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CHANGING ROLE OF EDUCATION AND WOMEN WORKERS IN JAPAN

by

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1. Introduction

This paper focuses on the rapid influx of women as paid employees into the Japanese labor force over the past two decades and the relationship of this trend with changing patterns of education and occupational transformation. In examining these changing patterns on a comparative basis and between cohorts of women workers, it is apparent, in general, that younger cohorts of Japanese women respond to economic stimuli in a similar manner as women in other industrialized nations. However, the large proportion of women engaged in the informal sector and the manufacturing sector lend a distinctive character to Japanese women's labor force participation (LFP).

Despite significant increases in average educational attainment, women have been unable to translate this into significant career advancement due to a number of factors, including discriminatory hiring and training practices among Japanese employers which tend to segregate women from the core labor force. While market returns on higher education for women remain low, it is still deemed a worthwhile investment due to the prospects for substantial non-market returns. To the extent that women's attachment to the labor market remains weak due to limited opportunities accorded them, market returns on education will remain depressed. However, structural and institutional transformation has wrought substantial changes in women's labor force participation over the past few decades despite deeply ingrained traditional values and further gradual change in a similar direction is likely as Japan moves into the next century.

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2. *Changing Educational Opportunities and Women's Occupational Transformation: The U.S. and Japan*

In this section, I review changes in women's education in Japan that have influenced their labor force participation behaviour and analyze the weak association between education and labor force participation among Japanese women.

While it is true that a positive association between education and women's market participation characterizes developed economies in the post-WWII period, this is a relatively recent phenomenon. Smith and Ward point out that prior to 1940 in the U.S., it was the least-schooled women who were most often workers (Smith and Ward, 1985, p. 570). This suggests that in the process of economic development, at some point the character of the labor market confronted by women changes in such a way that the association between market work and schooling undergoes a dramatic reversal. Among many factors which influence the character of the labor market confronted by women, this section focuses on women's occupational transformation in the course of economic development in comparative perspective.

(1) *Prewar and Postwar Changes in Women's Education*

Since 1908, 6 years of elementary education became compulsory for all children in Japan. However, educational opportunity beyond elementary school was quite limited for women. Only 8% of those who graduated from elementary school went on to four or five-year secondary schools which catered exclusively to girls (this institution was generally called "Koto Jogakko"; Hall: 1972). For those who sought higher education beyond the secondary school level, there were 60 private girls colleges where the curriculum focused on languages, literature and home economics. These institutions were somewhat equivalent to American finishing schools, designed to prepare women for their dual roles as wives and mothers. This was the highest level of education women could attain since they were not allowed to enroll in the public university system.

Girl's education was differentiated from boys from the third year of elementary schools and the academic standard for women's secondary schools was regarded as inferior to that of secondary schools for men. The emphasis of girl's education was placed mostly on social and home making accomplishments. For example, girls received instruction in sewing, tea ceremony, flower arrangement or Japanese language. This type of education was designed to increase women's productivity at home rather than in the market.

Narrow and restricted educational opportunities were mirrored in the job market for women. Typically, married women worked on the farm as unpaid family workers or worked at home as handicraft workers, while single women worked in the factories.

After WWII, the U.S. occupation authorities carried out major reforms in the Japanese educational system. A standard six-three-three-four education system modeled on the U.S. was instituted in which the first two levels, six years of elementary schooling and three years of lower secondary school, were made compulsory. At this time the

number of years of compulsory education rose from 6 to 9 years. The nine years were open to all children and were free. The education became much more standardized and the differences in curriculum between boys and girls were eliminated.

This suggests that the level of women's educational attainment must be critically examined in light of whether they have rereceived the old-style or new-style education, particularly in examining correlations between the level of education and labor force participation.

(2) Education and Labor Force Participation

In general, economists argue that education increases one's productivity in both the market sector as well as the home sector. However, in most advanced countries, education increases women's market productivity more than that in the home sector. As a result, we observe a positive association between women's educational attainment and the LFPR.

In Japan, however, the relationship between education and labor force participation is not so clear nor uniform. From Table 1 a U-shaped participation rate is observed at

Table 1 Female Labor Force Participation by Educational Categories in the U.S. and Japan.

(1) U.S.			
	Elementary	Secondary	Higher
1960	13.3	42.4	49.7
1970	25.0	56.9	67.3
1980	22.2	69.5	77.8
(2) Japan			
1960	56.5	48.9	53.8
1970	54.1	55.4	56.6
1980	46.0	53.1	58.8

Note: U.S. Figures

1. Based on population age 25 and above who are white females.
2. Elementary = 0-9 years of schooling, Secondary = 10-12 years of schooling, Higher = 13-16 years of schooling

Japanese Figures

1. Based on population age 15 and over.

Sources: For U.S. Figures

U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1982-83.

U.S. Department of Labor, Bureau of Labor Statistics, derived from the *Current Population Survey: A Databook* (Volume 1), September, 1982.

For Japanese Figures:

Population Census of Japan, 1960, 1970, and 1980.

different levels of educational attainment until the early 1970's. However, more recently,

this U-shaped relationship between women's educational attainment and the participation rate changed to a linear relation, similar to that observed in the U.S. and other industrialized countries.

Based on data collected in 1975 by the Employment and Vocational Research Center on 1500 women who resided in and adjacent to the Tokyo Metropolitan area regarding women's work history and their socio-economic background, a significant "vintage effect" of education on women's labor force participation behavior is evident (Osawa, 1986). Among the older cohorts which had completed their elementary education prior to WWII, additional schooling reduced the probability of participation in the labor force, while for the younger cohorts, products of the modern educational system, additional schooling increases the probability of participation.

As discussed above, the orientation of Japanese girl's education shifted from a concentration on preparation for domestic duties to a more standardized and modern curriculum. The old-style education increased women's home productivity, but left them ill-prepared for the job market, while the modern education system which provided girls with training comparable to boys, provided an impetus for the surge in women's LFP in the post-WWII period.

What factors influenced the relationship between education and the participation between older cohorts who received the old-style education and younger cohorts who received the new-style of education? I argue that the crucial factor is the ongoing women's occupational transformation, specifically the decline in women's employment in the manufacturing sector and the rapid increase of women workers in clerical occupations. Below I discuss the underlying reasons for the transformation of women's occupational structure from a concentration in production processing jobs to clerical jobs in the U.S. and when and how this "occupational evolution" has influenced women's employment choices in Japan.

(3) Women's Occupational Evolution

<U.S. >

The rapid growth of women's LFP in the U.S. stemmed from feminization of the clerical sector. In 1900, only 3.9% of all non-farm employed females were clerical workers and only 14.6% of all clerical workers were women. By 1930, the same figures increased to 22.7% and 51.5% and at that time more than half the workers in the burgeoning clerical sector were women. During the same period, the percentage of women engaged in the manufacturing industries fell from 31.8% to 19.2% of the non-farm female labor force (see Table 2).

Goldin examines the underlying causes of the sectoral shift in occupations and the related compositional change of the female labor force in the U.S. from 1890 to 1950 (Goldin, 1981). Comparing earnings functions between clerical and production processing workers she found that for production processing workers, slopes of the earnings function are steeper than those for clerical workers during the early period of employment. However, after 15 years of work experience, the earnings slope for production

processing workers becomes negative. In contrast, for clerical workers, the slope is less steep, but continues to increase throughout the relevant range of labor force experience. In addition, the rate of return on higher education is greater for clerical work than for manufacturing work.

Goldin argues that the above differences in the estimated slopes and the rate of return on schooling reflect the different type of skills required in the two jobs. For production processing work, skills are acquired mostly during on-the-job training, rather than acquired from off-the-job training, i.e. general education. This implies that these skills are specific to the manufacturing job they hold and are not transferable should they change jobs. These skills depreciate rapidly with age, and beyond a certain age, the earnings slope (productivity) stops increasing.

On the other hand, the skills required for clerical work are easy to acquire from a general education (off-the-job training). Moreover, typing, bookkeeping and stenography skills are easily transferable when a woman changes jobs.

These characteristics of clerical work are especially advantageous for married women who often interrupt their work career during child-rearing periods. The skill depreciation (loss) due to career interruptions is much less for clerical work than for production processing 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 married women reentering the labor force.

< Japan >

Japan experienced a similar transformation of the women's occupational structure during the post-WWII era of rapid economic growth. The reasons why Japan experienced the transformation so much later are manifold, but essentially the two countries experienced a quite different type and speed of economic development. Prior to WWII, Japan was mainly an agrarian society and as recently as 1955, 36% of the Japanese labor force was engaged in the primary sector, whereas the comparable figure for the U.S. in 1955 was 11.6%. The typical women's occupations other than those in agricultural industries were mostly in the informal sector (as unpaid workers in family businesses) or in the textile factories.

During the period of rapid economic growth in the 1960's, the clerical sector began to absorb young women workers in the labor market. In 1955, only 14.1% of all non-farm employed females were engaged in clerical work, while by 1975 this figure had increased to 25.6%. In the same period, the percentage of clerical workers accounted for by women rose from one-third to one-half (See Table 2).

Nonetheless, a high percentage of women remained employed in the manufacturing sector in Japan. During the 1960's, women production processing workers were typically employed in the electronics, precision machinery, or automobile industries. In Japan, the proportion of women engaged in the manufacturing sector exceeded that of the clerical sector until 1980 and the decline in manufacturing employment has been much slower than the growth in clerical employment for women. By 1980, the proportion of all non-farm working women engaged in the clerical sector (26.6%) was slightly greater than that

in the manufacturing sector (26.1%). In the U.S., by contrast, the proportion of women in clerical occupations has exceeded that of production processing workers since 1930.

The slow decline of women's employment in the manufacturing sector reflects its continuing importance in the Japanese economy. In an effort to attract married women

Table 2 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	33.3	30.0	30.6	59.5
1975	51.3	25.6	50.6	45.2	27.0	27.7	69.9
1980	58.0	26.6	53.6	49.8	26.1	29.3	75.8

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

workers and lessen wage outlays there has been a noticeable surge in part-time employment in the manufacturing sector; currently 57% of married women who work on a part-time basis are employed in the manufacturing sector.

Another interesting characteristic of women production processing workers in Japan is the changing age distribution. In 1960, more than 60% of production processing women workers were between 15 to 29 years of age, while in 1980 more than 80% are over 30 years old. Naturally, as the average age of female manufacturing workers rose, so did the proportion of married workers; from 37.4% in 1960 to 75.6% in 1980. This indicates a substitution of married women workers for youth labor. On the other hand, the change in age distribution of women workers in the clerical sector has been more

gradual, and exhibits characteristics similar to the U.S. In 1960, more than one half of female clerical workers were between 15 and 29 years of age, while in 1980, the highest concentration of female clerical workers (67%) appeared in the 20–39 years of age categories. It is particularly interesting that nearly one-half of all female clerical workers are over age 30, belying the common perception that youth and beauty are the primary considerations for employment in this sector. This implies that women remain in clerical occupations and return after child-rearing responsibilities decline. As a result, the proportion of married women among clerical women workers increased from 21.2% in 1960 to 49.8% in 1980. As pointed out by Goldin, clerical work is marked by characteristics, such as lower depreciation of human capital due to intermittence, that make it a more suitable choice for married women and thus this change is not surprising.

In order to examine the characteristics of women workers in the two sectors, Table 3 presents the means of various human capital variables. The average age for clerical workers is 10 years younger than that of manufacturing workers. Relatively less educated

Table 3 Means of the Variables in the Earnings Function

	Production Processing Workers	Clerical Workers
	Means (S.D.)	Means (S.D.)
Hourly Wage Rate	421.5 (152.3)	588.4 (281.5)
Age	38.7 (10.1)	29.5 (9.0)
Years of Schooling	10.15 (2.24)	12.3 (1.5)
Years of Work Experience	10.4 (8.3)	7.1 (5.7)
Tenure	4.8 (3.3)	4.4 (3.77)
Duration of Non- Participation	12.37 (10.4)	4.1 (7.4)
Marital Status	0.73 (0.45)	0.4 (0.5)

Source: The Occupational Mobility Survey conducted by the National Institute for Employment and Vocational Research in 1975.

women are more likely to work in the manufacturing sector, their average hourly earnings are approximately 70% of those in the clerical sector, and years of schooling is two years less than clerical workers. Comparing work experience, those in the manufacturing industry have longer work experience, although tenure is the same for both sectors, suggesting a higher turnover rate among those in the manufacturing sector. Finally, the average duration of non-participation is three times longer for those in the manufacturing

sector than for those in the clerical sector, indicating that many women in the manufacturing sector began to enter the labor force after their child-rearing responsibilities declined and part-time employment opportunities increased in the economy. The proportion of all newly hired women workers engaged as part-time workers increased from 13.8% in 1965 to 39.7% in 1983.

(4) Education and Occupational Structure

The above analysis presents a clear dichotomy between different generations of women workers. The young and well-educated age cohorts are absorbed into the clerical sector, while the older age cohorts and less educated are employed in the manufacturing sector. In terms of the "vintage" of education, among those cohorts which received pre-WWII schooling, less educated women are more likely to work, mostly in the manufacturing sector and on a part-time basis. On the other hand, for the younger age cohorts, education plays a positive role in their labor force participation decision, and most are employed in the clerical sector.

Women's educational attainment increased rapidly in the post-WWII period, at a time when the educational curriculum was modernized and reformed. Those who were highly educated prior to WWII faced limited opportunities in the labor market for two reasons: (1) those with high levels of education had a relatively high asking wage that was substantially greater than the offer wage available to this cohort, and; (2) the opportunities in the clerical sector, which began to increase after 1965, were given to more recently educated young women whose "vintage of education" is more relevant and had noticeably improved. On the other hand, less well educated members of the older cohorts were able to obtain low skilled and low paying manufacturing jobs. Participation of this latter group in the labor force was crucial in keeping wage rates low and making Japanese manufacturing products relatively inexpensive and competitive in the world market.

(5) Summary

Although both the U.S. and Japan experienced a transformation of women's occupational distribution, the time and speed of the process was quite different. In the U.S. a gradual increase in the feminization of the clerical sector was accompanied by a gradual decline in women's participation in the manufacturing sector. In Japan, this transformation took place within a short span; there was a rapid increase in clerical employment for women while a high proportion remained employed in the manufacturing sector, albeit on a declining scale.

A unique characteristic of Japanese women workers relative to their U.S. counterparts is the higher proportion of married women employed in the manufacturing sector as part-time workers which, until recently, dominated the overall trend of women's LFP. In contrast, when the U.S. and other OECD nations experienced a rapid influx of married women into the labor force in the 1960's, those who dominated the trend were relatively well-educated clerical and professional workers.

This process of occupational transformation explains why, in Japan, the association of educational attainment with employment has been relatively weak, especially among

married women. This is because the relatively large proportion of less-educated married women in the manufacturing sector obscured the positive association between education and employment among younger cohorts of women who are more likely to become clerical or professional workers.

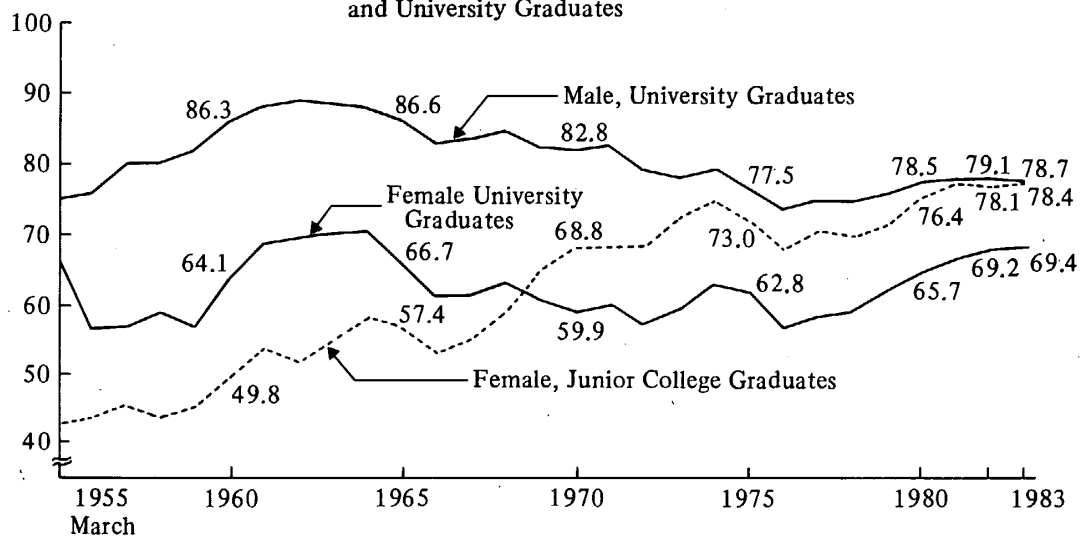
Looking into the future, the trend will be dominated by the younger cohorts who received the new style education. Although more educated women are now more likely to work, it is not clear that higher educational attainment leads to a higher return for them in the Japanese labor market. In the next section, I focus on the role of women's higher education in Japan.

3. *The Role of Women's Higher Education in Japan: Market and Non-Market Returns*

Due to both educational reform after WWII, and a rapid growth in household income, women's opportunity to enroll in higher education has also increased. The percentage of women high school students entering either junior colleges or four-year universities increased from 5% in 1960 to 33% in 1984. Although these figures remain higher for men, the difference in the enrollment rate for men and women has narrowed considerably since 1970.

It should be noted, however, that the recent influx of women into institutions of higher learning has been concentrated in junior colleges and very few have entered the more prestigious universities. Unlike in the U.S., the enrollment rate in junior colleges for women has always exceeded that in universities (See Figure 1). Only in recent years are there signs of a slow change with a slight increase in the rate of growth in women's enrollment in universities and a slight decrease in the rate of junior college enrollments.

Figure 1 Employment Rate of Junior College Graduates and University Graduates



Source: Basic School Survey, Department of Education

One reason for women's higher enrollment rate in junior colleges is the higher rate of

return on junior college education than for university education. Yano, based on the 1974 census, found that the rate of return on schooling for women junior college graduates was 11.5%, exceeding the 9.9% rate of return for university graduates.¹⁾ The higher rate of return on junior college education reflects the higher employment rate for junior college graduates evident since 1966 (See Figure 1). In 1983, for example, 78.4% of junior college graduates were employed, while only 69.4% of university graduates were employed.

The higher rate of return on junior college education and the higher employment rate of their graduates can be traced to Japanese firms' hiring practices. A survey of female employment and management in 1981 found that 70.9% of all firms hire only male college graduates. (*Status of Women Workers*, 1983) Moreover, 34.8% of the firms which employed female university graduates responded that different job contracts were offered to men and women. Significantly, 16.5% of the firms indicated that they hired female college graduates on the same basis, and pay, as junior college graduates. The major reasons listed by the firms for this differential treatment of male and female university graduates were: (1) shorter anticipated tenure for women (55.9%); (2) the Basic Labor Law which restricts women's working hours (35.4%); (3) very few university educated women specialized in the fields in demand (25.7%), and; (4) insufficient motivation to work (19.7%). This survey indicates that university educated women workers have not been fully integrated into the Japanese labor market. Employers assume that women will quit when they get married or give birth, and thus are less willing to hire women and treat them on an equal basis with men.

Recently, however, companies' attitudes towards women workers have changed. Companies have now opened up opportunities for some women to enter the same career path as university educated men at the entry level. Nonetheless, still very few women are able to do so. Thus, to some extent the new Equal Employment Opportunities Law of 1986 has some impact on firm's employment practices, but it is not yet certain whether such encouragement will have a dramatic impact on women's career opportunities.

Apparently, once hired, women do not considerably alter their employer's perspectives. A case study of 18 firms which employed many women workers found that differential treatment began from the time when they were first hired. (Nihon Seisansei Honbu, 1980) For university educated men, their job is classified as "general occupation" (*ippanshoku*) and jobs are not well specified, with the new worker mostly shifted around the many divisions or branches of the firm in order to familiarize himself with the organization. On the other hand, most university educated women enter the company as clerical workers. Their job training and job rotations are quite different from university educated men and prospects for advancement are sharply attenuated thereby. Recently, the firms interviewed began to consider the possibility of shifting women workers from

1) The figure for men was 5.3% and 6.7% for junior college graduates and university graduate respectively. The reason for the higher rate of return on schooling for women is due to a possible heterogeneity bias. Since the earnings function is the concave function, and most women workers have a shorter tenure, the heterogeneous characteristics introduce an upward bias in the estimates.

clerical occupations to general work by giving an examination, but still this is a hurdle that men do not face.

Brinton has pointed out that the differential access to on-the-job training is particularly critical in Japan because unlike in the U.S. there are relatively few opportunities for women to acquire relevant skills elsewhere (Brinton, 1984). For example, professional training at universities such as business schools in the U.S. is quite limited in Japan because each company itself conducts the training it deems necessary to produce the managers that it desires. Since the firms exercise such tight control over training possibilities, and alternatives are exceedingly scarce, differential access to on-the-job training severely limits women's career development possibilities.

It is clear that for Japanese women, paid employment opportunities with prospects for substantial career advancement continue to be quite limited and yet we have observed an increase in university enrollment. What are the major factors which induce women to enroll in the universities? Since the direct benefits of education in the market remain elusive, we conjecture that there must be other indirect benefits which induce women to enroll in university, and render this sizable investment worthwhile.

Benefits from higher education accrue not only in the form of higher productivity in the market sector, but in the form of husband's higher productivity, and in turn higher family earnings. Yano found a strong correlation between husband's and wife's education (Yano, 1982). This finding itself is not unique to Japan, as similar findings were reported by Benham for the U.S. (Benham, 1974). However, the difference is that the indirect benefits of education are more crucial in Japan than in the U.S. where gains in university enrollment have been matched by advancements in the labor market.

In terms of indirect benefits of education, the most prominent is higher home investment in children and, down the road, higher earnings for children. Leibowitz found a significant positive effect of mother's education on home investment in children, while father's education plays only a minor role (Leibowitz, 1973). Although there is no empirical study in Japan which attempts to measure the correlation between women's home investment and mother's educational attainment directly, an upsurge in women's university enrollment in the early 1970's and the consequent ubiquitous emergence of the educational mother (*kyoiku mama*) in the 1980's provides circumstantial evidence in this regard. With the narrowing of opportunities at the top, the competition has grown fiercer, extending down to the elementary schools, with mothers devoting substantial energy and household resources to improve their children's future possibilities. To this end, there has been a marked surge in enrollment in cramming schools of children at all school ages.

Furogori pointed out that the probability of women's withdrawal from the labor force due to child-rearing is positively associated with the level of educational attainment for women based on the Basic Survey of Employment Structure in 1980 (Furogori, 1981). Moreover, Tanaka, examining 1974 micro-data on life cycle stages among women workers found that more highly educated women are more likely to withdraw from the labor force when dependent children are present, supporting the thesis that non-market returns on education exceed market returns for Japanese women. Holding market wage

and household income constant, Japanese women's education is negatively associated with participation in the paid sector, indicating that education significantly increases women's productivity in the home sector, rather than that in the market sector, particularly for mothers with young children. She also noted similar findings in the U.S. in the 1950's, although since then the coefficient of education has been positive, suggesting the positive impact of education on market productivity (Tanaka, 1986).

Table 4 Distributions of Female University Students
by Fields of Study, U.S. and Japan

Field of study	U.S.				Japan			
	1955– 1956	1964– 1965	1974– 1975	1977– 1978	1960	1970	1980	1986
Humanities	10.7	10.3	11.1	8.0	33.1	35.9	35.8	35.6
Social science ¹	12.7	13.5	12.1	10.6	7.4	14.7	14.6	15.6
Natural science	4.0	7.6	7.0	7.3	2.3	2.2	2.3	2.5
Engineering	0.1	0.1	0.2	0.9	0.5	0.7	1.3	2.3
Agricultural sciences	0.1	0.1	0.6	1.3	0.5	1.8	1.9	2.1
Health	6.5	5.4	9.1	11.0	10.4	8.9	9.1	9.5
Home economics	4.2	2.4	3.8	3.9	9.9	8.1	8.1	7.6
Education	45.6	42.4	29.3	22.7	28.3	18.2	17.9	16.6
Art	5.5	11.1	6.0	5.8	6.4	7.1	7.2	6.7
Other	10.6	7.2	20.6	28.4	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	66.0	66.1	50.3	40.5	77.7	69.3	69.0	66.5

Source: For Japanese Figures

Bureau of Women and Youth, Ministry of Labor, *Status of Women* (in Japanese).

Tokyo: Ministry of Finance Printing Office, 1986

For U.S. Figures

1955–56: *Biennial Survey of Education, 1954–55*

1964–65: *Digest of Educational Statistics, 1966*

1974–75: *ibid.* 1976

1977–78: *ibid.* 1980

While it remains true that the economic return on higher education is weak, recent data suggests some small, but steady changes taking place among university educated women regarding women's education and career choice. In contrast to U.S. counterparts, area specialization among university women students is much more concentrated in traditional women's areas such as humanities, foreign languages, and social sciences, with few opting for scientific or technical fields, a tendency which has not substantially

altered (see Table 4). However, due to structural changes in the Japanese economy, increasing competition in knowledge-intensive industries has opened up opportunities for women. Distribution of women university educated workers in technical fields has increased from 3.1% in 1975 to 8.1% in 1983. Moreover, the proportion of those who specialize in engineering has increased from 0.5% in 1960 to 2.0% in 1984. While the change is not dramatic, women are now entering "men's" specializations in greater numbers and can be expected to continue doing so in response to gradually improving labor market conditions.

4. Conclusion

On a theoretical level, the rise in the level of women's educational attainment and the rise in women's participation in the labor market as paid employees demonstrates that the economic changes observed in the other OECD nations are taking place in Japan as well. Women and their families are devoting more resources to their education in response to improving economic opportunities and substantial non-market returns. In the early 1970's, important changes emerged with the rapid influx of young, well educated women into the labor force as paid employees. The young cohorts of women workers are concentrated in clerical and professional jobs where educational background plays a much more significant role.

Although rapid growth in educational attainment among young women workers and rapid feminization of clerical occupations induces relatively well-educated young women to enter the labor force, the translation of this gain into career advancement has been quite limited. This can be ascribed to employment practices which discriminate against women. However, limited as the gains may be, the possibilities for women's career advancement in Japan are greater than they ever have been in Japan and further gradual improvement can be expected.

Looking to the future, it is likely that Japanese "shock absorber" employment practices will persist since the well-educated post-war baby-boom cohorts of male workers began entering the labor market in the 1970s and prospects for continued slow economic growth should create a tight labor market for some time. While we will observe increases in women's labor force participation, the nature of women's employment, as part-time or low level workers, undermines women's accumulation of work experience and market skills, and their subsequent potential for advancement. Thus, occupational transformation is progressing and more highly educated women workers are entering the labor force in greater numbers, but the concentration of this influx on the labor market periphery suggests that career prospects, and incentives to stay in the labor force on a continuous basis, will remain limited for some time.

On a more optimistic note, the Equal Employment Opportunity Law of 1986 is an encouraging sign, less for what it will achieve in terms of monitoring and lessening discrimination in the labor market than as a reflection of underlying forces which are transforming the labor market and women workers' role therein. The passage of this legislation recognizes the ongoing fundamental institutional and structural changes which

are gradually drawing women from the home and the periphery into the core labor force in greater proportion to their numbers and commensurate with their skills, albeit dampened by the dilatory response of corporate Japan.

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