

WAGE AND SALARY STRUCTURE IN ASIAN CONTEXT (1)*

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I. *Summary Introduction*

1. Wage Structure: Its Logical Concept

When we deal with wage structure in a theoretical framework, we must start from the component part of basic wage. The concept of the basic wage, in theory, comprises two-fold meanings: one is that the basic wage covers the total expenditure of regular daily life of workers, and another is that the basic wage plays the role of monetary base by which many of monetary fringe benefits are calculated. Since the base wage is, as such, the most important component of wage structure, first of all, we will focus on it for a little while from its theoretical aspect.

In principle, it goes fair without doubt that more difficult and more responsible jobs be paid more than less difficult and less responsible jobs. For having this principle materialize, attempts are made to set up a hierarchy of jobs on some logical basis so that pay for jobs is relative to job status within this hierarchy. Wages and salaries paid for different jobs within a particular organization comprise wage and salary structure, and thus the wage structure is set up based on the hierarchy of base wages.

Assuming that minimum base wages are fixed either by statutory regulation or by collective bargaining, the problem arises of what relationship between different levels of wages should be. This is the essential problem of wage structure. The problem of constructing wage and salary structure may be solved by employer's fair judgement or through collective bargaining. However, the key point of the problem centers around how to objectify or impersonalize the procedure of setting wage rates.

Since the beginning of this century, in developed countries, a more logical approach has developed for solving that problem, which is called job evaluation method. Though there are several different methods of job evaluation, which will be dealt with later in more detail, the logic used is fundamentally the same. It starts from a study of the jobs in the organization, then to decide what factors place a job at higher point, and to choose or build a system

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that will permit the appraisal of jobs according to the factors, and place them properly in the job hierarchy. The next step is, using the system, to set up such a logical job hierarchy, and then goes to the final step of assigning wage or salary rates to the hierarchy.

After wage and salary rates are properly placed in the wage structure of a particular organization through such an analytical approach, the next step comes up, which is individual wage rate determination. The question at this point may be whether all individuals on the same job shall receive the same pay. As technical improvements such as automation or computerization tend to simplify the content of many jobs, possibility of paying same rate for the same job is increasing. However, many cases are found in a variation in wage payment to different individuals on the same job. Where such a variation is permitted, it may be accepted in the following two ways. One is an incentive method of pay by which the base rate is set up for the job and the individual remuneration is determined largely by his own efforts. Another method is that of setting up wage or salary ranges with a starting rate, a standard rate, and a maximum rate applicable to individuals on the same job. Further, pay grades may be set up so that jobs of similar difficulty have similar pay ranges. When such ranges and pay grades are set up, some logical procedures must be made for moving individuals through the range and grades. The possibilities are three, that is, automatic increase based on length of service, increase based on individual merit rating, and a combination of the above two.

Following the procedure above described, we will get a theoretical picture of wage structure, in a static setting. However, the picture made as such is not a real picture of wage structure whatsoever, or it is even not sufficient in theory either without considering factors affecting wage differentials. When we consider the factors which influence the wage structure within a particular organization, we have to take in account several factors such as employer's needs to job fulfilment, employer's ability to pay, and disparities among individuals or groups of employees. When the employer has keen needs for particular group of workers such as skilled trades, they will be willing to pay much higher than reasonable rates. When there are redundancy of workers, lower jobs may be given far lower rates than logical consideration. Therefore, employer's ability to pay is to be examined not only from the aspect of management, but also from labour market situation under which the management operates his business. As for disparities among individuals or groups of employees, differentials based on sex, length of service, ages, educational careers, and race or nationalities may be seen in many countries regardless of the extent of industrialization. Collective bargaining also influences wage differentials. Many of trade unions are not for widening wage differentials, and they usually strive for narrowing them. Technological changes have influence on determining wage differentials. The most important approach to consider those factors which affect wage differentials is to select the factors which are really inevitable or even indispensable for smooth industrialization, and to decide to what extent those factors be woven into the wage structure.

There is another factor to be considered on wage differential. Without any doubt, wage has not only economic but also social aspects such as sociological, psychological, political, and ethical aspects. Therefore a wage structure in a particular country has more or less uniqueness which reflect its cultural background or traditional custom. Even in developed countries, wage structure of a particular country has its own feature. This kind of social background also strongly affects wage differentials and we have to examine them carefully.

When we turn to salary structure in public service, we have another different aspect to consider. Salary structure in public service is, in many countries of the world, the reflection of class structure of the country in which career system has been built in.¹ It is interesting to see that wage structure in public service shows fairly the same shape, while wage structure in private undertakings varies with different countries. The reason may be explained not from economic but rather from some of social reasons which will be dealt with in more detail later. However, it is also interesting to observe that such a career system is now being reviewed and examined in many developing countries, and has even been criticized. It will be also dealt with later.

Now we will turn to the concept of wage components. Remuneration of workers is not fully accounted for by determining base rates. It is necessary to consider indirect compensation which workers receive. They are usually called fringe benefits. Workers, for example, receive cost of living allowance, paid vacations, and paid sick leaves. Employees may contribute to pensions and other benefits for employees. The number and the amount of fringe benefits have remarkably increased in developed countries. In the United States, for instance, average expenditure for fringe benefits in manufacturing undertakings reached 16.5 per cent of the total payroll even in 1953.²

To the workers, many of the items of fringe benefits may not be wages and they do not appear in wage rates. Some of them do not appear on the paycheck at all. To the employer, they are part of the wage bill however.

The study problem of fringe benefits is their number, their amount, their coverage, and their ratio in total wage earnings. The number and kinds of fringe benefits are now growing remarkably, and therefore, we have to consider which are the most essential, and to what ratio they should be or could be woven into wage structure.

Finally, we have to turn from the wage and salary structure of a particular organization to inter-organization area such as industry, region, and society as a whole.

There are wage and fringe benefit differentials in different size of undertakings, differentials among private undertakings, public corporations, and public service, differentials among industrial sectors, and geographical differentials. Which factors most strongly influence vary with different countries. Even in developed countries, complete solution for neutralizing such differentials has not come yet, partly because of difficulty for collecting data, or conducting research or inquiries, and partly because of changing nature of industrial development. Collective bargaining between trade unions at area level or at national level and employers' associations at their respective levels or between confederations of both sides at national level may be helpful for setting up reasonable differentials or for decreasing irrational differentials of wage structure at macro-level. If such kind of collective agreement covers remaining unorganized sectors by its extension clause, collective bargaining will work more effectively. Another alternative may be found in the role of government which promotes establishing a model or guideline of uniform wage structure in its public corporation or in public service. This role of the government is sometimes very important when the wage structure in private undertakings should link with national economic and wage policy. It is true that some differentials in wage structure are essential or not able to be removed. The

¹ See ILO, *Report of Joint Committee on the Public Service*, 3 vols. (Geneva, 1971).

² U.S. Department of Labor, *Problems in Measurement of Expenditures on Selected Items of Supplementary Remuneration*, *BLS Bulletin No. 1186* (Washington, 1956).

important is that excessive disparities may not be fair or rational. What kinds of differentials are rational or to what extent the differentials are fair will be the keen subject to be reviewed.

2. Wage Structure in Asian Context

While we find fairly uniform and well established wage and salary structure in public service in almost all of Asian countries, we do not find uniform wage structure in private undertakings in many of Asian countries. In some countries or in some industries of other countries, however, there are some kinds of uniform wage and salary structure. For example, Japan has its unique uniform wage structure in which wage rates are determined by formal educational career and length of service. Most of workers are recruited at the year when they complete school education and they continue to work in the same company up to retirement. This construes company-wide closed labor market where lifetime employment of workers is secured. Under this condition, wage rates of employees start at entering wage and they are increased to the maximum at retirement. Although the amount of wage rates vary with size of undertakings, the system has prevailed in almost all the undertakings.³ In other countries, for example, in Ceylon, attempts are being made to set up a uniform wage and salary structure in State Corporations where by the efforts of the Cabinet Sub-Committee, more than 1,500 scales of salaries have been reduced to 32, and further attempts are being made for introducing job evaluation for placing jobs on the standard set of wage and salary scale.⁴ In some industries in India, a fairly uniform wage scales have been set up through collective bargaining, and the same practices are found in Malaysia too. In India, wage boards in various industries have made attempts to establish uniform wage structures according to category and skill.⁵

As for wage components, it is important to observe that there are two extreme differences on the role of base wage in Asian countries. In countries such as the Philippines and Japan, the base wage is the major source of the total wage earnings, but, in other countries such as India and Indonesia, the ratio of the amount of base wage to total wage earnings are very limited. Payment in kind is found in some countries such as Thailand and Indonesia, and in Indonesia, rice allowance is the most important wage component.⁶ The payment in kind is expected to play the major role of safeguard against severe inflation.

Concerning other fringe benefits, the important one is cost of living allowance found in Ceylon, Hongkong, India, and may be in some other countries. Among them, it is unique in Ceylon that cost of living allowance is paid by annual lump-sum for manual workers covered under six collective agreements.⁷ An overview of fringe benefits in Asian countries shows that the number and kinds of fringe benefits are not so many, compared with developed countries.

Differentials of fringe benefits between the private sector and public service are great in many of Asian countries. Common feature is that government officials are provided best

³ For a detailed information, see Tsuda, M., Japanese Wage Structure and Its Significance for International Comparisons, *British Journal of Industrial Relations*, Vol. III, No. 1 (London School of Economics, 1966).

⁴ Perera, S.E.G., Wage Payments in Ceylon to Categories of Employees Outside Government Service, the ILO-ARRSSW, *Country Statement* (Bangkok, 1971).

⁵ Krishnaswami, Wage Regulation in India, the ILO-ARSSW, *Country Statement* (Bangkok, 1971).

⁶ Situmorang, J.N., Wages in Indonesia, the ILO-ARSSW, *Country Statement* (Bangkok, 1971).

⁷ Perera, *op. cit.*, p. 7.

fringe benefits, employees of big-scale undertakings follow, and others are less provided for.

Differentials of wage and salary rates between private undertakings and public service vary with different countries, and we find two opposite aspects. In Malaysia, the Philippines and Singapore, for example, the rates and structure of wages and salaries are fairly better in public service, and they serve as guidelines to those of public undertakings. On the other hand, in the Republic of Vietnam, the Republic of Korea, Thailand and Japan, for example, the wage and salary rates in public service are lower than them in private sector, and there is a tendency that the government fails to attract able young people to public service, especially from technical and engineering fields.

As for other kinds of differentials, one of important feature is found in skill differentials. In many of Asian countries, skill differentials are usually great because of keen shortage of skilled workers against needs. In the Republic of Vietnam, for example, wage rates of skilled manual workers are higher than clerical employees.⁸

Industrial differentials are also remarkable between agriculture and urban industries, between labor-intensive and capital-intensive industries, and between domestic and export industries. Company-size differentials are found elsewhere too. As for sex differentials, it may be rather unique in Thailand that there are almost no differentials between male and female workers in urban area so far as they are on the same job.⁹

Pertaining to wage differentials, we have to take in account of the role of the government. The government is, in many Asian countries, the largest employer, and as such, the government influence on structuring wage and salary differentials in other sectors of industry in a country. The government also makes attention to the nature of wage differentials in industries from its national economic policy. In Indonesia, for example, the government has set up a policy for particularly narrowing skill differentials.¹⁰ Another example is the Republic of Vietnam where the Government maintains the policy to urge employers to improve fringe benefits for their employees rather than to increase their wage rates.¹¹

II. *Job Classification and Evaluation*

1. Theory and Practices

The problems of defining and fixing suitable wage and salary relationships between groups of jobs and workers are very important in both the theory and practices of wage determination. The technique of job evaluation is applied to deal with problems of comparative equity in wage determination mainly at the level of an individual undertaking or plant. Its object is to give a means of establishing a wage structure which is acceptable to labour and management, and which is, as far as possible, fair or equitable in the sense of assuring equal pay for jobs demanding broadly equivalent sacrifices from their incumbents, and in the sense of rewarding properly the greater efforts and hardships involved in some jobs as compared with others.

⁸ Truong Cong Long, Determination of Wages in Vietnam, the ILO-ARSSW, *Country Statement* (Bangkok 1971).

⁹ Salaries and Wages in Thailand, *Country Statement* (Bangkok, 1971).

¹⁰ Situmorang, *op. cit.*, p. 9.

¹² Truong Cong Long, *op. cit.*, p. 2.

Wage and salary relationships are those among individual jobs within a given unit in which common rules govern the fixing of wages and salaries for individual jobs or groups of jobs. This unit may be an individual undertaking, plant or public organization, but in other cases may cover a whole industry for which a national collective agreement exists. In exceptional cases, for example, in the Netherlands, common rules have been applied to even larger groups of workers. The problems to be here examined are mainly focused on the following question: how are individual rates established and how are wage differentials among individual wage rates adequately structured? To answer the question, job evaluation approach comes in the scene.

As learned from the experience of developed countries, an established wage system has become necessary with the development of large manufacturing, transport and service organizations where, because of the development of division of labour and specialization, any large undertaking may have hundreds of different jobs, each of which may be performed by a substantial number of workers. Their work must be carefully planned and closely coordinated. One result of this is that individual jobs tend to be precisely defined. In addition to it, workers whose jobs are interdependent must work according to uniform schedules of working hours and observe other common rules. Persons working under those conditions and performing identical tasks will be required to work for the same rates of pay. For meeting those necessities in wage structure of modern industrial work, job evaluation method has been brought in.

Job evaluation may be defined as an attempt to determine and compare the demands which the normal performance of particular jobs makes on normal workers without taking account of individual abilities or performance of the workers concerned. To this definition, the following remark based on an international study should be noted. In 1950, International Committee for Scientific Management had the International Conference on Job Evaluation to which thirteen countries sent their specialists. In this Conference, the specialists of different countries reached a general agreement on several important points in which the definition of job evaluation was included. The definition which appears in its report says, "The purpose of job evaluation is to establish a systematic basis for comparing jobs from the point of view of their demands on workers capable of performing them."¹²

While the above definition is very wide in sense, several important aspects are involved. In the first place, job evaluation rates the job, not the man. Individual abilities or efforts of workers may, of course, also be taken into account and reflected in the worker's earnings, for example, under a system of payment by results or of merit rating, but this is something entirely different from the rating of job. This aspect is in general agreement on the definition of job evaluation, and thus, a Bulletin of the Bureau of Labor Statistics, Department of Labor of the United States says in its glossary of wage terms, "Job evaluation is always applied to jobs rather than the qualities of individuals in the jobs."¹³

In the second place, job evaluation contributes to establish ranking of jobs in the unit and its real object of investigation and comparison is in the content of the job. This is important because any results of job evaluation are no more than one factor of determining the wage structure, although they will normally be used as an aid in the fixing of relative wages.

¹² ILO, *Job Evaluation*, Appendix A (Geneva, 1960).

¹³ U.S. Department of Labor, BLS. Glossary of Currently Used Wage Terms, *Bulletin No. 983* (Washington, 1950). pp. 11-12.

The actual fixing of wages is entirely beyond the area of job evaluation, which is conducted through collective bargaining or by other ways.

Through those definition and special notes, we will go further concerning the definition and object of job evaluation pertaining to wage structure. Job evaluation, as above defined, aims at providing for a more logical, systematic basis for the comparison of job contents as an aid in the establishment of a more rational wage structure. Here, we meet a new problem, that is, what may be a rational wage structure. What wage structure is more rational is quite debatable and the perfect answer to it may be impossible. However, it seems appropriate to cite the clarification made by the International Labour Office. In its New Series No. 56 of Studies and Reports, entitled "Job Evaluation," published in 1960, the International Labour Office refers to the concept of rational wage structure from the following two aspects. It says, "Firstly, a wage structure will not be considered rational if it conflicts sharply with accepted opinions as to the equity of relative rates. Secondly, a wage structure will not be considered rational unless it permits the unit to hire and retain at reasonable cost suitable workers to fill the various jobs its productive aims call for."¹⁴

Before going further on job evaluation, one matter is to be mentioned concerning the concept of job cluster. In a particular organization, regardless of its size, several different categories of jobs are found, such as jobs of production workers, clerical employees, sales employees, professional and technical employees, supervisors, middle-management, and higher management. Difference in job contents are so extensive among those categories that job evaluation is usually applied to every separate category of jobs which are closely related for purposes of comparing job rates and contents. This kind of category of jobs is called job cluster.

Now we will turn to the process of job evaluation. First of all, whichever method is used for job evaluation, more or less thorough examination and description of the jobs to be assessed are indispensable. This first step is called job description. For writing job description, it is necessary to make clear what criteria should be applied to. This step is necessary because the jobs are evaluated based on the job description in which the jobs are assessed in terms of the criteria descriptions. This criteria is called either grades in which jobs will be placed, or factors in terms of which they will be evaluated.

One problem which encounters job description is that it costs much and takes time. However, job evaluation comes meaningless without concrete information of the jobs. It is justified to say that there may be no problem on cost or time since the cost and time of the operation may be more than fully repaid by the many other uses of job description besides job evaluation. Information collected through job description process are also valuable for improving management efficiency of the undertaking.

Another problem which rises in job description process is how to apply. Method used for acquiring information about jobs are questionnaire, observation, interviewing, and combination of those three. Each of the methods has its advantages and disadvantages, and among them, it is said that the questionnaire approach is the most preferable because it gives employees an opportunity of participating in the process. For adopting this questionnaire method in some Asian countries, however, some specific arrangement should be devised for overcoming illiteracy of workers.

¹⁴ ILO, *Job Evaluation*, *op. cit.*, p. 14.

We still have another problem pertaining to define such basic elements as grades and factors. This is normally done through extensive discussion and consultation among various people with special knowledge of the jobs. Usually after some provisional definitions have been prepared, these are tested by applying them to certain important jobs so as to see whether the definitions can form a basis for acceptable wage relations between these jobs, and through this process, the definitions may be revised. Once they have been settled in a final form, various definitions are written in manuals which contain illustrations of specific job descriptions and ratings.

After all the above processes are done, the actual step of job evaluation comes. Methods of job evaluation will be here reviewed very briefly. Methods of comparing jobs have been limited in number. The first and simplest method is the ranking method. Based on job description of the jobs, jobs are placed in order of the demands they are considered to make on those who perform them. Each job is considered as a whole. Where there are a considerable number of jobs, particularly found in a large plant, several modified ranking method may be used. One of them is the paired-comparison method, in which a list of pairs of every job with every other job is made, and selection is made on which job in each pair ranks higher. After this selection is over, an ordinal list of all of the jobs is completed.

The advantage of the ranking method is in its simplicity and less cost. The disadvantage is, however, again in that simplicity. Firstly, jobs may be ranked without the benefit of well-defined standards. Secondly, the ranking may be affected by the ranking of the job holder rather than the job itself.

The second method is the grade or the classification method. This method is widely used for salaried jobs and is quite applicable to those of public service. In Japan, this method has become extensively used especially since 1960 for improving its traditional wage structure by this method.

The key feature of this method is that labor grades are established before jobs are examined. Firstly, the number of labour grades is decided upon, secondly, the functions corresponding to these grades are determined, thirdly, descriptions for each are prepared, and finally, each of the job descriptions is compared with the grade description. The grade descriptions are framed in such a manner as to cover visible differences in degree of skill, responsibility and other job characteristics. The lowest grade may cover jobs which merely require the workers concerned to follow simple instructions under close supervision. Each successive grade will reflect a higher level of skill and responsibility, with less and less supervision. Jobs are, as in the ranking method, considered as a whole. The feature of this method lies in the small number of grades. For example, under this method introduced in 1955 for time workers in the British coal mines, about 400 jobs which are selected as key job from more than 6,500 existing jobs, are divided into a small number of grades by each of the job clusters. Thus, three such grades were established for craftsmen's jobs, five for underground jobs and five others for surface jobs.¹⁵

Disadvantage of this method lies in the number of grades, and when the range of jobs increases, it becomes more difficult to compress many different jobs into a limited number of grade descriptions. However, we should not forget that this method is relatively simple, inexpensive and easy to apply.

¹⁵ ILO, *op. cit.*, p. 29.

While the above two methods, the ranking method and the grading method, are referred to as non-analytical, non-quantitative, or summary method, the following two methods such as the factor-comparison method and the point-rating method are known as the analytical or quantitative methods. The difference between the two categories of the methods is that comparisons of job contents in the latter category of the methods are made separately in respect of each of a smaller or larger number of job characteristics called factors.

The first task of the factor comparison method is to select and carefully describe the factors to be used. The factors selected are usually skill, mental and educational requirements, physical requirements, responsibility, and working conditions. Each of these may be subdivided, for example, responsibility may be broken down under such headings as responsibility for other people, responsibility for equipment, responsibility for progress of the work of a crew, and so on.

The ranking of jobs in terms of each of the factors is first carried out for a number of key jobs on benchmark jobs which serve as points of reference for the latter evaluation and ranking of other jobs. For this purpose, the key jobs should satisfy a number of conditions. Firstly, they should be capable of clear description and analysis in terms of the factors used. Secondly, the group of jobs selected should cover a sufficient wide range with regard to the importance of each factor. Thirdly, when the ratio for the key jobs are to be used as the standard appropriate for the fixing of appropriate wages in other jobs, these rates should be regarded as appropriate for all the concerned. Finally, the key jobs should include jobs covering a sufficient wide range of pay grades including, specifically, the lowest and one or more among the highest-paid jobs in the unit concerned.

We will deal with this method in more detail using some tables quoted from a distinguished American publication.¹⁶ In Table 1, suppose those 16 jobs are tentatively selected as

TABLE 1. AVERAGE RANKS OF 16 TENTATIVE KEY JOBS

Jobs	Mental Requirements	Physical Requirements	Skill Requirements	Responsibility	Working Conditions
Gager	2	13	2	3	15
Pattern Maker	1	12	1	1	16
Common Labourer	16	1	16	16	1
Power Shear Operator	11	11	9	5	4
Plater	10	6	6	12	9
Riveter	12	3	12	14	8
Blacksmith	13	2	8	13	7
Punch Press Operator	14	4	13	15	5
Automatic Screw Machine Opr.	4	8	3	2	13
Casting Inspector	3	7	4	4	10
Millwright	9	10	5	6	11
Tool Crib Attendant	7	16	14	10	14
Arc Welder	8	9	7	9	3
Electric Truck Operator	6	15	11	8	12
Crane Operator	5	14	10	7	6
Watchman	15	5	15	11	2

Source: Belcher, B.W., *Wage and Salary Administration*, p. 264

¹⁶ Belcher, B.W., *Wage and Salary Administration* (New Jersey, 1962).

the key jobs in a manufacturing plant. The step of the factor-comparison method begins with ranking the jobs successively by reference to each of the factor chosen. Thus, each of the 16 jobs in Table 1 entitled average ranks of 16 tentative key jobs, is ranked by each of five factors such as mental requirement, physical requirements, skill requirements, and so on. Of course, the number of 1 is for the highest and 16 for the lowest. When the ranking is done as such by a committee, the usual practice is for each member to make his own ranking and the results are then averaged. These averages are again ranked.

Advantage of this factor-comparison method is in a more systematic comparison of jobs. Disadvantage of this method will come clear when wage rates are really applied to, which will be dealt with later.

The fourth and final method of job evaluation is the point-rating method. As the same as the factor-comparison method, a number of factors are clearly distinguished at the first step. While in the factor-comparison method, jobs are simply ranked in terms of various factors, a number of degrees are first distinguished for each factor in the point-rating method, for example, vary small, small, average, large, or very large. These degrees must be defined in a fairly detailed manner since the jobs are analyzed by reference to such definitions rather than with respect to each other. The factor degrees are assigned certain point values expressing the importance attached to the various elements composing a job. In Table 2, we see that the technical and office jobs are to be evaluated by five factors. Each of the five factors is assigned points.

TABLE 2. FACTORS AND POINTS OF TECHNICAL AND OFFICE JOBS

Factor	Total Points (Weight)	Per Cent
Mental Demands	200	48.2%
Training and Experience	84	20.2%
Effect of Error	48	11.6%
Personal Contacts	45	10.8%
Job Conditions	38	9.2%

Source: Belcher, *op. cit.*, p. 284

In Table 2, we can see that some arithmetic progression is applied to each degree of individual factors, placing the total point in Table 1 at the highest. The progression may of course be either arithmetic or geometric. The point assignment method is determined by the evaluation committee.

TABLE 3. FACTORS, DEGREES, AND ASSIGNED POINTS, TECHNICAL AND OFFICE JOBS

Factor	Degree											
	1	2	3	4	5	6	7	8	9	10	11	12
Mental Demands	200	175	150	125	100	75	50	25				
Training and Experience	84	77	70	63	56	49	42	35	28	21	14	7
Effect of Error	48	40	32	24	16	8						
Personal Contacts	45	35	25	17	9							
Job Conditions	39	30	22	14	6							

Source: Belcher, *op. cit.*, pp. 284-286

Based on job descriptions, each of the benchmark jobs or the key jobs is evaluated, being assigned one of degree points of each factor. The total points so assigned are the points of the job. Advantage of the point-rating method is to use points and not money values. Therefore, this method may claim that it is less subjective and fairer than any of other methods. One important problem of this method is the choice of factors and weights which should be acceptable among the people involved.

We will then advance to pricing the jobs which result in wage structure.

Under the ranking method, the present job rates are placed in each of the jobs ranked. Various existing rates to one job may be either averaged or one of the rates may be selected as the benchmark rate. The job rank and wage rates of the jobs are together examined and the wage rates are revalued so as to reflect the rank of the jobs. Under the grading method, the same process is taken, but comparisons are made between labor grades and present wage rates.

Under the factor-comparison method, the steps are different from the above methods and are more complicated. We will deal with it in more detail using by the example of 16 job comparison in Table 1. Assume the present rate of the jobs are 3.08 for Gager, 3.25 for pattern maker, and 1.63 for common labor which are shown in the parenthesis following the name of the job. We will here use the Thai currency, therefore, 3.08 means 3 Bahts and 8 Satangs. The wage rates of each job are divided into each of five factors on job by job basis. For example, 3.08 Bs. for gager are divided into five factors, 72 Ss. to mental requirements, 38 Ss. to physical requirements, 1.02 Ss. to skill requirements, 51 Ss. to responsibility, and 45 Ss. to working conditions. This money rate assignment is of course conducted by the evaluation committee. Combine Table 4 with Table 1, and we will get Table 5.

TABLE 4. AVERAGE DISTRIBUTION OF PRESENT WAGES

Jobs	Mental Requirements	Physical Requirements	Skill Requirements	Responsibility	Working Conditions
Gager (3.08)	.72	.38	1.02	.51	.45
Pattern Maker (3.25)	.90	.39	1.13	.60	.23
Common Labourer (1.63)	.18	.60	.21	.14	.50
Power Shear Opr. (2.24)	.41	.42	.51	.48	.42
Plater (2.17)	.44	.51	.59	.30	.33
Riveter (1.95)	.39	.56	.41	.26	.33
Blacksmith (2.35)	.33	.59	.68	.27	.48
Punch Press Opr. (1.75)	.30	.54	.30	.23	.38
A.S.M.O. (2.89)	.62	.48	.98	.57	.24
Casting Inspector (2.54)	.63	.50	.62	.50	.29
Millwright (2.57)	.48	.45	.90	.47	.27
Tool Crib Att. (1.67)	.53	.26	.29	.35	.24
Arc Welder (2.00)	.50	.47	.53	.36	.44
Electric Truck Opr. (1.97)	.57	.32	.44	.38	.26
Crane Opr. (2.27)	.60	.36	.50	.45	.36
Watchman (1.73)	.20	.53	.23	.32	.45

Source: Belcher, *op. cit.*, p. 265

TABLE 5. DIFFICULTY RANKS VS MONEY RANKS

Jobs	Mental Requirements		Physical Requirements		Skill Requirements		Responsibility		Working Conditions	
	D	M	D	M	D	M	D	M	D	M
Gager*	2	2	13	13	2	2	3	3	15	4
Pattern Maker#	1	1	12	12	1	1	1	1	16	16
Common Labourer#	16	16	1	1	16	16	16	16	1	1
Power Shear Opr.#	11	11	11	11	9	9	5	5	4	6
Plater#	10	10	6	6	6	7	12	12	9	10
Riveter#	12	12	3	3	12	12	14	14	8	9
Blacksmith#	13	13	2	2	8	5	13	13	7	2
Punch Press Opr.#	14	14	4	4	13	13	15	15	5	7
Automatic Screw Machine Operator#	4	4	8	8	3	3	2	2	13	14
Casting Inspector#	3	3	7	7	4	6	4	4	10	11
Millwright#	9	9	10	10	5	4	6	6	11	12
Tool Crib Attendant	7	7	16	16	14	14	10	10	14	15
Arc Welder#	8	8	9	9	7	8	9	9	3	5
Electric Truck Opr.#	6	6	15	15	11	11	8	8	12	13
Crane Operator#	5	5	14	14	10	10	7	7	6	8
Watchman#	15	15	5	5	15	15	11	11	2	3

Note: When a tie in money rank orders, the difficulty ranking decides which ranks first.

Source: Belcher, *op cit.*, p. 266

When we see Table 5, we find two ranks in each of the jobs by each of the factors. The ranks headed by "D" means the ranks shown in Table 1. The ranks headed by "M" is the money ranks which are obtained by Table 4, where money values of the jobs so assigned to each of the factors are compared by each of the factors, say, compared vertically, and are ranked. For example, in mental requirements, pattern maker gets 90 Ss. obtaining the first rank, and common labour, 18 Ss., is placed in the lowest rank 16. Now compare, in Table 5, both of two ranks of each of the jobs by each of the factors. If in a given job, comparisons from two different directions do not coincide, that job is not considered as a key job. Four jobs such as gager, blacksmith eating inspector and arcwelder are thus eliminated because of inconsistency. Some adjustment may be also done in this context, and thus, millwright has a higher rank in money on skill factor and a lower rank in money on the working condition factor. It implies that the job has been given too much for skill and too little for working conditions. If the committee wants to place this job in the key job, adjustments must be done reassigning other money values so as to make two ranks the same number.

After such comparison and adjustment are made and all the ranks are accepted, the job comparison scale is made, a sample of which is illustrated in Table 6.

Table 6 shows only a part of the job comparison scale, being placed each job by every factor to the corresponding money rates. Tool crib attendant is thus placed in the position of 53 Ss. in the factor of mental requirements. This scale is used for comparison of all the other non-key jobs placing in their appropriate place by each of the factors, being given in total their respective wage rates.

TABLE 6. JOB COMPARISON SCALE (SAMPLE)

	Mental Requirements	Physical Requirements	Skill Requirements	Responsibility	Working Conditions
.54	Tool Crib Att.	Punch Press Opr.	Power Shear Opr. Crane Opr.		Common Lab.
.53		Watchman			
.52		Plater			
.51	Millwright	A.S.M.O.	Elec. Truck Opr.	Power Shear Opr.	Watchman
.50				Millwright	
.49				Crane Opr.	
.48		Millwright			
.47					
.46					
.45					
.44					

Source: Belcher, *op. cit.*, p. 268

Under the point-rating method, fixing of wage rates is different. The conversion of the evaluated job structure by this method into a wage structure is achieved by assigning some money rates to points. There are many possible relationships between points and money rates, and the following two methods are widely used. The one is to assign a fixed and uniform amount of money for each point. Then, a graph is made measuring points scored along the horizontal axis and the corresponding wage rates along the vertical axis. Each job is placed in this graph corresponding to its points and rates. The wage line connecting all the jobs will be an upward-slope line. Another is that the jobs are categorized into some number of grades. Each grade carries its own wage rates. It should be noted that

TABLE 7. PAY GRADES, POINTS AND AVERAGE RATE

Grade	Points	Average Rate
1	100—119	1.87
2	120—139	1.96
3	140—159	1.99
4	160—179	2.02
5	180—199	2.16
6	200—219	2.29
7	220—239	2.32
8	240—259	2.41
9	260—279	2.43
10	280—299	2.58
11	300—319	2.72
12	320—339	2.77
13	340—359	2.89
14	360—379	3.09

Source: Belcher, *op. cit.*, p. 321

categorizing point scores are made entirely separate from the job evaluation method. The committee decides this grouping independently, and this process is called pay grade determination. Advantage of this grouping of job rates may be justified on several grounds. For example, it helps to decrease inaccuracy of evaluation method, and it helps to avoid troubles of adjusting work when a worker transfers from one job to another slightly different job which carries a slightly different rates. Table 7 shows an example of pay grades and range of points, in which the jobs carrying the points between 100 and 119 are categorized into the Grade 1. The rate assigned to this Grade 1 is 1.87 Ss. In this Table 7, since range rates are applied to, the rate of each of the pay grades is shown as the average rate.

Adjustment of wage rates of all the pay grades is made through examining wage line which is mentioned earlier. The important step is how to frame the wage line. The following three methods are widely used: the low-high line, the free hand line, and the least square line. Each wage rate is adjusted so that all the wage rates or the average wage rates of each job category are placed on the wage line. Whichever wage line may be used, one of the important arrangement is that reduction of current rates should be avoided under any occasion.

Before closing this section, some important remarks should be made concerning the entire procedure of job evaluation. Firstly, it is important to know who should conduct job evaluation. A decision to introduce job evaluation may be taken by management as a management's sole task. However, when trade union is organized in the unit, it is desirable that the trade union is brought in the entire procedure from the very early beginning, since an agreed system of job evaluation cannot be applied without agreement of the workers. Even where trade union is not organized, the workers could be invited to participate in the whole, major, or a certain extent of the job evaluation process by the same reason. In many cases, especially in a large organization unit, the procedure is often entrusted to a committee composed of labour and management, and quite often of independent experts as well. Thus, in India, for example, the collective agreement of 1956 between the Tata Iron and Steel Company and the Tata Workers' Union provides, "A Joint Committee consisting of an equal number of representatives of the Company and the Union shall be appointed with an independent expert as the Chairman for the work of job evaluation."¹⁷

Such a committee should provide revision procedure for adjusting the rates not properly classified, or should establish provision for the evaluation of new jobs that did not exist when the system was introduced. The establishment of this kind of readjustment of machinery is the second important remark on adopting job evaluation procedure. The readjustment machinery also should deal with the review of jobs whose contents change as a result of reorganization, as an introduction of new methods of production, and so on.

Finally, it should be repeatedly noted that job evaluation neither limit collective bargaining, nor an alternative to collective bargaining. This kind of remark was expressed in the sixth session of the metal trades committee of the ILO in May of 1957 when the workers' members submitted their statement. They say, "Basically job evaluation tends to limit collective bargaining and to freeze the wage structure."¹⁸ The report of the committee responded to this statement saying that the problem of determining the different job difficulties and wage categories can only be solved by collective agreements. It seems appropriate to stress that mere application of job evaluation has nothing to do with the question whether wages are

¹⁷ ILO, *op. cit.*, p. 55.

¹⁸ See ILO, *op. cit.*, Appendix B.

fixed by collective bargaining or not. Furthermore, it should be noted that job evaluation concerns with problems of relative remuneration only. It has nothing to do with fixing absolute wage levels. Even if both parties agree to apply job evaluation and to use its results as a basis for wage determination, wage levels and the absolute amount of wage differentials remain to negotiation.

2. Job Evaluation in Asian Countries

It can be roughly guessed that many of developing countries have had little experience of utilization of job evaluation, but, in some of Asian countries, experience have been reported. In India, for example, Indian National Trade Union Congress complained, through the communication letter to the ILO, on 20th August of 1956, the absence of consultation with workers in the evaluation of a scheme, the failure to inform them of the scheme, the absence of union co-operation in the conduct of job evaluation, the failure on the part of the evaluator to carry out essential foundational procedures such as job analysis, job description, and so on.¹⁹ In Australia, national wage structure is largely framed by the awards of the Commonwealth Commission of Conciliation and Arbitration. Whether or not a formal job evaluation method has been applied to such awards is not clear, but, as far as the metal industry is concerned, an over-all attempt at evaluating jobs under the Arbitration Court has begun as early as in 1930 by a decision of J. Beeby.²⁰ In the Fiji, the point-rating method has been applied to public service. In Ceylon, according to the report of the Cabinet Sub-Committee on Terms and Conditions of Employment in Statutory Boards and Corporations in September of 1971, it was recommended that job evaluation should be done for all the categories of jobs except the executive class, under the control of the Public Corporations Secretariat.²¹

In Japan, job evaluation has been in extensive use since 1950's. According to a survey of the Japanese Confederation of Employers' Federations which covered 241 private undertakings of various sizes, conducted in 1968, 49.4 per cent of the firms adopted job evaluation for production workers, 42.8 per cent, for clerical and technical employees, and 21.5 per cent, for middle-management. Among the firms utilized job evaluation for production workers, 76 per cent of the firms used point-rating method and 20 per cent of them adopted grading method. For clerical and technical employees, this ratio turns reversely, that is, 54 per cent of the firms used grading method and 40 per cent of them took up point-rating method. For middle-management, 60 per cent of the firms used grading method and 30 per cent of them adopted point-rating method. The reason why job evaluation has become necessary to be used may be explained by the following two recent drastic changes in industrial scene, namely, technological changes and keen labor shortage, especially of youth. The Japanese traditional wage structure has been formed on the basis of formal educational career and length of service. Educational career at three formal school levels, namely, the 9-year compulsory education, the 3-year middle-school education, and the 4-year college education, determines to which hierarchical category an individual employee enters. Graduates of the compulsory school are placed in production and maintenance workers, graduates of middle-schools are classified into clerical and lower class technical employees, and only the

¹⁹ ILO, *op. cit.*, p. 137.

²⁰ ILO, *op. cit.*, Appendix C.

²¹ See *Report*, the Cabinet Sub-Committee on Terms and Conditions of Employment in Statutory Boards and Corporations (Colombo, 1971).

graduates of colleges are supposed to become supervisory and management people. Wage rates of each category start at entering wage and these rates are increased by successive annual increments based on length of service. However, technological changes have simplified old complicated jobs and have created new jobs which require new higher knowledge. Older employees have found difficult to cope with younger workers because of difficulties of their adjustment and redress of their knowledge. In addition to them, educational experience of Japanese people as a whole has been remarkably improved since 1960 up to the extent that job seekers of the graduates of the compulsory school have almost disappeared. As a result of this, middle-school graduates have become the main source for both production workers and clerical employees. Different wage lines separately set up by categories have thus become necessary to be amended and adjusted to the new scene. Absolute decrease of younger population has joined, and they together have brought about labor shortage of young workers. For all of those adjustments, job evaluation has been applied to serve for a remedy. After job evaluation is conducted, wage rates are assigned to strictly jobs and not to the employees with a given educational career with a given length of service. However, it should be noted that wage rates are not strictly adapted to the job structure determined by job evaluation. In all of the cases which Japanese undertakings utilize job evaluation plan, only a part of base wages are assigned to job evaluation plan. It is a common practice that around 25 per cent of the amount of the base wage are allocated to the job rates and the remaining 75 per cent of the base wage are still determined on the traditional basis.²²

Before closing this section, it seems appropriate to cite the remark of the report of the ILO Regional Seminar on Salary and Wages in August-September of 1967 which gathered participants from African countries. It says, "Job evaluation, by which the duties attaching to each job are accurately described and the qualifications required by the holder of the job assesses in relation to certain selected factors, can be of assistance in determining the allocation of jobs within wage groups and in preventing excessive dispersal in the pattern of wages. The factors derived from job evaluation may be used either as a means of determining the relative position of jobs within a wage and salary scale or as a means of determining the level of a bonus paid over and above the normal time rates and thus corresponding constituting only a portion of total earnings. The value of job evaluation as a tool for these purposes was recognized, but the actual wages paid for the different grades could not be governed mainly by this method in cases where certain skills or qualifications commanded owing to their scarcity, levels of earnings quite different from those which would appear from a classification based on job evaluation."²³

(to be continued)

²² See Sumiya, M., and Tsuda, M., Manpower Adjustment Programmes: Japan, ILO, *Labour Bulletin*, N. 7 (Geneva, 1968).

²³ See *Report on the ILO Inter-Regional Seminar on Salaries and Wages, August-September, 1967* (Højstrupgaard, 1967).