty years researching and writing about work and welfare in Wisconsin. On this study Dr. Lori Geddes, an economist with a strong background in data analysis, assisted him.

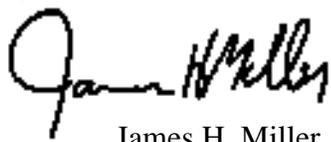
The data used for this initial project come from the Wisconsin Department of Workforce Development. It is a special database created to analyze the work and earnings experiences of the 96,000 women who were on AFDC in Wisconsin in 1990, and who worked in our state in jobs covered by Unemployment Insurance between January 1, 1990 and December 31, 1998. It is an enormous database that can produce the kind of information that policy-makers need to shape programs to benefit poor, working women.

In this report, the authors examine the major characteristics of women who are still in Wisconsin and who worked in 1998. Approximately one out of four women who were on AFDC in 1990 were clearly self-supporting by 1998. The analysis by White and Geddes provides quantitative backing for some of the characteristics that seem intuitively important. To be successful, you simply must work four quarters a year. It does not matter whether you are White, Black or Hispanic or whether you live in a city or a rural area. Working four quarters is the single most important factor in moving women successfully from welfare into the economic mainstream in Wisconsin.

The ability to work continually during the year is a more important characteristic than education or even the size or type of the employer. Education helps, but there was only a modest five percent increase in earnings for completing high school and an additional five percent for completing some college. Additionally, those working in retail jobs made less income than those working in non-retail industries. Retail contributed to 12-14% lower earnings among poor women. While it is plausible to suggest that additional education would allow women to seek jobs in industries other than retail, no hard evidence shows that huge spending on education will produce the kinds of additional opportunities that W-2 critics call for.

This project also demonstrates that other social services such as childcare, transportation, and education can certainly contribute to higher potential earnings for former welfare recipients. But, these programs cannot come at the expense of emphasizing that women must work if they want to improve their economic status in Wisconsin. That is the one result that is absolutely clear from this enormous data set.

We would like to thank the Helen Bader Foundation, Inc. for their support of this project.



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INCOME SUCCESS AMONG FORMER WISCONSIN WELFARE RECIPIENTS

Work Matters Most

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EXECUTIVE SUMMARY

The number of Wisconsin women using cash assistance (AFDC) dropped from 96,300 in 1990 to just over 5000 in 1998. It is an extraordinary decline reflecting a remarkable story of a changed attitude toward assistance. The fact that the rules changed certainly made a difference. But the overall number on AFDC has been declining from mid-decade onward. Work in the formal sector became a part of 88% of these women's lives over the 1990-1998 period. For some, it was a major part of their lives; for others, the contact was fleeting. The 1998 outcomes reflect these differences.

About 23,000 (24%) of the women on AFDC in Wisconsin in 1990 did become clearly self-supporting. They earned an average of \$23,000 in the formal economy in 1998. Some of them earned considerably more. These women are not likely to become dependent again.

But the story is not as clear for the other 73,000 in the 1990 AFDC cohort. About 22,000 of these women worked in all quarters of 1998 and yet were able to earn only \$9,600, on average. Why did they earn so much less, despite the seemingly equivalent work effort? The analyses in this report attempt to explain this.

To some degree the women with lower earnings had, on average, less education, more children, younger children, and several other personal characteristics that contributed to the earnings outcome. Surprisingly, race was not a factor for those who worked four quarters, although it was for those who worked less than four. Among women who worked four quarters in 1998, White and Hispanic women earned virtually the same incomes, which were a mere 2% higher than those of the African American women.

Personal characteristics collectively accounted for only 26% of the variance in earnings among the 62,000 women in this cohort who worked in 1998. Personal characteristics accounted for 40% of the variance in earnings among those who worked four quarters in 1998. A number of seemingly similar women ended up with very different earnings.

The earnings differences may have been affected by the women's skill and luck in connecting with better-paying employers or with employers located in better-paying industries, in better-paying geographic areas, and with lower employee turnover rates. But even these reasons do not fully explain the difference in outcomes. When characteristics of the employers are included with these women's personal characteristics, we can explain some 66% of the variance in earnings among the whole population of 62,000 former recipients who worked in 1998, or 50% of the variance in the earnings of the almost 44,000 former recipients in this same cohort who worked four quarters in 1998. Obviously, with only two-thirds of the variance explained at best, we are still overlooking some important factors. Employer characteristics add a good deal to the explanation, but large gaps remain.

These overlooked factors are likely to include unmeasurable or at least difficult to measure personal characteristics. These include qualities like perseverance, attitude toward work, interpersonal skills, and ability to take instruction. The question for public policy is whether these attitudes and skills can be taught and, if so, whether they can be taught at a reasonable cost. That is difficult to answer. But it seems that attempting to teach these skills is worth exploring. In fact, many job placement organizations try to teach some of these rudimentary skills, with success. But the evidence from this study can only imply the need for such skills.

Not much in what we have learned in this analysis of earnings suggests dramatic public policy interventions. More education does help, but the payoff was a modest 5% increase in earnings for completing high school and an additional 5% for completing some college. That does not indicate a huge payoff for an additional investment in education. But it does suggest that some money should be spent on education for these women, especially if we can identify those whom it will benefit most.

Steering women away from retail jobs appears to help even more: working in retail contributed to 12% to 14% lower earnings among these women. It is plausible that additional education would allow more women to seek jobs in industries other than retail, further reinforcing a need for more education. The point is to avoid or minimize one's time in retail, because it generally yields markedly lower earnings.

The step that seems to help the most, if it can be done, is to assist women to work the full year. Four quarters of work a year, especially for the main employer, pays big dividends. It is by far the biggest contributor to higher earnings. For the 62,000 women, an additional quarter of work for their main employer was associated with a 106% increase in 1998 earnings.

But working four quarters was not sufficient for 22,000 of the women who earned an average of \$9,600. We cannot fully explain why almost half of the women who worked four quarters in 1998 earned an average of \$9,600, as opposed to \$23,000. We do know the women with lower earnings worked predominantly in lower-paying industries and were more likely to work for lower-paying employers, employers that hired more welfare recipients, and employers that had average or higher rates of employee turnover. But that combination of factors, plus the personal differences noted above, only partially explain the large difference.

Perhaps the lower-paid women worked only part-time (which is not reported in our data). Or they may have worked in all four quarters but not for 50 to 52 weeks a year (which is also not reported). Either condition can make a big difference in annual earnings. If it was personal choice, that is one thing. But if the women were working intermittently because of problems with child care, health, parents, transportation, or some other element of their lives, they may be in need of further non-cash assistance that would help them earn more per year. Research by others cited in the literature review suggests that several of these problems exist, but without further exploration we cannot know how important a role each plays with regard to earnings. More must be learned about these women to reveal why, despite the seemingly similar effort and characteristics, they earned so much less than the 23,000 women who earned an average of \$23,000.

Another possible explanation is that some of the women with lower earnings worked and earned income in the underground economy. They may have been surviving and even doing as well as others whose incomes we were able to track. The women were resourceful, if not entrepreneurial. They did not appear on the Unemployment Insurance rolls or appeared there associated with low incomes because they had only worked intermittently in the formal economy. This is a subject that is not well documented. It begs for research, but it is an extremely difficult subject to research. Little cooperation would be forthcoming from a population that receives cash for their efforts.

We are left to conclude that public policy can contribute modestly by encouraging more investment in education for many of the women who have been on AFDC/W-2. But, as we have learned, that payoff in terms of increase in earnings is not very large, on average. Helping to steer these women away from employment in retail sales would help even more. But few other factors that are amenable to public policy seem to influence the earnings of these women. Undoubtedly, some women could use more help with transportation, childcare, or work skills. But our data source does not yield any compelling numbers that suggest clear policy choices.

In the formal economy, working consistently four quarters per year and working more quarters over more years contributed to higher earnings. If that creates greater opportunity to work for better-paying employers, the odds of earning a higher income increase. But most women in the group that earned an average of \$23,000 in 1998 made their higher incomes working for employers that were not better-paying (87%), located in industries that were not better-paying (75%), and that hired a greater than average proportion of former recipients (66%). The more successful women tended to have worked more quarters, more quarters with their main employer, more quarters in recent years, and so forth. There was not some simple, single factor that helped them earn much more than others. It was a combination of factors, many of which were related. But **fundamental to most was, simply, more work.**

Support for former recipients, be it in the form of opportunities for further education, work experience, better work advice, childcare, transportation, or the like, should help more of these women succeed in securing higher earnings. Research should be undertaken to verify that this is the case. The immediate payoffs to the investments in these women will not likely be large, but over time the combination of changes in personal characteristics and their work records will help them be more successful in the labor market. If there is one key to higher earnings, it appears to relate to more work, aided by the advantages that working for certain employers yields.

INTRODUCTION

This is the third report in a series exploring the factors that most affect post-welfare outcomes of women who were on AFDC or the Wisconsin replacement, Wisconsin Works (W-2). The study tracks women who received AFDC in Wisconsin in 1990, following them through 1998, the year W-2, post-welfare reform, was completely implemented. For these 96,300 women we have two sets of data that have been combined. One is their welfare record, starting with their baseline personal information in 1990, followed by information on their receipt of monthly welfare and other forms of assistance. The second data set is their employment record, derived from their Unemployment Insurance file. Listed in this record are all the employers each woman had between 1990 and 1998, and about 20 characteristics of each employer.

The first report in the series (White & Geddes, 2001a) analyzed the characteristics of the employers with whom recipients had found employment. The second report (White & Geddes, 2001b) explored what happened to the women who left welfare and all other forms of support and who were not working in 1998. This third report builds largely on the first. It also examines welfare outcomes, but it combines the examination of employer characteristics with those of the individual women. This effort examines in detail the relative roles of individual characteristics and employer characteristics in determining earnings outcomes. It is a unique effort, as much of the work to date on employment and earnings outcomes of welfare recipients has focused only on the characteristics of the individual women. The contribution of this report is that it combines both supply and demand sides: the characteristics of the women and the characteristics of their employers.

Our intent in this third report is to recommend public policy aimed at increasing the proportion of these women who are able to earn incomes likely to make them self-supporting. As was originally reported, one quarter of these women earned incomes that averaged about \$23,000 in 1998. The other three-quarters did not, either because they could not or because they did not attempt to do so in employment covered by unemployment insurance (the source of our data). By analyzing earnings outcomes in 1998, we hope to gain insight into what most determines those earnings and what in turn the public sector can do to increase the proportion of former recipients who succeed in earning these higher incomes.

The report first reviews what others have learned about this issue. We then examine the Wisconsin population to see what additional insights can be gleaned. We use both distributions and regression analysis to search for insights.

LITERATURE REVIEW

In reviewing what others have learned about factors associated with higher earnings among former welfare recipients, we focus on more recent and refined attempts to learn what it is that helps to determine how well former recipients will do in the workforce.

To a large extent the literature on the impact of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 has focused on the outcomes of AFDC recipients forced into the labor market. The studies range from evaluating earnings of working recipients to predicting the employability of recipients. Unfortunately these studies are not conclusive. While different studies find that different characteristics are the most important, the consensus is that welfare recipients who have completed high school and some college, have fewer and older children, and are white are more likely to become self-sufficient. That is, the women who find "good" jobs (full-time and paying at least \$8 per hour) often will have earnings that are greater than what they received from AFDC, greater than minimum wage, and enough to bring a family of three above the poverty line (Cancian et al., 1999; Cancian & Meyer, 2000; Meyer & Cancian, 1996; White, 1996; Pavetti, 1997; Pavetti & Acs, 1997). On the other hand, the employment prospects for the women who hold bad jobs (part-time and/or less than \$8 per hour) are meager: these women are more likely to transition from a bad job to unemployment and to remain unemployed longer (Pavetti & Acs, 1997).

Self-sufficiency is not as simple as working steadily throughout the year. A lack of education and skills will make it difficult for former recipients to compete in the job market with people who have more education and skills. About 50% of welfare recipients nationally have not completed high school. In our cohort from Wisconsin, about 43% have not completed high school. Education beyond high school is rare for former welfare recipients. Nationally, only 10%

attempt education beyond high school, with 1% completing college, which is pretty similar to our sample (15% and 1% respectively). Additionally, the skill level for former recipients is just as low as the education level (Burtless, 1994). Data from the National Longitudinal Survey of Youth (NLSY) show that two-thirds of AFDC recipients score in the bottom quartile of the Armed Forces Qualifying Test (AFQT), a measure of basic skills that is highly correlated to future employment and earnings (Deavers and Hattiangadi, 1998). It may be difficult for former welfare recipients to find a good job. Lane and Stevens (2001) found that less than 6% of employers who hired AFDC recipients in Maryland between 1989 and 1996 offered jobs that lasted at least four quarters and precluded the individuals from reapplying for welfare benefits. These employers accounted for about 10% of the total jobs offered to AFDC recipients. Coupling the lack of job availability with poor education, poor basic skills, and lack of employment experience further reduces the chances of former welfare recipients finding a decent-paying job with a longer-term future (Burtless, 1997; Danziger & Lehman, 1996; Danziger et al., 1999).

Prior job experience and education seem as important as demographic characteristics (such as age, race, and marital status) in determining employability and earnings. Neenan and Orthner (1996) found that prior labor force experience and work attitudes accounted for 29% of the variation in earnings of participants in Job Opportunities and Basic Skills Training (JOBS) program in North Carolina, with education and skills explaining an additional 21%. Including demographic characteristics brings the total variation in earnings that can be explained by characteristics the women already have to 79%. Skill enhancements gained during JOBS contributed an additional 8%. The contribution from JOBS does not seem great. It is small because many of the women drop out before they achieve significant changes in skills.

Lack of education and job skills can limit the number and type of jobs available to welfare recipients. Starting in low-paying jobs often leads to more low-paying jobs. Former recipients who had worked in low-paying jobs in 1979 (bottom 10% of wages) found that their wages had decreased by 1990, from \$5 to \$4.26 per hour. In comparison, those who had earned a median wage (among former recipients) had a slight increase (from \$6 to nearly \$7), and those at the top of the distribution (90th percentile) experienced an even greater increase, from nearly \$9 to \$12 per hour (Burtless, 1997). But finding a better-paying job is difficult for most former welfare recipients.

Pavetti and Acs (1997) found that only 17% of women with less than a high school education worked steadily in a good job by age 27. In comparison, 61% of women with some education beyond high school work in such jobs. Pavetti (1997) used AFQT scores to proxy job skills and found that women with extremely low skills were less likely to work than women who were moderately low-skilled. Some 44% of the women scoring in the bottom decile of the AFQT were not working, compared to 15% of women scoring in the 11th to 25th percentiles. Relying on public assistance seems to hurt those at the low end of the skill distribution. For those with low skills on the AFQT, 25% of former AFDC recipients worked steadily, compared to 54% of those who scored in the same quartile but who had never received AFDC. Among the higher skilled, 62% of former AFDC recipients versus 67% of non-recipients worked steadily (Pavetti, 1997).

Also contributing to poor labor market prospects are a lack of employment experience and intermittent work histories. Jacobsen and Levin (1995) studied the effects of intermittent labor force attachment. They found that women who leave the labor force experience a drop in pay when they re-enter. Their wages are lower after the hiatus than before they left. If they remain continuously employed after re-entry, they do gain some of the lost wages back. However, they never fully recover the wage reduction. Women with 20 years of continuous employment after a hiatus in work still had wages that were 5% to 7% lower than women who did not leave the labor force. We would expect welfare recipients (who have shorter job tenures, longer and more frequent periods of not working) to be at a greater disadvantage than non-recipient women (Hershey & Pavetti, 1997). Most welfare recipients (75%) have some work experience within five years prior to receiving AFDC, and about 60% report working within the year prior to AFDC. However, long-term recipients are not likely to have recent work experience. In California, only 17% to 24% of long-term recipients enrolled in experimental welfare-to-work programs had any work experience within two years prior to enrolling (Burtless, 1997).

If former welfare recipients had only one barrier to employment to overcome, their prospects would not be so bleak. However, many of these women face more than one or two barriers. It is the multiple barriers that make finding steady employment difficult. Danziger et al. (1999) studied the effects of multiple barriers on the probability that former welfare recipients would be employed at least 20 hours per week. They used data from the Women's Employment Survey, which was administered to 753 single welfare mothers in an urban Michigan County during 1997 and again in 1998. The survey questions identified potential barriers to work, like lack of education, little work

experience, limited job skills, discrimination, and the presence of such difficulties as mental health problems, substance abuse, physical health problems, child health problems, and domestic abuse. Results showed that only 15% of the sample had no barriers to employment, 21% had only one barrier, and the majority had two or more barriers to employment. Danziger et al.'s findings reveal that women with one barrier were just as likely to be employed as women with no barriers; but the probability of being employed decreased sharply as the number of barriers rose.

More importantly, the Danziger et al. study revealed that not all barriers have an equal effect on employability. Only half of the 14 barriers identified had a significant negative impact. The barrier with the largest effect is drug dependency, which decreases the probability of working by 21 percentage points. The barrier with the least impact is having a major depressive disorder, which only decreases the probability by 8.5 percentage points. Each of the other five (less than high school, fewer than four job skills, perceived discrimination, transportation problem, and own health problem) reduces the probability of working between 10 and 17 percentage points. Surprisingly, having little work experience did not have a significant effect on the probability of being employed. Considering the focus on being employed a minimum of 20 hours per week, it may not be as surprising. Women with low work experience may be working in low-paying jobs and just at 20 hours per week. It would be interesting to look at the probability of working full-time or a higher number of hours per week than 20.

What is clear from the previous research is that not all former welfare recipients are doomed to work in low-paying jobs with little hope for advancement. Some women (those with more education and higher skills) will find jobs that pay decent wages. Others will need to start in low-paying jobs, and gain experience and more skills, before they can move to the better-paying jobs. The women who do not have a high school education and have extremely low basic skills are going to have the hardest time finding a job, keeping a job, and moving to a better-paying job. What we hope to gain from our analysis is verification of the characteristics of women that lead to higher wages, and greater insights into degrees of success attributable to the combination of women's characteristics and the characteristics of the employers with whom they have found employment. It is the more comprehensive view that should lead to additional understanding of what is needed to help former recipients become self-sufficient.

EARNINGS DIFFERENCES ACROSS DIFFERENCES IN PERSONAL CHARACTERISTICS

Women who have been on welfare are often thought to be the same, but they differ from one another in several ways. Some are young and others are old. Some have one child, and others have many children. Some of their children are young, and others are old. The women come from a variety of races. They have a range of educational achievements. They participate to varying degrees in other assistance programs, such as Food Stamps and Medical Assistance. The women also differ in the quality, type, and duration of work experience. And those who have worked have worked for a wide range of employers — employers that vary in industry, size, location, turnover rates, pay rates, rate of utilization of persons with few skills, and so forth. Given this range of variations, can we learn what are the most important factors that determine the earnings success of former recipients?

Certainly, the earnings outcomes in 1998 were different for a set of women who shared the common element of having received AFDC in 1990. One comparison is that of whether the women earned more or less than \$15,000 in 1998. Those who were able to earn at least \$15,000 earned an average of \$22,867. Those who earned less earned an average of \$6,886. That \$16,018 is a huge differential, one that we explore in greater detail below. Just over one third (37%) of the women who worked in 1998 were able to earn at least \$15,000. These women constituted only 24% of all the women on welfare in Wisconsin in 1990. On average, they have succeeded in earning incomes that should allow them to be self-supporting. That is obviously not the case for the others.

1998 Earnings	Number in 1990 Welfare Cohort	Average Earnings
Earned less than \$15,000 in 1998	39,394	\$ 6,849
Earned at least \$15,000 in 1998	23,207	22,867
No reported earnings in 1998	33,393	0

Is the key to these earnings differentials the measurable personal characteristics of the individuals, or their employment history, or does earnings success have more to do with the employers with whom the former recipients have had the opportunity to work? That is what we have been attempting to learn. Much has been written about the

impact of personal characteristics on work history. Yet these measurable personal characteristics often play only a moderate role in explaining outcomes. There are often unmeasured differences, such as attitude toward work, perseverance, commitment to being economically independent, energy level, and the like, that play important roles in determining earnings success. These are not easily measured and are, therefore, not included in analyses such as this. But they do play important roles, as anyone who has hired employees will attest.

Since we cannot fill the gap on the unmeasurables, we will continue to focus on measurable characteristics. But unlike almost all other analyses, this analysis will go beyond the individual and her employment history to include characteristics of the employers for whom recipients have worked. In an earlier report (White & Geddes, 2001a), it was reported that employer characteristics do matter. Earnings differentials could, in part, be attributed to differences in employers for whom recipients worked. But the initial analyses did not include the concurrent role of the personal characteristics of the former recipients. In this report the two are combined to highlight the relative roles that they play in earnings outcomes.

Table 1 reveals some of the important characteristics that produce differences in earnings among former recipients. The list of characteristics is not exhaustive. Several others, such as married in 1990 and number of children, were included in the analysis. But these others had little apparent impact on earnings differences. In other words, whether the former recipients were married in 1990 had little impact on their earnings in 1998. The same can be said for the other characteristics. The characteristics listed in Table 1 are linked to some substantial differences in earnings. What appears are the average earnings per woman who worked in 1998. Thus, the 62,000 women who worked in 1998, whether they worked part-time or part-year, are included in what is termed the "full sample." Similar differences were calculated for the sub-population of women (44,700) who worked four quarters in 1998.

TABLE 1: AVERAGE 1998 EARNINGS BY VARIOUS PERSONAL CHARACTERISTICS

Characteristics	Full sample		Worked four quarters	
	Women	Earnings	Women	Earnings
Less than high school	26,839	\$10,621	17,426	\$14,569
High school	26,108	\$13,483	19,689	\$16,556
More than high school	9,654	\$16,927	7,622	\$20,115
African American	19,224	\$11,857	13,002	\$15,981
Hispanic	2,758	\$12,514	1,936	\$16,214
White	35,118	\$13,147	25,997	\$16,365
Youngest child 6 years or younger, 1990	42,934	\$12,567	30,540	\$16,191
Youngest child older than 6 years, 1990	19,667	\$13,267	14,197	\$16,813
Received AFDC in 1998	4,979	\$5,217	1,951	\$9,193
Did not receive AFDC in 1998	57,622	\$13,441	42,786	\$16,716
Received food stamps in 1998	15,575	\$7,557	8,941	\$11,041
Did not receive food stamps in 1998	47,026	\$14,519	35,796	\$17,724
Received medical assistance in 1998	19,564	\$8,527	12,004	\$11,978
Did not receive medical assistance in 1998	43,037	\$14,723	32,733	\$18,005

The most pronounced differences occur between the women who did or did not work four quarters in 1998. The critical importance of working four quarters will be discussed further below. At this point, however, the distinctions are made within each population to see what can be learned about the relative impact of various personal characteristics on each of the samples.

The first point to note is that education seems to matter. Those women in the full sample who had earned a high school degree earned, on average, 27% (\$2,862) more than those who had not earned a high school degree.

Furthermore, those who continued their schooling beyond high school earned 26% (\$3,444) more than those with only a high school degree. Among the women who worked four quarters in 1998, the pattern was similar but not as pronounced: those with a high school degree earned 14% more than those without, and those with more than high school earned 21% more than those holding only a high school degree.

On average, more education does make a large difference in earnings. But there are differences among individuals that get masked by aggregate figures. And among women who were able to make a four-quarter connection with the workforce in 1998, the level of education matters less than among all workers. These statements suggest that while education is important, there are other characteristics that contribute to earnings outcomes.

A personal characteristic over which individuals have no control is race. One might expect this factor to play an important role in different outcomes, especially given the lower earnings generally found among minority workers. The lower earnings may well relate to lower levels of education as well as fewer quarters worked. As expected, among all workers minorities did earn less than whites in 1998. But the differences were not large. White women earned 5% more than Hispanic women and 11% more than African American women. These differences almost disappear among women who worked four quarters: White and Hispanic women earned virtually the same incomes, which was a mere 2% higher than those of African American women. Again, the relatively modest impact of this factor among those who worked four quarters suggests that other characteristics are important in determining earnings.

One factor cited that has appeared for years in analyses of workforce behavior of welfare recipients is the age of their youngest child. Women with younger children are generally deemed less likely to be in the workforce or more likely to enter the workforce later. That, in turn, should lead to lower earnings. Among the over 62,000 recipients who worked in 1998, there is a modest tendency in the expected direction. Those with older children earned 7% (\$700) more, on average, than those with younger children. Among those who worked four quarters, the difference was even smaller (4%). Thus, the age of the youngest child seems to have an impact, but not a very large impact, on earnings.

In contrast, receipt of various forms of assistance in 1998 did seem to have a large impact on earnings. Receipt of AFDC/W-2 in 1998 would imply some continuing degree of dependency, less work, and consequently less earned income. The differences in 1998 earnings reinforce this point, especially among the full sample that includes women who worked 1-3 quarters in 1998. The difference between those who received cash assistance and those who did not was \$8,224. In other words, those who did not receive AFDC/W-2 in 1998 earned 158% more, on average, than those who did receive aid. Among those who worked four quarters in 1998 and received aid, the difference was still very large: \$7,523 or 82%. It appears that requesting cash assistance is, not surprisingly, linked directly with low earnings.

Similar patterns hold for Food Stamps and Medical Assistance. But since these programs aid women working as well as those who do not, the differences are not quite as great. Among the full sample, those without Food Stamps earned \$6,962 or 92% more than those who did receive Food Stamps. Those on Medical Assistance earned \$6,196 or 73% more than those not using the Stamps.

Among those who worked four quarters, the pattern is similar but not as pronounced. Those without Food Stamps earned \$6,683 (61%) more. And those without Medical Assistance earned \$6,027 (50%) more. Quite obviously, those with lower earnings had greater need for additional assistance. Whether the availability of assistance led to less work effort is another question, one that can not be answered here.

If we examine the number of women who received aid, we see some pronounced differences in the extent of aid. For example, nearly 20,000 working women received Medical Assistance in 1998, compared to 15,573 who received Food Stamps and less than 5,000 who received AFDC. These AFDC numbers reveal how relatively unimportant cash assistance was in 1998. The Food Stamps and Medical Assistance numbers, though higher than AFDC, are thought by many to reflect inadequate education of former recipients. The argument is that many more such women would qualify for these programs, if they knew about them and made the effort to apply. In either event, the two programs were important sources of support for 25% to 32% of those former and current recipients working in 1998.

In sum, personal characteristics, with the exception of education, are linked to some modest differences in earnings. Education appears to be linked to substantial differences in the expected direction: more education seems to yield higher earnings. But the education-earnings link is not as strong when measured among women who worked four quarters a year. This smaller earnings difference is likely due to the fact that, once employed, what a person can actually do is more important than what is expected, given some level of education. Furthermore, education level is a proxy for other characteristics, such as perseverance, problem-solving skills, ability to work with others, and ability to follow directions. When these abilities can be judged on the job, the role of education as a screen is diminished. Also, unlike the population at large where 26% are college graduates, the welfare population has but 1%, thereby limiting the range of incomes that recipients are likely to earn.

The other point that stands out is the earnings difference between women who received any aid in 1998 and those who did not. The largest differences existed between those who were on and those not on AFDC/W-2 at any time in 1998. Those who were on AFDC/W-2 clearly have lower earnings. But since few were on AFDC/W-2, this factor will likely not be influential in earnings outcomes overall, except for those few still receiving cash assistance.

Employer Characteristics

Employer characteristics may play a more critical role in earnings outcomes than many have imagined. Employer characteristics have not been appreciated because data on employers have not been available. Table 2 displays several characteristics that appear to matter in terms of earnings outcomes for the full sample. The full sample is used here because the numbers are large and the patterns for the women who worked four quarters is virtually the same; only the earnings levels are higher.

Clearly, job seekers would be well advised to go to work for high-paying employers, where the average pay for all workers is greater than the average pay for the industry in question. Those women in 1998 who worked for high-paying employers earned \$10,387 (91%) more than those who did not. Thus, connecting with these employers makes a good deal of economic sense. Unfortunately, for this cohort of former recipients, only 13% (8,417) were able to make these connections.

TABLE 2: AVERAGE 1998 EARNINGS BY VARIOUS EMPLOYER CHARACTERISTICS

Characteristics	Women	Earnings
Worked for low-paying employer, 1998	54,184	\$11,390
Worked for high-paying employer, 1998	8,417	\$21,777
Employer has greater than average turnover, 1998	23,739	\$11,587
Employer has average turnover or less, 1998	38,862	\$13,520
Low proportion of W2 workers, 1998	20,511	\$16,860
High proportion of W2 workers, 1998	42,090	\$10,802
Employer located in Milwaukee area	17,121	\$12,346
Employer located in other metro area	8,506	\$13,063
Employer located in rural area	36,390	\$12,981
Agriculture or mining, 1998	388	\$9,057
Construction, 1998	600	\$16,028
Manufacturing, 1998	10,689	\$17,187
Transportation or utilities, 1998	2,043	\$15,596
Wholesale trade, 1998	1,795	\$14,433
Retail trade, 1998	11,864	\$8,819
Finance, insurance, or real estate, 1998	2,375	\$16,768
Services, 1998	30,099	\$11,671
Public administration, 1998	2,241	\$20,243

On the other hand, workers should try to avoid employers associated with high turnover rates among employees. High turnover rates are often a sign of less than desirable working conditions or pay. As the numbers in Table 2 convey, recipients who in 1998 worked for employers with higher turnover ended up earning \$1,933, or 14%, less than women who worked for employers with average or lower than average employee-turnover rates.

Another type of employer to avoid is the type that hires large numbers of welfare recipients. Women who worked for those that hired many recipients earned markedly less, on average. In 1998 that amounted to \$6,058 or 36% lower earnings among those who made this decision. As the numbers in the first column indicate, avoiding these employers is not easy: two thirds of the women in our sample worked for employers who hired a high proportion of former welfare recipients in 1998.

Location of employment is yet another decision a recipient could make. Many recipients are locked into a geographic place, but some do move. Within Wisconsin, are there benefits from a particular type of location, be it metropolitan Milwaukee, any of the smaller metropolitan areas, or the more rural areas? As it turns out, the smaller geographic areas appear to be the best. But the differences are not very large. Recipients located in the smaller metropolitan areas in 1998 earned an average of \$82 more than women who worked in rural areas, and \$717 more than women in Milwaukee. The average earnings have only partially to do with place; they also reflect the characteristics of the recipients and the employers. In any event, it appears that location has but a modest impact on earnings outcomes.

An important issue is the industry in which a job is located. As most readers know, there is wide variation in earnings per worker by industry. Retail commonly has the lowest earnings, although Agriculture and Mining give it a run for the money. These are generally industries to be shunned, especially over the long run. On the other hand, working in Public Administration, Construction, Manufacturing, or Finance, Insurance, and Real Estate (FIRE) is often a wise decision financially. Is this true for former recipients as well?

The answer is yes. Those few (2,241) individuals who were able to secure employment in the Public Sector earned an average of \$20,243, or \$11,424 (130%) more than the women who worked in Retail. The 10,689 women who were employed in Manufacturing earned an average of \$17,187, or \$8,368 (95%) more than those who worked in Retail. The 2,375 women who worked in FIRE earned \$7,949 (90%) more. Unfortunately, with the exception of the large number of women in Manufacturing, former recipients were concentrated in the lower-paying industries such as Services and Retail. Finding a job in the better-paying industries increases the odds that a woman will earn a higher income, but the chances of that occurring are limited: approximately one in four recipients was able to secure employment in one of the four better-paying industries.

It appears that several employer characteristics are associated with higher or lower earnings. Selection of industry makes a difference, as does working for an employer with few workers who are former welfare recipients. Working for employers who pay more made a substantial difference in earnings in 1998.

Recipient Employment History

Other characteristics linked to earnings differentials are those having to do with personal work histories. Individuals who have more years of work are likely to earn more than those who are just beginning. Women who are working for employers who pay well, described as “good employers,” are likely to have higher earnings. Women who have job stability and who have worked for the same employer for longer periods might be expected to have higher earnings than others who have jumped from job to job. These are the next relationships examined.

Table 3 displays the earnings differences among these women with various work experiences. We learned at the outset of this study that almost two-thirds of those who worked in 1998 earned, on average, relatively low incomes (\$6,849). One obvious reason for this is that many women (75%) did not work four quarters for their main employer (main employer is defined as the employer from whom they earned the most) in 1998. That discontinuity hurt. Those who worked four quarters with their main employer in 1998 earned an average of \$18,068, or almost three times what those who did not have this advantage earned. That is substantial. Other factors, such as having less education, and less work experience altogether undoubtedly contributed. The role of these many factors will be explored later in this paper in a regression analysis. But not having consistent work for the four quarters with a main employer certainly seems to be an important factor in explaining low earnings.

According to labor theory, working for the same employer over time should yield higher earnings because the employee would become more familiar with the operations and become more proficient at her job duties. We examine the earnings related to working with the same employer for the most recent four years, 1995 to 1998. Less than one third of the women did in fact work for the same employer all four years. For those women with the same employer, consistent employment did help in terms of earnings. Those who consistently worked for the same employer earned \$4,801 (42%) more than those with less consistent employment by their main employer. Work stability seems to matter.

TABLE 3: AVERAGE 1998 EARNINGS BY EMPLOYMENT HISTORY, 1990-1998

Work Pattern	Women	Earnings
Did not work 4 quarters with main employer, 1998	29,564	\$6,886
Worked 4 quarters with main employer, 1998	33,037	\$18,068
Worked for same employer, 1995-1998	19,543	\$16,089
Worked for different employers, 1995-1998	43,058	\$11,288
Did not work for same good employer, 1995-98	57,019	\$12,008
Worked for same good employer, 1995-98	5,582	\$20,748
Did not work for same good employer, 1990-98	59,935	\$12,477
Worked for same good employer, 1990-98	2,666	\$19,765
Did not work for same good employer, 1990-94	59,387	\$12,442
Worked for same good employer, 1990-94	3,214	\$19,160
Worked for same employer, 1990-94	14,623	\$13,598
Worked for different employers, 1990-94	47,978	\$12,540
Worked for same employer, 1990-98	5,616	\$15,657
Worked for different employers, 1990-98	56,985	\$12,504
Worked in most common industries, 1990	16,807	\$12,698
Did not work in most common industries, 1990	45,794	\$12,820

Working for the same employer for the last four years matters even more if that employer is one who pays more than the average of all employers. Such employers have been dubbed “good employers.” Some 5,582 women in our sample were fortunate enough to work for good employers all four years, 1995-1998. They earned an average of \$20,748 in 1998, or 73% more than women who did not experience this advantage.

As we saw in the discussion of Table 2, a similar but even larger advantage fell to those women who were able to work for “good” employers in 1998. Such women earned an average of \$21,777, some \$10,387 or 91% more than those who worked for employers who did not pay their workforces as well. However, only 8,417 women (13% of all working women in the sample) were able to secure work with higher-paying employers in 1998. Not only is this stature relatively rare for former welfare recipients, it also indicates that most of the 23,207 recipients who earned more than \$15,000 in 1998 did so with lower-paying employers. That is even more of an accomplishment.

At the other end of the spectrum is the question of whether the women who worked in 1990 in the most common industries for welfare workers (industries such as temporary help, eating and drinking places, nursing homes, grocery stores, department stores, and hospitals) earned more or less than other women. The criticism leveled at these industries is that they are low-pay and lead nowhere. As it turns out, that is not the case. Women who held these jobs in 1990 earned virtually the same in 1998 as the women who did not hold such jobs: \$12,698 versus \$12,820. Beginning work life in these industries was not a determinant one way or the other of earnings in 1998.

Table 3 also provides some further evidence about the role of previous work experience. These variables cover longer-term engagements to see what impact they might have had on 1998 earnings. About 4% of these women were able to work for the same good employer from 1990 through 1998. As one might expect, such a long-term engagement for the same employer, and for a “good” employer, seems to pay dividends. These 4% had average earnings in 1998 of \$19,765, compared to \$12,477 for those who did not have this set of circumstances.

Finding employment early in the decade with a “good” employer helped a number of women. Some 3,214 women, including the 2,666 who worked for nine years with the same employer, gained from their 1990 to 1994 employment with the same good employer. In 1998, those with the early four years of employment with a good employer were earning almost as much as the women who stayed with the good employer for all nine years: \$19,160 compared to \$19,765.

What reinforces the importance of being able to secure employment with a good employer as opposed to any employer is the fact that those who early on worked for a good employer earned substantially more in 1998 than those women who merely worked for the same employer 1990-1994. Those with the four early years with a good employer earned \$19,160 in 1998, or \$5,562 (41%) more in 1998 than those who just worked anywhere (\$12,142). The key may be the personal characteristics of the women, finding a better-paying employer to start with, or some combination of the two. But it is clear that those who were able to find and keep jobs with good employers have benefited over the long run.

This is true as well for those who found and kept jobs for the nine years. Those who worked for the same employer for the nine years did earn \$3,153 more in 1998 (\$15,657) than those who worked for different employers over the nine years. But working the nine years for a good employer would have yielded them an additional \$4,108 (26%) in 1998, given the average earnings of such women (\$19,765).

These patterns suggest that finding a good employer for the long haul helps one's earnings. Finding and keeping a job long-term helps more than jumping around or working for shorter periods of time. From these differences it does appear that work histories play an important role in earnings outcomes in 1998.

Having acknowledged that several different types of characteristics — personal, employer, and employment history — make a difference, it becomes clear that we do not know how important each is in respect to the others. We have learned that some characteristics are associated with large differences in earnings while others are more limited, if still seemingly important. To get a better idea of how important each characteristic is we must use statistical analyses. That is undertaken later. Next, however, is some further explication of the differences among former recipients who were able or not able to earn at least \$15,000 in 1998.

HOW DIFFERENT ARE THE WOMEN WHO EARNED GREATER THAN \$15,000?

One important set of questions has to do with the differences between those women who did earn at least \$15,000 in 1998 and those who did not. Were women in the one group very different from those in the other, and, if so, in what ways were they different?

One set of differences might be demographic. One could easily guess that those who were earning at least \$15,000 in 1998 were better educated, had smaller families, had older children, had more work experience, were more likely to be white, were no longer receiving any form of assistance, had received assistance over fewer years, and were more likely to live in large metropolitan areas. But as with much of the preceding research on welfare recipients, the crucial factors are not always that clear.

Demographic Differences

We can differentiate among women by several characteristics. One of the most common is race. Many readers might have expected differences in earnings to vary by racial groups. That expectation does not match the results, as we saw above. Among those with earnings of less than \$15,000 in 1998, white women did earn more, but less than 1% more than Hispanic women. Both earned about 10% more than African American women. Among the women who earned at least \$15,000, differences by racial group were more modest. White women earned 3% more than African Americans and 4% more than Hispanic. What this suggests is that race is not an important factor in determining earnings outcomes among former recipients.

Another variable often associated with differences in earnings is education. We expect to see that women with higher levels of education have higher levels of earnings. As we saw in Table 1, this appears to be the case. Among women in both groups of earners, those who had attained more than a high school education earned more than those at the other two levels of education. Among those who earned less than \$15,000, those who had gone beyond high school received but a 1% gain over those with high school only. Among those who earned at least \$15,000, having a high school degree added 3% to earnings and having some college added 12%. Education does bring advantages, but for this population the advantage is not as large as might be expected from national studies of the payoffs for additional education. Also the larger payoff to those who earned at least \$15,000 suggests that the post-high school experience was likely different for these women.

Yet a third variable often associated with lower earnings is having more children. What we would therefore expect is a pattern of lower earnings, as one scans down the column for additional children (Table 4). In neither column do we see the expected pattern. Earnings remain very similar across all of the categories of number of children.

TABLE 4: DISTRIBUTION OF AVERAGE EARNINGS BY NUMBER OF CHILDREN IN 1990 AND \$15,000 RECEIPT, 1998

Number of Children	Less than \$15,000	\$15,000 or more
0	\$6,487	\$22,440
1	\$6,935	\$22,926
2	\$6,917	\$22,730
3	\$6,857	\$22,446
4	\$6,465	\$22,363
5	\$6,218	\$22,522
6	\$6,568	\$23,014
7+	\$6,913	\$21,593

It seems that the number of children had no effect on the earnings outcomes. We also learned that the age of the youngest child, often cited as influential, had no impact either. The lack of such impact did not warrant a separate table.

If number and ages of children did not have an impact, what then of geographic location? An argument can be made that women who lived in larger metropolitan areas where higher wages are more common should be able to earn more. We would expect those women who worked in the Milwaukee metro area to earn more than those who worked elsewhere. We learned above that this was not the case overall. We now see

a moderately different pattern. Among those who earned less than \$15,000, women who lived other than in Milwaukee earned more than those in Milwaukee. Factors other than the higher pay rates in Milwaukee played a role here. Among those women who earned at least \$15,000, other metropolitan areas were the best places to be, followed closely by Milwaukee. Rural areas were the lowest paying, but the differences are quite small. It appears that geographic location is not a key factor in determining earnings.

Another factor that might well affect 1998 earnings is the women's experience with AFDC/W-2. One might guess that women with fewer "spells" (lengths of time) on assistance and those with fewer years on assistance would have higher earnings. Fewer spells could well mean that women were on and then off assistance, relying on work for sustenance and building a track record of work. The fewer times they had to cycle on and off work, the more likely they would be to have succeeded in supporting themselves. Similarly, women who have had fewer years on

TABLE 5: DISTRIBUTION OF AVERAGE EARNINGS BY AFDC SPELLS AND \$15,000 RECEIPT, 1998

Number of AFDC Spells	Less than \$15,000	\$15,000 or more
1	\$6,792	\$24,048
2	\$6,728	\$22,685
3	\$6,759	\$21,937
4	\$6,762	\$21,423
5	\$7,074	\$21,008
6	\$7,259	\$20,721
7	\$7,407	\$20,909
8	\$7,315	\$20,853
9	\$8,548	\$20,784
10	\$8,160	\$20,259
11+	\$8,914	\$21,432

AFDC/W-2, calculated by dividing the total months on assistance by 12, should have had much more work experience and less experience being dependent, suggesting that they should have higher earnings in 1998. Data on the first of these topics appear in Table 5.

A quick look at the patterns of earnings in the two columns shows that they are moving in opposite directions. Among women who earned less than \$15,000, more spells on AFDC are associated with higher earnings. The explanation may be that women who more actively sought to become independent kept trying work and over time built up enough experience to earn higher incomes. Their many spells of AFDC/W-2 may have occurred because they lost jobs

and needed assistance each time or they may have taken time off from work and sought additional education to raise their earning potential. In either case, more spells are associated with higher earnings. At the other end of the spectrum, those with one spell of AFDC may well have been on AFDC up to nine years and have gained very little work experience, which would help to explain their lower earnings. In fact, one third of these women had but one spell of AFDC/W-2.

Among women who earned more than \$15,000 in 1998, just the opposite association occurs. Those women with fewer spells had the highest earnings in 1998. More spells translate into modestly lower earnings. Each additional spell means a few hundred dollars lower earnings, in most cases. This suggests that the women who became more stable members of the workforce were able to earn somewhat higher incomes by 1998. The decrements per additional spell are not large, but they do suggest a relationship, perhaps even some loss of work skills. However, the different direction of the relationship compared to those who earned less than \$15,000 suggests that this factor will not be a good predictor of 1998 earnings. There are clearly different paths to take to earn over \$15,000.

Unlike the ambiguity of the relationship with spells on AFDC/W-2, the number of years on AFDC/W-2 is inversely related to earnings, for those under and those over \$15,000 in earnings in 1998 (Table 6). Among those women who earned less than \$15,000, there is a modest but pretty clear decline in earnings with up to seven years of AFDC/W-2 receipt. After seven years, the bottom drops out of the earnings. Very few women were on assistance for all nine years. Those who were had almost no earnings in 1998. Those with between eight and nine years of earnings earned just over \$3,600, while those with between seven and eight years earned an average of \$5,880. It seems that after one has been off AFDC/W-2 for at least three years, the increment to earnings is not very large. Nonetheless, it does exist.

Although the absolute dollar amounts are greater, the relative decrement for each additional year of AFDC/W-2 receipt is about the same for those women who earned at least \$15,000 in 1998, and those who earned less than \$15,000. But clearly, less time on assistance is associated with higher 1998 earnings. The only surprise is that there is so little difference in average earnings for each year of additional support. That suggests these women are quite similar, despite their varying degrees of reliance on cash assistance. And it suggests that years on welfare were not very important in determining 1998 earnings among these women.

We also examined the relationship between years of receipt of Food Stamps and Medical Assistance and earnings. Both those who earned less than \$15,000 and those who earned at least \$15,000 in 1998 have the same basic relationship between years of receipt and earnings: the fewer years of receipt, the higher the income in 1998. There is an occasional blip in the pattern, but the pattern is definitely there. But there is no great difference in earnings associated with each additional year of in-kind assistance. Those who received Food Stamps over more years did earn less, but only a little less for each year.

The relationship of earnings to receipt of Medical Assistance appears to be very similar: the more years of receipt, the lower the income, generally. The annual increments are not large. Medical Assistance is linked to income, but not strongly.

Overall, personal characteristics and assistance-program participation are often linked to income. But there are no variables that appear to be strongly linked to earnings. Several play minor roles, but none is strongly linked. Since much of the research on women's characteristics has yielded mixed results, this finding of modest links between personal characteristics and earnings is not surprising.

TABLE 6: DISTRIBUTION OF AVERAGE EARNINGS BY YEARS OF AFDC AND \$15,000 RECEIPT, 1998

Number of Years	Less than \$15,000	\$15,000 or more
< 1 year	\$7,569	\$24,220
1 - 2	\$7,237	\$23,602
2 - 3	\$7,238	\$22,983
3 - 4	\$7,006	\$22,389
4 - 5	\$6,966	\$21,906
5 - 6	\$7,080	\$20,907
6 - 7	\$6,900	\$20,092
7 - 8	\$5,880	\$19,493
8 - 9	\$3,621	\$19,136
9	\$803	0

Employer and Work Experience Differences

Did the women who earned less than \$15,000 in 1998 have different experiences with employers over the 1990-1998 period that can help explain differences in earnings outcomes? The answer seems to be yes.

TABLE 7: DISTRIBUTION OF AVERAGE EARNINGS PER QUARTERS WORKED AND \$15,000 RECEIPT, 1998

Number of Quarters	Less than \$15,000	\$15,000 or more
1	\$921	\$26,509
2	\$2,858	\$19,636
3	\$5,537	\$19,899
4	\$9,610	\$22,922

more quarters worked does increase earnings, especially for those earning less than \$15,000. What is interesting is that among those who earned at least \$15,000, over 98% of the women worked in four quarters. And among those who did not succeed in earning at least \$15,000, two-thirds worked less than four quarters, partially explaining the lower earned incomes. Obviously, working four quarters and still earning \$9,610 suggests other factors also play a role in earnings outcomes.

If we look historically at women who worked more quarters per year over the 1990-1998 period, building up work experience and an earnings history, we would expect a fairly strong relationship between more quarters worked

TABLE 8: AVERAGE 1998 EARNINGS BY AVERAGE NUMBER OF QUARTERS WORKED PER YEAR, 1990-1998

Average Quarters	Less than \$15,000	\$15,000 or more
1	\$909	\$21,277
2	\$3,650	\$20,091
3	\$7,164	\$21,523
4	\$9,778	\$23,598

per year and 1998 earnings. Two interesting points come from the data in Table 8. First, those women who worked a lot and averaged four quarters a year, earned more than those who worked less. Second, it is among those who earned less than \$15,000 in 1998 that the historic amount of work annually had the greatest impact on earnings differentials. Among those who averaged over \$15,000, work histories marked by greater and lesser amounts of work

do relatively little to differentiate among women in 1998. This suggests that it was not so much the work experience as other factors that contributed more to determining 1998 earnings.

A related issue has to do with the number of quarters recipients worked for their main employer (the employer for whom the recipient earned the most income in 1998) in the measured year, 1998 (Table 9). Again, one would expect

TABLE 9: DISTRIBUTION OF EARNINGS BY QUARTERS WITH MAIN EMPLOYER AND \$15,000 RECEIPT IN 1998

Number of Quarters	Less than \$15,000	\$15,000 or more
1	\$1,873	\$22,767
2	\$5,462	\$20,531
3	\$8,298	\$21,005
4	\$10,364	\$23,200

The analyses below focus on distinguishing between those who earned higher versus lower incomes in 1998. We look at both the whole sample of earners in 1998 and the earners who worked four quarters in 1998. We do the latter because we have learned that four quarters of work is likely to play an important role in earning at least \$15,000 per year. In fact, Table 7 shows that, aside from an aberration of five women who made good money in one quarter, that

per year and 1998 earnings. Two interesting points come from the data in Table 8. First, those women who worked a lot and averaged four quarters a year, earned more than those who worked less. Second, it is among those who earned less than \$15,000 in 1998 that the historic amount of work annually had the greatest impact on earnings differentials. Among those who averaged over \$15,000, work histories marked by greater and lesser amounts of work

that more quarters with the main employer would increase one's income. This is especially true for those who earned less than \$15,000 in 1998: the earnings difference between working one quarter and four quarters for the main employer was \$8,491 (4.5 times the one-quarter earnings). The relationship was largely true for those who earned at least \$15,000 in 1998, but the scale difference is not as large: the difference between working

in two quarters and four quarters was \$2,669. What seems to matter for most of the women who earned at least \$15,000 is the fact that they worked four quarters. The icing on the cake is having had the same main employer for an extended period.

What is less important is the number of years a woman has worked for a main employer. Regardless of outcomes over or under \$15,000, the more years these women worked for their main employer, the higher their incomes. The relationship is almost consistent, but it is not very consequential, year-to-year. For example, a woman who earned less than \$15,000 in 1998 and had worked for the same main employer for four years earned \$530 less than the women who had worked for the same main employer for five years. The extra year adds marginally to average earnings.

Given this relationship, a reader might well expect that if a woman worked more years with a high-paying employer, one that pays more than average to all workers, the worker would be paid more. That is the case for those who earned more and those who earned less than \$15,000 in 1998. However, most of those who earned more than \$15,000 in 1998 never experienced that level of earning by working for a high-paying employer by the end of 1998. In other words, the majority of the higher-earning women achieved their higher earnings with lower-paying employers. And, as with other relationships to time, the incremental earnings gains year-to-year are modest and not totally consistent. Working four quarters helps a lot, but working more years or more years with a high-paying employer adds only incrementally.

It would seem logical that if a woman had more years of earning at least \$15,000, then that woman would be likely to earn more in 1998. Table 10 shows that this is the case over the last four years. Those women who earned at least \$15,000 in more of the years 1995-1997 earned higher sums in 1998. This is true of both those who earned less than \$15,000 in 1998 and those who earned at least \$15,000 in 1998. When we did a similar analysis of earnings over \$15,000 in the 1990-

1994 period, we found a similar, but lesser impact on those who earned less than \$15,000 in 1998. We conclude that previous earning of \$15,000 does increase one's odds of doing it again, or at least earning more than many others. More than 75% of those who were able to earn at that level before 1998 were able to do so again in 1998.

Further reinforcing this relationship is the finding that women who first earned at least \$15,000 earlier in the decade were more likely to have higher earnings in 1998 (Table 11). The women who earned at least \$15,000 in 1998 and first earned \$15,000 in 1990 earned an average of \$27,628, higher than the figure for any other cohort. By contrast, those who first earned \$15,000 in 1998 earned an average of \$18,183. The pattern of higher earnings in 1998 associated with higher earnings is very consistent, at least for those who were able to earn more than \$15,000 in 1998. Also, the more years a woman was able to earn at least \$15,000, the higher her 1998 earnings were. A precedent of higher earnings seems to matter.

Unfortunately, earning at least \$15,000 early is not a guar-

TABLE 10: AVERAGE 1998 EARNINGS BY YEARS OF EARNING \$15,000 ANNUALLY, 1995-1997

Number of Years	Less than \$15,000	\$15,000 or more
0	\$6,452	\$18,287
1	\$9,202	\$20,627
2	\$9,311	\$22,159
3	\$10,030	\$26,401

TABLE 11: AVERAGE 1998 EARNINGS BY YEAR FIRST RECEIVED \$15,000 OR MORE IN EARNINGS

Year of First \$15,000	Less than \$15,000	\$15,000 or more
1990	\$8,189	\$27,628
1991	\$8,403	\$26,374
1992	\$8,578	\$25,449
1993	\$8,266	\$24,762
1994	\$8,610	\$23,818
1995	\$8,971	\$23,249
1996	\$9,410	\$21,940
1997	\$10,492	\$20,811
1998	\$6,378	\$18,183

antee that it will occur again. Among the 7,232 women who earned at least \$15,000 some time but not in 1998, the year in which they first earned \$15,000 often did not seem to affect their 1998 earnings. It is only the last two or three years before 1998 that seem to have a somewhat positive relationship to the 1998 earnings. If the women were able to earn at least \$15,000 in the early 1990s, it had almost no impact on their 1998 earnings. However, 82% of the women who earned less than \$15,000 in 1998 never earned at least \$15,000. This suggests that there were other differences between the women who repeated their earnings success and those who did not.

The good news for most of these 62,000 working women is that their earnings did increase over the nine-year period (Table 12). Even among those who earned less than \$15,000 in 1998, almost three-quarters (74%) experienced an increase in earnings between their first year of work and 1998. Their average gain was \$5,644. Unfortunately, almost one-quarter of those with earnings of less than \$15,000 in 1998 experienced a decline in earnings, a decline that averaged some \$3,255.

TABLE 12: AVERAGE 1998 EARNINGS AND CHANGE IN EARNINGS FROM THEIR FIRST WORK, 1990-1998

Change in Pay	Less than \$15,000		\$15,000 or More	
	Earnings	Change	Earnings	Change
Did not change	\$3,105	\$0	\$18,634	\$4
Increased	\$8,183	\$5,644	\$22,899	\$16,711
Decreased	\$3,053	-\$3,255	\$20,071	-\$3,988

For those who succeeded in earning at least \$15,000 in 1998, the earnings gains over their work lives in the 1990s were three times greater than for those who earned less than \$15,000 in 1998. Just under 99% of the higher earners were earning more than when they began work. Not only did virtually all the more successful women succeed, they magnified their earnings. What differentiates the two groups is not the increase in earnings, since so many did so, but the scale of those increases. The question that still needs to be answered is what most helps to account for the dramatic increases.

One hypothesis that has been put forth to help explain some earnings patterns is that women who have made a greater effort to find work and to find better employer, — as reflected in more jobs per year — are likely to have had

TABLE 13: AVERAGE 1998 EARNINGS BY AVERAGE NUMBER OF EMPLOYERS PER YEAR, 1990-1998

Average Number of Employers	Less than \$15,000	\$15,000 or more
1	\$6,848	\$23,162
2	\$6,871	\$22,536
3	\$6,767	\$22,007
4	\$6,772	\$22,196
5	\$6,754	\$20,662
6+	\$6,601	\$22,001

higher earnings by 1998. But as we look at Table 13, we discover that there appears to be little truth in this statement. Among the women who earned less than \$15,000 in 1998, there is an extremely modest pattern of lower earnings the more employers a woman averaged per year over the years 1990-

1998. Among those who earned more than \$15,000 in 1998, there is almost no pattern at all. True, those who averaged one employer a year earned the most. But after that there is not a linear relationship. Having one employer per year seems to be the best option for better earnings, but the payoff is not very large. Different paths have worked better for different people.

We continue to examine some other characteristics of the employers for whom these women worked to see if more insights can be gained.

We would expect that women who worked for employers with higher than average employee turnover rates would earn less on average than women who worked for employers with low turnover rates. Our expectation is based on the observation that turnover tends to be higher at employers that pay less. That appears to be true for those women who earned over \$15,000. Women who worked for employers with higher turnover rates earned less than women who worked for employers with lower turnover rates (Table 14). But that expected outcome was not true among those who earned less than \$15,000. For some reason, women who worked for lower-turnover employers earned less on average in 1998. This contrary outcome suggests that there is not a neat relationship here and that, again, other factors have more influence on earnings.

Fortunately, two other expected relationships do hold up, as can be seen in Table 14. In both sets of women (above and below \$15,000) those who worked for low-paying employers earned considerably less than those who worked for high-paying employers. In both cases in 1998 the difference was about \$4,000. A similar and expected finding exists for those who worked for employers with high proportions of former welfare recipients. If women worked in firms that employed many recipients, they tended to earn less than those who worked in firms that hired few such women. In both cases, the difference was between 11% and 13%. This factor seems to matter, but not as much as some others.

TABLE 14: DISTRIBUTION OF AVERAGE EARNINGS BY VARIOUS WORK CHARACTERISTICS AND \$15,000 RECEIPT, 1998

Characteristic	Less than \$15,000	\$15,000 or more
Employer turnover > average	\$7,595	\$21,338
Employer turnover <= average	\$6,291	\$23,513
Low-paying employer in 1998	\$6,631	\$21,869
High-paying employer in 1998	\$10,643	\$25,556
Low proportion of W2 workers	\$7,620	\$24,209
High proportion of W2 workers	\$6,617	\$21,566

For many decades, larger employers have paid, on average, more than smaller employers. Thus, we might expect to find that recipients who worked for the largest employers would have higher annual earnings than women who worked for smaller employers. Table 15 reveals the patterns among recipients who worked in different-sized firms in 1998. Among those women who earned less than \$15,000 in 1998, the expected pattern does not hold. Those women who worked for the largest firms earned more than only those women employed in the smallest firms. The women who earned the most worked in firms with 100-499 employees. So the advice to women to look for work in the largest firms is not very good for this population.

TABLE 15: AVERAGE 1998 EARNINGS BY SIZE OF MAIN EMPLOYER, 1998

Number of Employees	Less than \$15,000	\$15,000 or more
1 - 19	\$6,572	\$22,180
20 - 99	\$6,895	\$21,770
100 - 499	\$7,293	\$21,968
500 +	\$6,593	\$23,872

On the other hand, there appears to be some truth in

the advice for those women who earned over \$15,000 in 1998. Those with the highest average earnings worked for employers with at least 500 employees. That is a safe statement. But the second-highest earnings came to women who worked for the smallest employers. That is not expected. The net result of both patterns suggests that size of employer is not likely to be well associated with higher earnings, except for a select group of those who earned over \$15,000. The uncertainty here makes the advice to look for the largest employers suspect.

The analysis of these eleven factors suggests that most of the expected relationships exist for both lower- and higher-earning women. In few cases do these factors, by themselves, play a major role in determining earnings. The

one exception is working four quarters in 1998. Even working four quarters for one's main employer adds very little to the effect of four quarters of work. Yet that alone is clearly not the answer, since those who did work four quarters in 1998 were evenly split between those who earned an average of \$22,922 and those who earned \$9,610. What is it that can account for that difference? The best way to gain insights into this question is to use regression analysis to see what factors, be they personal characteristics, employer characteristics, or work histories, seem to play the greatest relative roles in determining earnings outcomes.

REGRESSION ANALYSIS

We analyze the impact of former recipients' personal characteristics and their employers' characteristics on their earnings by attempting to associate these characteristics with earnings success. To do so we regress various personal and work characteristics on the natural log of 1998 earnings (we use the natural log in order to simplify the conversion of coefficients to percentage changes). In light of the discussion above on which characteristics have the most influence on earnings, two models are used. One includes only personal characteristics, and one includes both personal and work characteristics, allowing us to gage the relative importance of personal characteristics. Going a step further, we use two pools of women, one that includes the entire population of former recipients who worked in 1998 and another that includes only women who worked in all four quarters in 1998. We have learned that the women who worked in all four quarters have a stronger connection to work and have higher average earnings than the entire sample. We theorize that the impact of personal characteristics on earnings may be different.

Many women in our sample work for the same employer, which means that they may have similar characteristics, especially work characteristics. In order to account for this possibility, we run the regressions relaxing the assumption of independence among women who worked for the same employer while maintaining the assumption of independence between employers. After excluding women with missing variables, the resulting sample sizes are 61,090 women who worked in 1998 distributed among 14,968 employers and 43,752 women who worked four quarters in 1998 distributed among 11,931 employers.

Turning to the variables used in the analysis, the personal characteristics are grouped into three categories: demographic, income-related, and public assistance use. The demographic variables used in the regressions include minority status, level of education in 1990, number of children in 1990, and age of youngest child in 1990. Income-related variables include the number of years earning \$15,000 or more and the total amount of Social Supplemental Income (SSI) received between 1990 and 1994. The public assistance variables include the number of spells of AFDC, average spell length, total months of AFDC receipt converted to years, total months of food stamp receipt converted to years, and the total months of medical assistance receipt converted to years.

The work characteristics are classified by whether the person can exercise her preferences. For instance, the variables about which a former recipient has some choice include number of quarters worked with main employer, total number of quarters worked, the number of employers per year, having the same "good" employer, and industry. The variables that are not necessarily within the worker's control are size of employer, proportion of employees that were AFDC recipients, the number of years with a high-paying employer, employee turnover rate, and the geographic location of the employer.

As it turns out, most of the key variables associated with higher earnings are work-related. These are described in Table 16. (Details on all the variables used are given in Table A1 of the appendix.) In terms of overall impact, personal characteristics account for only 26% of the variance in 1998 earnings among former recipients ($R^2=0.264$). In other words, differences in such factors as level of education, number of children, age of youngest child, and the like account for only 26% of the differences in earnings among the women who worked in 1998. This may surprise some readers, given what we think we know about such factors as the payoffs for greater education.

When work characteristics are added, however, the explained variance jumps to nearly 66% ($R^2=0.655$), indicating that, in the full sample, work characteristics have a larger impact on earnings than personal characteristics. This relationship is reversed for those with a stronger connection to work. Among the women who worked four quarters in 1998, nearly 40% of the variance in earnings is accounted for by personal characteristics ($R^2=0.398$). Adding work characteristics brings the total explained variance to 51% ($R^2=0.509$). One hypothesis about why work characteristics have a smaller impact on explained variance for the women who worked four quarters in 1998 is that since these women have a stronger connection to working, their work characteristics would be more similar than for all

TABLE 16: DEFINITIONS AND MEANS OF KEY VARIABLES USED IN REGRESSIONS (STANDARD DEVIATIONS ARE IN PARENTHESES)

Key Variables	Definitions	Full sample	Four quarters
1998 earnings	Annual earnings from all jobs in 1998	\$12,706.91 (9621.58)	\$16,272.83 (8826.38)
Minority	If recipient is a minority	0.419 (0.493)	0.400 (0.490)
Less than high school, 1990	If recipient has less than a high school education	0.416 (0.493)	0.377 (0.485)
More than high school, 1990	If recipient has education beyond high school	0.158 (0.365)	0.174 (0.379)
Years of \$15,000+, 1990-94	Number of years earned \$15,000 or more from 1990 to 1994	0.532 (1.135)	0.657 (1.238)
Years of \$15,000+, 1995-97	Number of years earned \$15,000 or more from 1995 to 1997	0.805 (1.165)	1.027 (1.239)
Children, 1990	Number of children in 1990	1.864 (1.129)	1.846 (1.109)
AFDC spells	Number of times a woman has been on AFDC	2.572 (1.860)	2.568 (1.894)
Years of food stamps	Total months of food stamp receipt converted to years	3.942 (2.817)	3.683 (2.742)
Main employer quarters	Number of quarters worked for main employer in 1998	3.077 (1.120)	3.602 (0.742)
Total quarters	Total number of quarters worked from 1990 to 1997	23.232 (9.599)	25.965 (8.332)
Number of employers per year	Average number of employers per year from 1990 to 1998	1.605 (0.731)	1.609 (0.742)
Same "good" employer, 1990-98	If recipient was employed with same high-pay employer	0.043 (0.202)	0.053 (0.224)
Firm size	Natural log of employees at the firm	5.682 (2.077)	5.745 (2.052)
High proportion of W2 employees	Former recipients are 5% or more of workforce at the firm	0.675 (0.468)	0.634 (0.482)
Years with high-pay employer	Number of years with a high-paying employer	0.479 (1.076)	0.619 (1.206)
Average or less turnover, 1998	If turnover is average or lower in 1998	0.620 (0.485)	0.589 (0.492)
Most common industry, 1990	If recipient was employed in one of the most common industries in 1990	0.272 (0.445)	0.279 (0.448)
Milwaukee area	If employer is located in Milwaukee area	0.275 (0.447)	0.261 (0.439)
Construction	Construction industry in 1998	0.008 (0.088)	0.007 (0.085)
Manufacturing	Manufacturing industry in 1998	0.168 (0.374)	0.192 (0.394)

TABLE 16 (CONTINUED):

Key Variables	Definitions	Full sample	Four quarters
Transportation or utilities	Transportation and utility industry in 1998	0.031 (0.175)	0.035 (0.184)
Wholesale	Wholesale trade industry in 1998	0.028 (0.165)	0.030 (0.171)
Retail	Retail trade industry in 1998	0.191 (0.393)	0.174 (0.379)
Finance, insurance, real estate	Finance, insurance, and real estate industries in 1998	0.038 (0.192)	0.045 (0.208)

62,000. Therefore, we would expect work characteristics to have lower explanatory power for the variance in earnings. Furthermore, the women who worked four quarters and their earnings are more similar, so the narrower range of outcomes is harder to explain.

Working any time in 1998

We will first discuss the results for the full sample of former recipients who worked in 1998, and then compare it to the sub-sample of women who worked four quarters in 1998. Figure 1 summarizes the percentage change for the key variables using the full sample of women who worked in 1998. (All the results are included in Table A2 of the appendix, including the models using only personal characteristics.)

The variable with the largest impact is the number of quarters worked with a main employer; each additional quarter worked in 1998 increased earnings 106%. This is not surprising, because the main employer is the employer from which the former recipient has the highest wages. On the other hand, having worked an additional quarter from 1990 to 1997 increases earnings only by 8%. Of course, the relationship is not linear; the squared term of total quarters worked is negative and significant, indicating that each additional quarter worked increases earnings, but at a decreasing rate. This means that the impact on earnings is greater during the first few quarters worked and then decreases as total quarters rise.

An additional year earning \$15,000 or more from 1995 to 1997 has the second-largest positive impact on earnings (23%). Earlier success has a much smaller impact, with each additional year of earning \$15,000 or more from 1990 to 1994 increasing earnings in 1998 only by 2%. These percentages put into perspective the impression gained earlier in the analysis of the relative importance of earnings history.

It is not surprising, given the findings we saw earlier, that women who worked in specific higher-paying industries earned more than women who worked in lower-paying industries. The top-paying industries were Construction, with a gain of 22%, Manufacturing, with a gain of 19%, Finance, Insurance, and Real Estate, with a gain of 13%, and Wholesale Trade, with a gain of 10%. The industry that paid the lowest was, of course, Retail, with a penalty of 14%. Along the same lines, women who worked in one of the most common industries (Temporary Help, Health Care, Retail, etc.) in 1990 earned, on average, 3% less than women who did not work in one of these industries in 1990. Thus, starting in Temporary Help, Health Care, or Retail has only a marginal negative impact on earnings over time.

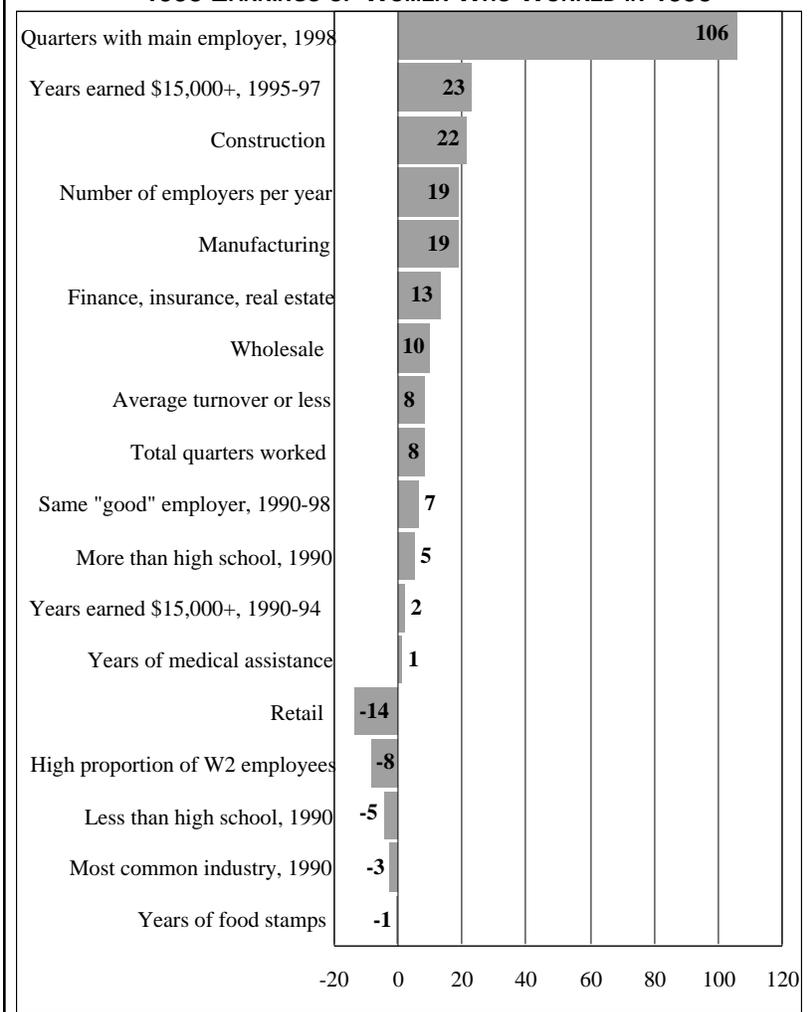
Having more employers per year worked increases earnings by about 19%. Three scenarios fit this result. One is that the women are working concurrently for more than one employer, which would increase total earnings. The alternative explanations are that women are switching employers, trying to find a better job; or that women are starting in temporary help or similar easy-entry industries and are being hired permanently where they were placed. The earnings premium of 7% for staying with the same high-paying employer seems to support the search hypothesis.

As expected, employer stability seems to pay off, but working with many other former recipients does not. Women who worked for a stable employer, one with average or lower turnover rates, realized earnings that were 8% higher than women who worked for employers with higher turnover rates. On the other hand, women who worked

for an employer that employed a higher proportion of former recipients had earnings that were, on average, 8% lower than women who worked in firms that employed a lower proportion of former recipients. We would expect firms that employ a relatively large number of former recipients to have a larger number of lower-paying jobs than other employers, and would then have lower than average pay. We would also expect firms with higher turnover rates to have lower average earnings among employees, since the total payroll would be divided among more workers, leading to a lower average without necessarily lower wages. The best characterization of the employers with greater turnover rates is that, for a variety of reasons, they are less desirable places to work.

Among the personal characteristics, obtaining education beyond high school results in the largest gain, with about a 5% premium. The penalty for having less than a high school education is the same (5%) as the gain for some post high-school education. The smallest positive gain comes from receiving an additional year of Medical Assistance, which increases earnings by 1%. This indicates that Medical Assistance is marginally complementary to working. Oddly, receiving an additional year (12 months) of Food Stamps seemed to hinder earnings by about 1% per year.

FIGURE 1: KEY VARIABLE CONTRIBUTIONS TO PERCENTAGE CHANGE IN 1998 EARNINGS OF WOMEN WHO WORKED IN 1998

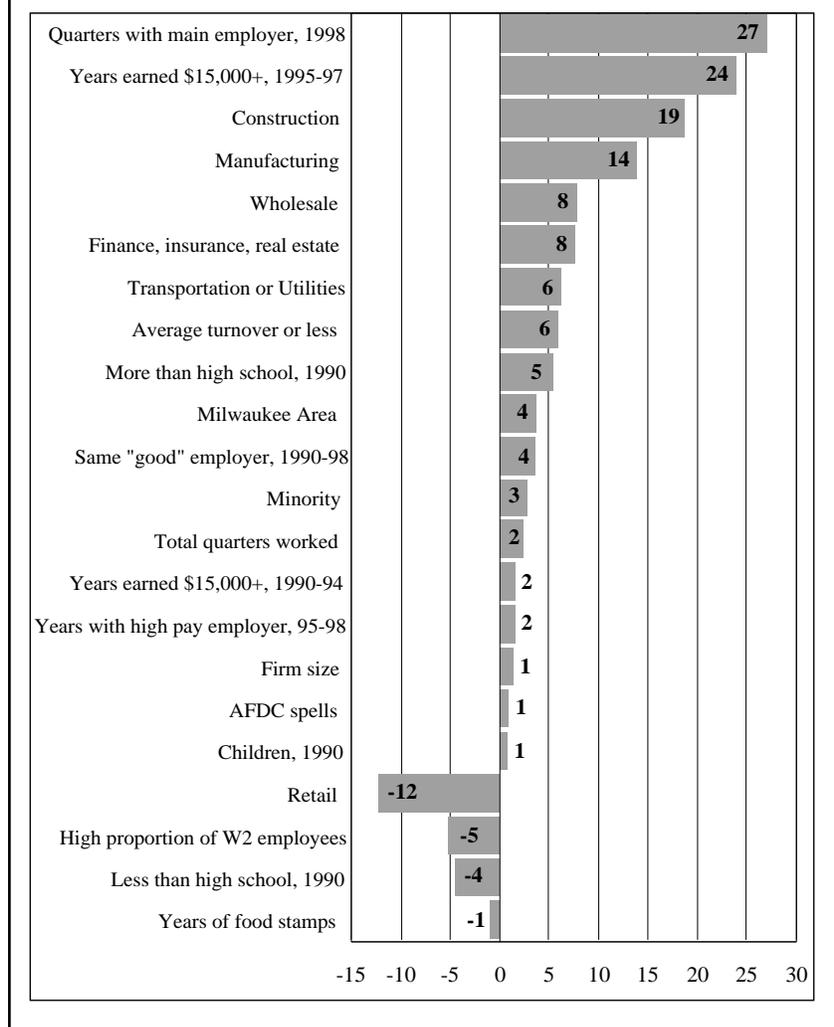


Working four quarters in 1998

Turning our attention to the sub-sample of women who worked four quarters in 1998, we see several marginal differences from the results for the full sample of women working in 1998. For instance, the percentage change each variable contributes to earnings is smaller for most of the variables (see Figure 2). Also, several variables gain significance (Transportation and Utilities industry, employer location, minority status, years with high-paying employer, firm size, AFDC spells, and children in 1990), and three lost significance (number of employers per year, years of Medical Assistance, and most common industry in 1990). These changes are expected, given what the earlier distribution revealed. The number of quarters with a main employer in 1998 remains the largest contributor to higher earnings, at 27% per quarter; however, it is much lower than the 106% per quarter for the full sample.

Many other variables had lower impact than in the full sample. For instance, the advantage for being in the Construction industry decreased from 22% to 19%. Similarly, women in Wholesale Trade found their advantage fell from 10% to 8%. The other industries had a larger decrease in their gains. For example, Manufacturing lost 5 percentage points to 14% and Finance, Insurance, and Real Estate fell 5 percentage points to 8%. The good news is those

FIGURE 2: KEY VARIABLE CONTRIBUTIONS TO PERCENTAGE CHANGE IN 1998 EARNINGS OF WOMEN WHO WORKED IN ALL FOUR QUARTERS IN 1998



high-pay employer was 2%, where it was insignificant in the full sample. However, these women are not penalized as much for working in a firm with a high proportion of former recipients (5% compared to 8%) or for having less than a high school education (4% rather than 5%). They were penalized at the same rate for an additional year of Food Stamp receipt (1%).

The women who worked four quarters had some characteristics that impact their earnings differently as compared with the full sample. Specifically, those who worked in the Milwaukee area had a gain of 4% over the women who worked in other parts of Wisconsin. Also, the women who worked for larger employers had a 1% gain over those who worked for smaller employers. Some of the personal characteristics that differ are: minorities (non-whites) who worked four quarters in 1998 had a 3% gain in earnings over white women who worked four quarters in 1998, women with more spells of AFDC receipt earned 1% more than the women with fewer spells of AFDC, and women with more children in 1990 had higher earnings in 1998 by about 1%.

What we have learned from this exercise is that work, rather than personal characteristics seems to matter more in terms of earning higher incomes. If former recipients can find a good employer and continue to work more quarters with that same employer, the recipients are well on their way to earning enough income to make them self-sufficient. This is supported by the relatively large return for an additional quarter worked with their main employer and by the gain from working consistently with a high-paying employer. The women who already have connected to work in all four quarters can still benefit by sticking with their main employer during the year. Also, former recipients ben-

who worked four quarters in Retail were not penalized as much as those in the full sample. They only had a disadvantage of 12% versus 14%. Also, those who worked in Transportation or Utilities realized gains of 6%, whereas before those industry effects had been insignificant. The reward for working with an employer with average turnover rates or less were lower as well; it decreased to 6% from 8% in the full sample. This is similarly true for each additional quarter worked from 1990 to 1997: the gain is now only 2% per quarter where it was 8%, and for those who worked for the same high-paying employer, 1990-1998, the gain was only 4% where it had been 7% for the full sample.

Several variables had a slightly larger impact on earnings over the full sample results. The gain from having an additional year earning \$15,000 between 1995 and 1997 was virtually the same (24% versus 23%). Early successes remained the same for this sub-sample: that is, earnings were 2% higher for each additional year of earning \$15,000 from 1990 to 1994, regardless of the number of quarters worked in 1998. Having some college in 1990 had virtually the same advantage (5%) for this sub-sample. The premium for an additional year with a

efit from working in Construction, Manufacturing, Finance, Insurance and Real Estate, and Wholesale Trade industries. Those who worked four quarters also benefited by working in Transportation and Utilities. Former recipients want to avoid, if they can, Retail, employers that have higher proportions of former recipients working there, and being in a position to need and receive food stamps.

Although personal characteristics do not seem as important in determining higher earnings, there are still some things that former recipients can do to boost their earning potential. One is to increase their education level. Even completing high school could potentially increase earnings by 5%, and then going beyond high school (but not necessarily earning a degree) would add another 5%. Good news for former recipients: having more spells of AFDC does not impede earnings potential. In the full sample of women who worked in 1998, the number of spells of AFDC receipt had no impact on earnings, yet those women who worked in all four quarters in 1998 experienced a 1% gain per spell of AFDC receipt. This may imply that these women are cycling on and off AFDC while searching for a better job or completing more education. This continuous cycling may actually help earnings, but seemingly not very much.

What lessons do we take forward? One is that recipients help themselves by continuing their education, be persevering at work, and connecting themselves to work in all four quarters per year. They also help themselves greatly by finding jobs with employers who pay well and are located in higher-paying industries.

CONCLUSION

Earning an income that allows a former recipient to be economically independent is not an easy task for most former welfare recipients. It requires a good deal of effort across several years. Personal characteristics, such as race, number and age of children, and the like do not appear to be very important in determining income outcomes. The one exception is education level, which does make a significant difference. Also playing a modest role in outcomes is early employment history.

Other factors are more important. Several of these other factors can be addressed by public policy. The women in question can be further helped in making a successful transition from welfare to economic self-sufficiency. Simple keys include helping these women to work four quarters a year. That is a fundamental difference between many of the women with lower incomes and those with higher incomes. But it is also clear that four quarters is not sufficient for many. Why that is is not entirely evident. But it would seem that since more education is associated with higher earnings, education is one critical component. More education should help women to better connect with “good” employers, to employers in better-paying industries, to employers that hire fewer recipients, to employers that have lower rates of employee turnover. It is not work experience per se that makes the difference. It is a combination of characteristics that helps women find and keep better-paying, more stable jobs. But most important is simply working. Those women with recent work success earned more than those with less recent work. And those women who accepted retail positions, regardless, earned less.

These conclusions are not revolutionary. But they appear to be not well understood. Of the former recipients who worked in 1998, only 71% worked four quarters. So another 29% could be aided by efforts to help them work full years. But as we also know, four quarters is not enough to make women economically self-sufficient. It appears to be a necessary but insufficient step. Other factors stand in the way of earning higher incomes. For example, only 13% worked for employers that paid well, and only 25% worked in the four, better-paying industries. At the same time, some 19% worked in retail, 67% worked for employers who hired a high proportion of former recipients, and only 15% had an education beyond high school. These distributions suggest that more needs to be done to help these women to be in positions to find, take, and hold better-paying jobs.

Many of the work characteristics and most of the personal characteristics analyzed cannot be addressed by public policy. Policy cannot change race or firm size or the number of quarters an employee works for a specific employer. But public policy can help to increase education levels and can help make women more stable and reliable employees. That, in turn, is likely to open more doors in better-paying industries, with better-paying employers. And this, in turn, should help make more of these women more attractive as employees, so that employers will work harder to keep them on the payroll for longer periods. “Work connection” is a two-way street. It requires effort on the part of the employee to become and remain consistently productive. And it requires employers to appreciate these efforts and reward them with the firm’s commitment to employ these individuals as long as possible and to work to upgrade their skills and contributions.

Readily measured personal characteristics do make a difference in earnings outcomes. But recent work experience and the employers for whom these women work make a greater difference. As these women work more quarters and years, their earnings tend to rise. Nevertheless, work experience and employer qualities do not come close to explaining the large differences in earnings among these former recipients: they explain between one half and two thirds of the variance in earnings. More detailed research needs to be undertaken to further clarify what it is that can help a higher proportion of these former recipients achieve economic self-sufficiency in the formal labor market. We have learned that finding the right employer can help a good deal, but even that is not enough. Luck does matter, but that is insufficient. It is critical to better understand more factors that influence earnings so that the reduction in welfare participants is followed by a similar increase in those who are economically self-sufficient.

APPENDIX

Table A1 shows the definitions and means of the variables used in the regression analysis and Table A2 presents the contributions of the variables to the percentage change in 1998 earnings. The conversion of the OLS regression coefficients to the percentage change requires using the following equation: $e - 1$, where e is the coefficient. Only the variables that were significantly different from 0 at the 1%, 5%, or 10% level are reported. The full results of the OLS regressions are available from the authors.

TABLE A1: DEFINITIONS AND MEANS OF VARIABLES USED IN REGRESSION ANALYSIS

Key Variables	Definitions	Full sample	Four quarters
1998 Earnings	Annual earnings from all jobs in 1998	\$12,707 (9621.578)	\$16,273 (8826.381)
Minority	If recipient is a minority	0.42 (0.493)	0.40 (0.490)
Less than high school, 1990	If recipient has less than a high school education	0.42 (0.493)	0.38 (0.485)
More than high school, 1990	If recipient has education beyond high school	0.16 (0.365)	0.17 (0.379)
Years of \$15,000+, 1990-94	Number of years earned \$15,000 or more from 1990 to 1994	0.53 (1.135)	0.66 (1.238)
Years of \$15,000+, 1995-97	Number of years earned \$15,000 or more from 1995 to 1997	0.81 (1.165)	1.03 (1.239)
Total SSI	Total amount of Supplemental Social Insurance Received, 1990 - 1994	\$410 (2970.379)	\$223 (2186.602)
Married, 1990	If recipient was married in 1990	0.11 (0.310)	0.11 (0.310)
Children, 1990	Number of children in 1990	1.86 (1.129)	1.85 (1.109)
Youngest child, 1990	Age of youngest child in 1990	5.19 (5.393)	5.26 (5.338)
AFDC spells	Number of AFDC spells	2.57 (1.860)	2.57 (1.894)
Spell length	Average number of months on each AFDC spell	22.07 (22.304)	20.27 (20.639)
Years of AFDC	Total months of AFDC receipt divided by 12	3.46 (2.450)	3.19 (2.318)
Years of food stamps	Total months of food stamp receipt divided by 12	3.94 (2.817)	3.68 (2.742)
Years of medical assistance	Total months of medical assistance receipt divided by 12	4.67 (2.829)	4.45 (2.779)
Main employer quarters	Number of quarters worked for main employer in 1998	3.08 (1.120)	3.60 (0.742)
Total quarters	Total number of quarters worked from 1990 to 1997	23.23 (9.599)	25.96 (8.332)
Number of employers per year	Average number of employers per year from 1990 to 1998	1.61 (0.731)	1.61 (0.742)
Same "good" employer 1990-98	If recipient was employed with same high-pay employer	0.04 (0.202)	0.05 (0.224)

TABLE A1(CONTINUED): DEFINITIONS AND MEANS OF VARIABLES USED IN REGRESSION ANALYSIS

Key Variables	Definitions	Full sample	Four quarters
Firm size	Natural log of employees at the firm	5.68 (2.077)	5.75 (2.052)
High proportion of W2 employees	Former recipients are 5% or more of workforce at the firm	0.68 (0.468)	0.63 (0.482)
Years with high-pay employer	Number of years with a high-paying employer	0.48 (1.076)	0.62 (1.206)
Average or less turnover 1998	If turnover is average or lower in 1998	0.62 (0.485)	0.59 (0.492)
Most common industry 1990	If recipient was employed in one of the most common industries in 1990	0.27 (0.445)	0.28 (0.448)
Milwaukee area	If employer is located in Milwaukee area	0.28 (0.447)	0.26 (0.439)
Other metro area	If employer is located in other metro area	0.13 (0.341)	0.14 (0.343)
Construction	Construction industry in 1998	0.01 (0.088)	0.01 (0.085)
Manufacturing	Manufacturing industry in 1998	0.17 (0.374)	0.19 (0.394)
Transportation or utilities	Transportation and Utility industry in 1998	0.03 (0.175)	0.04 (0.184)
Wholesale	Wholesale trade industry in 1998	0.03 (0.165)	0.03 (0.171)
Retail	Retail trade industry in 1998	0.19 (0.393)	0.17 (0.379)
Finance, insurance, or real estate	Finance, insurance, and real estate industries in 1998	0.04 (0.192)	0.05 (0.208)
Services	Service industry in 1998	0.49 (0.500)	0.46 (0.499)
Observations		61,090	43,752

TABLE A2: PERCENTAGE CHANGE IN 1998 EARNINGS FROM SELECTED VARIABLES FOR WOMEN WHO WORKED IN 1998

Variables	Full Sample		Employed 4 Qtrs in 1998	
	Personal Chars	All Vars	Personal Chars	All Vars
Minority	ns	ns	5	3
Less than high school, 1990	-16	-5	-7	-4
College, 1990	2	5	5	5
Years earned \$15K+, 90-94	ns	2	2	2
Years earned \$15K+, 95-98	65	23	33	24
Total SSI	0	0	0	0
Children, 1990	ns	ns	1	1
Age of youngest, 1990	ns	0	0	0
AFDC spells	2	ns	1	1
Spell length	0	0	0	0
Years of AFDC	-12	ns	-2	ns
Years of food stamps	-2	-1	-2	-1
Years of medical assistance	10	1	1	ns
Quarters with main employer, 1998		106		27
Total quarters worked		8		2
Quarters squared		0		0
Number of employers per year		19		ns
Same "good" employer, 1990-98		7		4
Firm size		ns		1
High proportion of W2		-8		-5
Years with high-pay employer, 95-98		ns		2
Average turnover or less		8		6
Most common industry, 1990		-3		ns
Milwaukee area		ns		4
Other metro area		ns		ns
Construction, 98		22		19
Manufacturing, 98		19		14
Trans/Utilities, 98		ns		6
Wholesale, 98		10		8
Retail, 98		-14		-12
FIRE, 98		13		8
Services, 98		ns		ns
Constant ¹	8.621	5.225	9.231	8.074
Observations	61,090		43,752	
Firms	14,968		11,931	
F(33, 14967)	620.09	1171.58	871.72	635.19
R-squared	0.264	0.686	0.398	0.510

Note: ns indicates coefficient is not significantly different from 0.

¹The constant was not converted to a percent.

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Our major priority is to increase the accountability of Wisconsin's government. State and local governments must be responsive to the citizenry, both in terms of the programs they devise and the tax money they spend. Accountability should apply in every area to which the state devotes the public's funds.

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