

# **JAPANESE PERSONNEL MANAGEMENT PRACTICES : AN ANALYSIS OF STRUCTURAL EARNINGS OF MANUFACTURING INDUSTRIES**

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## **1. JUSTIFICATION**

The success of Japanese economic development after World War II has inspired many people, especially among academic circle to investigate what are the main factors behind that. As the fact that Japan has a poor endowment of natural resources, only personnel management practices, in which human resources are utilized, is Japan's resorted last in the long run. Thus, personnel management practices are always mentioned as the most important factor for success in business. This concept is confirmed by a survey conducted by the Japan Productivity Center in 1969 which showed that finance was the most important factor for success in U.S.A. while in Japan was personnel. It is true that the most distinctive attributes of modern Japanese management are domiciled in the field of personnel. Personnel management in Japan is recognized by Western countries as the truly unique aspect of Japanese management. As dramatic advanced in science and technology as well as intense competition both in domestic and international markets including other major social changes, such as urbanization, computerization and aging population. In addition, the effect of the first oil crisis in 1973-74 and the second oil crisis in 1979 as well as recent the sharp appreciation of yen after the G-5 monetary conference in 1985. All of these factors have the great impact upon personnel management practices but, it is noticed that under

such circumstances the rate of separation of workers in Japanese manufacturing industries is only around 1-2%, whereas it is about 4% in U.S. manufacturing and 8% for male workers in Australia. This implies that, from human capital theory's point of view, employers can be benefited most from longer service of employees once intrafirm on the job training systems have been developed. This is because of worker productivity can be increased in response to recurrent training specific to a particular firm. From this point of view, it can be said that the Japanese lifetime employment system is the most efficient method for employers to maintain the fruits of investment in training. As wages serve as a mirror for personnel management practices and labor-management relations, therefore, it is worth to take wages into consideration and use them as the sole dependent variable for analysis. As it is well known that wage rates vary considerably depending upon two sets of factors. One set is composed of the various characteristics or attributes peculiar to the individual employee. These include sex, educational background, age, and occupational responsibilities or job content. The second set is composed of characteristics associated with the firm to which individual employee, is attached. This set includes the firm's geographical location, its size, and its industrial classifications. So far, there are some studies related to wage differentials. But, most of them pick up some variables, for instance, sex or firm

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size into consideration as the sources differences in earnings or wage rate. In addition, these studies confine only to all manufacturing industry which do not allow us to know any details on each industry any more. Therefore, it is this study intention or tasks to fill the gap on wage differentials by taking all important variables which may affect to wage structure into account as well as go further to study wage structure of selected industry and finally tries to compare each industry. In fact, economic development in each period may have an impact on wage structure, for instance, in a rapidly growing economy the profiles of worker's expectation about prospective earnings streams would be much steeper than those which are estimated from actually observable cross-sectional data. This factor may indeed be very important when evaluating earnings or wage profiles comparatively between industries. In order to avoid from bias in underestimating this factor, this study picks up an interval 5 years starting from 1970 to 1985 for analysis. From the results of this study, it is hoped, we may get an insight and more elaborated knowledges on wage structure of the industries as well as their personnel management practices.

## 2. THE PURPOSE OF THE STUDY

The purpose of the study can be summarized as follows:-

1. To estimate the effect of experience in determining the rate of earnings.
2. To compare the effect of experience across different segment of the labor market (sex, occupational and industrial segments).
3. To compare and evaluate these points of interest between growing and declining industries in terms of similarities and dissimilarities.
4. To draw some policy implications from the results of the study in terms of personnel management practices as well as give some suggestions and recommendations.

## 3. THE SCOPE OF THE STUDY

The study focuses on earnings or wage profiles of Japanese workers which, basically, affected by educational attainment and experiences. In addition, wage profiles also are differentiated by sex, type of worker, and industries. In this context, we confine this study as follows:-

1. Educational attainment:- 4 levels of formal schooling in Japan are taken into consideration that are: junior high school (consisting of 3 years beyond elementary school, usually completed at age 15); senior high school (consisting of 3 years beyond junior high school, usually completed at age 18); and college or university (lasting 4 years beyond senior high school, usually completed at age 22).
2. Experience :- Two kinds of experience are taken into account: inside experience and outside experience. The inside experience means years of experience which employee receives from current firm in terms of training. On the contrary, outside experience or previous experience means years of experience prior to those as an employee of the present employer.
3. Occupation or type of worker:- Two types of worker are taken into consideration that are:- salaried worker and production worker.
4. Sex:- Male and female are taken into account.
5. Firm size:- As data which we take from Basic Wages Census are not classify into large and small firm by length of service for each industry, therefore, we take data from all size of enterprises to use in this study.
6. Industry:- Growing industry e.g. electrical machinery and transport equipment as well as declining industry e.g. textile and iron and steel industry are the main focus of this study.
7. Data sources:- Secondary statistical data is mainly taken from Basic Wages Census which is compiled every year by Ministry of Labor.

The wage functions are fitted to 1970, 1975, 1980, and 1985 monthly contractual cash earnings which exclude special earnings, for instance, bonus. Wages in this study are converted to real hourly wage rate because real hourly wage rates are free from the possible distorting bias caused by the difference in hours of work and inflation. Besides Basic Wages Census, this study also uses data from Year Book of Labor Statistics and Japan Statistical Year Book as well as others related materials for analysis.

#### 4. SUMMARY AND CONCLUSION

The results of empirical findings confirm our hypothesis that individual earn different wages as a consequence of variation in their human capital investments. In addition, from our empirical finding also emerge four points of similarity and two points of dissimilarity in earnings profiles of four industries.

The similarities are :-

1. Experience, both internal and external, has significantly positive effect on earnings profiles. In addition, the marginal effect of experience also varies with level of education.

2. The effect of internal experience is considerably stronger than that of external experience in raising earnings.

3. The effect of experience, both internal and external, is a great deal larger or stronger for males than that of females. In addition, the effect of sex has much stronger than that of educational level.

4. The effect of experience, both internal and external, is considerably larger or stronger for salaried worker (white-collar) than that of production worker (blue-collar). In addition, the effect of occupation or type of worker has much stronger than that of educational level. The dissimilarities are:-

1. In electrical machinery industry, the work experience has much effect on raising earn-

ings than it does in textile industry.

2. In iron and steel industry, the work experience has much effect on raising earnings than it does in transport equipment industry.

These empirical findings are examined in terms of the various relevant hypotheses. The human capital theory appears to explain well the rise of earnings with experience in four industries. The observation that the impact of internal experience is greater than that of external experience in increasing earnings also seem to be compatible with the prediction of specific human capital hypothesis. In addition, the internal labour market hypothesis which emphasizes the importance of internal promotion together with on-the-job training seems to indicate that the internal experience is much importance than that of external experience in raising earnings as the experience with the present firm is pertaining to the current job. In addition, the seniority-based wage system which age and length of service of worker are very important for wage progression, give another alternative explanation for experience-earnings profiles. Moreover, the Japanese seniority -based wage system is designed to response changing in economic situation as well as cover the life-cycle of worker's household, especially head of family. Thus, it can be inferred that the earnings profile of worker can be explained by these hypotheses.

Actually, the earnings profile of worker is also affected by gender, education, and occupation as we have found in our findings. The differences in earnings of individual do not only depend on experience which worker acquires skill acquisition through on-the-job training but it also depends on personal characteristics of each individual worker. Thus, it is no wonder that the marginal effect of experience varies with the level of education and sex for all groups of workers. It is clearly to us that the source of income inequality of individual worker come from the differences in past investments in human capital.

The differences in inter-industry wage differentials come from the differences in the amount of intrafirm training which is considered as specific human capital. In this connection, the differences in the amount of such intrafirm training among the industry come from the differences in rate of technical changes in each industry.

## 5. POLICY IMPLICATIONS

From the above summary and conclusion, what kind of policy implications can be derived.

First, the intrafirm on-the-job training is considered as the powerful method in embody worker with specific knowledges and skills as well as increase labour quality of worker. As the consequence, from employers side, the employees arm with technical knowledges and skills which will not be able to make full use of their capabilities if they move to another industry are considered as the valuable assets of industries or enterprises which employers can fully utilize for the benefits of industries or enterprises. For employees side, it is a great benefit for themselves to embody with technical knowledges and skills as the higher quality they are the higher wage pay they might receive. In addition, once they are embodied with technical knowledges and skills, it seems that their life has already guaranteed as they will be protected by industries to prevent from capital loss of human capital of industries.

Second, educational policy, rather than direct intervention in the labour market, is the most efficient means of reducing pay differentials. As skills are acquire prior to entry into the labour market from formal schooling and the distribution of jobs is supposed to be perfectly malleable, depending on the distribution of human capital endowment (and thus on the distribution of skills) produced by the educational system. Furthermore, if we presume that the labour quality differs according to gender, age, years of employment

and formal education as the wage paid differs according to labour productivity of worker groups. In other words, the wage differentials base on difference in level of the labour quality. If so, the formal education can be interpreted to indicate the most formal investment in human capital. As formal education is considered as the means to increase labour quality therefore it is reasonable to use it as the means to reduce wage differentials. For industries, it is very clearly that the shift of pattern of recruitment from lower educated employees to higher educated employees will, no doubt, give a fruitful benefits to industries.

Third, a mechanical enforcement of "Equal Employment Opportunity Law" which is enacted in April 1, 1986 in order to protect female workers comprehensively from any form of discrimination or disadvantage in employment will not necessarily benefit female workers. If most of male-female wage differentials are due to the employer's prejudice or monopsony power, then wage levels can be equalized without harming the resource allocation of the entire economy by using legal power to raise women's wages to the equilibrium level. But, most of the male-female wage differentials are due to the differences in the quality of males and females that arises from the difference in on-the-job training. Then, even if equal pay for equal work is carried out thoroughly, there is no guarantee that the prevailing wage differentials will be greatly reduced. As the fact that most of the firms give a preferable to males for training than females it is a poor policy for them to invest heavily in the training of female workers, who leave their jobs or whose labour productivity decreases because of marriage and childbirth. So, what kind of principle should be considered as a policy to deal with rational discrimination.

### 1. As the nuclear family is becoming the

norm, there are many cases where female workers are forced to change jobs to become full-time housewives even though they are willing to continue their employment. The cost that is paid for the job change is not only a reduction in income but also the loss of opportunity for on-the-job training, which is bound to be very high in terms of opportunity cost. To avoid this, it is necessary to externalize household labour as much as possible. In particular, the expansion of day care centers for preschool children is most effective. This public day care centers should open to all households varying fees according to family income. This will be considered as a social policy to equalize employment opportunities for men and women.

2. For married women who are compelled to terminate work, acquiring as much general training as possible that can be used in any firm in the most effective strategy for reemployment. This might be supported publicly by having each industry provide a kind of certificate examination for general skills among the skills that have accumulated while working, making this a matter of public record. The male-female wage differentials are greatest among newly hired adults largely because information about worker's abilities are lost due to separate from a firm. Therefore, if information about previous experience could be preserved by an impartial institution, it would be a great advantage for both employees and employers.

Fourth, if Japanese seniority-based wage system (nenko wage), in the pure form, is the norm in Japan, thus one would expect previous experience or experience outside the firm presently employing a worker, to have a negligible effect on wages, since that system usually assumes that skills acquired in a firm are not transferable. But, our empirical findings suggest that external experience is quite important as it has a positive

impact on earnings profiles. It is possible that with the tightening of the Japanese labour market in the last decade, the nenko wage system has eroded more than previously believed. This notion seems to converge to the annual report on "White Paper on Japanese Corporate in 1985" of Japan Committee for Economic Development (Keizai Doyukai) which indicates that the global deployment of Japanese corporates is bound to have a powerful impact on Japanese style management. The Japanese corporate now in the dematurity (1) are moving to shift from the traditional management styles to a new management system. According to the report, one of the elements of Japanese Management which need to be changed in the 1990s is the seniority system which should be replaced by the merit system whereas lifetime employment system should be still kept (2).

## 6. LIMITATION OF THE STUDY

This study, like any other study, cannot avoid from limitation or defect. As this study, from the beginning, confines it only in the scope of experience-earnings profiles and skips some variables which might be influenced on earnings as we can see from the empirical findings, which show an inconsistent, mixed, and ambiguous results for some cases. In addition, the literature on Japanese wage system suggests strongly that size of firm is an important determinant of earnings. If this is really the case, considerable bias would have been introduced into our analysis. As the present analysis is performed on data which are not broken down by size of firm. Therefore, we can say that this study still incomplete. However, most of the empirical findings seem to be in the line of theoretical expectations. Thus, it is hoped that this study, more or less, will give some insight knowledges on earnings profiles of workers, especially in sub-industry level and inspires other researchers to further investigate so that the body of knowledges in this area will be fulfilled.

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