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ABSTRACT

This document explores the role played by women in the economic success of Japan in recent decades. Part 1 provides a brief history of Japan's rural legacy and describes its urbanization process. Part 2 reveals trends in the nature and extent of the economic activity of Japanese women using data on cohort age-groups at 5-year intervals beginning in 1950. Part 3 describes the constraints and opportunities for women in the evolving Japanese labor markets, and part 4 focuses on the relationship between education and labor force status of women. Such trends as the increasing proportion of younger Japanese women in clerical positions, the under representation of women in upper-level corporate positions, and the use of older women in manufacturing are documented. It is concluded that further erosion of the "breadwinner" system in Japan is inevitable and that continuing transformation of Japan's economic structure will both reflect and affect the evolution of sex roles in the economy in future years. The paper includes 38 tables and a 17-item bibliography. (JDH)

DEVELOPMENTAL PERSPECTIVES ON THE EDUCATION AND ECONOMIC ACTIVITIES OF JAPANESE WOMEN

BY

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EXE CUTIVE SUMMARY

DEVELOPMENTAL PERSPECTIVES ON THE EDUCATION AND ECONOMIC ACTIVITIES OF JAPANESE WOMEN

Several interrelated ideas underly this paper. First, male economic activities are not independent of female roles. Second, Kingsley Davis' insights on the "breadwinner economy" as a transatory developmental phenomenon is taken as a useful perspective in which to view women's roles in Japan and to make some comparisons with the United States. Third, to understand what is going on it is necessary to pursue events using cohort analysis; more aggregative measures and single-year age cross-sections can easily mislead. Fourth, attitudes and expectations both reflect and affect education and labor force experiences of women. Finally, we start from the premise that "common knowledge" is not necessarily either correct or even "common."

Particularly remarkable in Japan's recent history has been the combination of rapid and highly visible economic progress with the persistence of traditional aspects of economic structure and female roles. The single most important change in Japan has been the shift from rural to urban living and from agaricultural to non-agricultural employment. Within agriculture and within other sectors there has been a remarkable persistence of steady proportions of economically active women who were unpaid family workers, and within each of these sectors the proportion of men working on "own account" has even risen slightly. These are not unconnected phenomena. Meanwhile, there has been an extraordinary expansion of education for females as well as males, and fertility rates have declined sharply to below population replacement levels. Unlike

what some economists have indicated for most Western societies, however, the rates of participation of women in employment have not been tidily associated with educational attainments, and responsiveness to relative wage opportunities have been small. Negative associations of labor force participation with husband's income and income from other sources have been strong, an earmark of a "breadwinner" society in which the men earn money and the women stay home.

One of the effects of a shift out of agriculture has been the sharpening of the peak at age 20-24 in rates of labor force participation among Japanese women and a steepening of the drop from that peak. The unusual degree of peaking in Japan cuts across successive cohorts despite the emergence also of rising rates at which women return to non-agricultural employment in their thirties. But there can be no question about the time tensions in employment of married women. As in the West, increasing proportions of Japanese women in both paid employment and other statuses are working part-time, an adjustment that complements the Japanese Nenko system for paid employment and contributes to flexibility in business strategies. The importance of this cushion, even including women in full-time work, is demonstrated in data on hires and separations over the 1970's. It has been of greatest importance among the least educated women, many of whom are among the self-employed.

In Japan, as earlier in the United States, economic development has been accompanied by rising rates of employment of women in clerical work; starting far below men's share, today women account for more than half of all clerical workers even among people over age 30. This is, of course,

a type of activity that has minimal requirements of learning on the job and in which it is comparatively easy to catch up after periods out of the labor market. Recent Japanese history parallels earlier American history in this respect.

There is no such parallel, however, with respect to the work of women in processing activities. The number of women engaged in manufacturing exceeded the number of clerical workers until 1980, and the decline in manufacturing has been much slower than the growth in clerical employment of women; this reflects the continuing importance of manufacturing in Japan. But the proportion of older women among manufacturing workers has risen sharply. Indeed, there is a clear dichotomy between older and more recent cohorts of Japanese women. For some years the participation of the former in manufacturing kept wage rates low and fostered international competitiveness, a role now being shifted toward contracting out of work to low wage Asian countries.

Internal labor markets have long played an important part in the formation of human resources in Japan as well as in the career opportunities for Japanese men. While young women are at least as likely as young men to be employed in the biggest firms, few continue in such firms after the age of 25, whereas the proportion of women over 25 employed in small enterprises grows; this clearly signals the contrast in initial status and career expectations on the part not only of women but also of their employers. Not surprisingly, sex contrasts in tenure are greatest for the age range 40-54. But lest we put too much emphasis on the Japaneseness of this situation it is well to remember that age-for-age the gender wage gaps in Japan today are very like those in the United States.

Two clues are discussed with respect to expectations and attitudes concerning female labor-force participation.

The cohort, now in their late thirties, of female seniors in the upper-secondary schools in 1967 presented a mixture of ideas predictive of the extreme Japanese paid-employment peaks of labor-force participation in their early twenties and withdrawal thereafter. With rare exception, they exhibited little awareness of or interest in real career options. But those rare exceptions are important. What, unfortunately, we do not know, is how such young women perceive the future today.

The recent Male-Female Employment-Opportunity Equality Act is another story. It is clearly a reflection of substantial shifts in attitudes and perceptions concerning the role of women in the labor markets and their career opportunities. But this was not arrived at easily, and its guidelines have no teeth. What is fundamentally significant about it is the very expression of the values indicated, along with change via consensus in the Japanese way.

In sum, as in other industrialized countries, economic development led first to the rise of the "breadwinner" system in Japan. As elsewhere, a major part of the increases in participation of married women in paid employment in Japan has been in part-time work, especially among the least educated. But full and part-time together, the rates of participation of Japanese married women in paid employment ~~in~~ are still relatively low. A further falling off from Davis' breadwinner system seems inevitable. What is not so clear is what new ways the innovative Japanese will find in the adaptation of economic structures to accomodate new roles for women in their urbanized society.

DEVELOPMENTAL PERSPECTIVES ON THE EDUCATION AND ECONOMIC ACTIVITIES OF JAPANESE WOMEN

Mary Jean Bowman and Machiko Osawa

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DEVELOPMENTAL PERSPECTIVES ON THE EDUCATION AND ECONOMIC ACTIVITIES OF JAPANESE WOMEN

What part is played by women in the startling economic success and dynamism displayed by Japan in recent decades? This is a complex and a generally neglected question.[1] The answer must go back, as must

***Fn 1/ On this theme see Bowman 1980

any understanding of Japan today, to developments that predate World War II as well as those of the post-war years. And the answers cannot be found merely by tracing women's participation inthe labor market along lines that parallel conventional treatments of men. Indeed, one must ask how far the Japanese labor markets as usually described today — almost wholly with reference to men — depend upon what women are doing and can be drawn upon to do as demands arise. Turning this around, one must ask also "how effectively does Japan make use of the female half of her human resources ?" And taking a long view into the future, what are the portents of change?

These are large questions, and the most we can do is to delineate them in a somewhat more explicit way, as pieces of information available to us illuminate the moving scene. This paper is organized in four main parts. Part I, on "urbanization and the rural legacy," uses broad strokes to depict historical developments as a foundation for understanding the recent past and the near future. Part II pursues a cohort perspective on post-war changes in the nature and extent of women's participation in the

labor markets. Part III deals with "women and the internal and external labor markets" in terms of implications for learning opportunities and career development in the post-school years. This section of the paper winds up with a discussion of the new opportunity in employment act. With Part IV we focus explicitly on relationships between education and labor force status of women in the distinct but complementary perspectives of (a) the effects of women's education on post-school experiences and (b) the sex, age and education composition of the Japanese labor force. In concluding we suggest that a continuing transformation of economic structure in Japan (and also in the United States) will both reflect and affect the evolution of sex roles in the economy in future years. This does not mean, however, that Japan will simply converge on Western ways; this is a country that has demonstrated capacities for structural innovation.

I. URBANIZATION AND THE RURAL LEGACY

A. From family workers to paid employment: an evolutionary process

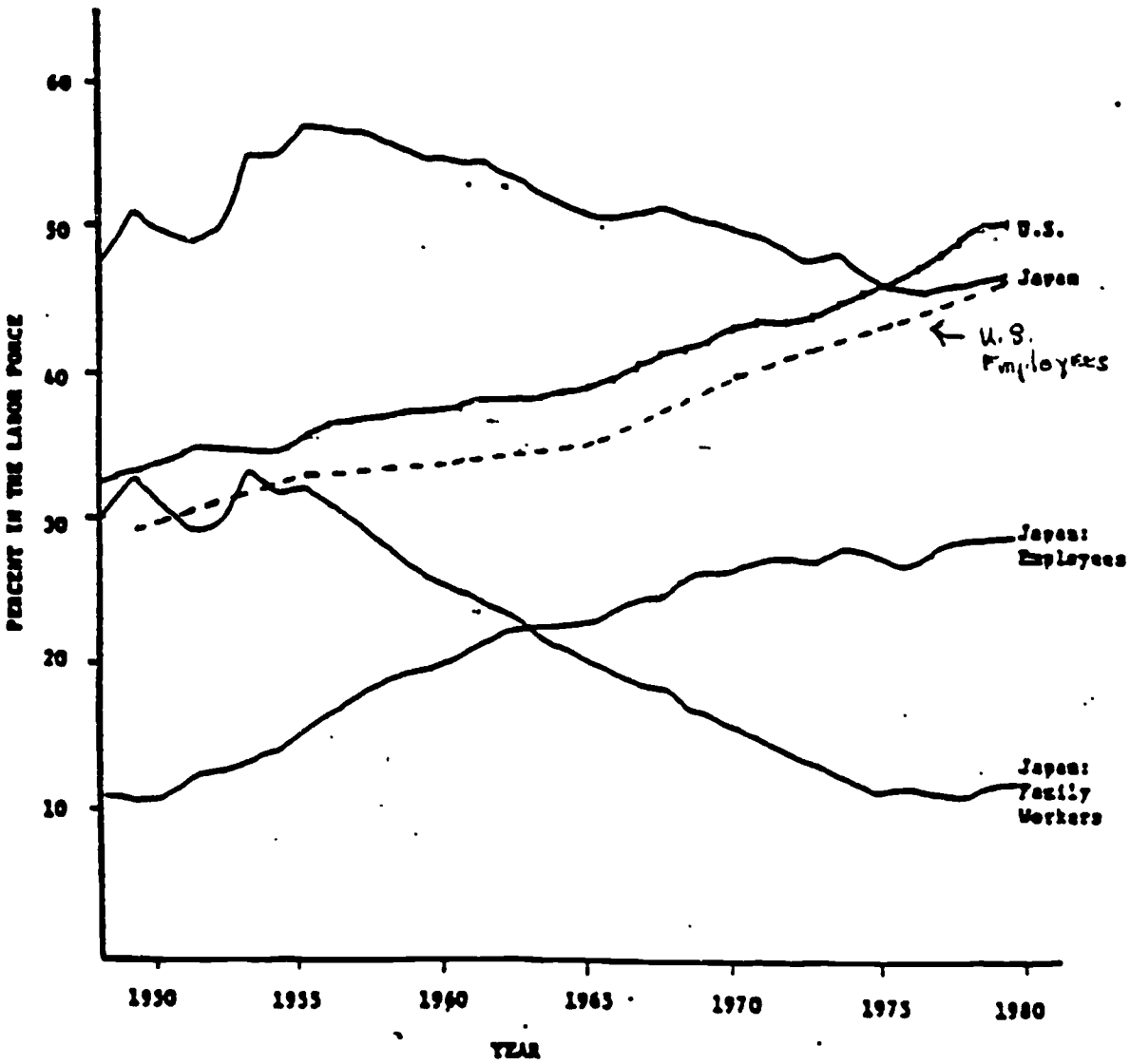
In a recent article (1984), Kingsley Davis adopted an "evolutionary" approach to what he describes as "the rise and fall of the breadwinner system." The challenge to which he was responding came from his observation that the proportion of married women in paid employment has "risen dramatically in virtually every industrial country." We will come back shortly to this matter, but let us look first at the "rise of the breadwinner system," as this has taken place in Japan and in the United States.

Americans are impressed, as they should be, by Japan's performance

on the leading edge of technological development. But what we see is only a part of what Japan is today, for the legacy of an earlier agricultural economy lingers on even among many people who have moved into urban life (as it did earlier in the United States). What is most notable about Japan in this respect is the very marked concurrent signs of past and future in the economy and in the economic roles of women. This concurrence reflects the very rapidity of the changes that have been going on. For it is a matter of only a generation in which Japan has shifted from a predominantly agricultural to a non-agricultural society, and from a society in which for large fractions of the population the work of both sexes was localized around the home to one in which home and work place have become spacially separated. It is only in comparatively recent times that Japan has arrived at what Davis calls the "breadwinner" system — referring to a situation in which the husband's occupation takes him away from home and he becomes the "breadwinner" while his wife becomes increasingly specialized as the home maker. There is a carry-over, nonetheless, to family-organized economies not only in agriculture but also in trade and even in some types of manufacturing ("cottage industries"). Indeed, there are still in Japan remnants of a "putting-out" system such as characterized transitions in pre-industrial Europe.

Japan's midway point in the transformation of a traditional to a "breadwinner"system is displayed clearly in Chart 1 and in Table 1. As the chart shows for the years 1950 to 1979, and is shown by age groups over the years 1920 to 1980 in Table C.3, there has been little change overall in the labor-force participation rate of Japanese women. There was a striking shift, however, in the relative importance of family work and paid employment.

CHART 1
LABOR FORCE PARTICIPATION RATES OF
MARRIED WOMEN



Source ; Japan Statistical Yearbook, various volumes, Statistical Abstract of the U.S., various volumes, As cited in Hill, Anne, "Labor Force Participation of Married Women in Japan," Unpublished Dissertation, Duke University, 1980.

Figure I-1 Female Labor Force Participation in Japan and the U.S.

TABLE 1

STATUS PERCENTAGE DISTRIBUTIONS OF THE LABOR FORCE BY SEX;
JAPAN AND THE UNITED STATES, 1950 - 1980

Year	Total	Employees a/	Own account b/	Unpaid family	Total	Employees	Own account	Unpaid family
	Japanese Females				United States Females			
1950	100.0	26.4	12.2	61.3	100.0	85.8	8.0	6.2
1955	100.0	33.2	11.7	55.1	100.0	87.4	6.2	6.4
1960	100.0	41.6	13.5	44.9	100.0	88.2	6.6	4.2
1965	100.0	49.6	12.0	38.4	100.0	89.8	6.2	4.0
1970	100.0	53.2	14.0	32.8	100.0	92.7	4.6	2.7
1975	100.0	59.8	12.0	28.2	100.0	93.3	4.7	2.0
1980	100.0	63.9	11.5	24.6	100.0	93.3	5.4	1.3
	Japanese Males				United States Males			
1950	100.0	47.7	34.8	17.5	100.0	77.0	21.3	1.7
1955	100.0	53.9	31.8	14.4	100.0	79.3	19.0	1.3
1960	100.0	61.7	27.6	10.7	100.0	81.5	17.3	1.2
1965	100.0	68.5	24.3	7.2	100.0	84.4	14.8	0.8
1970	100.0	71.3	23.0	5.7	100.0	88.0	11.5	0.5
1975	100.0	74.7	21.1	4.2	100.0	88.4	11.2	0.4
1980	100.0	75.8	20.5	3.7	100.0	88.6	11.1	0.3

a/ Includes salaried supervisory and management personnel.
b/ Includes proprietors with employees.

In Japan the labor force participation rate is for persons age 15 and over. For the United States it is age 16 and over.

Sources
Japan: Computed from data in the population censuses.
United States: Computed from data in the Statistical Abstracts of the United States

As of 1950 over 60 per cent of the Japanese women counted as in the labor force were family workers and only a fourth were paid employees; as of 1979 these proportions were reversed, with paid employment 64 per cent and family workers 25 per cent of the total. Meanwhile the proportion of self-employed among Japanese women remained steady at around 12 per cent of all women recorded as in the labor force. Among Japanese men also there was a jump in proportions in paid employment, from 48 per cent in 1950 to 76 per cent in 1980. The contrasts with the United States are striking: even in 1950 family workers made up only 6 per cent of the total female labor force, and by 1980 they constituted less than 2 per cent. Notice also (Chart 1) that in the late 1970's the total labor-force participation rates of Japanese women and of those in the United States were very close, but Japan was still consistently behind the United States in the rates of female (and of male) participation in paid work.

A major part, but by no means all, of what has been happening in these respects in Japan reflects the rapid shift out of agriculture. Some of these relationships are sorted out in Table 2. The upper part of that table shows clearly the decline in proportions of both the male and the female labor force in agriculture. Despite the fact that work on the farm still accounts for a larger fraction of economically active females than males, the decline among females has been greater than among males, at almost 40 percentage points (from 51 to 13 per cent) compared with 24 percentage points (from 32 to 8). Indeed, young women have been leaving the farms in even larger proportions than young men; there is a statistical basis for the complaints of difficulties in finding wives for farmers.

TABLE 2

EMPLOYMENT STATUS RELATED TO EMPLOYMENT IN AGRICULTURE AND IN NON-FARM ACTIVITIES BY SEX; JAPAN, 1955 - 1980

Percentages of the Labor Force in Agriculture

Year	Males			Females		
	All	Own account	Family	All	Own account	Family
1955	31.7	N.A.	N.A.	50.7	N.A.	N.A.
1960	22.8	70.6	12.5	41.9	47.8	78.2
1965	17.2	63.2	13.8	31.5	37.9	69.2
1970	13.1	54.1	15.2	25.3	32.5	62.4
1975	9.6	47.6	15.2	17.7	23.4	52.0
1980	7.8	40.1	15.4	13.1	17.7	43.8

	Percentages of agricultural labor force who were:				Percentages of non-agricultural labor force who were:			
	On own account		Unpaid family workers		On own account		Unpaid family workers	
	M	F	M	F	M	F	M	F
1960	55.7	12.0	33.3	83.6	12.5	11.4	4.1	16.8
1965	68.7	14.5	25.6	84.5	13.8	10.9	3.1	17.3
1970	74.8	17.9	23.5	81.3	15.2	12.6	3.0	16.5
1975	76.4	15.9	20.2	86.2	15.2	11.2	2.4	16.4
1980	76.5	15.6	16.0	82.2	15.4	10.9	2.4	15.9

The lower half of Table 2 turns these questions around to look at the employment status distributions within the agricultural and within the non-agricultural sectors. The stability of proportions of women who were unpaid family workers within each of these sectors is striking. The decline in over-all proportions of unpaid family workers among economically active women must be attributed almost entirely to the shift out of farming. Equally stable has been the proportion of own-account workers among women in non-agricultural activities. Notice that the proportion of women who are family workers tells us something about the nature of economic activities of men that cannot be gleaned from statistics on the men alone; for every female family worker there will normally be a man with whom she is associated in that work —usually her husband. Indeed, females who are family workers are usually in the prime adult years, whereas males who appear in the statistics as "family workers" are usually either very young or quite old. Supportive unpaid wives undoubtedly have contributed to the persistence of own-account activities among men in non-agricultural activities as well as in agriculture. It should be recognized also that in an informal husband-wife partnership the census categorizations tend arbitrarily to count the male as "own account" and the female as "unpaid family worker." This has been especially misleading as men began to work off the farm, coming back on weekends and at harvest time when, it is said, they "put the cats to work."

Davis saw the days of the "breadwinner"system primarily in terms of males working outside the home while few married women were yet entering into wage employment. It could be said that the peak of a "breadwinner" system in Japan was reached when women were the steady workers on the farms and increasing proportions of "farm men" were coming to be engaged in off-farm

work. Such was the situation in Japan in the 1950's. But as married women come to enter paid worker status in rising proportions the situation begins to change. The timing of this development in Japan and in the United States can be seen in Table 3. We have to go back to the beginning of the twentieth century to find in the United States a proportion of married women in paid employment as low as the Japanese figure for 1960. Over the twenty years from 1960 to 1980 there was an accelerating rise in the rates of paid employment among married Japanese women that can be compared with the 35-year-long rise from 1920 to 1955 in the United States. But even today the large minority of the Japanese labor force who are either family workers or self-employed and the small proportion in paid employment is in striking contrast to the picture in most western countries.

Urbanization and demographic change

Both fertility and educational decisions have often been hypothesized to be associated with female rates of economic activity. But decisions to work are not all of the same kind. The costs of working outside the home can be substantial in what is foregone in the household economy and in outlays for travel and clothing. By contrast, child rearing in particular can be easily combined with work in a family unit. Anne Hill demonstrated this contrast in her econometric study (1983) of female labor force participation in Japan. Though perhaps in lesser degree, similar advantages can accrue to being self-employed, which may be associated also with part-time employment. But do we in fact find such a linkage between fertility rates and the extent of unpaid family work and of part-time employment in Japan? The answer is not obvious.

TABLE 3

PERCENTAGES OF MARRIED WOMEN IN PAID EMPLOYMENT IN JAPAN AND IN THE UNITED STATES; SELECTED YEARS

Year	Japan	United States
1900	...	5.6
1910	...	10.7
1920	...	9.0
1930	...	11.7
1940	...	14.7
1950	...	23.8
1955	...	27.7
1960	8.8	30.5
1965	14.1	34.7
1970	18.3	40.8
1975	21.3	44.4
1980	26.1	50.1

Sources

Japan: Bureau of Women and Youth, Ministry of Labor, Status of Women (in Japanese), Ministry of Finance Printing Office, 1983, Table 17.

United States: U.S. Bureau of the Census, Historical Studies of the United States, Colonial Times to 1970 (Washington, D. C., U.S. Government Printing Office (1975 Part I, p.133 and Statistical Abstract of the United States, U.S. Government Printing Office (1983) p. 413.

6a

That fertility rates have declined rapidly in Japan is taken to be "common knowledge," and so is the wave of "baby-boom babies" born in the early post-war years. Both the trend and the post-war wave can have important effects on the evolution of women's participation in the labor markets, even as the demographic trend is a reflection also of the underlying process of urbanization of the Japanese population. Between 1940 amd 1960 the proportion of the population who were urban residents jumped from a fourth to two thirds and by 1980 to over 75 per cent.

Table C.1 lays out figures over the period 1920 to 1980 relating to the underlying trend in fertility rates and the post-war "baby boom." Fertility rates are expressed as children under 5 per thousand women aged 15-49 and per married woman in that age bracket. Taking the former figure as the fertility measure most appropriate for our purposes here, we observe a small rise between 1920 and 1930, to a maximum of 593 children under 5 per thousand women 15-49 (probably reflecting improved infant survival rates). After 1930 this fertility rate began to decline; in 1940 it was 526. This was also the rate in 1950, which should be picking up the post-war "baby boom." So was there a baby boom after all? Presumably the 1945 rate was below 526, and there were sharp declines through the 1930's to 1965. In terms of fertility behavior, the "baby boom" was then a small bump on a downward trend, catching up with the missed births of the war years. But another factor was operating. In absolute numbers there was a decided 1950 jump in numbers of children under 5, to over 11 million compared with the 9 million or less up to 1940 and from 1955 to 1970. Back of this was a marked increase of the number of women age 15-49 between

1940 and 1950 — a decade change far greater than had occured earlier. The principal explanation seems to have been improvements in the survival rates of the cohorts coming into the maximal child-bearing years. It is important to take account of this fact in trying to interpret the fertility decline in Japan. The ten years from 1950 to 1960 saw a drop in fertility rate from 526 to 311 children under 5 per thousand women, and this decade was marked also by a large percentage point decline in the importance of family workers among members of the female labor force (Table 1). The decline in family workers has continued with the continuing shifts out of agriculture but at a more moderate pace (down to 25 per cent in 1980), and up to 1980 with only limited further declines in fertility rates. (The "total fertility rate" in Japan as of 1978 was only 1.77, well below population maintenance.)[2]

Fn 2/ The total fertility rate is the sum of age specific rates.

The demographic picture is complicated also by sex differentials in wartime death rates. As Table C.2 shows, the deaths of young men during the war years reduced male/female population ratios by 15 percent or more for the cohorts involved. This raises the proportions of women never married, which may be expected to dampen aggregative fertility rates and clearly contributes to higher over-all life-cycle rates of participation in paid employment of both single women and war widows.

These demographic developments and the shift off of the farms have had important effects on the operation of internal labor markets in Japan as the war-time youth and the baby-boom cohorts have moved through the economy, changing substantially the relative numbers of men in early and in later career stages. Among the adjustments to these flows have been

encouragement of contracting out by the big firms and of own-account work among men. This effects indirectly, but substantially, the avenues for participation of women in the non-farm economy.

C. Female participation in educational expansion

Fortunately, but not by accident, the spread of schooling in Japan over recent decades has been phenomenal, and not only in quantity but for the most part in quality as well. Education has clearly been a lead factor in Japanese economic development, and this includes females — as it must if quality is to be sustained. There can be no doubt about the mutual interactions among urbanization, educational progress, and fertility decline, but we cannot sort out these relationships here.[3] What we can

Fn 3 Using a "rational expectations" model in a study of changes in enrollment rates in Japanese secondary and higher institutions Kaneko (1984) found that (with appropriate time lags) benefit/cost ratios had strong effects with respect to higher education for men, but for both men and women the variations in enrollment rates were more sensitive to incomes (ability to pay) than to variations in benefit/cost prospects.

and will do is to take a look at the paths of educational expansion for males and females over a long time span, from 1905 to 1978. The data are displayed in Charts 2 and 3. Two sources were used in constructing these series for the pre-war years. First, we worked with data from reports of the Ministry of Education on numbers completing one level and then entering another. Second, we derived estimates from census data that provide information on highest levels of schooling attained by age groups. The census figures have the advantage that they smooth out irregularities, and take into account, for example, the delayed entrance to higher institutions for those

CHART 2

JAPANESE MALE AND FEMALE RATES OF ENTRY TO MIDDLE (PRE-WAR) AND TO UPPER-SECONDARY SCHOOLS, 1905–1978

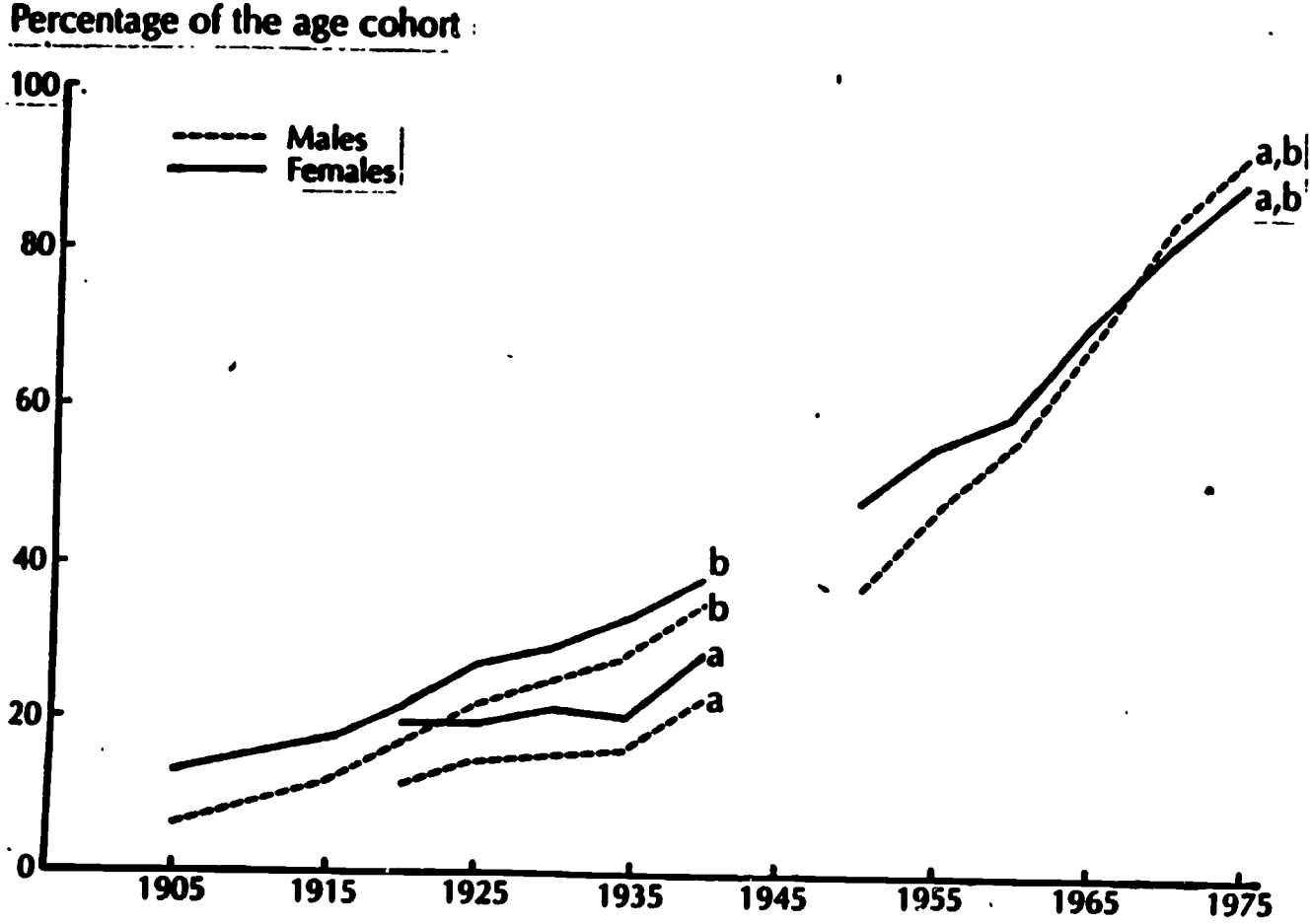
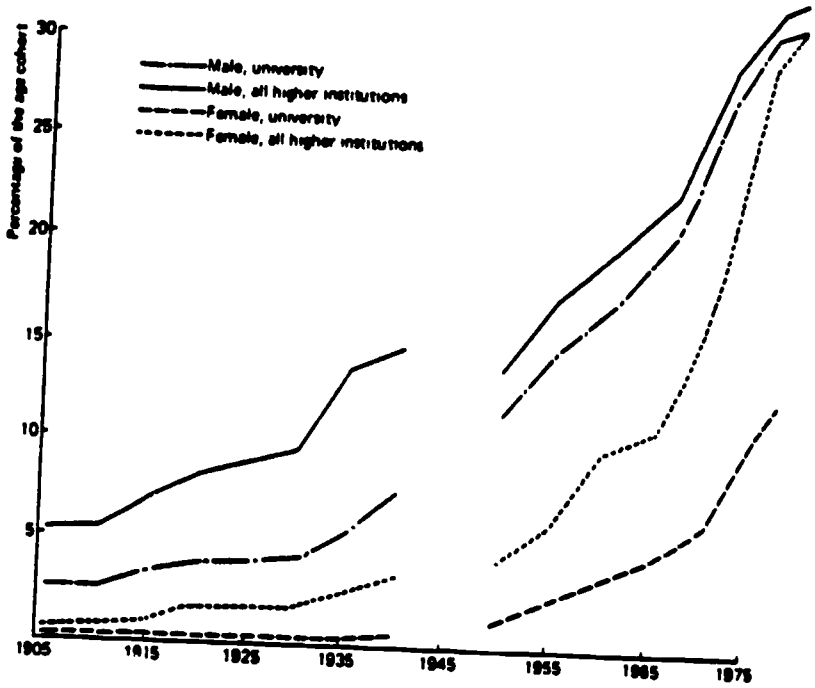


CHART 3



Male and female rates of entry to higher institutions, 1905–78
Source: Mary Jean Bowman, Hideo Ikeda, and Yasumasa Tomo *Educational Choice and Labor Markets in Japan* (University of Chicago Press, 1980) Chapter 1, Table 5

who spend a year or more as ronin preparing to take examinations over again.[4] For the prewar years they run consistently higher than the estimates based on data in the Ministry of Education.

Fn 4/ Ronin have been a substantial minority of those going on to higher education.

Japan was a relatively well educated country even before World War II, and few even of the oldest people in Japan today had less than the equivalent of 8 years of schooling (6 years of compulsory education and some form of subsequent training). By 1940 a third or more of the teenage boys were entering middle schools at around 9th grade or more (the system was complex). Starting early in this century with separation of sexes in the schools at the fifth year, there has been a progression of coeducation to successively higher levels in the system. In the pre-war years, however, for girls the middle schools began at an earlier age than among boys; the prewar sex contrasts were thus even sharper than they appear on Chart 3. With the reorganization after the war, to a 6-3-3-4 sequence for both sexes, the compulsory school requirements went through 9th grade (completion of "junior secondary school"). Sex differentiation was mainly in fringe aspects of the curriculum in the general secondary schools, which had the majority of students, but also in what was largely self-selection into particular streams — as technical for boys and commerce and home management for girls, the latter enrolling only a small minority of the girls even in the early years.

As Chart 2 shows, though girls started behind boys in rates of enrollment in the postwar upper-secondary schools, their rate of enrollment rose rapidly and they overtook the boys (at enrollment rates over 90 per cent)

in the 1970's. Dropouts from upper-secondary school have been extremely low — until recently at around 1 percent for girls and only slightly higher for boys. This means that in Japan, in contrast to the United States, data on rates of entry to the upper-secondary schools are in effect also approximate cohort rates of graduation from those schools.

Sex contrasts in the spread of higher education are displayed in Chart 3. The rapid gains of females in the past fifteen years have brought them very nearly to a par with males in proportions continuing on to higher institutions — and to a position of leadership on a world scale. There is still a major gap, however, since two thirds of the women continuing into higher institutions are entering the 2-year junior colleges whereas most of the young men are entering the 4-year colleges and universities. The predominantly female junior colleges call for some special comment.

All along Japanese educators have been explicit in their expressions of concern about adapting the educational program to what was deemed suitable for girls versus for boys, and this concern has persisted. But provision of a home management option and minor fringe adaptations in upper-secondary curricula aside, after the war deliberate sex differentiation was pushed up to the post-secondary level. Whereas before the war the "higher schools" (roughly at junior college level) were diverse, often technical, and served primarily young men, after the war those "higher schools" were upgraded to become 4-year institutions, as part of the regular college system. The old "higher schools" for girls became the core of the rapidly growing post-war junior colleges for girls, which are now most of the "junior colleges" in Japan.

The task of these female junior colleges was unambiguous — they were to train young women to be skilled, gracious and responsible homemakers. The closest approximation in the west is probably the old "finishing schools" for ladies in some parts of Europe and on the Atlantic coast in the United States. But it would be a mistake to assume that they have had low standards, or that they are frivolous. For one thing, the Japanese female junior colleges were training the women who would become leading "educational mamas" to the next generation. Furthermore, there has been a striking change in the proportions of their graduates who enter the labor force for a few years at least. In fact, the graduates of these schools have been going directly into the labor force at a rising rate, which now substantially exceeds the rate for female graduates of the 4-year colleges and universities (Chart 4).

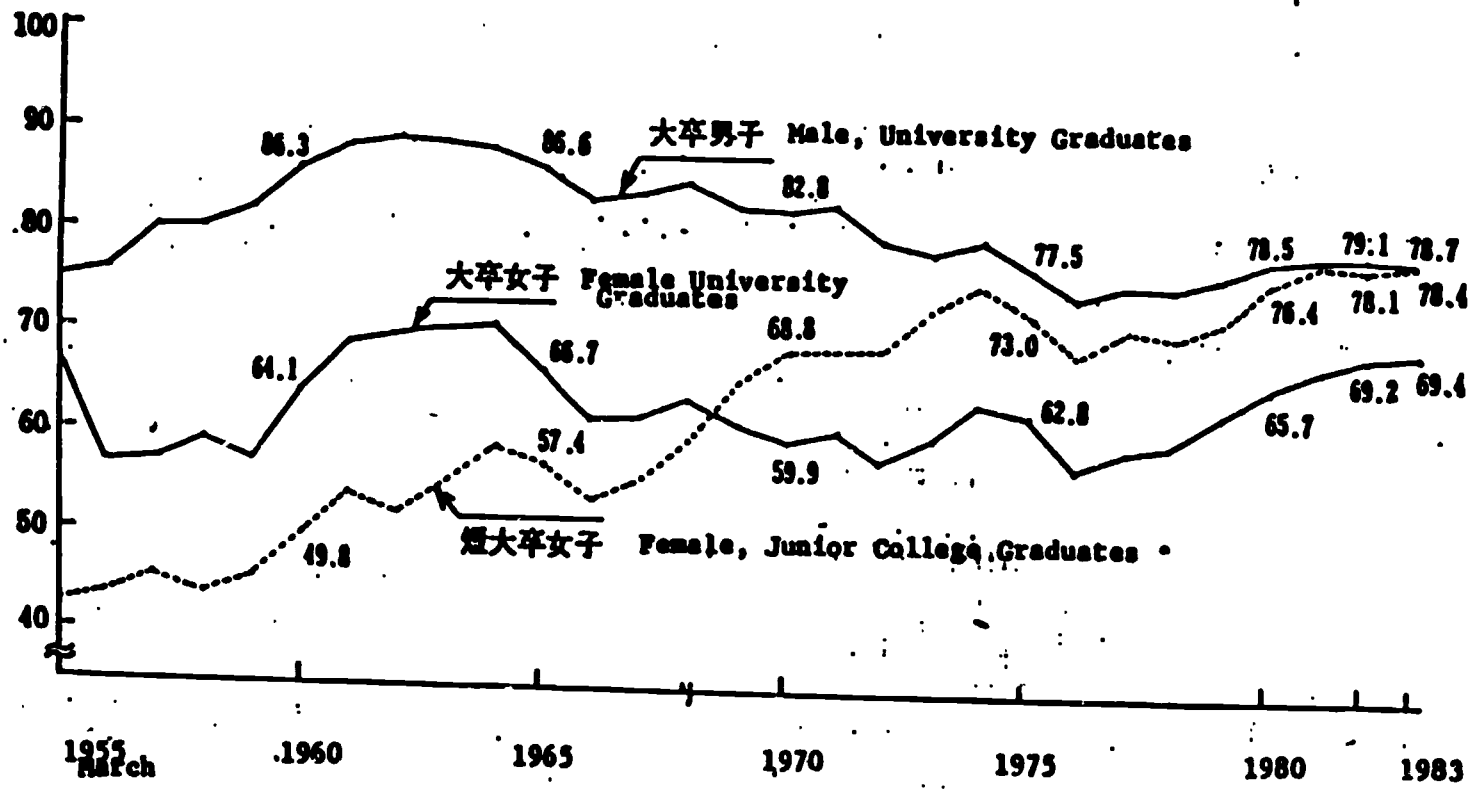
II. A COHORT PERSPECTIVE ON FEMALE RATES OF PARTICIPATION IN THE LABOR FORCE

A. The shifting age and cohort patterns of female labor-force participation

At any given point in time a description of rates of labor-force participation by age can give a valuable picture of the state of things with respect to women's involvement in a range of economic activities. Unless the society being studied is characterized by little or no change, the age cross-sections cannot, however, tell us much about what happens sequentially in any particular cohort or how cohort experiences are changing. Indeed, if we try to interpret cross-section data as a guide to cohort experiences we can even come to a complete reversal of the true situation.

It is helpful to begin, however, with a cross-section picture, and

CHART 4



資料出所：文部省「学校基本調査」

Source Basic School Survey, Department of Education

one that uses total participation rates, setting aside for the moment what we have said earlier about family workers and the self-employed versus paid employment. Just such a crude depiction of the age pattern in economic activity of Japanese women is presented in Chart 5, which shows the age patterns for each of five calendar years at intervals from 1955 to 1975 inclusive. The general pattern is clear enough, and is repeated in each year. There is a sharp peak in participation rate at age 20 to 25 followed by a sharp drop and a subsequent more gradual rise, reaching a secondary peak around age 50 and falling off thereafter. This Japanese pattern is an exaggerated version of what has been observed in other countries. But at this aggregated level it also hides almost as much as it reveals.

One of the most important things that it hides is laid before us in Chart 6, in which the participation rates are shown separately for agricultural and non-agricultural activities. The age cross-section curves for agriculture all slope upward; if we were to read this as an indication of movement into agricultural employment over the life span we would be totally wrong. Those age cross-sections have an upward slope because older cohorts were more frequently in agriculture. Cutting across the age cross-sections are cohort paths showing, for example, the path followed by a cohort that was age 20-24 in 1955, age 30-34 in 1965, and age 40-44 in 1975. The proportion engaged in agriculture goes steadily downward.

The lower part of this figure refers to rates of participation in non-agricultural activities. Here the general pattern resembles roughly that in Chart 5, but there are marked differences. Thus the peak at

CHART 5

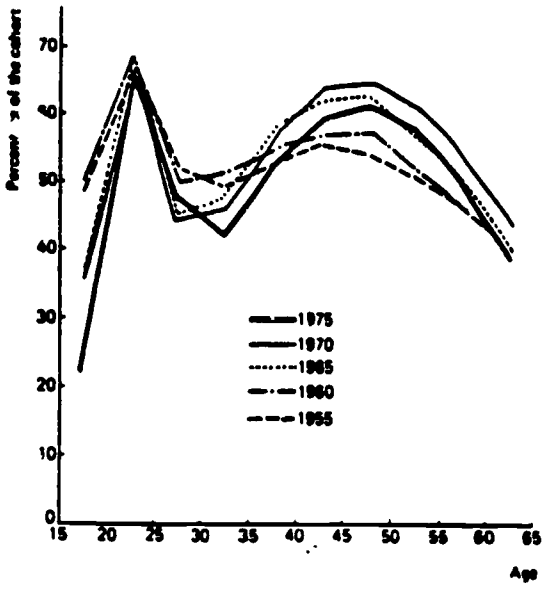


FIG. 19.1 Percentages of women economically active by age, 1955–75

For source see Chart 6 (from p. 257)

CHART 6

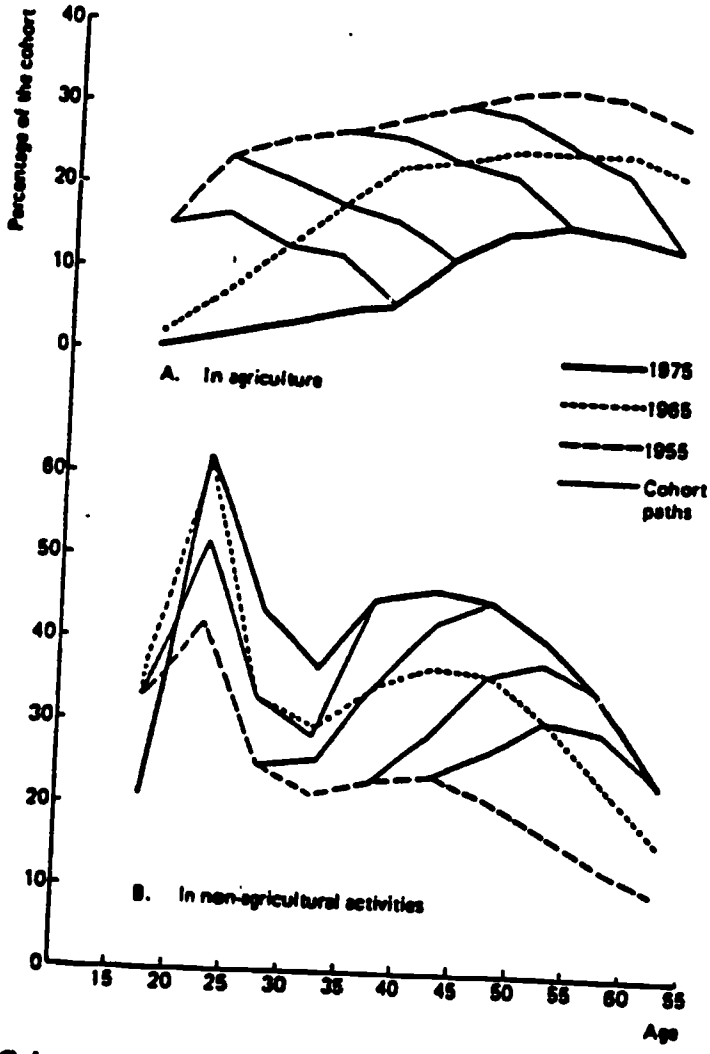


FIG. 19.2 Cohort paths and age-cross-section percentages; women in agriculture and in non-agricultural activities, 1955–75

Source: M.J. Bowman, Women and the Japanese Economic Performance, in Human Resource Employment and Development, Volume 2. Edited by Burton Weisbrod and Helen Hughes, Proceedings of the 6th World Congress of the International Economic Association (1980) Hong Kong, Macmillan Press, 1983 p. 260

age 20-25 is much sharper here in the 1965 and 1975 cross-sections and at subsequent ages the 1975 figures are decidedly the highest, the 1955 figures decidedly the lowest, throughout. The cohort paths rise initially, then fall as young women get married, and rise again in the middle years. We are seeing in broad outline how the changing economy is reflected in cohort paths and how underlying age effects nevertheless persist.

Tables 4 and 5 present data relating to paid employment among Japanese women by age at five-year intervals from 1950 to 1980 excepting 1960, for which data were lacking.

Table 4 refers to the proportions of economically active women who were in paid employment. This table is comparatively simple, and we may look at it first. It is immediately evident that in all years the proportions of the economically active females who were in paid employment are higher for the youngest women than for older ones. But adjustments were not limited to the youngest age groups. It is also clear that at any given age, the proportions of the female labor force in paid employment rises as we go from the cohort who were, for example, 30-34 in 1965 (and earlier) to the more recent cohort who were 30-34 in 1980. With the exception of women who were over 65 in 1980 and those who were 15-19 in 1970, every cohort experienced this change and at every age. Notice, nevertheless, that reading down the table under any given year gives a false picture of what would have been happening for any single cohort over the life cycle; to read cohort experiences off of this table one must follow diagonals. When this is done it becomes evident that the increases in paid employment across older ages are not independent of experiences when members of a cohort were younger.

Table 5 differs from Table 4 in that it refers to proportions of

TABLE 4

PERCENTAGES OF ECONOMICALLY ACTIVE JAPANESE FEMALES IN WAGE AND SALARIED EMPLOYMENT BY AGE, 1950-1980

Age	1950	1955	1965	1970	1975	1980
15-19	50	63	90	90	91	94
20-24	43	54	81	85	91	94
25-29	)		53	60	72	79
30-34	) 21	28	40	45	56	65
35-39	)		40	45	54	63
40-44	)		38	45	55	62
45-49	) 12	17	35	42	52	60
50-54	)		31	38	47	54
55-59	)		25	32	42	46
60-64	) 6	7	17	24	35	38
65+	)		13	16	25	22
All ages	26	33	50	54	62	64

14a

TABLE 5

PERCENTAGES OF JAPANESE WOMEN IN PAID EMPLOYMENT BY AGE, 1950-1980, WITH ANALYSIS BY COHORT SHIFTS

Age	1950	1955	1965	1970	1975	1980
15-19	—	32	33	30	21	17
20-24	28	37	55	59	59	64
25-29	10	15	24	26	32	38
30-34	) 10	14	19	21	24	29
35-39	)	15	23	25	28	35
40-44	) 11	10	24	28	32	38
45-49	)	9	22	26	32	—
50-54	) 6	9	18	23	27	20
55-59	)	8	13	17	21	23
60-64	) 2	3	7	10	14	19
65 +	)	1	2	3	7	8

Decline in participation rates from age 20-24 to age 25-29

Cohort (Year born)	Calendar year age 20-24	Decline in percent in labor force
1926-30	1946-50	-13
1931-35	1951-54	n.a.
1941-45	1961-64	-29
1946-50	1966-70	-27
1951-55	1971-75	-21

Twenty-year cohort shifts in labor-force participation rates 1955 to 1975

Birth cohort (1)		Birth cohort (2)	Age at comparison	Increase in participation rate
1911-15	to	1931-35	40-44	+ 22
1916-20	to	1936-40	35-39	+ 13
1921-25	to	1941-45	30-34	+ 10
1926-30	to	1946-50	25-29	+ 17
1931-35	to	1951-55	20-24	+ 22

Source: Computed from data in successive population censuses.

14 b

TABLE 6

COHORT SHIFTS IN AGE PATTERNS OF LABOR-FORCE PARTICIPATION OF WOMEN IN THE UNITED STATES, 1950 - 1975

Percentages in the Labor Force by Birth Cohorts and Age

Age	Born 1906-10	Born 1911-15	Born 1916-20	Born 1921-25	Born 1926-30	Born 1931-35	Born 1936-40	Born 1941-45	Born 1946-50
20-24	...	...	...	...	46.1	46.0	46.2	50.0	59.8
25-29	...	...	...	...	35.3	35.7	38.9	45.2	53.9
30-34	...	...	...	34.7	36.3	38.2	44.7	49.0	...
35-39	...	...	39.2	40.8	43.6	49.2	53.7	...	...
40-44	...	44.1	46.8	48.5	52.9	54.8	...	...	...
45-49	45.9	50.7	51.7	55.0	54.9	...	...	...	...
50-54	48.8	50.1	53.8	54.0	...	...	...	...	...
55-59	47.1	49.0	47.7	...	...	...	...	...	...
60-64	36.1	33.6	...	...	...	...	...	...	...
65-69	14.5	...	...	...	...	...	...	...	...

Declines in participation rates from age 20-24 to age 25-29

Cohort (Year born)	Calendar year age 20-24	Decline in percent in labor force
1926-30	1946-50	- 10.8
1931-35	1951-55	- 10.3
1936-40	1956-60	- 7.3
1941-45	1961-65	- 4.8
1946-50	1966-70	- 3.9

Twenty-year cohort shifts in labor-force participation rates 1955 to 1975

Birth cohort (1)	Birth cohort (2)	Age at comparison	Increase in participation rate
1906-10 to	1926-30	45-49	+ 9.0
1911-15 to	1931-35	40-44	+ 10.7
1916-20 to	1936-40	35-39	+ 14.5
1921-25 to	1941-45	30-34	+ 14.3
1925-30 to	1946-50	25-29	+ 18.6
1931-35 to	1951-55	20-24	+ 11.7

Source: Computed from data in The Role and Status of Women Workers in the United States and Japan. U. S. Department of Labor and Japanese Ministry of Education. Washingto, D.C.: U. S. Government Printing Office, 1976. Table 9, page 84.

14c

all women in a given cohort and age group who are in paid employment; this is why we see the age 20-24 peaks in Table 5 and the sharper subsequent dropping off in this table. In the lower part of Table 5 we have summarized cohort shifts in two perspectives. First is the extent of the decline between age 20-24 and age 25-29 in each cohort. These figures are directly comparable with entries for the United States at the bottom of Table 6. It is evident enough that this drop in participation among Japanese women in their late twenties is much more substantial than among that age group in the United States for the cohorts born in 1941 or later, and that in contrast to Japan the drop is fading away, toward zero, among more recent cohorts of American women. The jump in the Japanese data from -13 for the cohort who were age 20-24 in 1946-50 to a figure of -29 for the cohort aged 20-24 in 1966-70 is a dramatic illustration of the major shifts in economic structure and in women's activities that have accompanied the urbanization of Japanese life. This, again, seems to reflect in part Davis's "breadwinner" theme, despite increasing rates of subsequent re-entry of Japanese women to the labor market.

At the right in the lower section of Tables 5 and 6 are figures summarizing twenty-year cohort shifts (from 1955 to 1975) in rates of participation in paid employment in Japan and in total employment in the United States. The contrasts in this case are less sharp, and they are less revealing of any changes in life-cycle patterns. On the other hand, the structure of Japanese labor markets clearly contributes to the sharp peaking at age 20-24 and declines in paid employment rates thereafter.

B. The allocation of time and the importance of part-time employment

Mincer (1985) stressed the tensions in allocations of time and energy of women trying to combine family responsibilities with work outside the home. He was drawing on contributions to a conference on trends in women's work and related matters in twelve industrialized countries (including Japan). The following observations were part of his attempt to explain the persistence in diverse settings of a substantial gender gap in wages.

> The tension between family and market commitments is resolved or reduced by reduction in fertrility, postponement and shorter duration of marriages and greater capital intensity of household work -- all observed in most countries. On the other side of the accomodation is commitment to market work, which although greatly increased remains incomplete: much of the growth in labor force participation, most spectacular in Sweden and in Australia, has been in part time jobs. Moreover, most of the increases in market employment have been in the more traditional women's occupations in the service sectors, in jobs with lesser training components and in shorter or more flexible hours. (Mincer 1985, p. S23.) 5/

Fn 5/ Mincer went on to point out that the effects of this tension are evident in the USSR, where part-time jobs are not available, women are as full participants in the labor force as men, and their earnings are still only 70% of the earnings of men - comparable to the West. Time budgets reveal that houseold work in the USSR is highly labor intensive, and men do little. He cites Ofer and Vinokur's conclusion that the time and energy burden of household leads Soviet wives to relatively undemanding jobs.

Thus far we have taken only incidental note of the importance of part-time work among Japanese women. But this has been of major importance in the increases in proportions of married women in paid employment in Japan. Moreover, home responsibilities (including the "education mama" demands on time with even older children) are little shared by men. Indeed, men employed in the larger Japanese firms are commonly committed to spending long hours

after regular working hours with their work associates; those are critical hours for the career prospects of the men involved.

As Table 7 shows, almost half of the Japanese women aged 30 to 44 who were in the labor force in 1980 were in part-time employment, more than double the proportions in 1960. The cohort change is impressive. Indeed, in 1980 even among paid emplyees a third or more in the middle age brackets were working part time. If we ignore this fact we will over-estimate the extent of female involvement in the modern labor markets. Meanwhile, among those who were "own account" or family workers in 1980 almost two thirds in the age range 25 to 39 were working part time, as were three fifths of those over 40. Among men, on the other hand, part-time work is rare and is confined almost entirely to young men who are working while studying and to a tiny fraction of those over 55 or 60 years of age.

The sex contrasts in the nature and roles of part-time work are summed up by employment status and distribution among the young, the old, and the prime-age workers in Table 8. That part-time employment among women is largely a prime-age phenomenon whereas among men it is the opposite of this comes out clearly throughout.

Age structures of labor force participation along with the incidence of part-time employment show up in summary indicators of female earnings relative to those of men. In its Monthly Labor Survey, the Ministry of Labor gave figures on hourly earnings in yen for men and women at five year intervals from 1960 to 1980. Those ratios were at only .460 in 1960 but rose sharply to .522 in 1965, peaking at .564 in 1975 before a slight drop back to .545 in 1980.

TABLE 7

PERCENTAGES IN PART-TIME WORK BY AGE AND SEX: JAPAN 1960 and 1980

Age	1960 Part-time Proportions of all in the labor force		1980 Part-time Proportions of all in the labor force	
	Males	Females	Males	Females
15-19	3.4	6.0	12.2	15.2
20-24	0.8	8.4	5.1	9.8
25-29	0.4	16.5	0.7	27.0
30-34	0.3	20.6	0.4	44.3
35-39	0.3	21.9	0.3	48.8
40-44	0.2	22.9	0.3	46.1
45-49	0.4	24.7	0.3	41.9
50-54	0.6	29.2	0.4	40.2
55-59	1.3	34.4	0.7	43.1
60-64	2.9	38.8	2.1	47.6
All ages	1.3	19.2	1.4	37.8

	Employees, 1980		Own account and unpaid family workers, 1980	
	Male	Female	Male	Female
15-19	11.4	13.5	21.7	57.2
20-24	4.4	6.8	11.3	53.4
25-29	0.4	16.6	1.9	65.7
30-34	0.3	30.5	0.8	67.9
35-39	0.2	38.3	0.6	65.0
40-44	0.1	36.1	0.6	62.1
45-49	0.1	30.0	0.6	59.2
50-54	0.1	24.7	0.8	58.4
55-59	0.3	24.2	1.5	59.4
60-64	1.0	26.2	3.2	60.8
All ages	1.0	24.2	2.5	62.2

17a

TABLE 8

"NON-WORK" ACTIVITIES OF JAPANESE PART-TIME WORKERS AND PERCENTAGE DISTRIBUTIONS AMONG THE YOUNG, PRIME-AGE AND OLD MEN AND WOMEN, 1980

	Males				Females			
	15-24	25-54	55+	Total	15-24	25-54	55+	Total
Percentages of all workers (full and part time):								
Total labor force	10.5	73.1	16.4	100.0	16.0	67.6	16.4	100.0
Employees	12.4	76.1	11.5	100.0	23.4	66.7	9.9	100.0
Own account,family	4.1	63.5	32.4	100.0	2.8	68.9	28.3	100.0
Part-time workers; all employment statuses:								
All part time	50.6	19.6	30.8	100.0	4.6	74.8	20.6	100.0
Part time + home	7.5	28.9	63.6	100.0	2.7	76.3	21.0	100.0
Part time + educ.	90.7	9.2	0.1	100.0	93.8	6.1	0.1	100.0
Part-time employees:								
All part time	71.9	17.2	10.9	100.0	8.0	71.4	10.6	100.0
Part time + home	14.1	42.0	43.9	100.0	4.0	84.9	11.1	100.0
Part time + educ.	90.8	9.1	0.1	100.0	94.2	4.7	1.1	100.0
Part-time on own account and unpaid family work:								
All part time	21.9	20.7	57.4	100.0	2.3	70.1	27.6	100.0
Part time + home	4.8	23.5	71.7	100.0	1.9	70.3	27.8	100.0
Part time + educ.	90.5	9.3	0.2	100.0	91.6	8.0	0.4	100.0

17 b

Distributions of 1982 annual earnings of male and of female paid employees for all such workers and for those working under 35 hours a week are shown in Table 9. Taking all workers, among the men only 10.5 per cent earned under 1,500,000 yen (roughly $3,000) whereas 44 per cent of the women were in these low brackets; if we add family workers to the low income category, the percentages become 13.1 and 62.6 for men and women respectively. Women are of course correspondingly missing at the top; 48 per cent of the men and and only 8.1 per cent of the women earned over 3,000,000 yen (roughly $6,000). Even looking at part-time earnings (those working under 35 hours a week) the sex contrasts are notable, and this despite the fact that the part-time workers among women are primarily in the prime working years whereas most of the men in part-time work were still students.

It's obvious that we need to look at such figures by age groups, and if possible in a form that permits some comparisons -- for the present paper, with the United States. This is attempted in Table 10. The upper section of that table shows female/male ratios of average monthly contract earnings in firms with 10 or more employees. Looking across the years (and hence across cohorts), there have evidently been real gains recently in the relative earnings of young women relative to young men, even up to the age bracket 30-34. At higher ages the picture is mixed. Unquestionably, there were gains in relative pay for women over 35 over the years 1954 to 1974; the slight slippage between 1974 and 1980 in the relative earnings of women aged 35-49 may reflect primarily the selective withdrawals of women in the 1974 recession and the greater success in gaining access to employment in firms with over 10 workers by 1980.

Even the 1974 Japanese ratios are somewhat lower than those at

TABLE 9

ANNUAL PERCENTAGE INCOME DISTRIBUTIONS OF THOSE WORKING 200 DAYS OR MORE BY SEX AND FULL OR PART-TIME WORK PER WEEK; JAPAN, 1982

Income (in 10,000 yen)	Males		Females	
	All	Working under 35 hours	All	Working under 35 hours
Under 100	3.1	28.5	22.8	60.5
100 - 149	7.4	13.9	21.2	9.0
150 - 199	11.1	11.1	14.8	4.3
200 - 299	27.8	19.1	14.5	4.2
300 - 499	33.0	17.9	6.6	2.0
500 +	15.0	10.9	1.5	0.6
Family worker	2.6	4.7	18.6	19.4
Total	100.0	100.0	100.0	100.0

Source: 1982 Employment Status Survey, Table 27.

TABLE 10

FEMALE TO MALE RATIOS OF EARNINGS BY AGE;
JAPAN 1954-1980 AND UNITED STATES 1974

Female to male ratios of average monthly earnings of Japanese employees

Age	1954	1960	1965	1970	1974*	1980
18-19	.82	.79	.83	.80	.91	.86
20-24	.71	.79	.72	.72	.83	.81
25-29	.61	.61	.61	.60	.73	.71
30-34	.47	) .51	.54	.47	.60	.60
35-39	.41	)	.48	.44	.53	.51
40-44	) .37	...	) .42)	) .43	.53	.47
45-49	)		)	)	.54	.47
50-54	) .36	...	) .43	) .45	.51	.51
55-59	)		)	)	.57	.57
60-64	) .41	...	) .53	) .60	.64	.67
65+	)		)	)	.65	.72

United States Female to Male Ratios of Median Weekly Earnings, 1974

Age	Full time	Part time
16-19	.82	.86
20-24	.75	.89
25-34	.65	.60
35-44	.56	.48
45-54	.57	.51
55-64	.60	.71
65+	.65	.85

Sources

Japan: Ministry of Labor, Basic Susrvcey of Wage Structure, 1980 (in Japanese)

United States: Department of Labor, Bureau of Labor Statistics (in The Role and Status of Women Workers in the United States and Japan, United States Government Printing Office, 1976, p. 105).

comparable ages for full-time workers in the United States, shown at the bottom of Table 10, but the differences are small. In both countries the ratios follow a U-shaped profile with age. Notice also, that Japan's 1980 ratios at their minima (age 35-49) are almost identical with the U.S. ratios for part-time workers in this age range. What we seem to be observing is a remarkable similarity in relationships within the modern sectors of the two economies with respect to the gender gap in earnings.

C. Resolution of an economist's puzzle: Are Japanese women really different?

In the United States and other western countries, it is a well established fact that women's educational attainment is positively associated with the probability of working outside the home; this has been attributed to the higher earning potentials of better educated women. In Japan, on the other hand, most previous researchers have found either negative or negligible effects of women's education on their labor-force participation. In addition, the response to the market wage rate has been comparatively weak, while there is a strong negative association between income (other than wife's earnings) and labor force participation.[6]

Fn. 6/ See the comparisons in Mincer 1985 and the analysis for Japan in Shimada and Higuchi 1985.

The mixed and even negative associations previously observed between educational attainments and women's labor force participation in Japan has been a puzzle to many labor economists. Why did these results appear in the studies on Japan? A first reason undoubtedly goes back to the fact that often all economic activity has been treated in the same way, regardless of

whether employment was in agriculture and whether as family worker, self-employed, or in paid employment.

Osawa approached this "puzzle" by first disaggregating by age, concentrating on participation in paid employment. Her analysis was based on life-cycle data collected in 1974 by the Employment and Vocational Research Center on 1500 women who resided in and adjacent to the Tokyo Metropolitan area. These tapes included the respondents' work histories and their socio-economic backgrounds. She found a significant cohort ("vintage") contrast in effects of education on the labor force participation of married women (Osawa 1985). In the older cohorts (among older women in the survey) the association of participation in paid employment with education was actually negative, whereas among more recent cohorts (younger women) a positive association begins to appear. But what in fact were women of the older and the more recent cohorts doing?

In research on the United States, Goldin argued that the rapid increase of female participation in the labor force prior to World War II was closely related to the feminization of clerical work and a concurrent decline in women's employment in the manufacturing sector (Goldin 1981), what she called the women's occupational evolution. In this section we discuss the underlying cause of the transformation of women's occupational structure from a concentration in production processing jobs to clerical jobs in the United States and when and how this "occupational evolution" has influenced women's occupational choices in Japan.

(1) <u>The United States.</u>

In 1890 only 3.9 % of all females in non-farm employment were

clerical workers; by 1930 this percentage had risen to 22.7 %. Meanwhile the proportions of women in clerical positions had risen much faster than men in such work. Thus women made up 14.6 per cent of all clerical workers in 1890 but had climbed to just over half (at 51.1 %) by 1930. Over the same period the percentage of women who were production workers in manufacturing fell from 31.8 % to 19.2 % of the nonfarm female labor force (Table 11).

Goldin examined the underlying causes of the sectoral shift in occupations and the related compositional change of the female labor force in the United States from 1890 to 1950. Comparing earnings functions between clerical and manufacturing production workers, she found that the latter rose more quickly than did earnings functions for clerical workers. After 15 years of work experience, however, the earnings slope for production workers became negative. In contrast, for clerical workers the initial slope is less steep, but earnings continue to increase throughout the relevant labor force experience range. In addition, the rate of return to education is greater for clerical work than for manufacturing work.

Goldin argues that the above difference in the estimated slopes and the rate of return on schooling reflect the different type of skills required in the two jobs. For processing workers, skills are acquired mostly in on-the-job training, rather than from formal education and training. This means that the manufacturing skills tend to be specific to the industry or even to the firm in which they are acquired. Those skills are not transferrable and they depreciate rapidly with age.

On the other hand, skills required for clerical work are easy to acquire in formal training at specialized agencies or schools unrelated to the particular firm or industry, and they are readily transferred from

TABLE 11

EVOLUTION OF THE SEX COMPOSITION OF CLERICAL AND PROCESSING EMPLOYMENTS: THE UNITED STATES 1890-1950 AND JAPAN 1955-1980

Year	Married percent of employed females	Clerical			Processing		
		Percent of all non-farm	Female share	Married percent of females	Percent of all non-farm	Female share	Married percent of females
				United States			
1890	11.2	3.9	14.6	4.1	31.8	20.2	10.7
1900	12.6	6.3	24.0	3.7	31.8	20.2	10.7
1910	n.a.	11.0	36.2	n.a.	29.1	17.1	n.a.
1920	20.7	21.7	47.7	9.2	25.9	15.1	24.5
1930	28.3	22.7	51.5	18.7	19.2	13.4	32.4
1940	31.8	22.3	51.5	26.1	20.2	18.9	25.0
1950	46.1	27.6	62.1	41.5	22.2	16.8	n.a.
				Japan			
1955	33.1	14.1	33.1	16.0	38.3	31.8	34.8
1960	35.7	17.5	36.6	21.2	36.3	30.5	37.4
1965	38.6	20.0	40.7	29.5	34.6	30.1	49.5
1970	41.4	23.7	41.4	n.a.	30.0	30.6	n.a.
1975	51.3	25.6	50.6	n.a.	27.0	27.7	n.a.
1980	58.0	26.6	53.6	49.8	26.1	29.3	75.6

Sources:

United States: U.S. Population Censuses, various volumes. Goldin, C. "The Historical Evolution of Female Earnings Functions and Occupations," NBER Working Paper No. 529

Japan: Population Census, and Japan Statistical Yearbook, various volumes

work with one employer to another.

The characteristics of clerical work make it especially advantageous for married women, who often interrupt their work career when children are young. The skill depreciation (loss) due to career interruptions is much less for clerical work than for production jobs. Goldin concludes that feminization of clerical work was a crucial factor in encouraging a greater number of more educated women to work and particularly in encouraging married women to reenter the labor force, which was and is quite easy in the United States.

(2) Japan

Japan experienced a similar transformation of women's occupational structures during the comparatively recent era of rapid economic growth. As recently as 1955 over a third (36 per cent) of the Japanese labor force was still engaged in the primary sector, whereas the comparable figure for the United States was 11.64 per cent. The typical women's occupations other than in agriculture were mostly concentrated in the so-called informal sector or in the textile factories. But Japan was ready for change.

The participation of Japanese women in clerical employment grew rapidly as demands for clerical workers exploded and women of the baby-boom cohort passed on through and out of the primary and then the upper secondary schools. Nonetheless, a high percentage of women remained employed in the manufacturing sector in Japan. The number of women engaged in manufacturing exceeded the number of clerical workers until 1980, and the decline in manufacturing employment has been much slower than the growth in clerical employment of women. The slow decline of women's employment in manufacturing

reflects its continuing importance in the Japanese economy and the willingness of employers to accomodate the demands of married women for part-time work. Indeed, such accomodation provides a flexibility that complements the Nenko (seniority) system. By 1980, the proportions of all non-farm working women engaged in clerical work (26.6 %) and in manufacturing (26.1 %) were virtually the same. In the United States, by contrast, since 1930 the number of women in clerical occupations has greatly exceeded those in production activities. Indeed, durig the 1960's Japanese women in processing jobs were entering new fields, including electronics, precision machinery and Japan's newly growing automobile industry.

A related interesting characteristic of women in production work in Japan is the changing age distribution (Table 12). In 1960 more than 60 % of female production workers were young — ' tween 15 and 29 years of age, while in 1980 more than 80 per cent were over 30. Naturally, as the average age of these workers rose, so did the proportion of married women, from 37.4 in 1960 to 75.6 in 1980. In addition, 57 % of married women who work part time are employed in the manufacturing sector.

The change in age distribution of female clerical workers has been more gradual, and exhibits characteristics similar to those observed in the United States. In 1960, 77 per cent of the Japanese female clerical workers were under 30 years of age, by 1980 there were few teenagers in clerical work and female clerical workers were moving up the age scale. Nearly half of all female clerical workers are now over age 30. It is apparent that women are returning to clerical employment as the demands of child-rearing on their time decline. As a result, the proportion of married women among clerical workers increased from a fifth in 1960 to a

TABLE 12

AGE DISTRIBUTION OF JAPANESE WOMEN IN CLERICAL AND IN PROCESSING EMPLOYMENTS, 1960 AND 1980

	Clerical		Processing	
Age	1960	1980	1960	1980
15-19	21.3	6.7	31.9	3.8
20-29	55.3	44.6	32.2	13.8
30-39	15.4	23.0	14.5	23.0
40-49	5.7	16.2	13.7	32.5
50-59	1.9	7.9	6.2	19.8
60 and over	0.4	1.6	1.5	7.0

Source: Ministry of Labor, Bureau of Women and Youth, Status of Women Workers 1982, Table 14

half in 1980. As pointed out by Goldin, clerical work is marked by characteristics such as lower depreciation of human capital with temporary withdrawal from the labor force and greater opportunities for refreshing and improving skills off the job that make it a suitable choice for educated married women. Table C.5 provides data that enable us to compare the incidence of clerical employment among females and males by age groups over the years 1955 to 1980. Although a few more older men were still in clerical jobs in 1980 than in earlier years, on the whole there has been little change in the proportion of males who have been clerical workers. With the females the pattern is very different. First is the rapid increase in rates of clerical employment in the peak age of labor force participation, at 20 to 24. But the gradual movement up the age scale is also apparent. By 1975 females over the age of 25 were beginning to approach the male 1960 age pattern for clerical work.

On the other hand, there is a marked contrast between the age patterns of male and female involvement in production activities (Table C.6). For males, movement out of agriculture was predominantly movement into processing and related activities, and there is remarkably little age differential in the male rates excepting men over 55 and the teenagers. Such work has been and continues to be predominantly male. Among females the age pattern is very different from either the males in processing or the female proportions in clerical work.

There is a clear dichotomy between older and more recent cohorts of women. The young and generally well educated cohort are absorbed into clerical work, while the older and less educated continue to be employed

in manufacturing. For those receiving pre-war and war-time education the less educated face the greater monetary needs and are the more likely to work, mostly in the manufacturing sector and often on a part-time basis. On the other hand, for the newer cohorts education is playing a positive role in labor-force participation and many are in clerical jobs. Those who were relatively well educated prior to or during World War II were less inclined to participate in wage employment for two reasons. (1) involvements in home activities were relatively attractive compared with wage employment opportunities of almost any kind available to their cohort, and (2) when demand for clerical workers expanded after 1965, employers sought the more recently educated young women. The less well educated members of the older cohort could not compete for these jobs, but found work in relatively low skilled jobs in a rapidly expanding and progressive manufacturing sector. For some years the participation of this latter group in the manufacturing labor force kept wage rates low, making Japanese products relatively inexpensive and competitive in the world markets, and they still have this effect in some manufacturing enterprises. The situation has been changing, nevertheless, as better educated cohorts move on to older ages.

These developments are reflected in the shares of females in the clerical and the production labor markets, shown by year and age in Table 13. (The starred entries in this table identify the cohorts in which ratios of females to males are high because of deaths of young men during World War II.) Throughout females have made up a majority of the young clerical workers, but initially they were a minority of clerical workers age 25 and over. By 1980 females made up close to half of the clerical workers in the prime working ages, and this evolution continues. In processing

TABLE 13

JAPANESE FEMALE PERCENTAGE SHARES IN CLERICAL AND IN PROCESSING EMPLOYMENTS BY AGE, 1955-1980, AND 1955 FEMALE/MALE POPULATION RATIOS BY AGE

Age	1955 ratio females to males	Female percentage shares in clerical work					
		1955	1960	1965	1970	1975	1980
15-19	.987	70	72	77	80	82	83
20-24	1.002	56	59	66	73	74	78
25-29	1.018	31	34	37	44	49	54
30-34	1.187*	19*	24	30	35	41	46
35-39	1.208*	16*	21*	30	37	43	48
40-44	1.178*	15*	19*	32*	37	44	50
45-49	1.045	13	17*	28*	37*	42	48
50-54	.995	9	13	23*	31*	39*	42
55-59	.981	7	10	17	24*	32*	32*
60-64	1.035	5	9	12	18	25*	32*
All ages		34	37	44	44	51	54

	Female percentage shares in processing					
	1955	1960	1965	1970	1975	1980
15-19	38	38	37	35	30	24
20-24	30	30	20	27	21	19
25-29	19	20	21	21	16	18
30-34	22*	20	22	26	22	23
35-39	23*	28*	28	31	30	31
40-44	26*	31*	36*	34	33	35
45-49	23	28*	36*	38*	33	35
50-54	19	21	30*	36*	36*	33
55-59	17	20	25	31*	34*	35*
60-64	16	17	21	26	29*	36*
All ages	26	27	28	30	27	29

* Cohorts with large sex gaps due to male deaths during World War II

employments (including unskilled labor) females were and are a minority of the work force at all ages. The teenagers aside, women's share of employment in processing activities is greatest among women who were in the war-time youth cohorts and , by 1970 - 1980, their slightly younger sisters. But this is a pattern that cannot be expected to continue.

C. Evolving structures and economic rationality

It is time, before we go further, to sum up the major socio-economic forces that have influenced the patterns of labor force participation among Japanese women:

1. The decline of employment in agriculture is the most fundamental change. It is not only a relative, but also an absolute decline. Agriculture had long been a major field of economic activity for females of all ages, and it is carried out in a setting that accomodates easily to domestic responsibilities and child rearing. The decline of agricultural employment has two principal effects. First, it dampens over-all female rates of participation by reducing the options for combining labor force participation with child rearing, but second the opportunity cost of employment in non-agricultural activities is reduced when options in agriculture deteriorate. There is no reason to assume that these two forces will balance out. In fact, as is shown in Chart 1, the net effect in Japan was a decline in overall women's labor force participation between 1955 and 1975 despite increases in rates of participation in paid employment over that period. (The flattening out of all the curves for Japan between 1975 and 1980 coincides with a slowing of Japanese economic growth in the 1970's, but this is an unstable situation.)

2. With progressive urbanization, the problems of child care have impeded shifts to paid employment outside of the home, contributing to the persistence of women's participation in non-agricultural family enterprise and in part-time work of many kinds. Urban child-care problems are aggravated by crowded housing with little outdoor play space. Furthermore, the shift of young couples' residence to urban centers separates them from the older generation and from the child-care resources of the greater family. Nor do the jyuku (out-of-school supplementary schools and tutoring arrangements) fill the gap; they may help, but the focus is on educational provision and most mothers are not thereby freed from demands on their time. Urban children become even more time-intensive in their demands on adults than they would be in the countryside. The high time cost of child rearing can be partially offset, however, by an organization of economic activities consistent with monitoring children. This encourages the persistence of non-agricultural family and self employment, it discourages taking on paid work outside of the home, and the tensions in allocation of time between home and labor market encourage part-time work among those who do enter into paid employment.

These first two paragraphs suggest that we might have predicted a decline in labor force participation rates and a resistance to taking paid employment among women with young children, whatever may be the situation with single women or among married women after children are at least of school age. The sharp drop from peak rates of participation in wage work among young women in Japan fits this picture. But this is by no means the whole story.

3. The spread of education among women raises their potential

earnings in work outside of the home. The important question here is then what happens to a woman's earning potentials in wage work relative to the costs of providing for child care when she is at work. And it is not even a matter just of earnings at a particular time, but of the prospective value of an earning stream over the years as affected by the timing and continuity of participation in the paid labor force. It would seem that the spread of education to higher levels among women generally cannot be expected to have a major impact on rates of participation in paid employment except as it operates through reduced fertility — but both the educational expansion and the reduced fertility are part of an interrelated development process. None of these phenomena is exogenous.

4. With progressive urbanization there is increasing dependence on market goods. At the same time, technological change is biased against productive activities in the home. This has two immediate effects. Returns to time in the wage-labor market tend to rise relative to time spent in the home for most women. And the need for money income is greater (aside from the fact that affluence itself changes people's perceptions of adequate incomes). The monetary need factor is critical in its effects on labor-force participation among widowed mothers not part of an extended family and among wives of men with low earning power. One of the predictable effects is higher rates of labor-force participation among the urban women with the least schooling (whose husbands will also be the least educated) than among women whose husbands, like themselves, have at least upper secondary schooling.

It should not surprise us that the elasticity of response to rising market earnings for women has been low (or even perverse) compared with most Western countries, whereas the negative effects of rising male earnings

(and income from other sources) have been much stronger in Japan than in most industrialized nations. Coming back to Davis' "breadwinner" economy, the necessity of looking carefully into changes in cohort experiences and educational composition is highlighted in the combination of rapid change with survival of family and own account employment in Japan.

III. WOMEN AND INTERNAL AND EXTERNAL LABOR MARKETS

An important piece has been left out in our discussion thus far. We have spoken of accomodation to the desires of married women for part-time employment, but we have not yet looked directly at the nature of career options for women in paid employment as related to the Japanese economic structure.

What are the constraints and opportunities for women in the Japanese labor markets? While the answers to this question may seem to be "common knowledge," such knowledge misses the critical points at which change may be coming or is sought. We have been able to unearth only scattered bits of evidence, but even those bits may help us to a better grasp of the situation.

A. Men and Women in the Big and the Small Employment Settings

Back in the 1950's even the big Japanese firms were hiring large numbers of graduates of the junior secondary schools, and they were providing considerable general as well as firm-specific training for these young people, including certificates of educational accomplishment. With the spread of formal secondary education this policy was no longer appropriate, and personnel development in the large Japanese enterprises has been modified

accordingly. Also reaching back many years has been government programs to assist smaller enterprises in the development of skills. Few of these programs are oriented toward women, however. It is notable also that the Japanese statistics provide counts of applications and openings separately in "male" and in "female" jobs. All this is tied up, of course, with hiring policies, which will differ not only with the initial assignment of a new worker but also with the expectations and plans of the firm with respect to development of employees for positions of rising responsibility over time.

Simply being employed in a big enterprise is no guarantee whatsoever that one will be situated on a career path as a participant in an effective internal labor market. Neither does being in a small firm necessarily imply no career promise. It is worth while, nevertheless to take a look at sex differences in proportions of workers who are employed in large and in small enterprises. Tables 14, 15 and 16 address this matter.

Sex contrasts in distributions among firm sizes are minimal among the young people (Table 14). In fact as of 1982 a greater fraction of young women than of young men were employed in the biggest firms, and fewer of the young women were in the smallest enterprises. The picture changes quickly, however, as we move up the age scale. Whereas the men retain high representation in the biggest firms (at over 20 per cent) right up to standard retirement age, women quickly drop off in their representation in such enterprises. At the same time, they evince an increased presence in the smallest firms. The dropping off in the big firms is particularly significant in that it clearly signals the contrast in initial status and career expectations on the part not only of the women but also of their employers. But there is no surface

TABLE 14

DISTRIBUTIONS OF SIZE OF FIRM: JAPANESE WORKERS BY AGE AND SEX, 1982

Female Labor Force

Size	Age 15-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64
1-4	5.7	10.6	13.0	9.9	14.0
5-9	7.7	10.9	13.1	12.0	14.8
10-19	8.2	9.5	11.5	11.8	14.2
20-29	5.0	5.4	6.8	7.5	7.1
30-49	5.7	6.2	7.8	8.1	8.3
50-99	8.1	8.1	9.7	10.7	9.7
100-299	13.9	10.8	10.6	11.5	9.6
300-499	6.1	4.0	3.4	3.5	2.3
500-999	6.6	3.7	3.2	3.0	2.3
1000 +	25.0	14.5	10.2	10.2	7.6
Government	8.0	16.3	10.5	11.8	10.1
Total	100.0	100.0	100.0	100.0	100.0

Male Labor Force

1-4	7.0	7.0	7.0	6.4	7.8
5-9	10.5	9.0	8.8	8.7	10.1
10-19	9.8	8.5	8.4	8.9	10.9
20-29	5.7	5.0	5.3	5.5	7.0
30-49	6.3	5.8	6.1	6.4	8.3
50-99	8.3	7.8	7.9	8.1	9.6
100-299	12.5	11.1	11.0	10.3	11.2
300-499	5.0	4.6	4.5	4.0	4.0
500-999	5.5	5.6	5.3	4.4	4.0
1000 +	21.2	22.6	23.8	21.2	13.7
Government	8.2	13.0	11.9	16.1	13.4
Total	100.0	100.0	100.0	100.0	100.0

Source: 1982 Employment Status Survey, Table 12, p. 142

dichotomy between male and female in these data; both sexes are spread out over all sizes of enterprise and at all ages.

Table 15 turns these data around to ask what shares of the total labor force at each age and size of firm are female. What shows up from the start is simply the high labor-force participation rates of the young women; it is only in this age range that they constitute over half of the workers in any size of firm. Nevertheless, the female shares rise markedly to 40 percent or more of those aged 35 to 54 in firms with under 100 employees.

Table 16 sums up the changes for each age category between 1972 and 1982 proportions of economically active women in each size of enterprise and in government employ. There is a clear enough shift of teenage employment away from government and big firms toward small ones; this should not surprise us given the negative selectivity into employment among Japanese youth still of upper-secondary age. In contrast, there is a marked decline in proportions of those aged 20 to 34 in the small enterprises, with compensating increases spread out over firm sizes but especially into government. On the other hand, women aged 35 or over were losing out in government employment. We have not been able to pursue the question of what lies behind this shift, but suspect that it is related to age constraints in taking women back into public employment following upon the economic problems of the mid-seventies and perhaps a weak demand for teachers given the decline of school enrollments as smaller numbers were entering the primary and the secondary-school age cohorts.

TABLE 15

FEMALE PERCENTAGE SHARES IN THE JAPANESE LABOR FORCE BY AGE AND SIZE OF FIRM, 1982

Size	Age 15-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64
1-4	45	39	50	46	46
5-9	42	34	44	43	41
10-29	46	32	41	42	36
30-99	48	31	40	41	32
100-499	53	29	32	36	27
500-999	54	22	24	27	21
1000 +	54	21	18	21	21
Government	49	35	32	28	26

TABLE 16

1982 MINUS 1972 PERCENTAGES OF FEMALE LABOR FORCE IN DESIGNATED SIZES OF FIRM (OR GOVERNMENT) BY AGE

Size of Firm (in numbers of persons)

Age	1-29	30-99	100-499	500 +	Government	Total
15-19	+4	+2	+3	-7	-2	0
20-24	-3	+1	+1	-1	+2	0
25-29	-8	+1	+1	+1	+5	0
30-34	-2	+1	+1	0	0	0
35-39	+1	+1	0	0	-2	0
40-44	+3	0	+1	0	-4	0
45-49	-1	+2	+2	0	-3	0
50-54	-2	-1	+2	+1	0	0
55-59	+2	+2	0	-1	-3	0
All ages	+1	+2	0	-3	0	0

Sources: 1982 Employment Status Survey, Table 12, p. 142 and 1972 Employment Status Survey, Table

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B. Sex differences in labor force adjustments in the short and the Long Term

There have been a number of interview and questionnaire studies of policies and attitudes of Japanese businessmen, especially in the large firms, with respect to hiring and personnel policies. A few have directed attention explicitly to women. Unfortunately, much of this limited material is ambiguous.

One set of questions asked employers about whether they differentiated by sex on a list of items, and for new graduates versus for newly hired experienced workers. One of the clearest and most frequently cited sorts of sex differentiation was in "skill requirements" — admitted differences ran higher in 1977 than in 1981 and for new graduates than for experienced workers. Also important for experienced workers were sex differences in age restrictions reported by about 30 per cent of the respondents, discussed below. From 7 to 10 percent said they do not hire married women, and in 1981 7 to 10 per cent said they do not hire women living alone. There were explicit statements concerning policy with respect to the movement of personnel geographically as part of their training for and subsequent higher-level responsibilities;[7] 40 percent said this was a reason for favoring college men against women.

Fn.7 These and the following comments are based on special surveys of management regarding women workers conducted by the Ministry of Labor in 1977 and 1981.

Two other sets of questions pursued in these enterprise surveys referred to sex differences in provision of training and to promotion policies for women. Unfortunately, the training questions were too crude to give us much information, except that a fifth of the respondents specified

that they gave no training to women — accounting for roughly thirty per cent of those who provided training of men. The most unambiguous responses are those stating as a matter of policy whether and to what extent there were promotion possibilities for women. Of the 1977 respondents 48 per cent said that there were such possibilities, with 15 per cent saying this was to Bucho (section chief) level or higher; the corresponding figures for 1981 respondents were 55 per cent specifying female promotion possibilities and 20 percent carrying this to Bucho level or better. The reasons stated for not promoting women are particularly interesting. These responses with their percentages were as follows:

	1977	1981
Tenure too short	47.3	34.7
Lack management ability	12.7	11.8
Women's jobs are as assistants (subordinate)	60.1	59.8
Legal protective restrictions (eg. overtime work)	7.5	7.5
Other	4.5	2.7

The circularity in some of these responses is obvious. But they are not uniquely Japanese.

This brings us back to the age constraints in hiring, to sex differences in the duration of job contracts, and to female versus male average tenure by age.

The time out of the labor force that interrupts a woman's career in Japan, as elsewhere, is a much more serious problem for women in Japan. Their problems are compounded by arbitrary age limits and other automatic rules in employment policies that differentiate between the sexes. Thus, among the firms studied in the 1974 "Survey of Employment Management"

two fifths set age limits under 35 for the hiring of female clerical workers, whereas only one fifth set such age limits on employment of men in clerical jobs (Table 17). There were very few cases of specified age limits for part-time employment among men, but such constraints are more frequent for women and more of a handicap to them. On the other hand, age limits are more frequent and more stringent for male than for female production workers. These figures must of course be interpreted with caution, remembering that rules are specified only when there are enough relevant situations to make the setting up of general criteria worthwhile. Table 17 does point up the fact, however, that women trying to come back into the labor market after small children have grown may face special impediments in getting into clerical jobs.

One of the most easily distinguished characteristics of employment contracts is their initial duration. Table 18 provides a little information on this point, although it says nothing about long-term informal commitments and tenure expectations. In all three years, which span two decades, over 90 percent of the employment contracts with males were for "regular" status, and this proportion rose to 95 per cent in 1982. Among women also the predominant contract was for a year or more, but the proportions dropped from 88 per cent in 1960 to 81.5 per cent in 1982. What increased for women was the "temporary" status contracts, which entail commitments for more than a month but less than a year. Such contracts imply, among other things, that their recipients will receive no on-the-job training and are not candidates for future promotions.

The average duration of length of service will normally be shorter

TABLE 17

PERCENTAGES OF JAPANESE ENTERPRISES WITH SPECIFIED AGE LIMITS ON EMPLOYMENT BY TYPE OF JOB AND SEX, 1974

	Type of Work		
	Clerical	Production and sales	Part-time
Limits on males:			
Under 25	2.0	1.5	0.2
25-34	17.8	18.5	0.0
35-44	8.0	14.8	4.6
45-54	7.4	14.2	6.5
55 and over	5.7	12.0	14.8
No limits specified	59.1	39.0	73.9
Limits on females:			
Under 25	7.4	2.6	0.8
25-34	28.5	9.6	6.9
35-44	12.8	11.5	18.3
45-54	5.5	9.1	29.6
55 and over	1.6	4.5	6.1
No limits specified	44.2	62.7	38.3

Source: Yearbook of Labor Statistics, 1974. Table 46.

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for women than for men of any given age simply because so many of all but the youngest women have re-entered the labor market after a few years when their children are small. There is of course the further, and critical, fact that the Japanese system is built in so great a degree around the Nenko (seniority) system applied almost exclusively to men, especially in the big firms. No attempt to sort out possible changes in female compared with male tenure over time can fully distinguish these factors, but we can take a major step forward simply by observing average duration of service by age. Unfortunately we lack any such data for all females in full-time employment, and we cannot break the data down by firm size. What we do have is information on the duration of services of "regular" workers by age and sex, shown in Table 19 for 1965, 1974, and 1983.

The sex contrast in tenure is marked for all except the youngest employees in all three years. There is also a rise in average duration of service for each age group between 1965 and 1974 for both sexes, but with little change between 1974 and 1983. In all three years, the absolute sex differences are greatest at ages 40 to 54, when men on the life-commitment system reach their fullest position in the internal hierarchy and their highest levels of seniority. The standard retirement age at 55 for a majority of workers in the big firms puts a cap on the sex differentials thereafter, and by age 60 and over there is no significant difference between the average duration of services of male and of female "regular employees."

Finally, we come to two sets of data that say something about the demand and supply for services of men versus women and about the adjustments made when business conditions improve or worsen.

First is data from an official report on numbers of openings and

TABLE 18

PERCENTAGE DISTRIBUTIONS OF DURATION OF EMPLOYMENT CONTRACTS BY SEX; JAPAN 1960, 1970, AND 1980

	Males			Females		
	"Regular" a/	Temporary b/	Short c/	"Regular" a/	Temporary b/	Short c/
1960	91.7	4.3	4.0	87.6	8.1	4.3
1970	94.4	2.7	2.8	86.3	9.4	4.3
1980	95.0	2.8	2.3	81.5	14.3	4.3

Source: Bureau of Women and Youth, Ministry of Labor, Status of Women (in Japanese). Tokyo: Ministry of Finance Printing Office 1982. Table 15, p. 19.

TABLE 19

AVERAGE DURATION OF SERVICE OF REGULAR EMPLYEES BY AGE AND SEX: JAPAN, 1965 AND 1974

Age	Males			Females		
	1965	1974	1983	1965	1974	1983
15-19	1.7	1.4	1.0	1.3	1.4	1.0
20-24	3.3	3.2	2.7	1.7	2.9	2.8
25-29	5.3	5.6	5.5	3.2	4.6	5.4
30-34	7.9	8.8	9.3	4.9	6.2	7.1
35-39	10.4	11.3	12.5	6.4	6.6	7.3
40-44	) 11.7	14.2	15.5	6.3	8.2	7.9
45-49	)	17.2	17.3	5.9	9.6	9.2
50-54	) 12.2	18.4	18.6	) 7.0	9.6	10.8
55-59	)	13.5	15.3	)	9.6	11.3
60-64	) 8.9	9.7	10.4	) 7.5	9.4	11.8
65+	)	10.1	11.0	)	10.5	14.0

Source: Yearbook of Labor Statistics, 1965 Table 57, 1974 Table 68, and 1983 Table . Employees include all in wage and salaried positions.

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of applicants for "male" and for "female" jobs -- a type of tabulation no longer legally admissible in the United States. As Table 20 shows, the ratios of openings to applicants have generally been more favorable for men than for women with labor force experience and for male relative to female college graduates. This is not the case, however, for graduates of upper-secondary schools since 1976, when the ratios for females came to surpass those for males. But for both sexes the openings for upper-secondary graduates have been more than double the numbers of applicants over the past decade. It is only the experienced women who are sought in far fewer numbers than those seeking work. This has become an increasingly serious problem in recent years.

The most sensitive available indicators of sex differences in short-term labor market adjustments are probably in the data on hiring and separation rates. The course of those rates over the years 1965 to 1982 are shown in Charts 7 and 8 for hires and separations respectively. The drop in hiring rates in the early 1970's is clear enough for both sexes and for both full-time and part-time workers. Notice, however, that the decline is somewhat greater for the female than the male part-time employees. The markets for part-time workers are highly volatile, with sharp ups and downs in both hires and separations, regardless of sex.

The net effects of the fluctuations in hires and fires are shown in Table 21. Although year to year net percentage changes in employment are small, the inferior position of female compared with male full-time workers is evident. A fall-off for full-time women was evident already in 1970 when there were still net gains for men, and in 1974 and 1975 the losses were at

TABLE 20

RATIOS OF OPENINGS TO APPLICANTS IN "MALE" AND "FEMALE" JOBS FOR EXPERIENCED WORKERS AND FOR NEW GRADUATES OF UPPER SECONDARY AND OF HIGHER INSTITUTIONS: JAPAN 1972 - 1983

	Upper Secondary Graduates		Graduates of Higher Institutions		Experienced workers Full time		Experienced workers Part-time
	Male	Female	Male	Female	Male	Female	Both sexes
1972	5.94	5.15	4.04	2.46	1.58	1.39	.39
1973	5.91	5.70	3.89	2.55	2.33	1.88	2.03
1974	6.86	6.48	5.03	3.12	1.55	1.20	1.28
1975	6.22	5.73	4.32	2.70	0.98	0.93	1.20
1976	3.74	4.41	2.54	1.99	1.03	0.96	1.41
1977	3.26	4.34	2.26	1.85	0.93	0.72	1.13
1978	2.78	3.60	2.02	1.65	1.04	0.70	1.26
1979	2.54	3.18	1.97	1.47	1.30	0.81	1.60
1980	2.49	3.15	2.28	1.56	1.24	0.80	1.58
1981	2.41	3.18	2.46	1.61	1.07	0.75	1.45
1982	2.13	3.03	2.24	1.53	0.96	0.69	1.36
1983	1.74	2.45	1.97	1.36			

Source: Computed from Bureau of Women and Youth, Ministry of Labor Status of Women (in Japanese). Tokyo: Ministry of Finance Printing Office, 1982, Tables 34 and 35

TABLE 21

HIRE MINUS SEPARATION RATES: JAPANESE FULL-TIME AND PART-TIME WORKERS BY SEX, 1965 TO 1982

	Full-time		Part-time		Total	
	Male	Female	Male	Female	Male	Female
1965	+ 1.2	+ 0.7	+ 9.4	+ 7.1	+ 1.4	+ 1.1
1970	+ 1.6	- 0.3	+ 13.1	+ 8.9	+ 1.9	+ 0.4
1972	+ 0.2	- 2.0	+ 10.8	+ 9.4	+ 0.5	- 1.0
1973	+ 0.9	- 0.7	+ 12.6	+ 11.2	+ 1.3	+ 0.2
1974	+ 1.1	- 3.2	- 8.6	- 7.4	+ 0.9	- 3.4
1975	- 0.9	- 3.5	- 5.9	+ 3.8	- 1.0	- 3.0
1976	- 0.1	- 1.2	+ 9.1	+ 10.9	- 0.1	- 0.3
1977	- 0.4	- 1.9	+ 6.2	+ 6.3	- 0.3	- 1.2
1978	- 0.5	- 1.5	+ 2.8	+ 4.0	- 0.4	- 0.9
1979	+ 0.4	+ 0.1	+ 8.3	+ 7.8	+ 0.5	+ 0.5
1980	+ 0.7	+ 0.1	+ 5.4	+ 13.0	+ 0.8	+ 1.0
1981	+ 0.7	0.0	+ 6.2	+ 11.5	+ 0.8	+ 0.6
1982	+ 0.8	0.0	- 3.1	+ 3.1	+ 0.7	+ 0.2

Source: Computed from Bureau of Women and Youth, Ministry of Labor, Status of Women (in Japanese), Table 36, pp. 38-39. Tokyo: Ministry of Finance Printing Office, 1982.

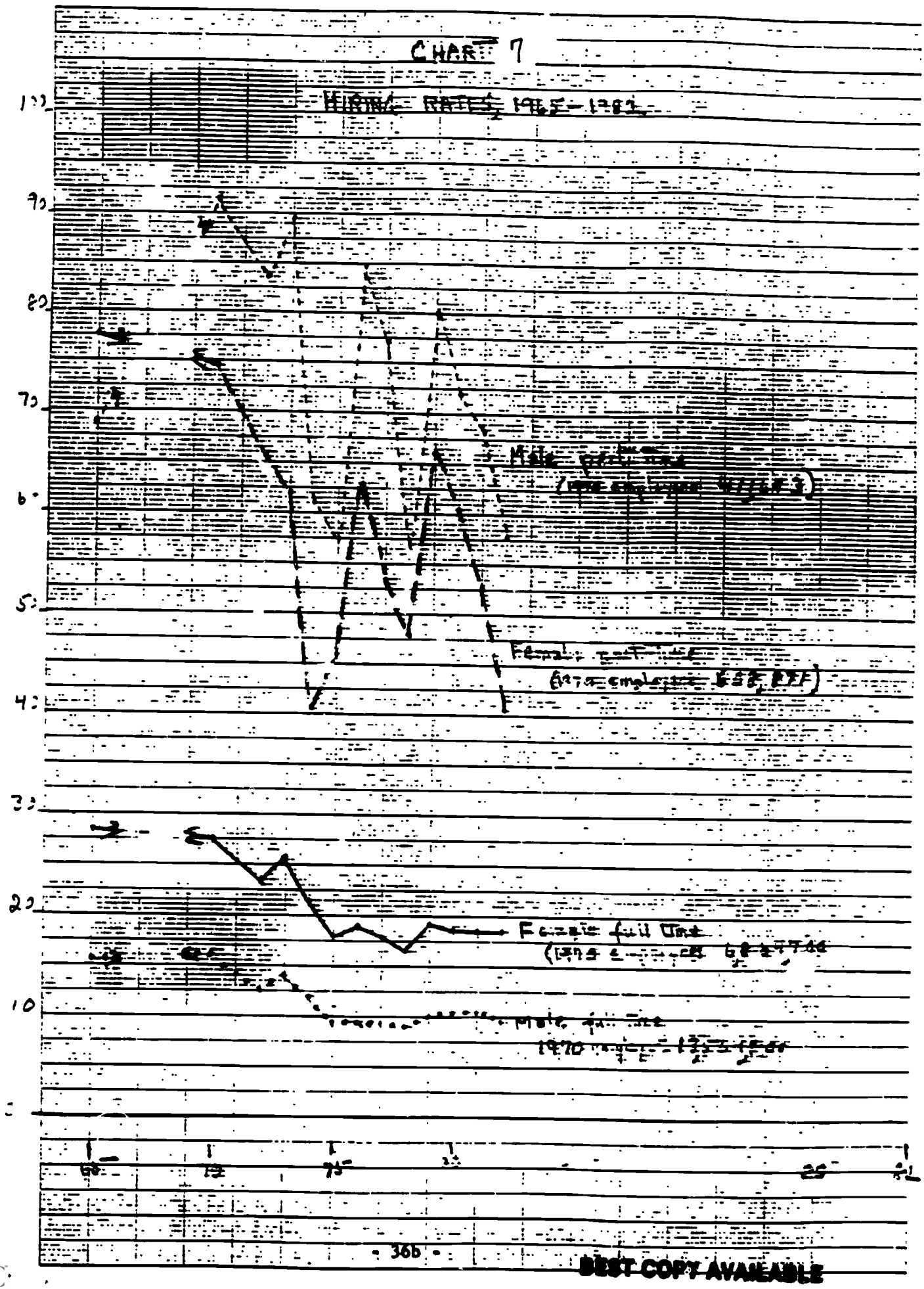
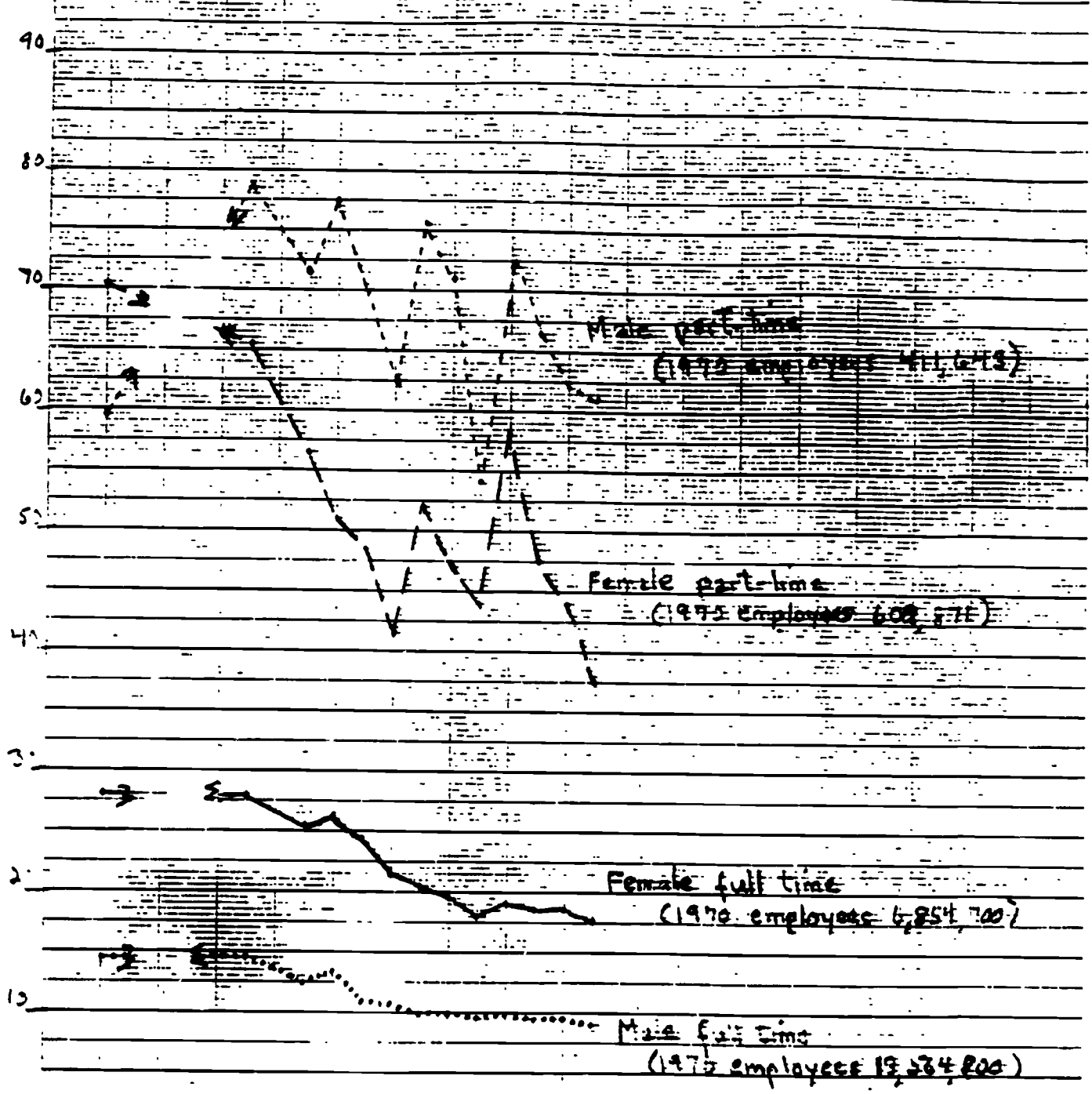


CHART 8

SEPARATION RATES, 1965-1972



3 percent of total female full-time workers. Negative rates for full-time men first appeared only in 1975.

Part-time workers are distinctive whether male or female, but with quite different age distributions, as we have seen. Although part-time paid workers among males are too few to provide much of a cushion even disregarding their distinctive qualifications and limitations, it is evident enough that they were hit as hard as (actually harder than) the part-time females with the 1974-75 economic recession. In general, however, there have been net increases in numbers of both male and female part-time workers over the years from 1964 to 1980. For females, but not for males, there was a cumulative net decline in numbers of full-time paid workers over those years. Given the marked peaking of proportions of women in paid employment in the age group 20 to 24, a part of what we are observing in Table 21 could be traced back to demographic factors; the wave of baby-boom girls would have been in their early twenties in the late 1960's, followed by a much smaller cohort in their early twenties in the mid seventies. But the cumulative decline in numbers of females in full-time employment cannot be attributed entirely to demographic factors, which in any case are important first of all because of the age structure of female employment rates that has persisted across successive cohorts. This brings us back to the interaction between the structure of life-cycle demands for and supplies of women in full-time, "regular" employment.

C. Relationships between education and post-school labor market experiences of men and women

Table 22 lays out 1980 female/male ratios of contract earnings by age in terms of hourly earnings and of monthly earnings. The progression

TABLE 22

FEMALE / MALE RATIOS OF CONTRACT EARNINGS BY AGE AND EDUCATION, 1980

	Hourly Earnings		Monthly Earnings			
Age	Compulsory Schooling	Old Middle, Upper Secondary	Compulsory Schooling	Old Middle, Upper Secondary	Junior College	University
Under 17	.93	—	.89	—	—	—
18 - 19	.85	.88	.81	.86	—	—
20 - 24	.69	.84	.68	.81	.87	.89
25 - 29	.63	.73	.61	.71	.79	.83
30 - 34	.54	.63	.53	.62	.72	.78
35 - 39	.48	.54	.48	.54	.68	.77
40 - 44	.46	.51	.46	.51	.66	.71
45 - 49	.47	.53	.48	.53	.67	.69
50 - 54	.48	.59	.50	.59	.63	.69
55 - 59	.56	.71	.57	.70	.73	.80
60 - 64	.67	.86	.67	.83	.87	.84
65 +	.72	.99	.72	.93	.95	.99

Source: Computed from data in the Basic Wage Survey, 1980 (in Japanese)

toward reduced relative gender gaps in earnings with increases in levels of education is manifest, whether in hourly pay (shown for lower and secondary schooling only) or in monthly contract earnings. Whether we look at hourly or at monthly contract earnings, those who had completed upper secondary schooling suffered a somewhat lesser disadvantage in earnings relative to their male counterparts than did the women with compulsory schooling or less. With the minor exception of a ratio of .63 for junior college graduates age 50-54 , earnings of such women were two thirds or more of the earnings of junior college men, and among university graduates the gender gap in contract earnings was even smaller. At the other extreme, among those with compulsory education (or less), women's wages dropped to less than half of men's in the age range from 30 to 54, at the normal point of retirement for manual workers in "life commitment" systems. This lower schooling group is of course becoming a smaller and smaller fraction of the population, with over 90 percent entering senior secondary schools and even now only tiny proportions of those who enter failing to complete the course.

Contract cash earnings are only part of Japanese pay, even setting aside various sorts of payment in kind. Bonus payaments can be as much as a third or more of the values of contract earnings over a year. The ratios presented in Table 22 do not take bonuses into account. An examination of ratios of bonus payments to annual earnings (Table C.8) revealed that the bonus ratios for females exceeded those for males among the younger workers in every education category. Since the data source is the same here as for Table 22, this implies that the total gender gap could have been somewhat less than the ratios in Table 22 may suggest for the younger workers

— up to age 30 for uiversity graduates and to age 35 for all others. But there is then a marked switch, to higher bonus ratios to men than to women in the age range 35 to 54; this implies that the Table 22 data understate the extent of the gender gap in total earnings for persons aged 35 to 54. The bonus element is not an insignficant aspect of sex differences in earnings.

It must be remembered in considering the evidence just discussed that all these figures refer to paid employees in firms with at least 10 workers. Those in the smaller enterprises are left out, as are own account and family workers. How women versus men fare in a family enterprise is hardly amenable to across-sex income comparisons even conceptually, quite aside from the lack of any figures on which to hang speculations.

D.The new opportunity in employment act — the Japanese way

It was over twenty years ago that the senior author of this paper was chatting with a well-known Japanese editorial writer about labor markets in Japan. The conversation was not directed toward women, but men brought it around to women because of the sex of their interviewer. This interviewee complained that there was a rising "problem" in the desires of women to participate in the urban labor markets, and in their actual entry into those markets. Put in Kingsley Davis's language, this journalist was perceiving a threat to the "breadwinner" system. While these remarks were in part just friendly humor, they were nevertheless indicators of some unease in Japanese society over what was happening already in the 1960's — an unease combined with discomfort over inherently conflicting aspects of the "problem." The enterprise surveys of 1977 and 1981 were manifestations

of quite fundamental shifts in perceptions of women's potential roles and of sex differentials in the treatment of women in both the "external" labor markets and those "internal" to the firm.

The Male-Female Employment Opportunity Equality Act of 1984 consists of a set of guidelines to firms. Originally there were to be fines for non-compliance, but in the end it became guidelines only. How much effect such guidelines may have on action versus on words remains to be seen. The basic idea is that it will be necessary in the long term to reduce treatment differences by sex. Three sets of processes are addressed: advertisement of job openings, promotion policies, and training on the job. The content of the guidelines may be summarised briefly as follows:

(1) When job openings at entry level are specified they should not differentiate by sex. Employers are "encouraged" to provide equal opportunities.

(2) Employers should not discriminate by sex in the provision of training.

(3) Employers are "encouraged" to treat men and women equally with respect to status and promotion within the firm.

(4) Retirements and separations "should not discriminate by sex."

(5) Pregnancy should not be used as a reason for firing a woman

(6) There should be more special provision for the return of married women to work after time taken out for care of young children.

Each prefecture now has a Committee of the Women'ss bureau. If both or either workers or employers request negotiation, the Committee of Equal Employment Opportunity will serve in helping to bring them together. What is not clear to us at the moment, but may be clear enough in the Act, is "what about the women who are NOT hired and their spokesmen?"

The combination of gradualness, development of concensus, and

the treatment of conflict has a distinctively Japanese flavor that may be difficult for non-Japanese to assess. In part the Act is simply a recognition of underlying forces that are going to bring change anyway. The very substantial changes in the "life commitment system" that ensued with the flood of baby-boomers and their movement through the system is a clear example of Japanese easing of and gradualism in making what are in fact quite fundamental institutional modifications. The Act is also a consistent extension of the Japanese system of labor conflict resolution in general. That system has itself been evolving in the ways in which it is used and the issues that have come under its purview. As Alice Lam (19) has shown in her recent study, the increasing appeals to the Labour Relation Commission from white collar groups is bringing more social issues relative to direct and immediate labour issues to the fore. But the Labour Relation Commission is not well placed to help resolve many of the white collar disputes, and arrangements for dispute settlement seem currently to be in flux. The Male-Female Employment Opportunity Equality Act sets up an agency to handle some "social" questions outside of the existing conflict resolution framework, but very much in line with its essentially informal and gentle processes, aimed at conflict resolution through concensus. It would be absurd to expect these guidelines to remake the treatment of women in Japanese firms and labor markets. But neither can this Act be tossed aside as of no moment. It should be taken as a signal that the time for change is here, albeit at a pace and in a style that can be accomodated without overt conflict. In the long view, the Act is more an effect than a cause of processes in the evolution of women's

roles that are already under way.

IV. SCHOOLS, LABOR MARKETS AND SEX ROLES IN JAPAN

A. The schools and recruitment to the labor force

The transition from school to labor force is facilitated in Japan by close connections between the schools and employers, especially the big firms. Whether at completion of senior secondary or college studies, the first "job" is commonly designated in terms of the employer. For males this reflects the importance of career development policies and hence career prospects. For most females the initial transition lacks this long-term dimension. Do they, nevertheless, also find their first jobs through the school as intermediary?

There must be quantitative evidence by sex that we have not found concerning the extent to which employment contracts are signed by upper-secondary and possibly by college students prior to graduation. Indeed, there has been concern in Japan about the long period of advance commitment to a particular firm before graduation from the senior secondary schools, and there have been efforts to limit this practice, which has been associated with competition by large firms to secure the commitment of promising young men. The best we can do here is to draw on data referring to the cohort who graduated from senior secondary schools in 1967, men and women now in their late 30's.

These heretofore unpublished data constituted a small part of a large 1967 survey of seniors in the public upper-secondary schools. The relevant responses on extent of prior-graduation job commitments and the contacts

involved in these arrangements are summarized in Table 23. These data are from students in a sample of schools that was stratified to give adequate representation of the less prevalent curricula along with those in the general courses. Here the general curricula are split according to whether the course was college preparatory or presumptively terminal.[7]

Fn.7/ No upper-secondary program completely precluded taking examinations for entry to higher institutions.

The first column simply specifies the percentages of youth expecting to go directly into the labor market on completion of senior secondary studies. Since General B is the academic, college preparatory course, those not taking examinations for entry to higher education are a small, definitely non-random minority. The vast majority of students in the other curricula expected to go directly into the labor market, although there were more males than females striving to enter higher institutions from those curricula. The rest of the table refers only to those who were going directly into the labor market.

The last column of Table 22 indicates percentages of youth who had not made specific job arrangements two or three months before graduation. Among females in General B, in agriculture, and in domestic arts this was over half, whereas in no case were as many as half of the males still uncommitted. It is in the terminal general and the agriculture courses that the male students were still "undecided." Turning this around, the proportions of those entering the labor market who had definite job commitments at least two or three months before graduation is impressive for both the commerce and technical students. Among boys in the technical schools this is almost 100 per cent.

TABLE 23

RECRUITMENT AND TRANSITION FROM SENIOR SECONDARY SCHOOLS TO LABOR MARKETS BY AGE AND SEX: JAPAN, 1967

Curriculum a/	Percent terminating	Percentage distributions of non-college students				
		Total	Entry job arranged through: Personal contacts	School contacts	Other	Not decided
			Females			
General B	26.5	100.0	11.2	27.3	4.5	57.0
General A	93.2	100.0	10.5	46.8	2.5	39.8
Commerce	93.5	100.0	8.0	64.0	3.2	24.8
Techical	87.7	100.0	8.0	72.0	6.0	14.0
Agriculture	90.6	100.0	10.5	28.6	2.9	58.0
Domestic Arts	93.8	100.0	20.9	19.8	1.6	57.7
			Males			
General B	6.7	100.0	14.6	50.4	35.0	0.0
General A	87.1	100.0	10.2	43.2	9.6	37.0
Commerce	77.7	100.0	12.1	65.0	11.8	11.1
Technical	81.1	100.0	5.5	85.8	5.3	3.4
Agriculture	89.5	100.0	5.9	29.5	29.7	34.9

a/ General B refers to the academic general curriculum.

Source: Unpublished data from the 1967 survey of 7,000 students in the final year of Japanese public secondary schools. These data refer to reports by respondents two to three months before graduation in March 1967.

The important part played by the schools in placing their graduates is evident for girls as well as for boys. Personal contacts were of minor importance and again with little difference by sex. Insofar as careers are differentiated by sex from the point of graduation this would seem to be through a combination of differences in curricula pursued, and differences in the nature of what the employers are anticipating and seeking when they hire girls versus boys from any given school. But curricula pursued reflect in turn the aims and expectations of the youth involved (or their parents), and those expectations are shared by the employers in an interconnected web they can be mutually reenforcing. And despite some similarities of the patterns revealed for males and females in Table ~~20~~ 13 we should not forget that search on both sides, by the youth and the prospective employer, also includes a greater diversity in types of communication channels through which young men are placed than is the case among females.

B. How young women perceived the future

We have presented many indicators of the nature of changes in female participation in education and in the labor force over some decades. These indicators are a kind of documentation, but they do not get back to questions of how the people concerned in fact saw their worlds. The measurement of attitudes and changes in them is another matter. This must be immediately evident in the unsatisfatory nature of the evidence cited above from surveys of Japanese employers. But what about how young people see things, or how parents see the future lives of their daughters versus of their sons? And are those perceptions changing? The answers to such questions will presumably reflect changes that have been taking place

in the life cycles of Japanese women, but they also affect behavior and hence the kinds of changes manifested in the passage of the Male-Female Employment Opportunity Equality Act and the choices that are made by women in the extent, timing and nature of their post-school activites within existing (and changing) institutional constraints.

Unfortunately, we lack a data base for even crude comparisons of attitudes or expectations of one cohort of young people with those of another, or of parents with their children. We can, however, take an instant-camera look at how female students graduating from Jpanese upper-secondary schools in 1967 perceived women's roles and opportunities. And we can ask whether these earlier observations may seem to be in accord with or to differ from the evidence cited by Carol Stocking about expectations of recent graduates of the upper secondary schools.

The same survey on which we drew in connection with recruitment into the labor force included an opinionnaire addressed exclusively to the female students. The questionnaire items and responses of the rural and the urban students are laid out in Table ~~25~~ 24. The questionnaire was set up on Lickert scales, from a score of 1 for strongly agree through 3 for neutrality to 5 for strongly disagree. Items on the opinionnaire have been regrouped in the table to facilitate interpretation. As is to be expected, the interpretation of responses on some items is more direct and unambiguous than on others.

Looking at the first cluster of items, all of which refer to marriage and or to work before marriage, we start with item c, which is entered at the top of the table. This may be an especially clear example of the need for caution in interpretation. A romanticist, and especially a male

TABLE 24

RESPONSES TO STATEMENTS ON WOMEN'S ROLES AND OPPORTUNITIES: FEMALE SENIORS IN UPPER SECONDARY SCHOOLS, 1967

Opinionna re statements	Percentages					
	Agree		Disagree		Neutral	
	Urban	Rural	Urban	Rural	Urban	Rural
Marriage and pre-marriage education and work						
c. A woman will be happier if she gets married even to a mediocre man and becomes a housewife than to concentrate on a life-time career at work.	40	46	34	32	25	22
i. So far as our generation is concerned, it is best to finish upper-secondary education as preparation for marriage.	53	50	31	34	16	16
m. When a woman goes to a four-year university she tends to pass the most appropriate age for marriage.	23	22	60	59	18	19
l. A man does not like a wife who has more education than he.	21	17	55	58	25	25
b. A woman should prepare for marriage by learning flower arrangement and tea ceremony rather than getting a job.	4	8	84	77	12	15
g. It is best for a woman go gain experience working before she gets married.	86	80	5	9	9	11
Labor-force participation of married women						
j. A man does not want his wife to have a job outside the home.	44	41	26	29	30	30
h. A housewife should have an outside job to help the family so that she may bring her children a richer life.	6	7	69	70	25	23
k. A mother with a job outsidke the home creates a better situation for her children than a mother remaining at home all the time.	5	5	70	74	25	21

continued

Table 14 continued

	Percentages					
	Agree		Disagree		Neutral	
	Urban	Rural	Urban	Rural	Urban	Rural
Opportunities for women in the labor market						
f. Businesses expect a woman just to be a flower in the office.	15	10	75	80	10	10
c. It is best for a woman to work in a government agency if she wishes to work steadily to retirement.	57	36	28	44	15	20
a. When a woman gets a job in a private company she runs into a "blind alley" and cannot get promoted.	30	22	59	60	12	18
e. Since companies do not want women to remain long it is difficult for a woman to obtain the status of a regular eemployee.	29	31	58	53	13	16

romanticist, might be shocked that as many as two-fifths of the young women agreed that it would be better to be married "even to a mediocre man." But to many realistic women, of the orient or occident, the surprise could just as well go the other way — that so many were prepared to disagree. Japanese women may often be more pragmatically realistic about marriage than the men, and perhaps for good reason. It must be remembered also that many of the women are themselves "mediocre," and know it. What the young women say they would hope for in a husband may be (and was) visionary, but what, if need be, they would accept is by no means the same thing. Nevertheless, the responses to this statement may provide a crude indicator of "modernization" in the attitudes of young women for two reasons. First, to disagree is to manifest an attitude of independence that must entail, in today's society, readiness to move into full life-time participation in the labor market and the expectation that a woman can find an acceptable place in paid or self employment. Second, disagreement may imply also something about what the young woman expects from marriage, which may be considerably more than or at least quite different from traditional expectations. On both counts we would expect stronger agreement with item c in a rural than in an urban setting. We do see that difference, but it is small.

A third of both the urban and rural women disagreed and another 22 per cent wavered on item c. Whether this is very different from earlier (or later) years we do not know. Off hand, it might seems to indicate a substantial deviation from traditional stereotypes at least. We may, however, be running into another problem. Within the traditional system of arranged marriages a fairly close match of marriage partners was to be expected. If a young woman interepreted "mediocre" to mean substantial

downward deviation from her reasonable expectations, disagreement could be consistent with traditional values.

In any case, no matter how "mediocre" is interpreted by the respondent we might expect a significant positive association of disagreement on item c with parental status. How, in fact were the relationships between responses on item c related to curriculum, to college aspirations, and to parental traits? The differences in responses by parental occupation and status were comparatively slight, reflecting mainly the rural-urban differences. On the other hand, there were clear consistencies with the educational choices the young women were making (or that their parents were in effect making on their behalf). Among the students in the college preparatory general curriculum those disagreeing exceeded those agreeing whereas, at the other extreme, among students in domestic arts 56 per cent agreed and only 12 per cent disagreed.

Items m and l are interesting for what they indicate concerning how these young upper-secondary seniors perceived the attitudes of men with respect to women's education. On balance there was clearly strong disagreement with the idea (item m) that "when a woman goes to a four-year university she tends to pass the appropriate age for marriage," and with the notion (item l) that "a man does not like a wife who has more education than he." There was little urban'rural difference on this. There was almost total disagreement with item b, and virtually total agreement (item g) that a woman should have some experience working before getting married. This is of course fully consistent with our observations with respect to the peaking of participation in paid employment

amoung Japanese women in their early twenties.

The next cluster of items in Table 24 refer to labor-force participation of married women. While 29 (urban) or 30 (rural) percent of the respondents were uncertain, or neutral in their response to the proposition (item j) that "a man does not want his wife to have a job outside the home," there was a substantial excess of those agreeing over those disagreeing in both urban and rural areas. The highest percentage agreeing, as we might expect, was among those in the domestic arts curriculum (51 per cent); the smallest percent agreeing was among those in the college preparatory course (38 per cent). In all cases the proportion who agreed exceeded the proportion who disagreed, but over half of the young women in the college-preparatory curriculum disagreed. On the other hand, there was strong disagreement with items h and k ; among all students, urban or rural, in whatever curriculum, and whatever their fathers' occupation, two thirds to three fourths disagreed. With the exception of students in the agriculture curriculum, in no case did more than 7 per cent agree with either of these propositions. The implied endorsement of the idea that a "woman's place is in the home" is overwhelming.

How did these young women perceive opportunities for women in the labor market? The most interesting responses are on items a and e, at the bottom of Table ~~23~~ 24. It is evident enough overall that the majority of the 1967 graduates did not see serious problems for women in the labor markets; over half disagreed that such blockages existed and only 30 per cent of even the urban students agreed that women faced significant impediments to advancement at work. Since there can be no

doubt that such impediments in fact existed, we interpret this response as primarily a reflection of the facts that the disadvantages faced by women are minimal (and minimally visible) in the immediate post-school years, and that the respondents rarely looked beyond those early years to any sort of career development. Even among the college-preparatory students only a minority expressed agreement with the proposition d, that "when a woman gets a job in a private company she runs into a "blind alley" and cannot be promoted" — or with proposition e, that "since companies do not want women to remain long it is difficult for a woman to obtain the status of a regular employee." One problem in trying to interpret these results may be that the propositions were stated in too extreme a form. It is interesting, nevertheless, that the bits of evidence that was coming from employers even a decade later suggests situations less favorable to women than these young upper-secondary graduates had perceived. Another consideration might have been that these young women anticipated going into smaller enterprises, but this was not the case; indeed, few of the female students anticipated work in small private enterprises whereas a significant minority of the male students had such expectations. Yet it is the big firms in which status hierarchies are clearly defined and, above all, in which substantial formal and informal training for promotions and rising responsibilities has been provided exclusively to men. While no direct comparison with Stocking's report is feasible, perhaps the high proportion of young women in her study who said they expected not to be working at the age of 30 signals some of the same perceptions today.[8]

Fn 8/ For how some men viewed education for sons and daughters at this time see Appendix B.

C. Two perspectives on age-education patterns in female labor-force participation.

One way of viewing relationships between education and the labor force participation of women is in the perspective of the woman and her life cycle; call this perspective (1). Quite a different way of looking at the same raw data is in the perspective of the labor market and the composition of the labor force, perspective (2). Table 25 is arranged to illuminate the first perspective.

The age structures for "mainly work" are surprisingly similar from one education category to another. The contrasts are substantial, however, when we look down the columns for percentages in part-time work. In 1971 at each age a substantially larger proportion of the least-educated than of other women were in that category. This says something about the nature of the labor markets for part-time workers that looks less favorable than the overall data might suggest when we do not distinguish by education. Unquestionably the pressure of need to work combined with limited work options, often poorer health, and home responsibilities account for the importance of part-time work among the least educated women. Many of these women are among the "self-employed," working in their (crowded) homes. Also, age for age as many or more of these least-educated than of other women were working full time; age for age fewer of the least educated than of other women were not working. These characteristics persist in the 1982 figures, but with a general increase in part time work among women of all educational backgrounds.

TABLE 25

PERCENTAGE DISTRIBUTIONS OF JAPANESE WOMEN'S LABOR-FORCE STATUS BY AGE AND EDUCATIONAL SEQUENCE COMPLETED, 1971 AND 1982

Age	1971				1982			
	Total	Mainly work	Part-time	No work	Total	Mainly work	Part-time	No work
				Compulsory schooling or less[1]				
15-19	100	73.1	4.5	22.3	100	52.2	6.3	41.5
20-24	100	53.3	8.0	38.6	100	46.3	8.3	45.4
25-29	100	25.6	14.8	59.6	100	28.5	16.5	55.0
30-34	100	27.8	20.2	52.0	100	27.1	26.5	46.4
35-39	100	35.8	23.8	40.5	100	34.4	32.4	33.1
40-44	)				100	40.8	31.8	27.4
45-49	) 100	39.6	24.5	35.9	100	43.7	28.2	28.1
50-54	)				100	40.3	24.7	35.0
55-59	) 100	24.3	20.7	55.0	100	31.2	22.9	45.9
60-64	)				100	21.6	19.6	58.8
65 +	100	7.2	9.4	83.4	100	7.1	8.9	84.0
All ages	100	30.9	18.3	50.8	100	26.8	20.5	52.7
				Old Middle or Post-war Senior Secondary				
15-19	100	83.7	2.6	13.6	100	81.1	2.2	16.7
20-24	100	65.6	5.4	29.0	100	70.5	4.4	25.1
25-29	100	27.8	9.7	62.5	100	34.9	12.1	53.0
30-34	100	22.1	14.8	63.1	100	27.2	21.4	51.4
35-39	100	25.7	17.8	56.5	100	30.1	28.4	41.5
40-44	)				100	35.8	29.7	34.5
45-49	) 100	32.2	18.1	49.8	100	36.4	26.0	37.6
50-54	)				100	35.1	21.4	43.5
55-59	) 100	21.4	16.1	62.4	100	29.0	18.8	52.2
60-64	)				100	20.0	15.3	64.7
65 +	100	9.0	7.3	83.7	100	9.9	9.6	80.5
All ages	100	38.5	12.2	49.3	100	36.0	19.2	44.7

Table ~~24~~ 35 continued:

Age	1971 all higher education Total	Mainly work	Part-time work	No work
20-24	100	65.7	4.8	29.5
25-29	100	35.8	6.6	57.5
30-34	100	28.2	7.9	63.6
35-39	100	31.8	10.4	57.8
40-54	100	38.4	13.0	48.6
55-64	100	26.1	10.3	63.6
65 and over	100	13.9	6.3	79.7
All ages	100	42.5	8.2	49.3

Age	1982 Junior College Total	Mainly work	Part-time	No work	1982 University Total	Mainly work	Part-time	No work
20-24	100	81.8	3.6	14.6	100	83.0	3.8	13.2
25-29	100	47.1	8.8	52.8	100	52.1	8.6	39.3
30-34	100	31.9	15.0	53.1	100	37.5	12.9	49.6
35-39	100	28.6	19.8	51.6	100	35.3	20.1	44.6
40-44	100	33.5	21.8	45.2	100	39.5	20.2	40.3
45-49	100	37.9	17.7	44.4	100	42.0	21.0	37.0
50-54	100	39.4	15.5	45.1	100	49.0	13.7	37.3
55-59	100	30.7	13.7	55.6	100	36.4	18.2	45.5
60-64	100	20.8	15.3	63.9	100	40.0	10.0	50.0
65 and over	100	11.0	8.0	81.0	100	21.7	8.7	69.6
All ages	100	47.1	11.6	41.3	100	48.6	12.5	38.9

1/ Includes those who had "youth training" after completion of 8-year compulsory schooling during the war years. Compulsory became 9 years of schooling with the post-war educational reforms.

Sources: Computed from data in the Employment Status Survey. Bureau of Statistics, Office of the Prime Minister, 1971 and 1982.

What of the women who were not working at all -- the true models of Davis' "breadwinner" state. There is no 1971 leader in first place for NOT working; the average proportions for all education categories reflect not only age-for-age comparisons but also the age distributions of women in each educational class. Balancing out these effects gave 1971 over-all percentages who were NOT working that ranged only from 50.8 to 49.3. By 1982, however, with the aging of the least educated women and the expansion of higher education the overall range in percentage not working is spread, from 53 per cent for the least educated to 38.9 per cent of the (predominantly young) university women.

In 1971 there were few female university graduates beyond the youngest women, even in 1982 they were a minority among all graduates of higher institutions. There may be some special interest, however, in comparing the 1982 patterns for junior college graduates with those to each side of them. Age for Age the proportions of secondary and of junior college women "mainly working" were very similar, but many more of the secondary graduates were working part time. On the other hand, age-for-age part-time proportions are quite closely matched between the 1982 data on junior college and on university graduates, but at each age the university graduates had the largest proportions who "mainly work." Despite the rapid increase in proportions of female junior college graduates entering paid employment, noted in Part I of this paper, they remain the relative core of the "breadwinner" phase in Japanese development. At the same time, it is particularly important to recognize the potential impact of rising numbers of female university graduates,

Let us turn now to the second perspective: views from the labor

market. In doing so it must be stressed that the contributions of women to the Japanese economy cannot be counted merely in terms of their share in the total labor force, let alone merely in paid employment. Japanese men recognize this fact in their generally strong support of the education of girls and in the roles they leave to women for the rearing of their sons. It must be of considerable interest, nevertheless, to look at just what shares women have in the age-education components of the labor force and how those shares have been changing over time.

The upper part of Table 26 provides information by educational level though not by age on female shares in the total of economically active persons for 1960, 1974 and 1982. Taking all levels together, there was virtually no change between 1960 and 1982 except for the drop in women's share in the recession year of 1974 — a time when some Japanese were saying "we should be grateful to our women", in this case for their withdrawal from the labor markets. Limiting the comparison to those "mainly working" reduces the overall female share from 36.7 to 24.7 per cent in 1974 and from 39.5 to 29.6 per cent in 1982. These are big differences both within each year and over the years from 1974 to 1982.

Taking all status categories together, the biggest share in the total labor force is inversely related to level of education and with the exception of higher education there was little change over time. But this pattern is changed when only those "mainly working" are considered: the female secondary school graduates accounted for a slightly larger fraction of all secondaru-school graduates working full time than did the less schooled women among all such full-time workers.

TABLE 26

FEMALE PERCENTAGE SHARES IN THE JAPANESE LABOR FORCE BY EDUCATION 1960, 1974, 1982 AND SHARES IN FULL-TIME PARTICIPATION BY AGE AND EDUCATION, 1974 AND 1982

I. All Ages

Level of Education	All labor force statuses			Mainly working	
	1960	1974	1982	1974	1982
All levels	39.0	36.7	39.5	24.7	29.6
Elementary, Jr. Secondary	41.6	39.7	42.7	30.7	30.0
Old Middle, Senior Secondary	38.5	37.7	41.5	31.7	31.6
Higher: All	13.4	24.7	28.8	22.0	24.5
Junior college	--	--	58.2	--	53.0
University	--	--	12.5	--	10.2

II. Mainly working labor force by age

Education	1974				1982			
	15-24	25-39	40-54	55-64	15-24	25-39	40-54	55-64
Elementary, Jr. Secondary	38.8	25.7	33.1	28.8	28.8	24.5	33.6	31.8
Old Middle Senior Secondary	48.2	23.9	28.7	25.0	47.1	33.9	29.6	29.5
Higher: all	50.0	15.8	15.4	18.2	58.3	21.8	11.0	9.4
Junior college	--	--	--	--	77.9	56.5	35.7	15.0
University	--	--	--	--	27.4	7.4	2.7	3.6

52a

The sharp increase of female shares in total labor force participation of graduates of higher institutions between 1960 and 1974, continuing to 1982 reflects both the rapid increase in higher education of women and a growing rate of participation of junior college women. Notice that among working persons with higher education there is very little reduction in female shares when one counts only those working full time.

Some data by age are provided for the mainly working labor force in the lower half of Table 26. In 1974 for all education levels the largest female shares, as we should expect, were in the youngest age category: here age 15-24. In 1982 this was no longer the case with respect to the least educated women; instead it is in the older age categories that their share of full-time employment was greatest. The sharp dropping off of female shares with age among the graduates of higher institutions in both 1974 and 1982 cannot be interpreted simplistically as an age pattern; it is in fact a combination of the shifts from older to more recent cohorts in proportions with higher education, of shifts across cohorts in the labor market behavior of junior college graduates, along with life cycle effects that cut across cohorts. The most recent arrivals on the scene, with notable exceptions, are female university graduates. If the rising cohorts of such women behave age-for-age as Table 25 would suggest, we must expect a rising minority share of females in the full-time employment of university graduates at all ages.

V. CONCLUSIONS: THE EVOLVING PAST AND FUTURE

We started out in this paper emphasizing the evolutionary nature

of the roles of men and women in a society. Taking Kingsley Davis's suggestive discussion of the "rise and fall of the breadwinner system" as a way of looking at the Japanese in relation to the American situation, it would seem that Japan has been moving into the "breadwinner" system over the postwar years, whereas the United States is unambiguously witnessing the fall of that system. It may be easier, though not necessarily wise, to predict the next twenty years in this evolution in Japan than in the United States. Where from here with our rising problems of female headed families and the progressive breakdown of family stability on the eastern side of the Pacific? Will there be a turn around in the United States, and might this bring a new sort of situation in which electronic invention alters the spatial structure of economic activities along with the sex redistribution, already quite well advanced, of "breadwinner" roles?

With respect to Japan, there can be no question in our judgment about the fundamental but gradual evolution of the economic structure and modifications in the life-commitment system that will ultimately have great significance for women's economic roles. The readiness to modify basic institutions as conditions change has been demonstrated again and again in Japan over recent decades. A major threat to the system came with the influx of the baby-boom cohorts, leading as time went on to what some Japanese labor economists referred to as "the aging of Japan" — this at a time when the "aging" was the arrival of the over-blown cohorts at the ages at which previous cohorts had been moving rapidly ahead in status and responsibilities in the big corporations. Many big firms had indeed already anticipated this, which, along with other forces at work in the society, had led to quite fundamental modifications in the handling of

"temporary" versus "regular" workers, to reduced distinctions between them, and to increased contracting out of some kinds of labor. In Japan, in contrast to the United States, it was feasible also to move teachers back and forth between upper and lower secondary schools as the baby boom cohorts moved through the schools. Meanwhile, as we have seen, women were moving forward at a rapid rate into higher education and they have almost taken over from men in clerical work. Will they go on — are they going on — into computer skills at higher levels? How many young women have changed their perceptions of the future as compared with the upper-secondary seniors of 1967? Stockings' findings suggest relatively little change, but her question specified their expectations at age 30, which is a low point of labor force participation among Japanese women generally.

Some of the forces operating to bring about further change are coming into visibility with changes in the operation of the Labor Relations Committees and in the new opportunity in employment equality act. Whatever happens, Japan is now an urban society, and despite continuing legacies of the past that have been carried over into urban life, a falling off in Davis's "breadwinner" system seems inevitable. What is NOT at all clear — and at this point we must draw back from suggesting predictability — is what new ways the Japanese will find in the adaptation of economic structures to accomodate new roles for women in their urbanized society.

APPENDIX A

GENDER DIFFERENCES IN FIELDS OF STUDY IN JAPAN AND IN THE UNITED STATES

Although, as remarked earlier, Japanese education is not rigidly marked off by sex and in principle there is quite open choice, the male and female patterns in curriculum choice remain distinctive. These patterns reflect differences in how students and their parents perceive future roles of men and women, even as those perceptions reflect both what has been in the past and anticipations of change. This is not just a matter of anticipated changes in occupational structures. Also involved are the institutions that guide and constrain postschool careers and how these are perceived. Cause and effect run in several directions.

Table A.1 shows the distributions of male and of female students among the main curricula in Japanese upper-secondary schools. There are no major surprises in this table, but several features are worth notice. First of all, there has been a marked increase for both sexes in the proportions who are enrolled in the general curricula. Unfortunately, the official figures do not distinguish between college preparatory and the presumptively terminal general curricula, but as in the United States the latter tend to enroll the least able and undirected students whereas the former are being "processed" to pass university entry examinations. The 1974 to 1984 decline in relative importance of the secondary technical schools is not due to any diminution in technical orientation among Japanese youth, but rather the determination of larger proportions of the male students to acquire technical competence at higher levels; students with such goals seek entrance to the

TABLE A.1

DISTRIBUTIONS OF MALE AND FEMALE ENROLLMENTS IN JAPANESE UPPER-SECONDARY SCHOOLS, 1966, 1974, AND 1984

	Males			Females		
Curriculum	1966	1974	1984	1966	1974	1984
General	55.6	59.0	68.7	65.2	64.5	72.5
Agriculture[a]	7.9	7.3	5.0	2.6	3.1	2.1
Technical	22.3	23.8	18.3	0.5	0.9	0.7
Commerce	14.2	9.8	7.1	20.1	20.7	16.9
Domestic arts	...	...	0.1	11.1	9.6	6.0
Other[b]	c	0.1	0.8	0.5	1.2	7.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source. Mombusho, Gakko Kihon Chosa [Ministry of Education, Basic School Surveys] (Tokyo, 1966, 1974, 1984

[a]Including fishery schools in 1966 and 1974. These are with "other" in the entries for 1984.

[b]Including nursing and related studies

[c]Under .05%

college preparatory general curriculum. For some years there have been a few five-year technical schools attended almost wholly by males; these reach the equivalent of junior college. Recently, also, there has been a growth of Senshu Gakko offering special technical post-secondary training of shorter duration, and open to both sexes, as were the old "miscellaneous" schools.

Among girls, the steady decline in proportions enrolled in domestic arts was underway before 1966; this has not been and is not a generally preferred upper-secondary curriculum. The rapid decline in male proportions in the commerce curricula is the other side of the major shift in sex composition of employees in clerical jobs, even though even among girls the commerce schools draw a somewhat smaller proportion today than a few years ago.

We may pass over the female junior colleges briefly, without any tabulation. The most striking feature of the curricula followed in the female junior colleges, confirming their distinctive nature, is the large fraction (at 30 per cent) who are enrolled in home management. This is followed closely by education, which is in second place for women in the day universities as well.

Sex comparisons for university students are provided for Japan in Table A.2 and for the United States in Table A.3. A rough summarization of the degree of sex differentiation in fields of study is provided in the last row of each table, which shows indexes of dissimilarity for each year (entered in the female columns). This index indicates the proportion of students who would have to shift curricula to reach distributions that were matched by sex. The Japanese indexes were at close to two thirds in 1960 and 1970, dropping to

TABLE A.2

DISTRIBUTIONS OF JAPANESE MALE AND FEMALE UNIVERSITY STUDENTS BY FIELDS OF STUDY, 1960, 1970, 1980 AND 1984

Field of sstudy	Males				Females			
	1960	1970	1980	1984	1960	1970	1980	1984
Humanities	9.7	7.4	7.6	7.6	33.1	35.9	35.8	35.7
Social science[1]	48.5	47.9	47.5	46.7	7.4	14.7	14.6	14.5
Natural science	2.8	3.4	3.4	3.5	2.3	2.2	2.3	2.5
Engineering	17.8	25.6	24.6	24.9	0.5	0.7	1.3	2.0
Agricultural sciences	5.3	3.9	3.9	3.9	0.5	1.8	1.9	2.1
Health	5.2	5.7	5.8	5.9	10.4	8.9	9.1	9.3
Home economics	...	...	...	...	9.9	8.1	8.1	8.0
Education	7.7	4.9	4.8	4.9	28.3	18.2	17.9	17.3
Art	0.8	1.2	1.2	1.2	6.4	7.1	7.2	7.1
Other	2.0	0.9	1.2	1.4	1.1	1.7	1.6	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent in humanities, art home economics, education	15.8	13.5	13.6	13.7	71.3	62.2	61.8	62.5
Index of dissimilarity					64.7	66.0	59.1	58.2

Source: Bureau of Women and Youth, Minitry of Labor, Status of Women (in Japanese). Tokyo: Ministry of Finance Printing Office, 1982.

TABLE A.3

PERCENTAGE DISTRIBUTIONS OF BACHELOR'S DEGREES CONFERRED IN THE UNITED STATES BY MAJOR FIELD OF STUDY: MALES AND FEMALES, 1955-56, 1964-65, 1974-75, 1977-78

Field of study	Males				Females			
	1955-1956	1964-1965	1974-1975	1977-1978	1955-1956	1964-1965	1974-1975	1977-1978
Humanities	5.3	6.3	5.7	4.5	10.7	10.3	11.1	8.0
Social sciences	20.4	20.0	16.8	13.8	12.7	13.5	12.1	10.6
Natural sciences	6.7	16.3	13.1	12.8	4.0	7.6	7.0	7.3
Engineering	13.9	12/2	9.1	10.6	0.1	0.1	0.2	0.9
Agricultural sciences	2.6	1.8	3.0	3.5	0.1	0.1	0.6	1.3
Health	2.3	1.9	2.2	2.4	6.5	5.4	9.1	11.0
Home economics	*	*	0.1	0.2	4.2	2.4	3.8	3.9
Education	10.5	9.8	8.8	7.7	45.6	42.4	29.3	22.7
Art	2.7	4.3	3.1	3.2	5.5	11.1	6.0	5.8
Others	35.6	27.3	38.0	41.2	10.6	7.2	20.6	28.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percent in humanities, art, home economics, education	18.5	20.5	17.7	15.6	66.0	66.1	50.3	40.5
Index of dissimilarity					51.7	49.1	39.5	33.5
Index of dissimilarity excluding "other"								

Sources: 1955-56: Biennial Survey of Education, 1954-55
1964-65: Digest of Educational Statistics, 1966
1974-75: ibid. 1976
1977-78: ibid, 1980

59 per cent in 1980 and 58 per cent in 1984. Sex differences in the United States have been considerably lower. They run from just under 50 per cent in 1955-56 and 1964-65 to 39.4 per cent in 1975 and 33.4 per cent in 1978. Even in 1984 the Japanese contrasts between distributions of male and of female curricular choices exceeded the 1956 sex contrasts in the United States.

What lies back of these figures? To start with it must be pointed out that the category "other" for the United States reflects a realisty that makes any comparison of degrees of differentiation illusive. This said, in both cases male enrollment proportions greatly exceeded female, but in some other respects the patterns in the two countries are quite different. Male excesses over females were scattered in the United States, with the largest difference appearing in the category "other," which includes a diversity of specialized subjects along with the fact that "major field of study" among undergraduates in American universities may occupy less than half of a student's time. The contrast between the relatively high Japanese and low American male proportions in engineering has been widely recognized and often, in the United States, deplored. But the big surprise (to us at least) is in the consistently high proportion of Japanese men enrolled in the "social sciences" — at close to half in all of the years covered. It appears that this may be in large part business studies rather than what we usually think of as "social science" in the United States.

In both countries ferales were much more inclined than males to study education. In the United States this was the main locus quantitatively of differences in the curriculum distributions of male and female students, but the very rapid decline in proportions of female students in this field

(which has come along with a conversion of older "normal schools" into general four-year colleges) has brought the male and female distributions closer together. In Japan the big excess in female over male proportions has been in the humanities, which have consistently drawn a third or more of all female university students. Are the universities now taking over for females the role twenty years ago of the female junior colleges? We leave the interpretation of the humanities emphasis in higher education of females in Japan and its relative neglect in the United States to the reader.[9]

Fn.9 . Finn et al. (1985)

APPENDIX B

HOW SOME JAPANESE MEN VIEWED EDUCATION FOR SONS AND DAUGHTERS IN 1968

Back in 1968, just a year after the survey of seniors in upper secondary schools and administration of the opinionnaire discussed in Section IV.B of this paper, there was an exploration of attitudes of men toward the education of daughters versus sons that may be worth noting here and compared with findings in presently ongoing researc. According to that study, Japanese men had decidedly higher ambitions for sons than for daughters. Just over half (53 percent) of the men surveyed wanted university education for any sons they had or might have and junior college added only 1 percent. By contrast, only 14 percent wanted university education for their daughters but another 14 percent set junior college as their goal. It is interesting that today the higher education of women is surpassing the total of 28 per cent for women, but shows no sign of reaching the 54 per cent dreamed of for sons.

In Japan as elsewhere there have been marked contrasts in ambitions for children's education between better and less educated parents. This shows up for both sons and daughters. But perhaps most remarkable is the high proportion (almost half) of the university men who thought that daughters should have not only some higher education but education at four-year institutions rather than junior college. The biggest contrasts in attitudes toward education of sons and daughters were among men with middle or upper-secondary education. Most of these men wanted sons to attend universities, but they were more oriented than either the more or the less educated men toward junior college for daughters. This suggests a shift into

upwardly-mobile perceptions of a way of life for daughters largely within a traditional context. Whether the men with higher education were more often lookibg beyond and outside of marital life toward wider ranging careers for their daughters is not clear, however, given what has since transpired in the labor-force participation rates of female graduates of 4-year colleges.

This 1968 survey enables us to distinguish the perceptions of the older and the younger men, since we can distinguish between those who in 1968 had attended schools under the prewar as against the postwar systems. That comparison is tricky, of course. The older men already had sons and daughters, many of whom had reached or were approaching college age. Among the younger men, many still did not have any children and few if any yet had their own children in the upper-secondary or college age cohorts. It turns out that in every case except fathers with higher education specifying university education for their daughters, the aspirations of the older men exceeded those of presumably younger comparable men. While we can easily rationalize this finding ex post, we could not have predicted it with assurance. Perhaps changes in the relative status of men with given levels of education were more important. It is only when we drop to the respondents with only compulsory education that the aspirations for education of daughters begin to be in line with (almost as low as) the aspirations of their educational counterparts in the younger cohorts.

APPENDIX TABLES

TABLE C.1

CHILDREN UNDER 5 RELATED TO ALL AND TO EVER-MARRIED WOMEN AGE 15-49, 1920 TO 1980

Year	Children under 5	Women 15-49 ('000)	Ever-married women 15-49 ('000)	Fertility Rates FERT A (1)/(2)	FERT B (1)/(3)
	(1)	(2)	(3)	(4)	(5)
1920	7,377,233	13,139	9,903	561	745
1925	8,183,827	13,982	10,459	585	782
1930	8,926,678	15,045	10,812	593	826
1935	9,243,835	16,126	11,283	573	819
1940	9,046,301	17,199	10,809	526	837
1950	11,205,457	21,287	14,200	526	789
1955	9,381,512	23,227	15,016	404	625
1960	7,842,400	25,223	16,261	311	482
1965	8,241,607	28,176	17,871	293	461
1970	8,908,564	29,799	19,652	299	453
1975	9,964,607	32,414	21,393	307	466
1980	8,515,416	30,618	20,363	278	419

Note: The "Baby Boom" clearly reflected (1) compensation for low war-time births, as a fertility "bump" on a declining fertility trend, (2) an exceptional increase in numbers of women 15-19 over the ten years 1940 - 1950 compared with prior decade changes. The latter in turn reflects a major gain in female survival rates from age 5-9 to child-bearing age and high birth rates in the late 1920's.

TABLE C.2

MALE/FEMALE POPULATION RATIOS BY AGE IN JAPANESE WAR AND POST-WAR COHORTS

	Born 1916-20	Born 1921-25	Born 1926-30
Age in 1940	20-24	15-19	10-14
Age in 1945	25-29	20-24	15-19
Sex ratios by age			
20-24	.988 (1940)	* (1945)	.985 (1950)
25-29	* (1945)	.838 (1950)	.986 (1955)
30-34	.830 (1950)	.843 (1955)	.993 (1960)
35-39	.830 (1955)	.843 (1960)	.998 (1965)
40-44	.828 (1960)	.844 (1965)	.997 (1970)
45-49	.824 (1965)	.837 (1970)	.987 (1975)
50-54	.814 (1970)	.827 (1975)	.971 (1980)

Sources: Computed from successive Japanese population censuses.

TABLE C.3

JAPANESE FEMALE PERCENTAGE RATES OF PARTICIPATION
IN THE LABOR FORCE BY AGE, 1920 - 1980

Age	1920	1930	1940	1950	1955	1960	1965	1970	1975	1980
15-19	68	62	67	--	50	50	37	35	23	18
20-24	60	54	59	64	68	69	68	69	65	68
25-29	53	47	47	48	52	50	46	44	42	48
30-34	54	49	49	50	50	51	48	47	42	45
35-39	56	52	53		53	55	58	56	52	55
40-44	57	54	56	53	56	57	62	63	59	61
45-49	56	54	58		54	62	64	61	62	
50-54	53	51	57	48	51	52	57	61	58	58
55-59	47	45	52		46	47	50	53	50	50
60-64	28	35	44	27	38	39	39	43	39	38
65+		19	24		21	21	18	20	26	16
All ages	53	49	53	49	51	51	49	50	45	46

Source: Computed from population censuses of Japan.

TABLE C.4

PERCENTAGE OF JAPANESE FEMALE POPULATION IN LABOR FORCE
BY MARITAL STATUS AND AGE, 1920 - 1980

Age	1920	1940	1955	1965	1975	1980
			Single			
15-19	60	67	48	37	22	18
20-24	65	73	76	81	77	77
25-29	63	66	73	76	78	81
30-34	61	63	69	70	77	77
35-39	59	62	64	71	75	76
40-44	57	60	67	67	75	74
45-49	55	59	64	65	74	72
50-54	51	56	59	58	65	71
55-59	45	51	52	41	58	59
60-64	28	44	38	36	45	43
65+		33	25	19	19	23
All ages	61	68	61	56	53	51
			Married			
15-19	59	50	50	37	34	36
20-24	52	43	48	42	37	40
25-29	51	43	45	38	32	37
30-34	52	46	45	44	38	41
35-39	53	51	48	54	50	52
40-44	54	55	50	59	57	59
45-49	54	58	50	58	58	59
50-54	51	58	50	54	55	55
55-59	48	56	47	50	47	48
60-64	36	51	41	44	38	38
65+		38	30	27	21	21
All ages	51	49	47	48	44	47

continued

	1920	1940	1955	1965	1975	1980
			Widowed or divorced			
15-19	76	67	65	13	2	0
20-24	69	65	68	46	64	12
25-29	69	64	68	74	73	33
30-34	73	69	75	78	79	61
35-39	75	70	81	86	83	63
40-44	72	68	79	83	82	59
45-49	65	62	68	72	81	79
50-54	55	54	54	69	70	72
55-59	45	46	42	51	55	78
60-64	23	37	35	34	39	39
65+		19	17	13	13	13
All ages	42	40	43	42	37	34

TABLE C.5

PERCENTAGES OF JAPANESE POPULATION IN CLERICAL EMPLOYMENT BY SEX AMD AGE, 1955 - 1980

Age	1955	1960	1965	1970	1975	1980
			Females			
15-19	5.3	1.9	8.3	9.8	8.7	7.5
20-24	12.1	15.0	23.5	28.5	30.3	33.2
25-29	5.7	6.9	8.6	11.3	14.8	17.0
30-34	2.6	4.6	5.5	6.9	10.4	12.2
35-39	1.8	3.1	6.1	6.9	9.8	12.5
40-44	1.5	2.2	4.8	7.3	9.8	11.4
45-49	1.1	1.7	3.5	5.4	9.0	9.9
50-54	0.6	1.1	2.4	3.4	6.1	8.1
55-59	0.3	0.7	1.4	2.1	3.5	4.8
60-64	0.2	0.3	0.8	1.1	2.0	2.3
All ages	5.4	5.0	7.2	6.8	7.9	10.9
			Males			
15-19	2.3	2.9	2.4	2.3	1.9	1.5
20-24	9.6	10.5	12.3	10.3	10.5	9.4
25-29	13.2	13.2	14.9	14.6	15.1	14.2
30-34	13.0	14.6	13.9	13.1	14.7	14.0
35-39	11.0	13.5	13.9	12.0	13.2	13.4
40-44	9.2	11.4	12.7	12.2	12.2	11.7
45-49	7.7	9.6	11.1	11.0	12.8	11.0
50-54	6.3	5.7	9.2	9.5	11.8	11.6
55-59	3.1	6.1	7.3	7.8	8.7	9.5
60-64	3.3	3.7	5.5	6.1	7.3	6.5
All ages	7.9	9.1	9.8	7.2	7.9	7.4

TABLE C.6

PERCENTAGES OF JAPANESE POPULATION IN PROCESSING EMPLOYMENTS BY SEX AND AGE, 1955 - 1980

Age	1955	1960	1965	1970	1975	1980
			Females			
15-19	14.2	18.7	14.4	12.5	5.6	3.5
20-24	12.7	15.9	15.1	13.6	9.3	7.5
25-29	6.4	8.7	9.4	10.0	7.1	7.9
30-34	6.4	7.8	9.7	12.9	10.4	10.9
35-39	8.2	10.0	11.8	15.7	15.0	16.0
40-44	8.8	11.1	13.8	16.0	17.1	19.4
45-49	7.5	11.6	13.6	16.1	15.5	19.0
50-54	5.2	8.0	10.8	14.4	14.0	15.5
55-59	4.0	5.6	8.2	11.0	11.4	12.6
60-64	1.2	3.6	4.7	7.4	7.0	9.2
All ages	8.0	10.1	10.8	9.3	7.8	11.0
			Males			
15-19	23.3	29.9	23.8	22.4	13.2	10.8
20-24	30.3	37.2	39.0	37.1	24.7	31.3
25-29	28.0	34.6	36.1	37.3	36.2	36.5
30-34	27.0	30.2	33.7	36.2	36.6	35.4
35-39	27.3	29.7	30.6	34.9	35.8	36.0
40-44	28.1	30.1	30.3	45.4	34.8	35.9
45-49	25.4	29.9	29.5	30.9	31.6	35.1
50-54	22.7	24.6	29.1	31.0	30.2	31.8
55-59	19.1	22.8	25.6	28.8	28.0	28.8
60-64	14.6	17.8	23.7	28.6	23.0	21.7
All ages	24.4	31.6	28.9	22.8	21.4	21.8

TABLE C.7

JAPANESE FEMALE RATES OF EMPLOYMENT IN SELECTED OCCUPATIONS
BY AGE AND EDUCATION, 1980

Age	Elementary and Youth Training	Old Middle and Senior Secondary	Junior College	University
A. Percentages in professional and technical occupations				
15-19	7.6	5.6	---	---
20-24	7.2	7.2	38.0	48.8
25-29	4.2	7.2	43.7	57.6
30-34	2.8	5.7	37.3	60.8
35-39	2.0	4.9	36.6	66.3
40-44	1.8	5.2	41.8	68.6
45-49	1.8	6.5	51.8	66.0
50-54	2.0	9.8	53.6	64.9
55-59	2.0	8.5	43.3	60.3
60-64	1.6	7.3	36.9	61.7
C. Percentages in clerical and related occupations				
15-19	7.5	58.0	---	---
20-24	9.8	56.3	46.6	40.3
25-29	9.6	44.2	34.8	30.9
30-34	10.0	34.8	29.6	23.8
35-39	10.1	32.5	27.8	19.0
40-44	8.3	29.1	25.3	16.9
45-49	7.5	26.7	21.7	16.7
50-54	6.7	24.6	18.8	14.6
55-59	4.9	20.0	18.8	12.6
60-64	3.2	14.0	16.5	10.5

continued next sheet

	Elementary and Youth training	Old Middle and Senior Secondary	Junior College	University
D. Percentages in sales and related occupations				
15-19	8.8	13.6	—	—
20-24	11.1	12.5	6.3	5.7
25-29	11.6	14.3	8.7	9.5
30-34	13.1	17.5	13.5	11.6
35-39	13.8	19.5	14.4	9.8
40-44	12.8	20.3	12.9	9.5
45-49	11.3	20.2	11.3	11.7
50-54	11.2	20.3	11.6	15.1
55-59	13.2	23.2	15.0	17.7
60-64	14.9	26.7	17.0	16.8
H.Percentages in processiong (both skilled and common labor)				
15-19	37.5	12.5	—	—
20-24	40.1	12.0	3.7	2.4
25-29	41.1	16.0	5.1	2.7
30-34	41.0	21.1	8.3	3.3
35-39	43.0	22.5	9.1	4.9
40-44	43.3	23.1	8.5	4.4
45-49	40.3	21.9	5.3	4.1
50-54	34.2	18.0	4.5	4.2
55-59	30.1	16.1	5.1	2.6
60-64	27.3	16.4	6.6	1.9
E. Percentages in agriculture and related occupations				
15-19	1.7	0.5	—	—
20-24	5.7	1.8	0.5	0.2
25-29	11.5	6.2	1.5	0.4
30-34	12.3	6.8	2.1	0.5
35-39	12.9	6.1	1.5	0.4
40-44	17.4	7.9	1.4	0.4
45-49	24.3	9.4	1.3	0.5
50-54	32.0	12.9	2.4	1.1
55-59	35.0	14.7	5.2	2.8
60-64	38.6	17.7	8.0	4.1

Source: Prime Minister's Office, 1980 Population Census of Japan, Volume 4, Part 1, Division 2, Table 9, pp. 208ff.

TABLE C.8

BONUSES AS PERCENTAGES OF ANNUAL EARNINGS:
MALES AND FEMALES BY AGE AND EDUCATION; JAPAN, 1982

Age	Compulsory Schooling		Old Middle, Upper Secondary		Junior College		University	
	M	F	M	F	M	F	M	F
Under 17	6.4	11.2	—	—	—	—	—	—
18 - 19	12.4	20.5	6.7	9.2	—	—	—	—
20 - 24	17.2	23.6	23.1	29.6	16.3	22.1	13.0	15.1
25 - 29	19.6	24.6	26.1	30.8	26.9	32.7	29.6	31.4
30 - 34	21.8	22.7	27.8	29.1	29.2	31.3	33.2	33.0
35 - 39	23.2	21.2	30.1	25.9	30.9	30.3	38.6	34.8
40 - 44	23.4	20.9	30.9	24.6	34.3	29.7	42.0	32.3
45 - 49	23.9	21.1	32.1	25.8	33.2	30.6	43.5	33.8
50 - 54	25.2	21.8	32.2	27.4	39.6	31.6	43.7	36.8
55 - 59	22.4	20.4	29.3	26.8	33.6	32.3	37.8	37.9
60 - 64	17.8	18.5	26.1	24.2	30.1	32.6	31.8	30.6
65 +	18.9	17.0	22.4	25.3	29.2	31.2	30.2	34.2

Source: Computed from data in the Basic Wage Survey for 1982 (in Japanese). Data refer to firms with 10 or more employees.

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