WOMEN, MOTHERS, AND WORK*

James P. Smith

The RAND Corporation

*Research funds from NICHD are gratefully acknowledged.

Throughout all Western countries, revolutionary changes have taken place in women's economic role. Strongly-held stereotypes about where the proper "place" for women was and what jobs were "women's work" have been forced to give way to new demographic and economic realities. Increasing numbers of women--in all marital and family situations--have flocked to the labor market in response to a steadily increasing demand for their services. While this revolution had its origins in economic changes in the job market, its repercussions were widespread, touching on social and psychological relations between the sexes and within the family.

In this paper, I discuss the changing economic situation of women in the United States and draw some parallels between the American experience and that in Japan. I show in Section I that economic forces have largely induced the rising fraction of American women who were in the labor force. These economic forces have eliminated marriage and then childbearing as total barriers to women's paid market work. Because of the interaction of these economic forces with women's schooling, the choice between a career and the home has become a far more difficult one, with many women now casting their votes for the job. In Section II of this paper, I discuss some of the consequences of childbearing on American women's labor market outcomes. The outcomes I highlight are labor supply, asset accumulation and family consumption, child care, and women's wages. In the final section of the paper, I make forecasts about what will happen to American women's wages throughout the remainder of the twentieth century. It turns out that

the labor market future American women face is a far brighter one than most observers predict.

Throughout this paper, the conclusions I draw will largely rely on results from research projects on the status of American women that I and my colleagues at RAND have been involved with for some time. Although the purpose of this paper is not to conduct a comparative study, I will draw parallels I see between the American and Japanese experience. Because there are important cultural and historical differences between the two countries, there is a tendency to emphasize the distinctive nature of the labor force experiences of women. I will argue here that the differences are more apparent than real. There is a great deal to learn on current labor force trends of Japanese women from the twentieth century history of American women.

I. AMERICAN WOMEN AT WORK

One of the most far reaching changes in the American labor market during this century is its growing feminization.[1] The traditional division of labor within the family, with men concentrating on market work and women specializing in household work, has been eroding steadily. For example, at the beginning of this century, fewer than one woman in five was a member of the labor force; by 1981 more than six in 10 were. These trends were even more dramatic among married women. Less than five percent of married American women worked in 1900. Today, a married woman is more likely than not to be in the labor force.

Although most attention has been concentrated on post-War developments in the United States, this process has its antecedents well before World War II. For example, during the first 40 years of this century, participation rates for married women increased fivefold. However, the rate of growth in the female labor force did speed up after the War. Female labor force participation rates increased by 50 percent from 1950 to 1970 and continued to grow at an accelerated pace during the 1970s and early 1980s.

What were the principal determinants of this rapidly changing economic role of American women? A number of RAND research projects have been aimed at uncovering the causes of the long term increase in the fraction of women who work. In these projects, we also identified some important consequences of the increased participation of women in the labor market. This research indicates that economic forces largely

dictated the rising proportions of American women who worked. To understand why the numbers of working women expanded, it is necessary to identify the nature of these economic forces.

The long-term growth in women's market work passed through three distinct stages. In each stage, a strong pre-existing barrier existed that virtually precluded any formal market work by large subgroups of women. As these barriers were overcome, labor force participation for this subclass of women began a process of rapid expansion.

Our research dealt only with the twentieth century. But the work of others indicates that the seeds of this revolution were actually sown in the 19th century. The initial barrier was broken when large numbers of young single women joined the labor market in the 19th century. The expanding manufacturing and factory system thrived on the employment of young single women and children (Goldin and Sokoloff, 1984). Relatively small scale factory production grew rapidly, leading to a substantial improvement in the relative wages of women. According to Goldin-Sokoloff, the relative wages of working women rose from 42 percent of men's in 1832 to almost 58 percent in 1885. As a consequence of this rapid rise in relative wages, labor force participation rates of single women expanded sharply. Starting essentially from zero, single women's participation rates rose to almost forty percent by the end of the 19th century.

The intrinsic nature of this factory work--its long hours, geographic location, and wage depreciation-conflicted strongly with family responsibilities. As a result, the labor market in 1900 was not hospitable to working married women. In that year, marriage virtually

precluded work by white women, with only 2 percent of such women in the labor force. One reason was that the wages married women could earn were far lower than those of single women--30 percent lower, by my estimates (see Smith-Ward, 1985). Their wages were low because in choosing a job consistent with their home and family responsibilities, married women in 1900 paid a considerable price in forgone wages. The majority of married women who did work in 1900 were employed as domestic servants, jobs that offered at least some compatibility with their homemaking responsibilities.

Another important characteristic of the 1900 labor market was that those women who worked were mostly less educated women or those women whose husbands had low incomes or were unemployed. While even contemporary American women are less likely to work as their husbands' income rises, all studies since 1940 show that the likelihood of women working increases with their education. Since this was not the case in 1900, the character of the labor market confronting women must have altered in some fundamental way that reversed the association of work with schooling.

The other deterrents to market work in 1900 were more conventional. Even in 1900, having large families reduced the likelihood of women working. So did living in families that extended across generations (e.g., with grandmothers and older daughters at home). Finally, women who lived on farms were less likely to be members of the paid labor force, and in 1900 more than one-third of women lived on farms.

The second major historical development was the elimination of marriage as a total barrier to women working. This 1900 labor market, which proved to be so inimical to married women's work, changed significantly in succeeding decades. Our analysis points to several important structural changes in the labor market that women faced during this century. The most important was a sharp increase in women's wages between 1900 and 1920. Across these years, women's wages increased 16 percent faster than wages of men. At the same time, the 30 percent wage penalty for married women was gradually eliminated.

The catalyst for the improving wages of married women was the emergence of a large clerical sector. In the first two decades of this century, clerical jobs went from a relatively minor part of the female work force to one employing more than one-third of all new female workers. The clerical sector opened up a whole new set of jobs that lessened the conflict between work and marriage. As we said above, previously domestic work was the only realistic option. The advantage of the new clerical sector was that skills did not depreciate significantly during the long absences of married women when their children were young. For example, the now familiar labor market reentry of married women after their childbearing began was primarily into clerical jobs.

Other factors also spurred the long-term increase in the number of women working. Coincident with the time period of the most rapid increase in female employment was a significant rise in school completion among women, largely due to a sharp rise in their high school

attendance. The emerging clerical sector reversed the previous negative association of work and education. Women's schooling (particularly a high school degree), proved to be very valuable in clerical work. As a result, the propensity for women to work was now positively related to their schooling.

This reversal in the correlation of women's schooling and work would have profound consequences. Previously, work by women was associated with low status, almost an embarrassment to the traditional male role of provider. However, as the association of women's education and work strengthened, the notion of women as only secondary workers weakened and the idea of an independent woman's career grew.

Our research also identified three demographic forces that contributed to the long-term growth in the female labor market: the increasing nuclearization of the American family, the urbanization of its population, and the long-term decline in fertility. In 1900, many American families were extended across generations, with grandmothers and older daughters living in the same households with mothers. In terms of the range of productive activities taking place, these homes often resembled small cottage firms. As families became more nuclear during this century, the labor available for such work diminished and many of those activities shifted out of the home.

Secondly, many women in 1900 lived on farms and many others resided in rural areas. Although these women often performed arduous tasks and worked long hours on the family farm, their work was so tied up with their homemaking duties that it was often impossible to distinguish home tasks from market work. Because of this, such women were not counted as

members of the paid labor force. As a result, the decline of the family farm was an important contributor to the growth in the female labor force.

With the elimination of marriage as a total barrier to women's market work, the last remaining obstacle was motherhood. Even when they worked, married women timed their participation so that it did not include the years when they were mothers of young children. In 1940, less than 6 percent of women with children under 6 years old were in the labor force. This concentration of market work before the birth of the youngest child and until after the youngest child was in school gave rise to the familiar double peaked life-cycle labor force participation for women.

During the last forty years, this final barrier to women's work fell victim to the powerful historical and economic forces pulling women into the labor market. To illustrate, Figure 1 plots women's labor force participation rates starting in 1940. For comparative purposes, this chart plots rates for all women, all married women, and mothers with children under 6 years old. In all three samples, the fraction of women working rose sharply. However, the most rapid increases occurred among mothers with young children. As a result, the disparities in aggregate participation levels when we stratify women by marriage or motherhood have almost been eliminated by 1984. In 1940, participation rates of married women were half as large as for all women. The rates for mothers of young children were even lower, one-quarter of the "all women" proportions. By 1984, however, there was essential parity among these three groups.

Figure 2 demonstrates that these spectacular increases in labor market participation among mothers also took place among mothers of toddlers. Participation rates for women with children under three have also risen rapidly. The final point to note is the sharp acceleration during the last 15 years in the increasing numbers of American mothers of young children who work. Since 1970, it is the mothers of young children who have spearheaded the increasing numbers of American women at work.

A complex set of factors lead to the elimination of motherhood as the final barrier to women's labor market work. Declining family sizes and an increase in life expectancy confronted women for the first time with a new demographic reality--an increasingly longer part of their lifespans after their youngest child entered school. Work during those years (as well as earlier in the life cycle in anticipation of them) became a sound economic decision for many women. As women's wages continued to rise at a more rapid rate than male wages, the choice between staying on the job and returning to the household increasingly tilted in favor of the job. Reinforcing that decision were the low birth rates of the women of the baby boom cohorts during the 1970s. The final element of the story is that the bulk of the expansion of labor force participation during the 1970s took place among more educated women. This development is illustrated in Table 1. Especially among younger women, the 1970s were characterized by a spectacular rise in employment rates among college educated women. Between 1970 and 1983, labor force participation rates jumped 23 percentage points among women

25-34 years old with a college degree. The cost for these women of dropping out of the labor market was quite high. As a result, many college educated women in the United States now have careers that resemble those of contemporary men more than those of the generations of women that proceeded them.

SUMMARY

The most important determinant of the growth in women's work during this century was the increase in their wages. The rapid growth in the American economy throughout this century increased the demand for women workers. American economic expansion produced a steady century long growth in women's wages that exceeded male wage growth. In addition to this steady wage growth, there were two episodes of radical restructuring of the American workforce that produced sharp and sudden acceleration in women's wages. The first was the onset of the factory system in manufacturing in the 19th century. This expanding factory system led to a sharp rise in the wages of single women, driving unprecedented numbers of young unmarried American women into the labor force. The second major restructuring event took place during the first two decades of this century. The rapid growth of clerical jobs opened up the prospect of paid market work for married women. Because of this growth of clerical jobs relative to male wages, women's wages increased rather sharply--16 percent--from 1890 to 1920. These relative wage increases were particularly large among married women. Wage progress was less explosive but continued at a steady pace after 1920. Between 1920 and 1980, the wages of women increased 20 percent faster than the wages of men.

These higher women's wages encouraged work for two reasons. The rewards from work are greater when women earn more and higher women's wages encourage smaller families. Our estimates indicate that an increase in women's wages decreases the number of children she has. This decrease in family size also leads to more work by women.

PARALLELS TO JAPAN

Does my description of the economic forces that lead to the entry of large numbers of American women into the workforce carry any lessons for understanding the Japanese experience? Because there are some surface differences between the two countries, an initial response may well be in the negative. But I believe a more careful inspection demonstrates real parallels.

To make these parallels, one must keep in mind the distinction between chronological time and economic time. Because post-war economic growth rates in Japan were so large, Japan has essentially compressed a century long U.S. experience into 30 years. Since 1940, personal income per capita grew 2.3 percent per year in the United States compared to about 8 percent per year in Japan.

Since the War, in terms of economic time, Japan has moved 3 1/2 years for every year in the United States. If we convert economic time into chronological time, the appropriate comparison of changes in Japanese women's labor market between 1950 and 1986 would be changes in the U.S. labor market between 1860 and today. The changes in the Japanese economy have been so profound and rapid that one sees the

contemporary coexistence of economic systems in Japan that the slower American economic growth placed into separate chronological eras.

The most obvious surface difference between the United States and Japan is that over the last few decades female labor force participation rates have actually been declining in Japan. For example, 54.5 percent of Japanese women were in the labor force in 1960 compared to only 49 percent in 1984.[2] Similarly, Bowman and Osawa state that total participation rates of married Japanese women fell from 49 to 46 percent between 1950 and 1980.[3] Participation rates of Japanese women did not begin to rise until 1975. This pattern obviously stands in sharp contrast to the U.S. experience.

The resolution of the conflict lies in the coexistence of two disparate series in Japan. In Table 2, I list the proportion of Japanese women in the labor force in three categories: self-employed, family workers, and paid employees. As pointed out by a number of Japanese scholars (see for example Shimada-Higuchi, 1985), the relatively stable total female employment rates hides two very different trends.[4] The proportion of women who were family workers, particularly in agriculture, fell sharply between 1960 and 1984 as the Japanese economy was transformed from primarily agriculture based to one oriented around the manufacturing and service sectors. The paid employees series is, however, much closer to U.S. trends. Between 1960 and 1984, the percentage of women in paid jobs in the modern sector rose by 10 percentage points. Bowman-Osawa report a similar rise in the fraction of Japanese married women in paid employee jobs.

Post-1960 Japan represents a process that took place over a century in the United States. As economic development proceeded, American women first moved off the family farm and into more urban settings. However, because of reporting conventions by the U.S. Census Bureau, American women who worked on their family farms were not even reported as members of the labor force. Consequently, the American labor force series captures only the growing numbers of women in paid jobs. If we counted American women working on the family farm as members of the labor force, as the Japanese do, two divergent series in the United States would also emerge. The first series would capture the falling fraction of American women working in family farm work. Subsequently, we would observe a rising proportion of women in paid modern sector work. With the spectacular rates of economic growth of women, these two developments which were largely sequential in the United States, occurred simultaneously in Japan.

To make meaningful comparisons between the United States and Japan, we should be contrasting the contemporary Japanese experience with that of the United States in earlier decades of this century. For example, Bowman and Osawa (1985) report that labor force participation of Japanese married women rose from 8.8 percent in 1960 to 26.1 percent in 1980. These rates are quite comparable to the rise among American married women from 5.6 percent in 1900 to 27.7 percent in 1955. If the past is truly prologue, during the next 20 years, Japanese women will be replicating the U.S. experience from 1955 to the year 2000. By the year 2000, Japanese and American women could very well have similar labor force lives.

The coexistence at a point in time of these Japanese diverse trends confounds many comparisons to the United States. For example, the positive association of women's education and their labor force participation emerged in the course of American economic development. In the first few decades of this century, it was more likely that less educated American women were in paid jobs. These chronologically distinct U.S. events once again exist once again simultaneously in Japan. Osawa (1985) reports that there is a negative association between education and female employment among older Japanese women. However, a positive correlation has emerged among younger Japanese women. The aggregate relationship which combines these two age groups shows little relation between Japanese women's education and their propensity to work. As Osawa effectively points out, many of these young highly educated Japanese married women have moved into the rapidly growing Japanese clerical sector--similar to the U.S. experience decades earlier.

II. THE CONSEQUENCES OF CHILDBEARING ON WOMEN'S LABOR MARKET OUTCOMES

In Section 1, I summarized some recent RAND research that explored the reasons why the numbers of women in the labor market has been rising at such a spectacular rate. In our research, we also examined the other side of this coin--the effect of children on a variety of economic aspects of a woman's and her family's well-being. The four dimensions that I will review here include the effect of childbearing on women's labor supply, a family's ability to save and accumulate assets, the care arrangements that children require, and a mother's ability to command a high wage in the labor market. In each of these four dimensions, our research indicates that children are a fundamental determinant of the economic reality that women must face.

Women's Labor Supply

The most well established labor market consequence of children is the reduction in their mother's labor market work. The constraints that young children place on American mothers' ability to work have been diminished but not eliminated in recent decades. Some recent trends are documented in Table 3, which lists labor force participation rates of mothers, evaluated at the age of their youngest child. These rates are presented for the years 1977 and 1982 so that some sense of recent secular changes can emerge.

As an indication that motherhood still matters, the lowest labor force participation rates in 1982 were among mothers with children less than a year old. Only forty-one percent of such mothers worked in 1982. Table 3 shows that the fraction of mothers who worked increases rapidly as the child ages. By the time the youngest child is four years old, more than half of American mothers are in the labor force.

The final column in Table 3 calculates the changing proportion of working women in the five years between 1977 and 1982. At each child's age, a much larger proportion of women were working by 1982 than five years earlier. However, the size of the increase is systematically related to the age of youngest child. The largest change occurred among mothers of one-year-olds; a proportion that grew by 10.5 percentage points. The secular growth in participation rates declined steadily with mothers of four year olds registering the smallest increment of 4.3 percentage points.

There clearly has been an explosion in the last decade in the number of American working women with young children. Moreover, the biggest changes in the proportion of mothers of young women working has taken place among more educated women, particularly those with a college degree.

The key to understanding the labor supply adjustments of mothers centers on the period immediately surrounding pregnancy. In addition to the physical demands of the pregnancy itself, young children make particularly time-intensive demands on their parents. In another RAND project, Waite, Haggstrom and Kanouse (1985) intensively studied the

timing of the employment activities for a sample of 2800 young ever-married women between the years 1972 and 1979.[5] The quality of their data allowed them to place in time the exact months of pregnancy and labor force activities.

The key result from the Waite, et al. study is illustrated in Figure 3. The figure depicts the proportion of mothers employed from the year before the birth of a child until 24 months after the birth. The employment of mothers is plotted with the solid line. For comparative purposes, they also plot the employment rates these women could expect if they had remained childless.

The labor supply adjustment induced by motherhood apparently begins at the point of conception. Before pregnancy began, approximately three-quarters of these perspective mothers were employed. Only half of the mothers-to-be remained in the labor force six months into the pregnancy. Not surprisingly, the lowest employment rates take place in the month of birth, but one in five women still continue to work during this month. After the birth, the process of returning to work begins immediately. A large number of women return to their jobs right away. Within three months of the birth, an additional 15 percent of mothers have returned to work. Two years after the birth, approximately 45 percent of these new mothers were workers. This proportion is double the trough rate during the birth month, but half the proportion that would exist if they had remained childless.

The working habits of American fathers are not immune to the influence of children. The top two lines in Figure 3 demonstrate that fathers work more than other men. This greater work effort of fathers,

however, is not affected by the timing of the birth. Fathers worked more throughout the entire time span contained in Figure 3.

Although many American women return to their jobs soon after the birth of their child, many do so in a limited capacity. This point is illustrated in Waite, et al.'s Figure 4, which depicts the proportion of working mothers holding full-time jobs. It may come as a surprise that right to the month of birth, these women who remain in the labor force continue to work full time. After birth, however, mothers take a different course compared to the pre-pregnancy period, as much larger proportion of working mothers now work in part-time jobs.

The Waite et al. study investigated the timing of participation rates of mothers during the early 1970s. If their study was replicated for the 1980s, we would most likely find that the fall in participation around the birth of a child would be much smaller and the return to work after the birth more common and much quicker.

Savings, Assets and Family Consumption

The next consequence examined in our RAND research was the impact of children on a family's ability to accumulate assets (see Smith-Ward, 1980). In addition to their effect on a woman's labor supply, the presence of children in the households requires a complex set of financial adjustments by the family. Out of pocket expenses may rise and we all know what profound effects children may have on what kinds of goods we may buy and when and where we consume them. The number of children a couple has, the average spacing between siblings, and the timing of births within a marriage have all been alleged to have important impacts on family savings.

To understand the ultimate effect of children on a family's financial well being, we traced the principal channels through which the impact of children might occur. The key channels we identified were (1) changes in husbands' and especially wives' hours of work affecting family income, and (2) changes in household consumption.

Children have complex effects on total family consumption. Since children consume, it is traditionally assumed that they must of necessity cause the household to consume more. Obviously the needs of the children must be met and the demand for commodities complementary with children will increase. But parents' consumption may also change as the wife spends more time at home. This increase in non-market time by women will typically allow the family to substitute her time for goods previously purchased in the marketplace. To give just two examples, the amount the family spends on living space and household durable goods probably increases when children are present, while restaurant meals, vacations, and other forms of market entertainment will probably fall. If the wife can now substitute her time for many previously purchased goods, total family consumption may fall when children are present.

In our research, we found the effect of children on family's financial well-being depended critically on two factors. The first was how old the youngest child was. The second was how many years the couple had been married. For young children, i.e., those under five years old, length of marriage mattered a lot. Because of this, I summarize our results for young children in Table 4 by listing the

effects of adding a young child to the family at two points in the life cycle of a marriage. The first case captures those families with a child in the first year of marriage, and the second represents the effect of having a child for couples who have been married at least nine years, the "long run" marriage effect. The effect of children when they were over four years old did not vary with marriage duration. Therefore, Table 5 contains a single set of financial adjustments induced by having another child over four years old.

In our work we wanted to trace out all the avenues through which a family makes its financial adjustments to having a child. With this in mind, Tables 4 and 5 show us the changes in a family's net worth as well as the separate impact of children on financial assets and durable assets. These savings effects are then broken down into their separate consumption and income components.

First, let us consider older children. The number of children over four years old has a negligible effect on total family savings. First, the reduction in wives' working hours is one-fifth as large as that due to pre-school children. This smaller hours decline translates into a considerably smaller reduction in female earnings--a drop of $163 compared to $815 for young children. Finally, even this effect on savings is partly offset by a $106 reduction in family consumption. Thus, families with older children compensate for the loss in mother's income by using the added mother's time at home to reduce the purchases of some market goods.

Although the number of older children has a minor influence on total savings, they do alter the composition of savings. Older children significantly increase durable assets and reduce assets in financial form. This recomposition is not surprising if children increase the demand for housing and other durable goods.

Now let's turn to the effect of young children. Young children present early in marriage have a much more pronounced effect on family savings. For example, we found that a new child in the first year of marriage reduces savings by $1,181. This lower savings is reflected entirely in a decline in financial assets. Since children require household durable goods, young families are forced to run down their liquid assets and increase their borrowings. However, this straightforward effect belies an entire set of independent effects which can be traced through the income and consumption equations. On the income side, it is well established that young children are a strong deterrent to market work of women. This reduction in working hours is significantly larger earlier in marriage. This larger hours reduction due to the presence of a child results in a larger decline in female earnings among young married couples. As a partial offset to lower female earnings, family consumption declines by $414. Family consumption declines because the increased female home time is substituted for some goods normally purchased in the market.

These large effects of young children decay with marriage duration until, by the ninth year of marriage, young children actually have a slight positive effect on savings. This reversal in the effect of young

children is caused by a smaller decline in female earnings and working hours due to the presence of young children, and a larger reduction in total family consumption.

Why does total family consumption decline so much more later in marriage when a couple has a baby. By the time a family has been married for nine years, the family probably already owns a house and other consumer durable goods that children require. In older marriages, the birth of a child affects total family consumption mainly through reducing the consumption of market goods through which the wife can substitute her time.

Child Care

An important recent development has been the rapidly expanding proportion of mothers of very young children who are in the labor force. However, children remain relentless demanders of time and attention. With their expanding job responsibilities, however, American mothers are finding alternative ways to care for their children. Because of its emerging importance, this issue is the topic of a current project by two RAND researchers, Arleen Leibowitz and Linda Waite.

American families with working mothers are coping with child care in a variety of ways with no one solution dominating the alternatives. To illustrate this variety and the way it has been changing over the last few decades, Table 6 lists the distribution of type of child care chosen for selected years between 1958 and 1982. Because the type of child care sought depends critically on whether the mother is working full time or not, all statistics in Table 6 are stratified by the full-

time/part-time status of the mothers. Consider, first, the type of care utilized by mothers in the most recent year available, 1982. Among women employed full time, 27 percent of mothers provide care for their children inside the home. In most cases, this in-home care is now provided by a relative. With the decline in domestic service as an important occupation for American women, it is now quite rare to have a non-relative come into the home to care for children.

Table 6 also points to a number of important long term changes over time in child care arrangements. I highlight the two most important trends in Tables 7 and 8. These tables list the proportion of fully employed women whose children receive care outside the home and who are cared for by non-relatives.

In the last few decades, child care in the home declined sharply. Only one-third of children received child care outside the home in 1958. By 1982, this proportion had doubled with two out of three children receiving care outside the parent's home. Alongside this shift to care outside the home, the percent of children in the care of non-relatives also expanded rapidly. In 1958, two-thirds of children of fully employed mothers were still cared for by some relative. By 1982, children were about equally likely to be cared for by a non-relative. Only part of this movement to non-home care by a non-relative reflects the growth of formal day care centers. Group day care has expanded, almost doubling its market share in the last 20 years. However, it still remains very much a minority choice with only one in five fully employed mothers selecting it as an option.

WAGES

The strong negative effect of young children on a woman's current hours of labor market work has long run effects that are often overlooked. Skills typically increase with added years on the job and many women forego developing these skills by leaving the labor market when their children are born. In addition, the critical period of intense investments in worker skills often conflicts with a woman's normal childbearing years. In another RAND project, Cogan-Berger (1978), estimated the long run impact children had on mothers' ability to command wages in the labor market.

The negative effects of children on American women's ability to earn turns out to be large. These effects were calculated by first estimating the cumulative impact of children on women's lifetime hours worked. In Figure 5, reproduced from Cogan and Berger, I present life-cycle reductions in women's work time for three typical families--those with one, two, and three children respectively. In this graph the vertical axis represents the percentage reduction in work time compared to work time for a woman without children. For each family size, the deterrent effects on women's labor market work are largest during the child's birth year. The life cycle reduction in hours worked becomes smaller as the child ages through his pre-school years. Women's hours worked continue to rise, levelling off to their normal level without children as children finish their schooling. The birth of a second child starts the process off anew, leading to additional reductions in mother's work time over their life cycle.

For all three families, the lifetime reduction in work time was substantial, especially during the ages when the children were young. In fact, working hours of these mothers did not approach the levels of a childless woman until the women were in their thirties. American women lost a substantial amount of valuable worktime during the twenties because they decided to become mothers. The loss of this worktime is especially critical, because it took place precisely at the time in the life cycle that men were investing heavily in getting ahead in their careers.

The number of children a women rears then has an important deterrent effect on her accumulated work experience. To quote Cogan-Berger, "a woman who has one child will work, on average, about 2.5 years less over her lifetime than a woman with no children. A second child results in an additional two years withdrawn from the labor force, and a third one additional year." If we take as our prototype American family one with two children, the average mother will have lost 4.5 critical years of labor market work.

Through its effect on accumulated work experience, child rearing has a substantial impact on women's wages. Cogan-Berger illustrate the impact in Figure 6, which plots the typical wage profile of women with alternative numbers of children in the family. Because they deter lifetime work, each additional child lowers a mother's lifecycle wage profile. For example, at age 30 a woman with no children would earn a 30 percent higher wage than a woman who had three children. After the childbearing years, the cost of children in terms of lower women's wages

becomes smaller, averaging about thirteen percent. Motherhood has many benefits, but the Cogan-Berger study indicates that it has real costs in the limit it places on the ability of women to earn high wages.

III. THE FUTURE WAGE PROSPECTS OF AMERICAN WOMEN

Fortunately, the large wage penalties women pay for having children has its optimistic side. In the previous section, we have seen that labor force participation rates have risen most rapidly among women with young children. As women's education levels have risen and as their families have become smaller, the amount of time they have spent out of the labor force has been diminishing. The income cost to many educated women from dropping out of the labor force has simply become prohibitive. We know that the amount of work experience that American women will forego in the future will be much less than in the past. What, then, will the future of women's wages be in the United States?

To answer this question, it is first necessary to understand the past path of the sex wage gap in America. In the United States, women's wages stayed at 60 percent of those of males for decades--according to virtually all government sources. The constant wage gap was seen as confirmation of a very pessimistic view of the labor market realities that American women must face. Many economists argued that the tremendous increases in the number of women who work must have translated into more market skills for women. And as the job skills of women increased, their wages should have been rising and much faster than those of men. However, the constant wage gap of 60 percent suggests that this did not happen.

In the face of this apparently unchanging wage gap, it is also easy to see why many people are so pessimistic about the future of American women's wages. A recent study I did at RAND (see Smith-Ward, 1985) provides an antidote to this pessimism. Let me forego the technical details and tell you about the reasons for our conclusions about trends in women's wages. I will divide them into three parts--those that concern the past, the future, and the present.

To understand my results for the past, it is important to distinguish between the female work force and the female population. The reason is that as the fraction of women working increases from 20 percent levels that prevailed in 1920 to those over 60 percent that exist today, more of the female population is absorbed in the labor force and the base on which the average wage of the workforce is calculated changes.

The fairly stagnant wage ratio for women in the workforce would surely be bad news if the experience and education of working women had been increasing all that time relative to the experience and education of working men. In fact, they have not. The assumption that working women have become increasingly skilled relative to men in recent decades is a false one. Compared to men, in the last 30 years working women, on average, lost a year of education and gained only half a year of market experience.

How could this be? The answer is simple. New entrants and reentrants into the female labor force have predominantly been women with relatively little labor market experience and lower than average

education. These relatively low skill, low wage entrants have tended to hold down the average wage of all working women, disguising what would otherwise have been an upward trend in women's wages.

In Table 9, I list years of labor force experience for the female workforce as well as the female population. The increasing labor force participation rates brought into the labor force women with very little prior labor force experience. As a result, the average amount of labor force experience of a 40 year old working woman in 1980 was less than that of a 40 year old working woman in 1930.

Thus, it is no surprise that the wages of working women have remained constant relative to men. Because of these compositional changes, the stability in relative wages by sex among workers is consistent with the stability in their skills. In short, nothing new has happened to narrow the wage gap between men and women "workers" over the last fifty years.

But the story is quite different when we monitor trends for all women. As more women have entered the labor force, experience levels for the entire population of women taken together--working and nonworking-have been increasing. For example, the average 40-year-old woman in 1980 had five more years work experience than her counterpart in 1930. The impression people have of a progressively more skilled female population is thus a correct one. However, the skills of the entire population of women should not be compared with the wages of the female workforce; they should be compared with the wages of the entire population of women. This we did.

We estimated that in 1920 the average earnings of all women were 43 percent of those of all men; in 1950, 48 percent; in 1980, 53 percent. Thus, across the sixty years between 1920 and 1980, women's wages grew 20 percent faster than men's wages.

Therefore, the correct historical record shows that there has been considerable improvement in the economic status of American women. Moreover, this improvement was due largely to higher levels of the market skills women brought with them to the labor market.

FEMINIZATION OF POVERTY

Individual earnings alone tell us little about how well off people are. Because incomes are typically pooled among family members to set family consumption levels, all members tend to share a common economic fortune. For example, in intact families poverty status is definitionally sex neutral because all family members are assigned as a group to their income class. Table 10 summarizes trends across the last 40 years in the fraction of adults of either sex who were poor. To highlight the feminization of poverty, this table also lists the percent of the adult poor who were women.

In 1940, poverty was indeed sex neutral. Over 90 percent of all 1940 families included a husband and wife. As a result, the margin for any sex differential in poverty rates was very small. Unless resources were very unequally distributed within families, Table 10 indicates that men and women in 1940 shared a similar economic lot. This is no longer the case.

Although the feminization of poverty is a real phenomenon, it should not obscure the fact that poverty rates have declined substantially for both sexes. Women's poverty rates were about one in nine in 1980, a three-fold advance across these 40 years. The sustained and rapid growth of the post-1940 American economy carried with it impressive benefits for men and women alike. The timing of these gains and their subsequent slowdown during the 1970s attests to the primacy of economic growth in shaping these trends. Success in reducing poverty was five times larger in the 20 years before 1960 than in the 20 subsequent years.

The second row in Table 10 tracks the growing feminization of poverty, a growth which correlates with the increasing breakup of the two-spouse family. With the rising incidence of unwed parenting and divorce, the fraction of female-headed families rose and did so at an accelerated rate after 1960. By 1980, women headed almost one in seven families, almost 70 percent more than in 1960. This problem reached epidemic proportions among blacks, where now more than four out of every ten families are headed by women.

AFFIRMATIVE ACTION

Given the intentions of affirmative action policy, no assessment of women's labor market gains would be complete without some consideration of its influence on relative wages. Labor market discrimination against women still exists, and laws such as Title 7 of the Civil Rights Act were put in place to combat it. But what role, if any, did affirmative

action play in the changes we have been discussing? While vested interests on both sides of the political spectrum hope for uni-dimensional consequences, as usual, the empirical evidence contains more of a mixed bag.

The key to assessing effects recognizes that not all sectors of the economy will be equally affected. If affirmative action is adequately enforced, women's employment should increase more in firms required to report to the Equal Opportunity Employment Commission (EEOC) than among firms that are not. Since federal contractors have more to lose, the greatest gains should take place among EEOC firms which are federal contractors.

Table 11 summarizes the effects by examining the changing location of women's employment. Among black women, strong positive changes are evident. As this table shows, black women were hired in force by EEOC-covered and federal contractor firms. This shift is even larger when we isolate the high-paying official and managerial positions. Among white women, by far the numerically dominant group, effects are mixed. While there were increasing numbers in the professional and managerial tiers, especially among federal contractor firms, aggregate employment of white women actually moved out of the EEOC-covered sector. Essentially, advances in in the professional ranks in the covered sector were more than offset by a relative reduction of white women employed in clerical jobs. Affirmative action is always a two-edged sword. Firms must be cautious about having "observably overqualified" women in low-paying jobs (e.g., a white, college-educated woman as a secretary).

In sum, these figures indicate the overall impact of affirmative action on the average woman was quite small. However, there were some winners and unfortunately some losers as well. Black women have been the primary beneficiaries, most likely because they allow firms to fill two quotas for the price of one. To a lesser extent, college educated white women gained as firms covered by affirmative action placed women in managerial and professional jobs where they have been previously quite scarce. In contrast, covered firms also responded by reducing their employment of white women in traditionally female occupations, particularly clerical jobs. The net result was a wash with no significant effect on wages for the average working woman.

PARALLELS TO JAPAN

Do these wage trends in the United States have any implications for understanding the post-World War II history of the women's labor market in Japan? On this issue, I believe once again that there exists a great deal of similarity between the two countries. The overall trends in relative women's wages in Japan are more similar to those in the United States than they are to most Western European countries. Compared to men, working women's wages are even lower in Japan than in the United States. (The wage ratio is lower in the United States than in Western Europe.) Wages of Japanese working women are roughly 55 percent of those of Japanese men (Osawa 1986). More important, this wage ratio has stabilized at this level throughout the 1970s and early 1980s.[6] The United States and Japan stand out as two countries in which working women's wages apparently made the least progress compared to men's.

Why has the sexual wage gap stabilized during the last 15 years in spite of the large growth in Japanese women's labor force participation in paid work? In an important recent paper, Osawa (1986) puts forth a compelling explanation. She demonstrates that there are sharp parallels between the U.S. and Japanese experience on the issue of trends in women's wages.

Osawa shows that in order to understand the overall trend it is first necessary to separate the trends in young women's labor market from trends in the labor market of older Japanese women. During the last 15 years, this stable aggregate relative wages of Japanese women hide two divergent series. Wages of younger Japanese women (those under age 30) actually continued to rise during the 1970s while those of older Japanese working women declined relative to men's. For example, Osawa reports that between 1975 and 1985, wages of Japanese women compared to wages of men who were 45-59 years old fell from 54 percent to 46 percent. In contrast, between 1970 and 1980 relative wages of Japanese women 25-29 years old rose from 61 percent to 72 percent.

The explanation Osawa offers for these divergent experiences rests once again on the distinction between the workforce and population. On the education side, there was a rapid general post war increase in education levels of women relative to men in Japan. But those gains were not uniform across age groups. The increases in participation among younger women (largely into clerical jobs) was greater for the more educated leading to a larger increase in the skill of young female workers than of male workers (consistent with the continued rise in

their wages). However, among older Japanese women, increases in labor force participation (into production jobs) came largely from less educated women, making the increase in the education of the female workforce larger than the increase in education of the population of women.

The main emphasis in Osawa's paper, however, is on work experience. Her results are dramatic. Among older women the increases in labor force participation were largely for women with low education and with little prior labor force experience. The consequence was that these compositional changes actually lowered the average amount of work experience of working women in these older age groups. To use the most dramatic case, the actual labor force experience of the workforce of women dropped six years between ages 30-35 (and calendar years 1970-1975) for the 1940 birth cohort. Osawa estimates that the typical working woman had 12 years experience in 1970. By 1975, with the influx of so many new women with little experience, the average working woman worked only 6 years. While this is an extreme case, Osawa reports similar stability or declines in the amount of work experience of the typical older Japanese working women.

The situation was very different among younger Japanese women. Osawa reports that the rapid increases in participation increased the average work experience of the female work force and population among younger women. For example, for women born in 1950 there was a 3 year increase in work experience of women in the workforce between 1970 and 1975.

Osawa's work demonstrates that what happened in the United States to artificially hold down the growth in women's wages also operated in Japan. The optimistic side of the study is that as the older Japanese women workers leave the labor force over the next decades, we should also see a rapid rise in Japanese women's wages relative to men's.

CONCLUSIONS

In this paper, I have attempted to describe and interpret some major changes in the American women's labor market. I have argued that sustained economic growth and some structural changes in the U.S. economy produced the rapid rise in the numbers of American women in the labor market. These forces interacted with rising women's education levels to eventually dissipate the barriers that marriage and then motherhood placed on American women entering the labor market. Historically, an important cost of motherhood to women was the reduction in their labor supply which in turn reduced their life time accumulated amounts of labor market experience. These fewer years in the labor market substantially depressed the wages American mothers could earn in the job market.

Rising women's schooling levels and their wages eventually made the real cost of leaving the labor market quite high. In response, many American mothers are increasingly reluctant to leave the job market when they have their children. The consequences of this change are profound. American working women will be achieving far higher levels of work experience than their mothers did. The end result is that during the

next two decades, women's wages will increase much faster than wages of men. My work suggests that half the wage gap between American men and women will be eliminated by the year 2000.

REFERENCES

Bowman, Mary Jean, and Machiko Osawa, "Developmental Perspectives in the Education and Economic Activities of Japanese and American Women," unpublished paper, 1985.

Cogan, John F., and Franklin Berger, *Family Formation, Labor Market Experience, and the Wages of Married Women*, R-2310-NICHD, The RAND Corporation, May 1978.

Goldin, Claudia, and Kenneth Sokoloff, "The Relative Productivity Hypothesis of Industrialization: The American Case, 1820-1850," *Quarterly Journal of Economics*, Vol. 99, No. 3, August 1984.

Japan Institute of Labor, *Problems of Working Women*, Japanese Industrial Relation Series, No. 8, 1986.

Osawa, Machiko, "The Wage Gap in Japan: Changing Patterns of Labor Force Participation, Schooling and Tenure," unpublished paper, 1986.

Shimada, Haruo, and Yoshio Higuchi, "An Analysis of Trends in Female Labor Force Participation in Japan," *Journal of Labor Economics*, Vol. 3, No. 1, January 1985.

Smith, James P., and Michael P. Ward, "Time Series Growth in the Female Labor Force," *Journal of Labor Economics*, Vol. 3, No. 1, January 1985.

Smith, James P., and Michael P. Ward, "Asset Accumulation and Family Size," *Demography*, Vol. 17, No. 3, August 1980.

Smith, James P., and Michael P. Ward, "Women in the Labor Market and the Family," *Journal of Economic Perspectives*, forthcoming 1988.

Waite, Linda J., Gus H. Haggstrom, and David E. Kanouse, "Changes in the Employment Activities of New Parents," *American Sociological Review*, Vol. 50, No. 2, pp. 263-272, April 1985.

FOOTNOTES

[1]This section is based in part on Smith-Ward (1984).

[2]These statistics were contained in *Profiles of Working Women*, Japanese Industrial Relation Series, the Japan Institute of Labor, Figure 3, page 9.

[3]See Bowman-Osawa (1985).

[4]For an excellent analysis, see Shimada-Higuchi (1985), and Bowman-Osawa (1985).

[5]Their analysis was based on the National Longitudinal Study of the Class of 1972.

[6]See "An Analysis of Trends in Female Labor Force Participaion in Japan," by Haruro Shimada and Yoshio Heguchi in *Journal of Labor Economics*, Vol. 3, No. 1, Part 2, January 1985, and "The Wage Gap in Japan: Changing Patterns of Labor Force Participation, Schooling and Tenure," by Machiko Osawa, unpublished paper, March 1986.

Table 1

LABOR FORCE PARTICIPATION BY EDUCATION LEVEL

Year	Years of Schooling		
	9-11	12	16+
	Ages 25-34		
1940	29.6	38.0	57.7
1970	39.2	47.4	58.9
1983	49.1	66.3	82.6
	Ages 35-44		
1940	25.8	31.0	48.6
1970	50.3	51.6	59.4
1983	59.5	70.6	76.5
	Ages 45-54		
1940	22.9	26.6	46.9
1970	51.1	55.9	67.2
1983	53.5	64.0	74.6

SOURCE: See Smith-Ward (1984).

Table 2

LABOR FORCE EMPLOYMENT RATES OF JAPANESE WOMEN

Year	Total	Self-Employed	Family Worker	Paid Employees
1960	53.7	8.5	23.3	21.9
1975	45.5	6.4	11.5	26.8
1984	47.4	6.2	9.6	31.6

Table 3

LABOR FORCE PARTICIPATION RATES OF WOMEN 18-44
BY AGE OF YOUNGEST CHILD

	1982	1977	Changes in Proportion of LFPR Between 1977-1982
Less than 1 year	41.4	31.9	9.5
1 year	47.7	37.2	10.5
2 year	51.0	44.4	6.6
3 year	50.8	44.0	6.8
4 year	54.3	50.0	4.3

Table 4

ESTIMATED EFFECT OF YOUNG CHILDREN ON FAMILY ASSETS, INCOME AND CONSUMPTION

Number of Children Under 5 Years Old	Net Worth	Financial Assets	Durables	Family Consumption	Wife's Hours	Wife's Income
a) First year of marriage	-1181	-1255	74	-414	-534	-1597
b) After nine years of marriage	325	676	-351	-1138	-335	-815

Table 5

ESTIMATED EFFECT OF OLDER CHILDREN ON FAMILY ASSETS, INCOME AND CONSUMPTION

Number of Young Children	Net Worth	Financial Assets	Durables	Family Consumption	Wife's Hours	Wife's Income
Number of Children Age 5 or Older	-21	-286	265	-106	-97	-163

Table 6

Percent Distribution of Principal Type of Child Care Arrangements by Mothers 18 to 44 Years Old for Their Youngest Child Under 5 Years, by Marital and Employment Status: June 1977 and June 1982

Marital status of mother and principal child care arrangement	1982		1977		1965		1958	
	Employed full time	Employed part time	Employed full time	Employed part time	Employed full time	Employed part time	Employed full time	Employed part time
ALL MARITAL STATUSES								
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Care in child's home	27.1	41.2	28.5	41.7	47.2	47.0	56.6	(NA)
By father	10.9	21.3	9.7	22.2	10.3	22.9	14.7	(NA)
By other relative	10.9	13.3	12.7	12.1	18.4	15.6	27.7	(NA)
By nonrelative	5.4	6.6	6.1	7.3	18.5	8.6	14.2	(NA)
Care in another home	46.3	35.7	47.7	30.4	37.3	17.0	27.1	(NA)
By relative	20.8	16.4	21.0	14.1	17.6	9.1	14.5	(NA)
By nonrelative	25.4	19.3	26.7	16.4	19.6	7.9	12.7	(NA)
Group care center	19.9	7.9	14.8	9.2	8.2	2.7	4.5	(NA)
Mother cares for child while working	6.5	15.1	7.5	17.3	6.7	32.3	11.2	(NA)
Other arrangements	0.3	0.1	1.2	0.7	0.7	0.9	0.6	(NA)

Source: U.S. Bureau of the Census, 1982, p. 6; 1983, p. 4.

Table 7

PERCENT OF YOUNG CHILDREN CARE FOR OUTSIDE THE HOME, FOR FULLY EMPLOYED WOMEN

Year	
1982	56.2
1977	62.5
1965	45.5
1958	31.6

Table 8

PERCENT OF CHILDREN RECEIVING CARE
BY NON-RELATIVES

Year	
1982	50.7
1977	47.8
1965	46.3
1958	31.4

Table 9

PROJECTED YEARS OF LABOR MARKET EXPERIENCE

	Age						
Year	20	25	30	35	40	45	50
1910	2.53	5.34					
1920	2.62	5.57	8.74	11.80			
1930	2.34	5.55	8.97	12.04	15.38	18.51	
1940	1.98	5.05	9.54	11.08	13.55	15.85	17.54
1950	2.81	5.87	7.97	10.57	13.99	16.43	19.31
1980	3.00	6.23	9.50	11.70	14.39	16.97	20.64
1990			10.44	15.06	17.24	18.76	22.17
2000					19.63	24.07	26.57
1910	1.73	3.19					
1920	1.81	3.0	4.53	5.31			
1930	1.55	3.57	4.90	5.82	6.65	7.39	
1940	1.25	3.08	4.63	6.11	7.19	7.94	8.59
1950	2.14	4.08	5.04	6.29	8.13	9.87	10.85
1980	2.47	5.27	7.85	9.46	11.40	13.35	15.04
1990			8.66	11.57	14.74	16.23	18.04
2000					15.57	19.16	22.90

Table 10

WOMEN AND POVERTY

	1980	1970	1960	1950	1940
% Who are Poor					
Women	11	11	15	23	34
Men	7	8	13	22	34
% of Poor Who are Women	62	60	55	51	50

Table 11

FRACTION OF EMPLOYMENT IN EEO-1 REPORTING FIRMS*

	1970	1974	1978	1980
White Women				
All EEO-1:				
Officials and managers	30.8	33.9	34.4	32.1
All	50.2	50.2	48.1	46.9
Federal contractors:				
Officials and managers	15.4	19.2	21.8	20.9
All	28.1	28.9	29.4	29.5
Black Women				
All EEO-1:				
Officials and managers	42.5	64.5	78.7	67.8
All	63.5	74.0	71.4	74.9
Federal contractors:				
Officials and managers	22.5	38.2	53.0	45.6
All	34.6	43.6	45.6	48.7

*Derived from EEO-1 reported employment divided by CPS employment in potentially covered industries.

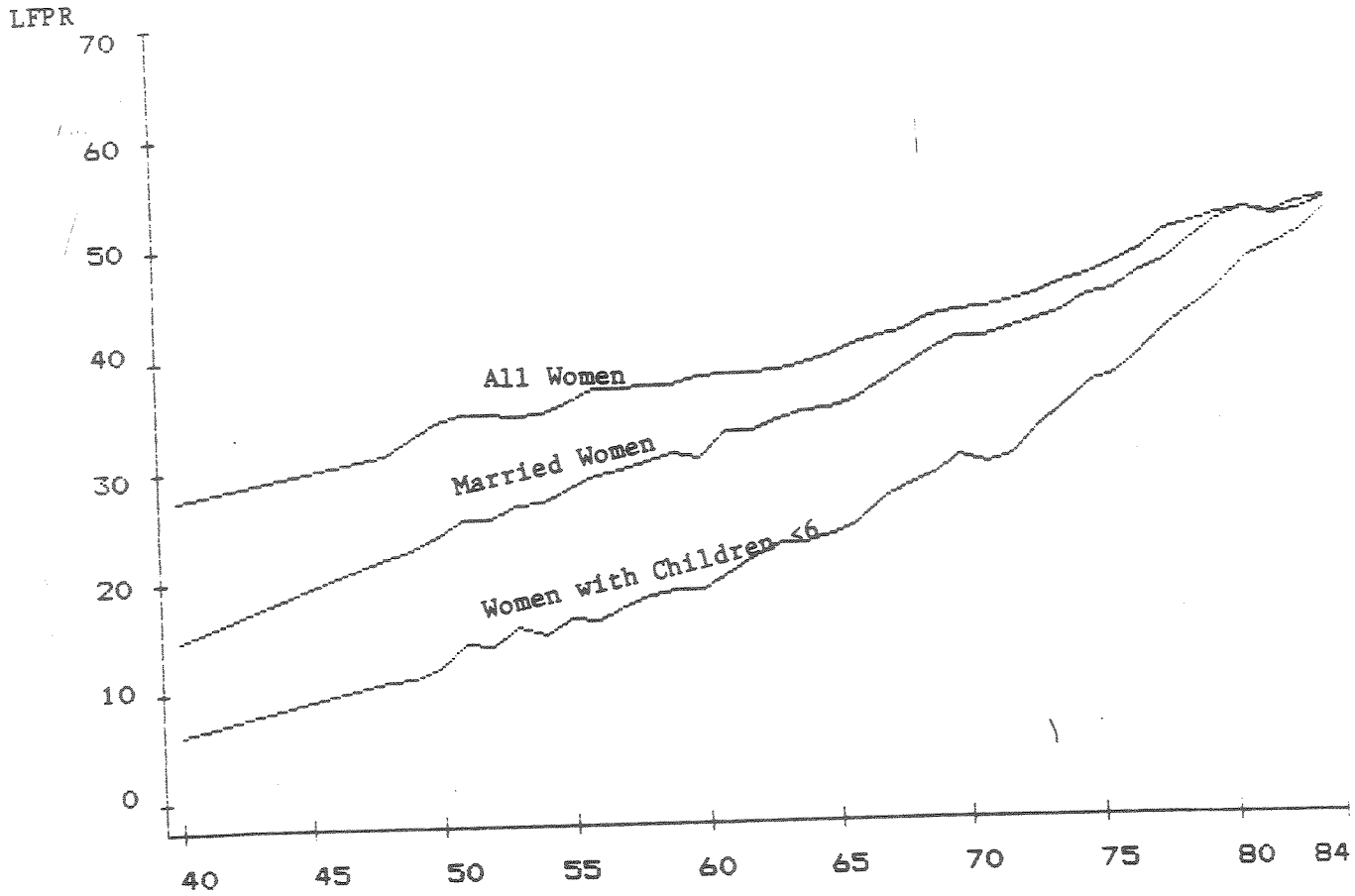

Figure 1: Labor Force Participation Rates by Year

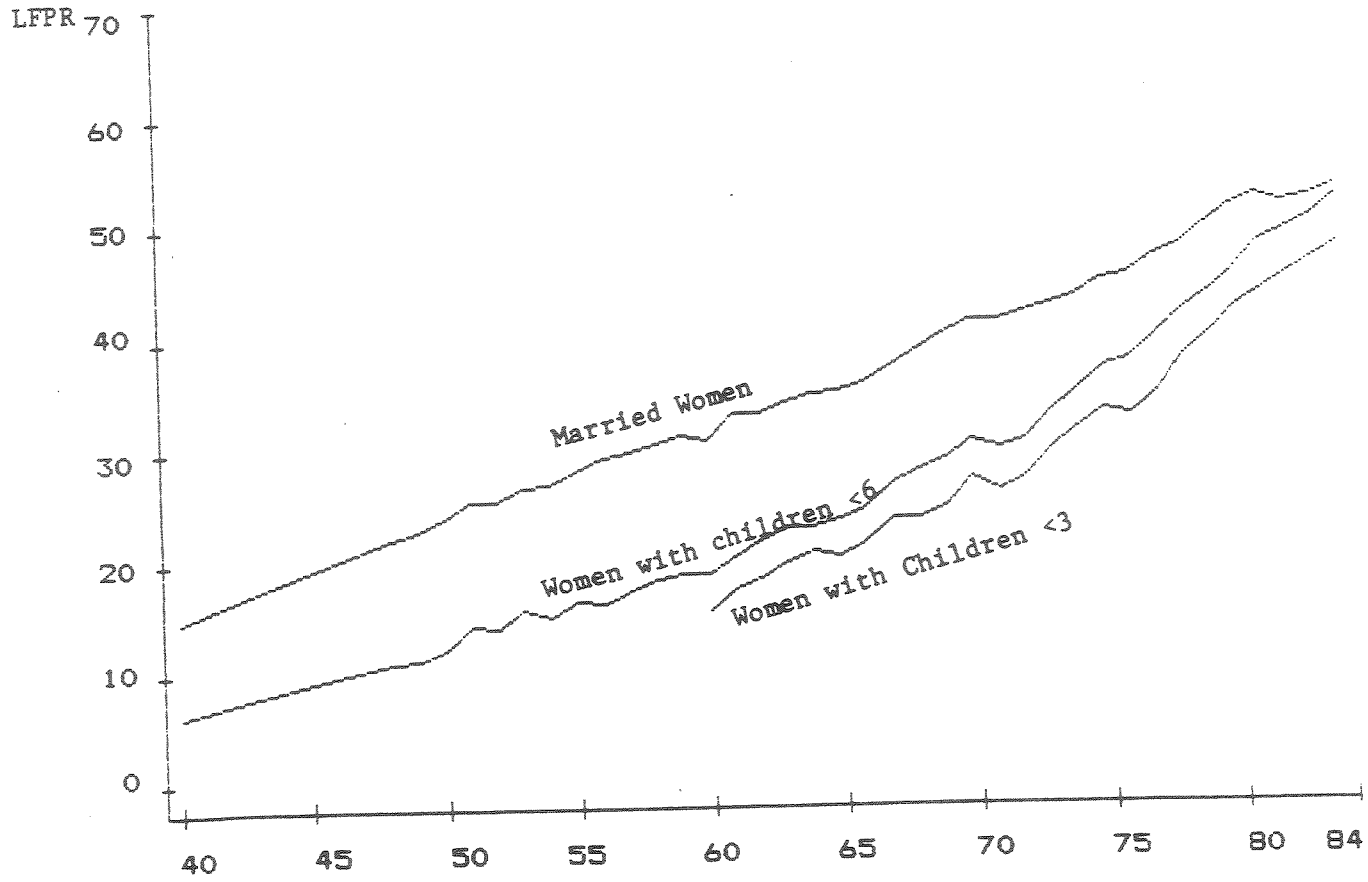

Figure 2: Labor Force Participation Rates by Age of Children

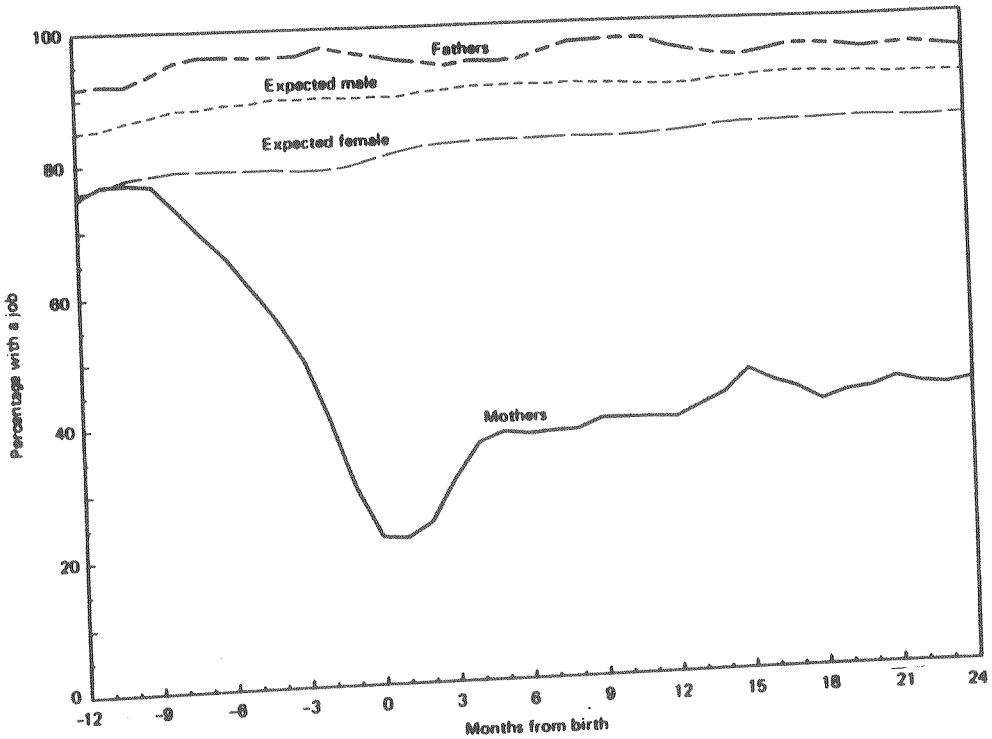

Fig. 3 —Proportion employed

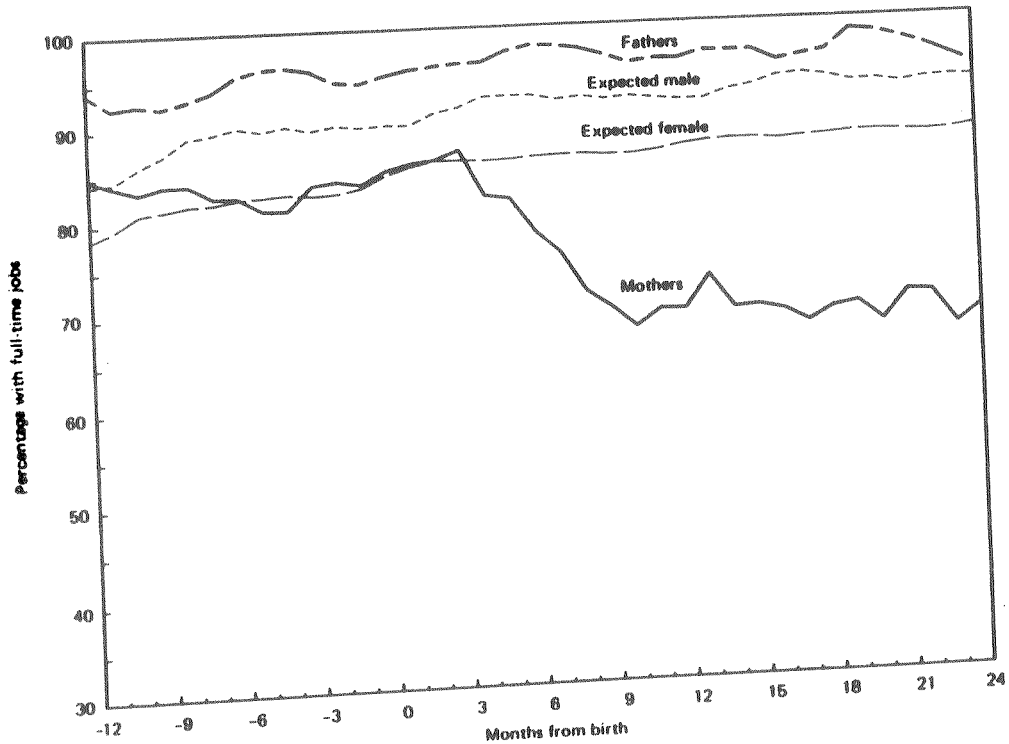

Fig. 4 —Proportion of workers holding a full-time job

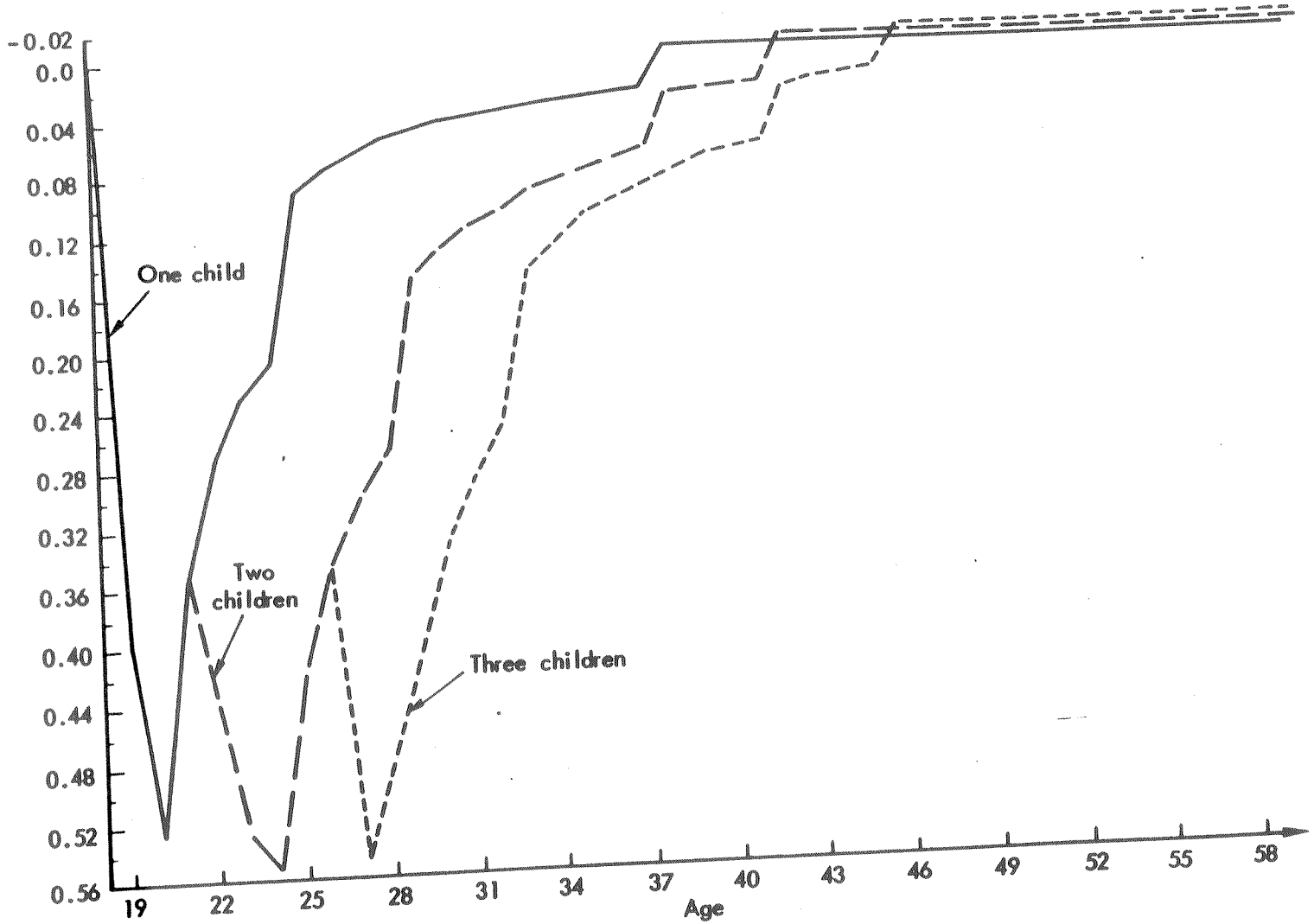

Fig. 5 —Expected reductions in market work

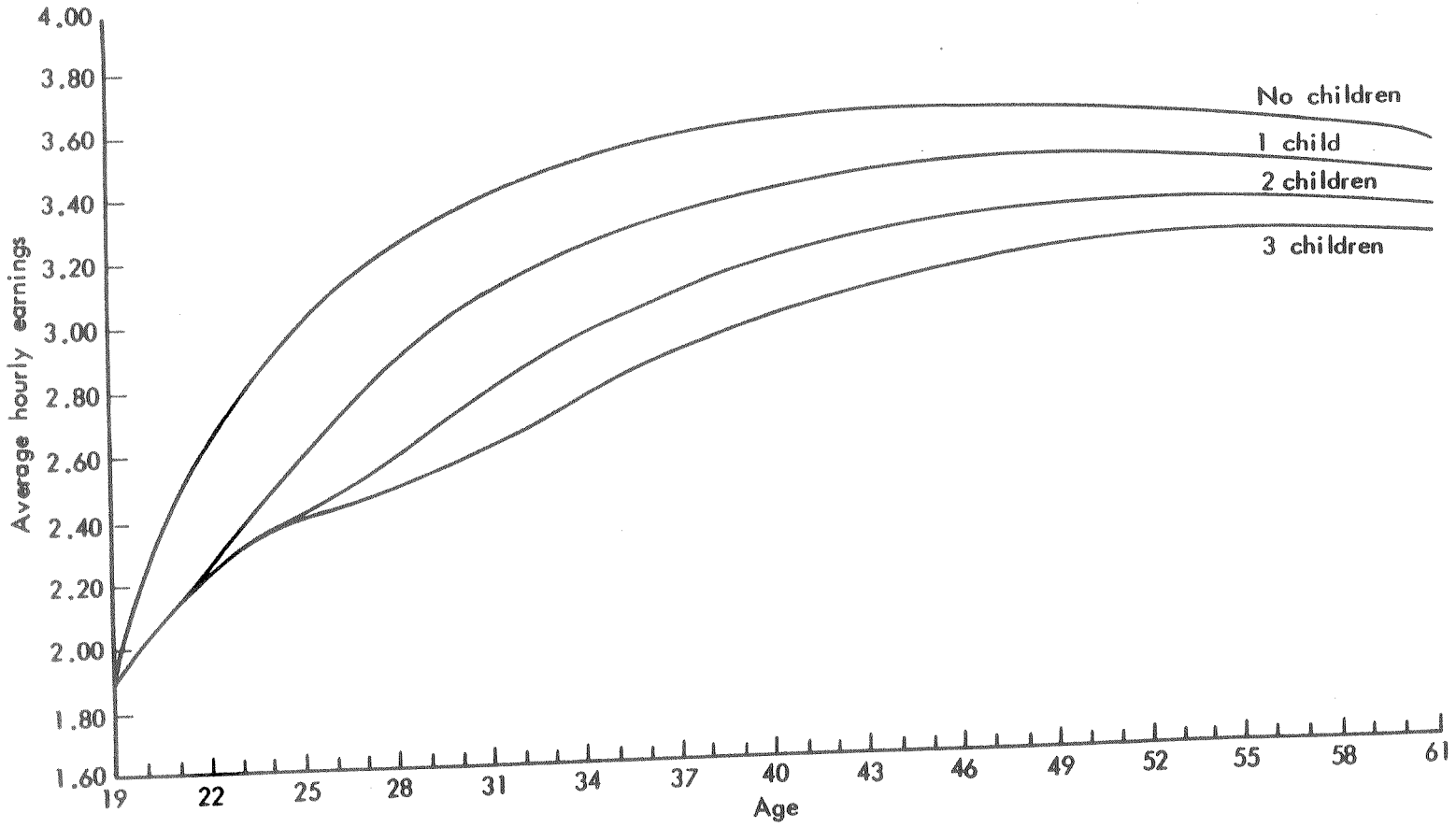

Fig. 6 —Numbers of children and life-cycle wages