STUDY OF JAPANESE MANAGEMENT DEVELOPMENT PRACTICES

By MASUMI TSUDA*

I. *The Japanese Management System: Some Traditional Features*

A. Some Characteristics of Business Organization in Japan

1. *Centralization and Functionalism.*

Since Japan began to industrialize in 1868, business organization in Japan has been characterized by the emphasis on centralization. Before the end of World War II, big business in Japan had come to be built around a small number of family concerns known as the *zaibatsu.* The majority of the capital in each concern was held by a central holding company, and presidents of the most important firms were carefully chosen from among competent members of the extended family. Decision making was centralized first in the president and second in the holding company.

During the Tokugawa period (1615-1867), a functionally specific bureaucracy developed. With the introduction of Western management techniques before the end of World War II, the *zaibatsu* further rationalized their organizations. Over time the *zaibatsu* organization became the backbone of business organization in Japan.

2. *The System of Status Differentiation.*

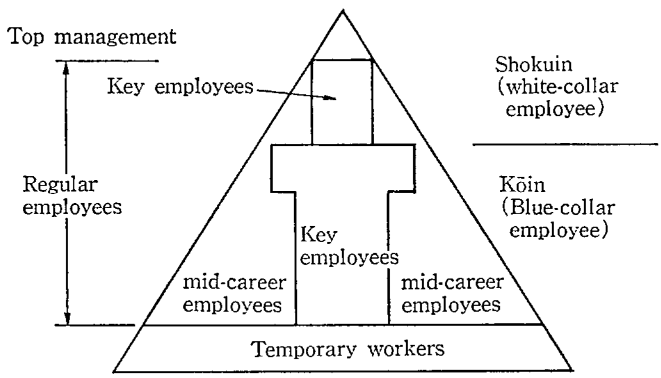
Large business organization deliberately devised the status system shown in Figure I. 1. There were the two kinds of employees: the regular employee and the temporary employee. The regular employee was a long-term employee, and his whole career is spent with the same firm. The temporary employee worked on a day-to-day basis. Before the war, about twenty percent of all employees were of the temporary type. The organization met business fluctuations by adjusting the number of temporary workers on its payroll. Among the regular employees, the white-collar employees (*shokuin*), who were paid monthly salaries and given high prestige, and blue-collar employees (*kōin*), who did physical labour at the plant level for daily wages, were separated into two completely different worlds. Promotion from the second status to the first was rare. Finally, the regular employees were further differentiated as either key employees or mid-career employees. The key employees were hired immediately after graduation from the system of formal school education. It is expected that they would be the main driving force in the enterprise. They usually enjoyed life-time employment guarantees. The mid-career employees were recruited from other companies. Although also tending to be employed on career basis, their prestige was far lower than that of the key employees, and they were rarely promoted to supervisory

* Professor (*Kyōju*) of Economics, Faculty of Social Studies.

positions. In times of extreme financial difficulty, these mid-career employees might also be laid off.

It should be stressed that the status system was independent from, though often parallel to, the functional system organized around job classifications. Figure I. 2. is based upon the organization at the Oji Paper Company (part of the Mitsui *zaibatsu*) in 1943. Every employee had a status such as Second-Class Worker or Junior Staff Member. Staff members were officially recognized as key employees. Selection of employees for all job positions was based on status. For example, sub-foreman should have been selected from among the second- or first-class workers. All employees acquired their status first, and their job position second.

FIGURE I. 1. THE STATUS SYSTEM IN THE LARGE TRADITIONAL FIRMS



3. *The Ringi System of Decision-Making.*

Japanese business organizations did not develop any detailed system of job descriptions. Accordingly, the individual functions and responsibilities of employees were not clear. Reflecting the Japanese cultural context, each job of the organization was assigned to a specific person. When the person was transferred the successor went about the job in a slightly different way, depending upon his own abilities and personality.

The centrifugal forces inherent in such a system were balanced by the *ringi* system which bound the individual to the group. The word *ringi* is formed by two Chinese characters: *rin* refers to the submitting of a proposal to one's superior and receiving his approval and *gi* means "deliberation and decision-making."[1]

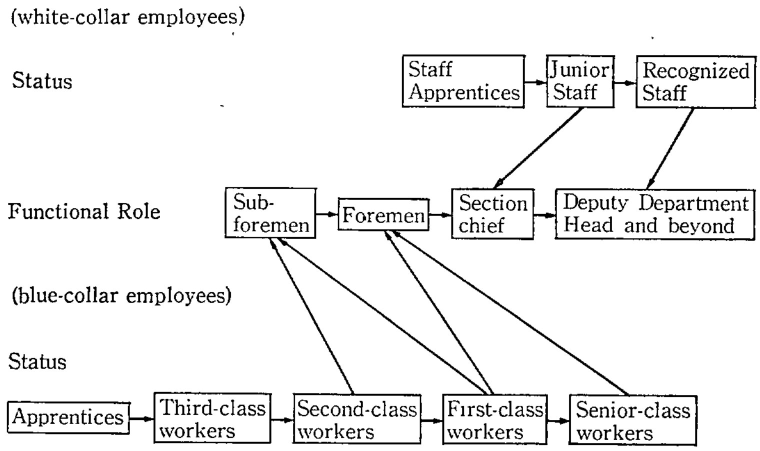
4. *Close Contact between business and the Government.*

There might have been no economic development in Japan had not the business organization maintained close contact with the Government. In the beginning, private firms depended heavily upon the help and advice of the Government. Even the *zaibatsu* got their real start when they were sold public enterprises at extremely low prices. Moreover, in subsequent years, the Government offered various kinds of ceonomic assistance to big business, and the two conservative political parties which stayed in power until the end of

[1] For an excellent description of the *ringi* system, see M.Y. Yoshino, *Japan's Managerial System* (Cambridge: The M.I.T. Press, 1968), pp. 254-272.

the war were in turn financed by big business. Big business recruited competent bureaucrats from important ministries and placed them in high managerial positions. Their job was to coordinate the policies of the various ministries and the government with the interests of the private firm.

FIGURE I. 2. RELATIONSHIP BETWEEN STATUS AND FUNCTION IN THE LARGE TRADITIONAL FIRM



B. Some Traditional Characteristics of Japanese Personnel Practices

1. *Career Employment.*

Career employment was the most outstanding feature of Japanese personnel practices. While the system of career employment is not provided for by neither legislation nor contract, this practice dates back to the feudal bureaucracy and business organization of the Tokugawa period. Although discontinued especially for blue collar workers and lower clerical employees in the early stages of industrialization, it reappeared after the Russo-Japanese War. Appearing first in the larger enterprises, this practice had become a common practice by the thirties.

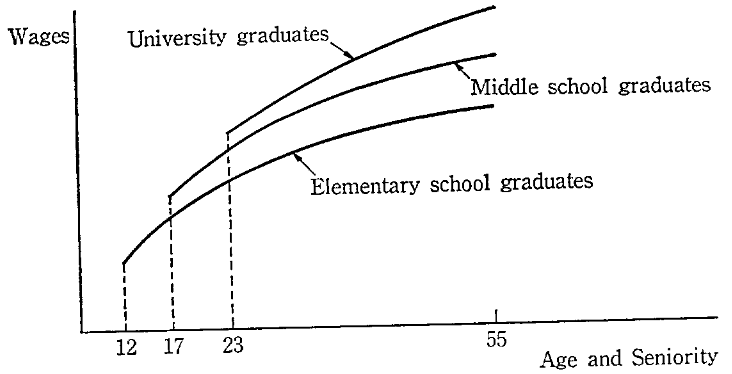
Career employment meant that an individual entered the firm immediately after graduation and remained employed until compulsory retirement at fifty-five. At the time of retirement, the firm tried to relocate him at one of its subcontractors. Before World War II, the practice of paying a lump-sum bonus upon retirement was confined to the white collar employees whose chances for re-employment were fewer than those for manual workers.

It should be noted that the guarantee of career employment was given only to the key employees. The status of the mid-career employees was generally vague. Mid-career employees tended to move freely to other firms for better wages or better promotion. Accordingly, they did not enjoy such employment guarantees.

2. *Seniority and the Wage System.*

Since jobs were not clearly defined or classified in Japan, it was difficult to determine wage rates by such criteria. Wage rates were instead based upon career needs measured chiefly by the length of employment at a given firm. As shown in Figure I.3., the so-called seniority wage curve was actually a composite of several separate curves for different groups of employees based upon career patterns which were in turn determined largely by education. Performance was occasionally appraised in an unsystematic fashion by management. However, the manager had considerable discretion in determining the wages of his subordinates.

FIGURE I. 3. THE SENIORITY WAGE CURVE IN TRADITIONAL FIRMS

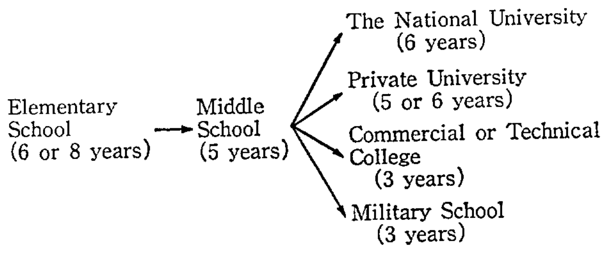


Note: Granduation from elementary school occurred at the age of 12; middle school, 17; and the university, 23.

TABLE I. 1. THE EDUCATIONAL CAREER OF TOP MANAGEMENT AT THE 120 LARGEST COMPANIES BEFORE WORLD WAR II

Formal Education	1928	1936
The National University	37.8 %	46.2 %
Private University	13.0	15.0
Commercial or Technical College	10.6	8.2
Foreign University	2.8	2.8
Military School	0.4	0.8
Middle School	2.2	0.4
Elementary School or below	33.2	26.6
Total	100.0	100.0

Source: Hiroshi Mannari, *Nihon no Business Elite* (Business Elite in Japan) (Tokyo: 1960).
Note: The pre-wer formal educational system was organized in the following manner.



3. *Seniority and Promotion.*

As the foregoing paragraph suggests, income was a function of both employment status and time spent with the company. While the blue collar workers came almost exclusively from elementary school, promotion within the group was based primarily on the length of time spent working for the company. The key employees received higher promotion, and supervisory positions were their exclusive domain.

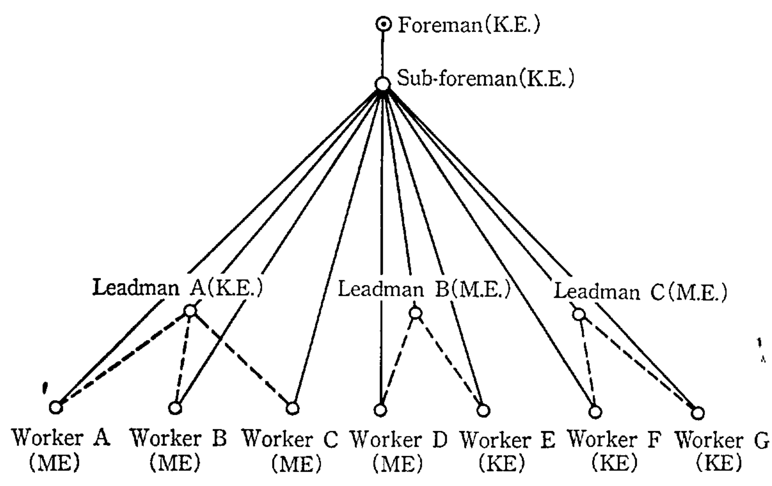
While the education of the white collar employees varied considerably, the upper ceilling for promotions was usually set by one's level of education. However, a very small number of extremely competent employees with less education were able to hurdle such barriers. Table I. 1. shows the formal education of top management in the largest 120 manufacturing firms before the war. Nevertheless, while the level of education among management was generally quite high, in 1928 35.4 percent of top management had a middle school education or less, although this figure dropped to 27.0 by 1936.

4. *Seniority and the Work Group.*

The traditional approach to business organization in Japan stress groupism. This principle was embodied not only in the enterprise as a whole, but was also given considerable emphasis at the shop level. Although the organization of white collar workers was rather complex, this principle of organization is easiest to discern among the blue-collar employees. As shown in Figure I. 2. above, the apprentice could be promoted to a third-class worker after three months. The third-class worker qualified for promotion to the second-class after six years. The second-class worker could then be promoted to the first-class after an additional ten years. Senior-class workers were few because most first-class workers were promoted to it only after more than ten years as a foremen and twenty five years as an employee.

Besides the formal status system, the traditional shop was organized as shown in Figure

FIGURE I. 4. THE SHOP GROUP UNDER THE TRADITIONAL MANAGERIAL SYSTEM



Note: KE=key employees. ME=mid-career employees

I.4. In the case of one company, a diesel engine manufacturer, it is interseting to note that the group was carefully designed, with key employees and mid-career employees often working in different groups. The position of foremen was reserved exclusively for the key employees. It also guaranteed further promotion later on. The foreman usually appeared on the shopfloor only twice a day to receive the report of his sub-foreman was the informal job title given to ordinary workers with relatively longer experience. They regularly taught younger workers. In contrast, the group of mid-career employees was headed only by one leadman for whom further promotion was not likely. Among the younger employees, the wage rates for mid-career employees and key employees was not too different, thereby helping to reduce dissatisfaction among the former group. However, although the key employees started at the easiest work, they were trained under the leadman and sub-foreman, and then gradually promoted to higher positions. Mid-career employees often competed with key employees at the lower ranks and obtained similar positions. However, they were not promoted beyond a certain level, and thus had to choose between staying on at the same position until retirement or seeking other employment outside.

5. *Fringe Benefits and Welfare Facilities.*

With the practice of career employment, management tried to foster a sense of community among the key employees. Management sought to promote a system in which the social and private life of the employee could be shaped by management directives. The seniority-based wage system implied that income would rise and then fall as living expenses rose and fell through the life cycle. This system initially appeared in the first decade of this century. Wedding gifts and other similar remembrances, such as for the birth of children or a death in the family, were paid. Loan services were also provided for housing and other needs. Cafeterias were built at plants and offices. Dormitories were offered to single employees; apartments and detached houses were constructed for married employees. Over time, meeting rooms and cafeterias, playgrounds, gymnasium, cultural and entertainment facilities, hospitals, kindergartens, and company stores all became part of the company's welfare scheme. The policy aimed at establishing a community around the company.

C. Management Development Under the Traditional Managerial System

1. *The Selection of Managers.*

With the establishment of a multitrack educational system after World War I, enterprises came to depend increasingly upon the educational system to supply managerial candidates. In the case of the Oji Paper Manufacturing Company in 1941 (Figure I.2.), managerial positions started with the deputy department head at the factory level and with staff status at the home office. Graduates of the national universities and two private universities (Keio and Waseda) were promoted to staff status after one and half years. Graduates of the other private universities and public colleges were given that status after two and a half years, and graduates of private colleges at between three and a half years and six and a half years. All employees with a higher education were promoted to managerial positions. However, the speed at which they were promoted depended upon the specifics of their education.

The higher in the managerial hierarchy, the higher the percentage of university graduates. As shown in Table I.1., the majority of top management consisted of university graduates in 1928, a characteristic which became even stronger by 1936. Here it should be noted that most of these university graduates came from an elite group of six universities.

Nearly fifty-one percent of all top management in the 125 biggest manufacturing firms in 1928 came from these universities, and the percentage had risen to nearly sixty by 1936.[2]

Looking at the proportion of white-collar employees among all employees, a study of two firms (Toshiba Electric Manufacturing Company and the Mitsubishi Nagasaki Shipbuilding Company) would suggest that the portion of white-collar workers had risen rapidly between 1920 and the late twenties whereas that ratio dropped rapidly during the Great Depression in the thirties.[3] The absolute increase in the number of white-collar employees reflected the increase in administrative work and technical jobs such as research. The relationship between education and managerial status can best be seen in Table I. 2.

2. *Position Rotation.*

Under the traditional system, a kind of on-the-job education was given to managers simply by rotation. Having no system of job classification, rotation was based upon employee status. We will here call this practice "position rotation". Position rotation was not carefully planned in the prewar period. Rotation often occurred as the need arose. Furthermore, rotation was often decided arbitrarily.

3. *Management Training through the Ringi System.*

As decribed briefly above, the *ringi* system was a decision-making system. It originated in the Tokugawa era, and the new enterprises in the Meiji era adopted those practices. According to this system, all top management except the president met regularly to talk

TABLE I. 2. MANAGERIAL POSITION AND EDUCATION IN THE PAPER MANUFACTURING INDUSTRY IN 1930

Position	Total	University	College	Middle-School	Company Training School	Elementary School	Below Elementary School
Division Head and Upper	13	6	6	1	0	0	0
Department Head	30	7	11	6	1	5	0
Section Chief	12	6	4	0	1	1	0
Ordinary Employee	627	92	74	165	66	222	8
Technician	483	53	164	106	25	135	0
Sub-Total	1,165	164	259	278	93	363	8
Foreman	487	0	0	52	35	385	15
Worker	8,362	2	0	140	180	7,315	725
Total	9,978	166	249	470	308	8,037	748

Note: Totals are for the larger firms only.
Source: Ministry of Education, *Kōgyō Rōdōsha Kenkyū* (Study of Industrial Workers) (Tokyo: 1930)

[2] Tokyo University (23.4% in 1928 and 27.4% in 1936), Hitotsubashi University (9.6% and 10.6%), Kyoto University (2.0% and 6.4%), Tokyo Institute of Technology (3.2% and 1.6%), Keio University (10.8% and 9.4%) and Waseda University (2.2% and 2.8%)

[3] Hiroshi Hazama, *Nihon Rōmu Kanri Shi Kenkyū* (Study of the History of Personnel Management in Japan) (Tokyo: 1960).

over matters and make recommendations to the president who then made the final decision. The *ringi* System gives recognition to the authority of top management while also giving a voice to those with less authority.

Under the traditional system of management all but few routine decisions were referred to top management. In doing so, middle-management had a certain procedure to follow. A department head, the lowest member of middle-management, must draft a memo known as a *ringisho*. The memo sets forth the matter to be decided and his recommendation as to what ought to be done. Such a memo was frequently drafted by someone in his office, but he would assume responsibility for the final copy. The memo is first circulated among other sections and departments which would be affected by the decision, or whose cooperation would be necessary to implement the proposed action. Each section on department checks its approval or disapproval. The memo thus rotates from one department to another until all concerned parties have seen it. If one does not concur with it, he relays his comments to the sender or may just sit on the memo without forwarding it the next party. In that case, some bargaining will likely occur. When the matter is of some importance, it is likely that a considerable number of prior consultations will have taken place before the memo is circulated. When all concerned have signed the memo or *ringisho* with their approval, it is delivered to the head of the division. The division head may then make several inquiries, and through a similar process work to coordinate his division with the rest of the company at the division level. By a complex and circuitous route, the *ringisho* slowly works its way up to the top management where the final decision will be made.

The president or top managers do not usually reject a recommendation formulated in this way because they know now it was worked out and who was involved. The decision of top management usually takes two or three weeks. It is usually understood that the recommendation is rejected when the decision is not made with an accustomed period.

The *ringisho* is not a mere statement of the problem with a request for direction. The problem should be formated clearly and a particular course of action should be recommended. Drafting of *ringisho*, therefore, provides good training in problem formation and problem solving for young managerial candidates. Consultation and meeting with the people of the other departments also train them in oral presentation and the techniques of persuasion. These are important qualities for leadership.

Finally, it should be noted that the *ringisho* system involves participation in decision-making because lower managers carry out much of the work. The *ringi* system thus also contributes to higher morale and greater satisfaction on the part of both the managers themselves and the staff under them who will be filling their shoes in the future.

II. *Impact of American Practices on Japanese Managerial Styles in the Postwar Period: 1945—1960*

A. The New Social and Economic System

1. *The Social System Reformed.*

The defeat of Japan in the Pacific War was total, and the reforms ushered in by the occupation were sweeping. In addition to the military tribunals, the Occupation purged many of the wartime leaders, including a large number of executives in major enterprises. A new constitution was drafted with an emphasis on the sovereignty and civil rights of the people. A second area of reform involved the system of education. No longer to serve as an instrument of the state, the system was greatly decentralized. The elitist system of imperial universities was replaced by the American educational system: a six-year primary school, a three-year middle school, a three-year high school and a four year college or university. Compulsory education was extended from six to nine years in order to better inculcate democratic values. Entrance to high schools and universities was to be as open as possible.

The Meiji civil code, which provided the legal basis for the traditional extended family, was replaced by a new civil law which was based upon the concept of the nuclear family. The law also limited parental authority, the right of inheritance was to be distributed equally among all children. Taxation on large inheritances was also stiffened.

2. *The Economic System Reformed.*

While seeking to destroy Japan's industrial capacity to produce armaments, the Occupation also sought to liberalize the economy. The most important three reforms are well-known. First, the traditional system of tenant farming was replaced by a system of widely based ownership. In a period of four years, nearly two million farmers came to own their own land. Farmers' co-operatives were formed throughout the country, and they rapidly grew to be one of the most powerful economic organizations in postwar Japan.

A second reform sought to break up the *zaibatsu*. The *zaibatsu* families and other top management personnel were prohibited from holding executive office in any of these firms for ten years. An antimonopoly act was designed to eliminate holding companies and encourage free economic competition. Commercial codes were also revised under the direction of the Occupation, and the American concept of corporate democracy was introduced.

Third, legislation was passed to protect the trade union movement. The oppressive laws governing the labour movement in the prewar period, such as the Public Peace Maintenance Act of 1925, were replaced by the Trade Union Law, recognizing the right to organize, the right to bargain and the right to strike. Five million workers, accounting for more than forty percent of the non-agricultural labour force, were unionized by the end of 1946.

B. Rebuilding Management

1. *The Fundamental Change in Occupation Policy.*

By late 1947, the cold war had begun to intensify, and had an impact on Occupation policy in Japan. Early in 1948, emphasis shifted from demilitarization and democratization to the promotion of economic recovery and the creation of a strong American ally. One of the first changes to reflect this shift was the clamp-down on militant or leftist trade unionism. After prohibiting a general strike early in 1947, the Occupation authorities actively began to suppress communist unionism, and clearly split the labour movement in two. Communists were later expelled from public office. The National Liaison Association of Trade Unions was dissolved as the red purge was carried out. More than ten thousand communists and sympathizers lost their jobs and the Communist Party became an underground organization until the end of the Occupation.

With regard to the economy, the heavy reparations plan of the Occupation was lightened in 1948. The Occupation also permitted the Japanese government to obtain international loans and participate in international trade. To end rampant inflation, the Occupation ordered a nine-point economic stabilization programme, calling among other things for a balanced budget, credit restrictions, and tax reforms. The government was discouraged from further subsidizing private enterprises. Although inflation was controlled, the Japanese economy entered a serious recession and the trade union movement became more militant in its all-out fight to resist the large number of layoffs.

In the midst of the critical recession, however, the Korean War broke out, giving the Japanese economy the needed "shot-in-the-arm". Since the taxation system recommended by the advisory mission provided various incentives for corporate capital formation, profits from the Korean War were plowed back into new equipment investments, thereby stabilizing the shaky footing on which firms had previously stood.

Immediately after the Korean War, the commercial law was revised. First, the board of directors was given the authority to issue stocks within the provisions of its articles of incorporation. Also, the importance of the general meeting of shareholders was lessened, the authority of the auditors was weakened, and the board of directors became a more powerful authority. Under the new law, top management in the old *zaibatsu* began to come together through a system of exchanging directors among the large enterprises. The presidents of the firms previously part of given *zaibatsu* swiftly formed new organizations around the main bank associated with their group.

2. *The Promotion of Management Improvement.*

In order to promote the Japanese economic recovery and normal labour-management relations, the Occupation authorities sought to rationalize the traditional approach to management. Three areas of change are particularly important and will be discussed briefly.

a. *Training* From the start, the U.S. Forces were always perplexed by the amount of time required for decision-making in the Japanese firm. The communications section in the Occupation headquarters prepared a special course to train top management in the Japanese electrical communications industry. Before planning the course, the section researched the industry and decided that America's "scientific management techniques" could be transplanted to Japanese soil.

Formally known as the Civil Communications Section (CCS) Management Course, the training course began in September 1949. Over a period of eight weeks (128 hours), the lectures focused on four areas: the goals of the firm, organization, control and administration.

The course was enthusiastically welcomed by Japan's top management, and was soon given to management in mining and shipbuilding. By the end of 1952, 1,287 had taken this course. Nikkeiren (The Japan Federation of Employer's Associations organized in 1948) sponsored the course after 1952 and continued to train top management in various other industries. In 1955, the Federation transferred this task to its newly established training organization, the Japan Industrial Training Association.[4]

[4] See *Nihon Sangyō Kunren Kyōkai* (the Japan Industrial Training Assciation), *Sangyō Kunren Hyaku-nen Shi* (Centenary History of Industrial Training in Japan) (Tokyo: 1961) p. 334

The Management Training Programme (MTP) provided another opportunity for formal management training. The U.S. East Air Force conducted a supervisor training programme for 2,000 Japanese supervisors working at air force bases in Japan. This MTP course followed the frame work of Henri Fayol.[5] Training Within Industry (TWI) was another course provided by the Air Force.

In June 1950 the Occupation recommended that the Ministry of International Trade and Industry (MITI) utilize the MTP course for Japanese management training, and fourteen managers were invited to receive instruction at Tachikawa Air Base. Begininng in April 1951, six courses were sponsored by MITI. Later transfered to Nikkeiren, by the end of 1954 the number of instructors was increased to 372, and the number having taken the course stood at about 46,000.

While the MTP course was originally designed to train Japanese supervisors at U.S. Air bases, it was introduced to the Japanese as a course for middle management. There are perhaps two reasons for this. First the MTP course was very comprehensive, the best available as basic education for managers. As mentioned before, there had been no systematic education for managers before the war; thus the MTP course served to fill a gap by providing the first education for middle management in Japan. Second, the MTP course emphasized systematic approach to the five functions of managers found in Fayol's theory. While scientific management as developed by Frederick W. Taylor had been well known in prewar Japan, it was the first time for Japanese managers to be told the importance of the managerial role in terms of the overall organization. In 1955, the sponsorship of the MTP course was transferred to Nissankun (Japan Industrial Training Association).

b. *The Development of Training Courses for Supervisors* Japanese supervisors were first trained in 1905, and such training had become rather popular during the 1920's. Given the authoritarian trend in prewar management practices, the curriculum could not be used in the postwar period. One of the most difficult obstacles facing Japanese management was the need to reassert management prerogatives at the workshop level where trade unionism had made its inroads. Given the growing millitancy of the labour movement, Japanese management, the Occupation authorities and the Government found it necessary to rescue and arm foremen and supervisors, who seemed to have lost their authority, with some modern theory and rational practice.

With those needs in mind, the Training Within Industry (TWI) programme which had been developed by the War Manpower Commission to train two million foremen in the U.S. and England during World War II, was introduced to Japan. The TWI programme was presented to the Minisrty of Labour in late 1948. The Ministry then took a full year to revise it for Japanese industry and started its first training course in March 1950. The TWI included three units; job instruction, job methods and job relations. However, although manuals for job instruction (December 1949) and job methods (September 1950) soon appeared, the third volume on job relations did not.

The TWI programme quickly caught on. Within one year, there were 534 trainers and 15,975 trainees. The Ministry of Labour set up TWI trainers in all prefectures, and by the end of 1952, 2,500 instructors had trained some 171,400 supervisors and foremen, including those in the majority of the large firms. Beginning in 1954 the Ministry directed

[5] With Frederick W.Taylor, Henri Fayol is known as one of the founders of the classical school of Western management theory. See Henri Fayol, Administrielle Industrielle et Générale (Paris: 1961).

the TWI training at those in the small and medium-sized enterprises. There were 339,378 trainess in 1954.

In August 1950, the National Personnel Authority (responsible for the civil service) studied the MTP and the TWI programmes in order to devise a training course for the supervisors in the civil service. It was called the Jinjiin Supervisor Training (JST) Course. While the Authority opened the first training course in 1951, the Nikkeiren first began to use the JST course in the private sector in 1952. By the end of 1954, there were 220 trainers in the private sector. In 1955, two private bodies (the Public Opinion Science Association and the Japan Management Association) took over the sales of this programme in the private sector.

c. *Industrial Rationalization Programmes* In March 1952 the Business Rationalization Promotion Act was passed. An industrial Rationalization Advisory Council was organized by MITI for implementing the Act. Although the Council made numerous recommendations during its long existence, only its more important early pronouncements will be considered here. In its research on the Japanese electric communications industry the Communications Section of the Occupation Headquarters found that top management in Japan was very busy of procuring funds, but was not sensitive to how such moneys were spent. Taking up this problem, the Council recommended that an internal control system be introduced to Japanese firms along the lines developed by the American Institute of Certified Public Accountants (AICPA), including cost control, standard cost accounting, budget control and the controller systems approach.

Quality control was another important area requiring education. In 1946, a group of American statisticians came to Japan and taught American wartime industrial standards to Japanese engineers and mathematical statisticians. As a result, the Japanese Engineering Standard (JES) was provided for by legislation in 1949.

The CCS management course was supplemented with three additional training courses, including one in quality control. Based on this course, The Japan Science and Technology League (Nikka Giren) offered its Quality Control Beginner Course in 1949. In July 1950, Professor William E. Deming (an American authority on quality control) came to Japan and for three months conducted seminars of quality control in various cities. Professor Deming gave the royalities from the Japanese edition of his book to Nikka Giren, and Nikka Giren used those funds to establish the Deming Prize for the firm which best implements a system of quality control. The Prize has been awarded annually ever since.

(cont'd)