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**Developing the Measures and Checklists for the Diagnosis
and Motivation of Workplace**

(Summary)

The Japan Institute of Labour

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Chapter I: Background and Development of Research

1. Background of research

(1) Direction of human resources management

Some time has passed since the period of steadily growing economy came to an end in Japan. No definite conclusions, however, have yet been reached on how each organization should respond to the situation or what kind of policy their personnel and employment management measures should be based on.

For instance, the phenomenon of diversification of employment patterns as evidenced by utilization of fixed-term contract workers and dispatched workers and an increase in part-time workers can no longer be denied. However, such questions as how employees working under diverse employment patterns should be treated and how to organize such diverse labor for the performance of work are still under debate.

As employment of fixed-term contract workers, dispatched workers, and part-time workers is anticipated to further increase in the future, human resources management styles are also expected to diversify. In introducing personnel policies that take into consideration the diversification of human resources, based on the assumption that diverse employment patterns would be realized, the management will need to organize those employees working under such diverse employment patterns into effectively functioning teams and realize a high-performance firm, if the personnel policies were to be implemented justly and fairly without damaging each employee's commitment to the organization or motivation for work.

The theme of the current research was set to address the administrative issue of "promoting employment stability and development of corporate management through improvement of firms' employment management." In 1989, Tom Peters argued, in *Thriving on Chaos: Handbook for a Management Revolution*, that as large markets disintegrate and transform into aggregations of niche markets, companies would have to swiftly develop their own markets and clients and gain the competence to securely protect them in order to survive in the global competition of products and technology. It has been pointed out that such changes also apply to Japan. Large firms as well as small- and medium-sized firms are required to free themselves from the existing market framework, fully utilize the technology and services accumulated within their organizations, identify clients' needs ahead of the competition, and acquire the competence for fulfilling such needs.

It goes without saying that in order to meet the above requirements, the skills and expertise required in the performance of individual employees' work must be at a higher

level than those of other firms, and at the same time, a system must be prepared within the firm to fully utilize these skills and expertise. With the aging of the society and as people's occupational awareness changes, we are at a stage where the perspective, or the paradigm, on which existing human resources management and personnel practices were based need to be changed. In view of the dramatically changing market and economic environment and the change in workers' awareness, it is becoming increasingly more important to enhance workers' skills, expertise and competence more than before, consider what kind of human resources management and personnel practices are required to unify such skills, expertise and competence into organizational power, set a direction for employment management in future management environment, and make efforts towards improving such employment management.

(2) Research and trend of high-performance organizations in the U.S.

1) Lawler's research

In the discussion on the effect of various employment management policies and personnel practices, the discussion must ultimately focus on the workers' morale, motivation for work, and commitment to the organization, as mentioned above. Edward E. Lawler III pointed out that development of policies that involve employees' participation in the business is the key to realizing a high-performing organization. In 1995, Lawler, et al, published a report titled, "Creating High Performance Organizations," in which they detailed about the extent to which employees are permitted to participate in various aspects of human resources management (Lawler defines this as "employee involvement practices"), including the extent to which firms are sharing information on management with their employees, the opportunities offered to employees for knowledge development related to the business, opportunities for rewarding individual employees for their performance, and the system for delegating decision-making and distributing authority to employees in the organization and development of the business.

The above report was based on a series of surveys conducted on Fortune 1,000 firms in the U.S. every three years from 1987. (The response rates from the firms were 51 percent in 1987, 32 percent in 1990, and 28 percent in 1993.) It emphasized that policies that involve employees in business were increasing, as more firms were sharing information on management, introducing gain sharing as an opportunity for remunerating employees, converting from salaries based on jobs to those based on knowledge and skills, and utilizing self-managing work teams and mini-business units that make autonomous operation by employees possible. With respect to the

autonomous working groups by employees, in particular, it was pointed out that in addition to the tendency for organizational downsizing to make inevitable for the organization's technical core to have greater autonomy and less dependency on the management structure and hierarchy, there was also a tendency for the need for participation of employees to increase when faced with specialized business challenges under a tough competitive environment.

In the final chapter of the report, it was pointed out that firms that have introduced policies for involving employees were improving their financial performance not only with respect to overall output, but also profit margin on sales, return on investment, and return on equity. Lawler considers the overall context where the development of policies and human resources management that promote the participation of employees results in enhancing employees' commitment to the organization and improving the organization's business performance. In this respect, he can be said to have pointed to the future direction of research.

2) Recommendation of the U.S. Department of Labor

In 1994, the U.S. Department of Labor published a guidebook titled, "Road to High-Performance Workplaces." The guidebook, which was published by the Office of American Workplace (OAW) that was established within the Department of Labor under the Clinton Administration in 1993, gives advice on how to operate the workplace organization under the present business environment, by showing concrete examples of high-performing firms in the latter half of 1980s to early 1990s, so that managers, leaders of the labor union, staff and employees and investors will be able to make their organization a high-performance organization. The guidebook is composed of three sections as described below.

The first section is related to "skills and information" required by employees to perform their jobs efficiently. It points to the need for "active investment in training and continuous learning and clearly defined areas of learning (skills in problem solving, customer service, team building, and employability that goes beyond training for specific jobs)" and "sharing of management information (targets and performance related to strategies and finance, performance of the competition, plans for introducing new technology, etc.) that is linked with teamwork and training."

The second section discusses issues related to "participation, organization, and partnership" required for realizing a high-performance workplace. They include "reinforcing employee participation for improvement in business processes and involving employees in problem solving and reform of products and services," "more

contact with clients, formation of autonomous work teams, and use of cross-functional teams,” and “establishment of partnership within an organization based on trust and respect and improvement in worker-management relations.”

The third section is concerned with “compensation, employment security, and work environment” required for continuous improvement in performance and for maintenance and strengthening of employees’ commitment. It discusses “building a compensation system that links pay to individual, team, and organizational performance and attainment of long-term commitment of employees through such a system,” “gain sharing that encourages continuous learning and salary policy based on knowledge and skill,” “introduction of a variety of employment patterns and adoption of employment security policies,” “adoption of generous welfare programs for supporting families and improving quality of life,” and “implementing policies and programs for enhancing employees’ morale and commitment.”

In the concluding section, the guidebook emphasizes the importance of recognizing the above practices not individually but as an integrated program in which each practice complements each other and helping to realize other business strategies such as customer service, quality programs, new technologies, and marketing.

The guidebook comprises four fields (including the concluding section) and 33 checklists, with which managers, staff and labor union leaders can review their organization’s human resources management and set a direction for achieving a high-performance workplace. The measures included in the guidebook are identical with the “employee involvement policies” mentioned by Lawler et al., in their survey of Fortune 1,000 companies.

The guidebook makes clear that a review and reorganization of employment management policies is necessary from the viewpoint of not only improving individual policies, but also ensuring that they ultimately contribute to enhancing employees’ motivation for work and commitment to their organization and lead to high performance.

(3) Motivation of employees and revitalization of organization

The trends described above are observable not only to businesses in the U.S., but the same trend can be seen also in some Japanese firms that have shown exceptional business performance in today’s tough and, in particular, global competitive environment. In order to quickly identify market and customer needs and respond to those needs faster than the competition on a global scale, a firm’s organizational structure must be capable of making quick decisions and quickly implementing those

decisions. This applies to all firms whether they are in Japan, the U.S., or Europe. It calls for de-layering of the hierarchy, giving greater authority to employees who are directly dealing with clients, and introducing self-managing team system that can autonomously carry out their projects.

In Japan, Maekawa Seisakujo Company, for instance, has transformed their regional branches employing 10 to 20 employees into separate legal entities and given them substantial authority in the business. KOA Corporation adopts the corporate structure as an aggregation of autonomous business units called "workshops" that are composed of 10 to 20 employees. Nemic-Lamda, which was listed on the Second Section of the Tokyo Stock Exchange in 1995, created its own concept of a spherical organization, in which each employee is considered a main player in the business and an in-house information network is built to support the employees carry out their business autonomously.

How should human resources management be in order to assist in such self-management and autonomy of employees? Many new efforts are being made by firms of all size in different industries, including diversified employment arrangements mentioned above and recruitment practices, evaluation programs, educational policies and systems that define the framework for investment in training and learning, compensation systems that enhance employees' motivation and commitment, and programmed allocation of funds for retirement and welfare. These efforts, however, have not necessarily been systematically presented.

Self-management and autonomy must be based on employees' motivation for work and commitment to their organization. The number of research on how employment management policies have contributed to raising the level of motivation and commitment, however, has been limited.

The current research was planned with a purpose of filling this void. For firms to survive in this tough business environment as high-performance organizations, they need to allow their employees to work with a sense of mission, maximize their commitment to the organization, and muster their commitment into organizational power. The current research aims to examine if firms are succeeding in this and if not, how the situation can be ameliorated. In particular, organizational evaluation on the direction and implementation of employment management policies, which have significant impact on employees' motivation and commitment, is essential for building a high-performance organization. The current research also aims to establish a means for such organizational evaluation and a method for examining how employment management should be through such organizational evaluation within the context of the

current situation in our country.

2. Purpose of development

The current research addresses the administrative issue of “promoting employment stability and development of corporate management through improvement of firms’ employment management.” It was conducted with a purpose of developing tools with which employers and managers can review and improve their employment management policies for building a high-performing organization in the current business environment. In addition, the tools were also developed for use in consultation between employers and public employment security officers who are familiar with the employment environment.

In reviewing current employment management policies, it is important to individually examine the policies’ sufficiency and how they are implemented. As mentioned above, however, the review must begin by judging whether the current human resources management policies actually enhance employees’ motivation and commitment. In this respect, development of organizational evaluation that involves employees will be necessary.

The organizational evaluation process should be carried out in two stages. In the first stage, managers or those in charge of personnel should examine the current human resources management policies and how they are being implemented and determine how they can be improved. In the second stage, the improvements made to the policies should be reexamined to see whether they are in fact enhancing the level of employees’ motivation and commitment.

In view of the above process, we developed two types of HRM checklists for seeking what employment management systems should be to support corporate management. The first group of checklists can be used by managers and personnel staff in determining what can be improved on. The second group of checklists is for individual employees and can be used for employees’ evaluation of the policies, job involvement, and commitment to their organization.

3. Development concept and outline

As mentioned above, there are two types of checklists: one for employees to check whether employment management policies are properly functioning and one for managers and personnel staff to evaluate the human resources management programs and how they are being carried out in connection with the firm’s performance.

(1) HRM checklists for employees

On the cover page, employees fill in items on their age, sex, education, length of service at their company and particular workplace, job transfer, spouse and children, job type (30 jobs in five categories of clerical, engineer, specialist, sales, and non-clerical), job position (rank and file, section chief, manager, director, etc.), and changes in the workplace (17 items on IT, transfer of authority, productivity and innovation level of their work, etc.).

In "Work Situation," job satisfaction and organizational climate are evaluated. Job satisfaction involves problems and awareness related to one's job and workplace that are often made a subject of surveys on morale. Organizational climate is included in "Work Situation" because it overlaps with job satisfaction in many ways.

In "Commitment," organizational commitment, job involvement, career commitment, and overall satisfaction in work and life are evaluated. "Overall satisfaction" is included here and not in "Work Situation" because the former evaluates the background of employees' awareness, while the latter examines the overall emotion and awareness related to that.

In "Stress" (Health Check on Body and Mind), employees' reaction to stress is surveyed. When actually distributing the checklist, the title "Health Check on Body and Mind" is used instead of "Stress." Other checklists on stress include checklists on stressors and how to reduce stress, which can be found under Section II, Chapter III of the main report.

In recent years, organizational downsizing and management delayering for greater efficiency have resulted in unintentionally overloading employees, and the management's pursuit of high goals have given undue pressure on employees to improve performance. In some cases, stress at the workplace has lowered morale and led to declining performance. Because managers should be aware of such unintentional effects of stress, the above checklists on stress were prepared.

In "Team Characteristics," the situation surrounding teams that are increasingly established at the workplace in carrying out projects, etc. is examined from the viewpoint of I) objective and participation, II) information sharing, acceptance of change, and task orientation, III) relation with other teams, IV) responsibility and discussion, and V) the overall situation. Self-managed teams are being set up to conduct sophisticated research and development and for better efficiency and quality of service. The checklists include questions on team climate, which is being taken up as a subject of many other researches recently.

(2) HRM checklists for managers and personnel staff

Three types of checklists were prepared for managers and personnel staff. The first is a checklist on organizational performance. The second is a checklist on employment management policies for evaluating each human resources management policy and how they are implemented. The third is a checklist which can be used by employers and managers to assess their leadership. The interpretation of the results of these checklists must be linked with problems identified in the employees' checklists on commitment, job satisfaction, stress, etc.

A stressor at a workplace may or may not cause stress depending on how the workplace is managed. The extent to which measures for reducing stress are adopted at a workplace, the effectiveness of such measures from the standpoint of employees, and the effect of such measures on the morale and commitment at a workplace are important questions with respect to employment management policies. From this point of view, we prepared additional checklists for corporate management to evaluate stress reduction measures taken by personnel staff. There are two checklists on stress reduction factors related to job characteristics and those related to social support. While these checklists were prepared mainly for managers, the same checklists are also provided for employees to gauge how they see the effect of such measures and to find any gaps in the awareness of managers and employees so as to identify the issues related to the measures. For more information on these checklists, which are not provided as a part of the HRM checklists for managers and personnel staff, please see Section II, Chapter III of the main report.

Various research materials accumulated by the members of the current research project are used in the development of the checklists. The process in which the checklists were developed is described in more detail in Section II and III.

Reference

- Peters, T. 1987 *Thriving on Chaos*. Knopf. (Japanese translation by Isao Hirano 1989 *Keiei Kaikaku*. TBS Britannica)
- Lawler, E. E. III. et al. 1995 *Creating High Performance Organizations*. Jossey-Bass Publishers, San Francisco.
- U. S. Department of Labor's Office of American Workplace ed. 1994 *Road to High-Performance Workplaces: A Guide to Better Jobs and Better Business Results*.

Chapter II: Outline and the Current State of Research and Development

The purpose of the current research is to address the administrative issue of stabilizing employment and promoting development of corporate management through the improvement of employment management of firms by developing specific tools, systems, etc. In this research, we have sorted out past theories, models, and surveys on the tools and systems we have been developing and compiled statistical data for analysis and utilization of data we collected from firms and employees.

The current research was started in 1997. In 1997, Waseda University Institute of Asia-Pacific Studies (formerly Institute for Social Science Research and Institute for System Science Research before that) developed the original draft of measures and checklists. In 1998, the Japan Institute of Labour (JIL) developed additional measures, examined the structure of the measures, prepared a booklet of the checklists, and collected data. The results of the research up to 1998 were reported in "Development of Measures and Checklists for Employment Management: HRM (Human Resource Management) Checklists" (JIL Research Report No. 124, 1999).

The research was continued after 1998, and data on about 100 firms and 8,000 individuals have been collected. New measures, such as multifaceted appeal of firms and employability, were also developed. The abridged version of the checklists was made available on the Internet. While fine tuning the system, data are also collected from the checklists on the Internet.

In the current research, an analysis is made on the data on 100 firms and 8,000 individuals. Past reference data that were missing in the previous report were also collected and examined. The data on the newly developed measures of the multifaceted appeal of firms and employability (competence for career development) are also analyzed in the current report. The development process and the use of the checklists on the Internet are also summarized. The current report can be considered as an enlarged and revised version of the previous report.

Two types of HRM checklists were prepared for employees and for managers and personnel staff, respectively. There are seven HRM checklists. Checklists on "commitment" can be broken down into "organizational commitment (OC)," "job involvement (JI)," and "career commitment (CC)" and can be used separately if so desired. If they are considered separately, there are ten HRM checklists. Checklists on stress (stressors and stress reduction factors) were also developed. These are not included in HRM checklists but included in this report. Lastly, checklists on the new measures of employability (competence for career development) and multifaceted

appeal of firms were also developed.

The above measures and checklists can be used separately or in combination.

1. Overall composition of measures and checklists

Figures 1 to 3 show the composition of the HRM checklists, and the actual checklists can be found at the end of Section II and III of the main report. As the checklists have been fine-tuned for improved usability, both the original version as well as the current revised version which was actually used to collect the majority of data, are contained.

In the HRM checklists for employees, "A. Work Situation" focuses on job satisfaction (morale) and organizational climate; "B. Commitment" on organizational commitment (OC), job involvement (JI), career commitment (CC), and overall job satisfaction (JS); "C. Stress (Health Check on Body and Mind)" on response to stress; and "D. Team Characteristics" on team climate. Because team climate overlaps with "A. Work Situation" in many ways and because inclusion of "D. Team Characteristics" increases the burden on the respondents, it was excluded except for in the beginning. For "C. Stress," the title, "Health Check on Body and Mind" is used in place of "Stress," because the word "stress" is expected to affect the response of the respondents. Separate checklists on stressors and stress reduction have also been prepared and included in this report. These checklists were kept separate because they would make the volume too bulky, but they can be used as needed.

In the HRM checklists for employers, managers and personnel staff, employers and managers can assess their leadership power and style in "A. Leadership." Transformational leadership, which is often taken up as a subject for discussion recently, is also included in leadership style. In "B. Checklist on Employment Management Policies," basic personnel policies, recruitment management, placement, personnel change and promotion management, performance rating, training and skills development, and job and organizational structure management are inspected. The checklist is used by employers, managers or personnel staff to review and check their employment management policies. In "C. Checklist on Organizational Performance," corporate productivity, the level of skills and technology, morale and motivation, and customer satisfaction are examined. Because organizational performance of a wide variety of firms and organizations needs to be compared, the expressions used in the checklist are necessarily abstract.

On the cover sheet of the checklists for employers, managers and personnel staff, the respondents are asked about management behavior, issues related to employment management, current state of the firm, personnel system, wage system, situation of

organization and team, corporate philosophy, mission and vision, and corporate strategy. These provide basic information for organizational assessment as well as an opportunity for the respondents to review their management and organization. On the cover sheet of the checklists for employees, the respondents fill in data on their age, sex, education, job type, and job position. In addition, they can evaluate changes in their workplace and job according to five ranks. The evaluation covers 17 items including IT, transfer of authority, and productivity. This allows them to grasp recent changes in their workplace and jobs from a different angle to a general perspective.

The checklist for “A. Leadership” is for employers and managers and cannot be responded by personnel staff. Therefore, when personnel staff is responding to the checklist, the checklists for “B. Employment Management Policies” and “C. Organizational Performance” are used as Checklist A and B.

The current report includes both Version 1 and 2 of HRM checklists for managers and personnel staff. Version 1 was used when we first collected data, and Version 2 is the checklists currently in use.

Figure 4 shows the relative position of the measures, checklists, and items covered in the cover sheets. It should be noted, however, that Figure 4 only serves as a conceptual drawing designed to give perspective. The actual causal relation is interactive and much more complicated. For instance, a management strategy is not automatically decided by external and internal environments, and adopting a certain strategy may also bring about a change in an external environment.

Figure 1: HRM checklists for employees

Checklist	Measures
Cover sheet	F1 (Age, sex, education, length of service, job transfer, spouse and children) F2 (Job type) F3 (Job position) F4 (Changes in workplace) F5 (Comments, etc.)
A. Work Situation	Job satisfaction (morale) Organizational climate
B. Commitment	Organizational commitment (OC) Job involvement (JI) Career commitment (CC) Overall job satisfaction (work and life) (JS)
C. Stress (Health Check on Body and Mind)	Response to stress
(D. Team Characteristics) ← used when needed	Team climate

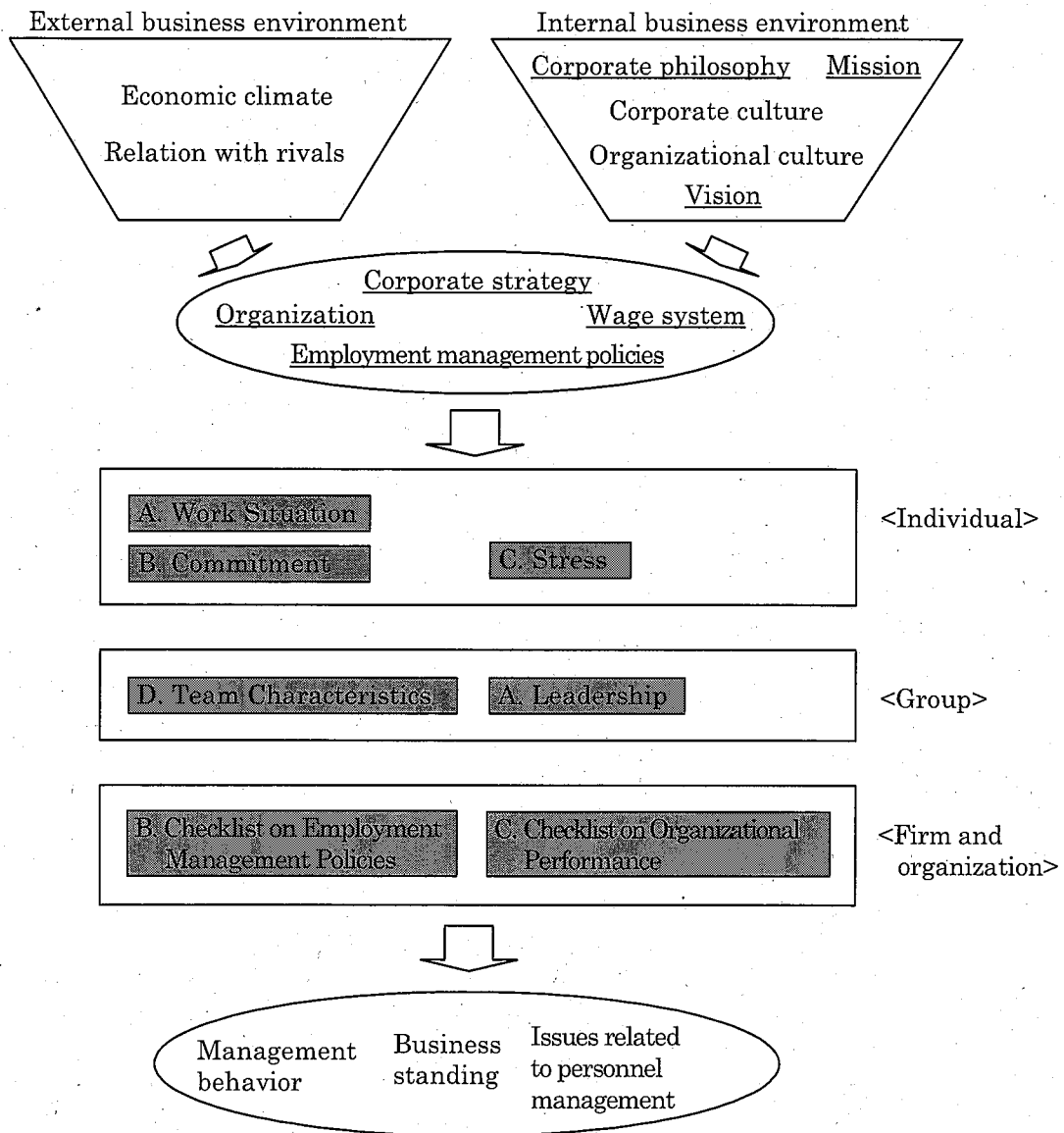
Figure 2: HRM checklists for managers

Checklist	Measures
Cover sheet	F1 (Management behavior) F2 (Issues related to employment management) F3 (Current state of the firm) F4 (Personnel system) F5 (Wage system) F6 (Organization and team) F7 (Corporate philosophy, mission and vision) F8 (Corporate strategy) F9 (Comments, etc.)
A. Leadership	Leadership power and style
B. Checklist on Employment Management Policies	Basic personnel policies, recruitment management, placement, personnel change and promotion management, performance rating, training and skills development, and job and organizational structure management
C. Checklist on Organizational Performance	Corporate productivity, the level of skills and technology, morale and motivation, and customer satisfaction

Figure 3: HRM checklists for personnel staff

Checklist	Measures
Cover sheet	F1 (Management behavior) F2 (Issues related to employment management) F3 (Current state of the firm) F4 (Personnel system) F5 (Wage system) F6 (Organization and team) F7 (Corporate philosophy, mission and vision) F8 (Corporate strategy) F9 (Comments, etc.)
A. Checklist on Employment Management Policies	Basic personnel policies, recruitment management, placement, personnel change and promotion management, performance rating, training and skills development, and job and organizational structure management
B. Checklist on Organizational Performance	Corporate productivity, the level of skills and technology, morale and motivation, and customer satisfaction

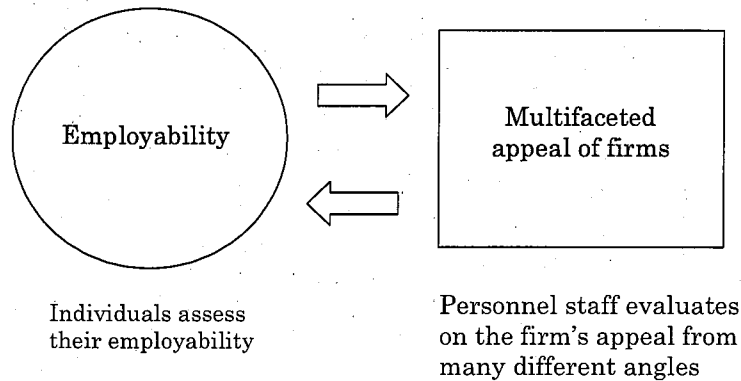
Figure 4: Relative position of the checklists



Note

- Checklist for employees (by individual)
- Checklist for managers and personnel staff (by organization)
- Cover sheet for checklist of managers and personnel staff

Figure 5: Employability and multifaceted appeal of firms



2. Description of each measure and checklist

The method and process of how each measure and checklist was developed is described in various sections of the main report. Basically, they were developed by thoroughly reviewing past research and studying the theories, models, and results of surveys.

Each measure and checklist is briefly described below.

- **Organizational climate:** Organizational climate in the Work Situation Checklist concerns employees' comments, dissatisfactions, etc. related to their workplace and work. Whereas job involvement, organizational commitment, and career commitment are related to employees' attitude and emotions, organizational climate is more focused on employees' objective views.
- **Job satisfaction (JS):** The level of employees' satisfaction on their work is gauged. It assesses how various conditions of the workplace and work are meeting employees' needs.
- **Job involvement (JI):** The degree of employees' involvement in their jobs is checked. It looks at how much employees are devoted to and thinking about their work.
- **Organizational commitment (OC):** Employees' sense of belonging and commitment to their firm, organization, and workplace is examined.
- **Career commitment (CC):** Each employee's interest in and commitment to their fields of specialization and professional career is measured.
- **Team characteristics:** Various aspects of project teams, taskforces, team system in-house ventures, and other types of teams that have been increasingly introduced in the workplace recently are studied. Ways for making them more effective are also considered.

- Response to stress: The checklist allows employees to evaluate their response to recognized stress. There are two types of checklists: abridged and extended. There are also Workplace Stressor Checklist, which looks at sources of stress and Stress Reduction Checklist, which looks at factors that reduce stress such as work characteristics, support from colleagues, etc.
- Competence for career development (employability): A checklist for workers (mainly employees) and job seekers to analyze their appeal and characteristics (behavior, action, skills, orientation, etc.) as a worker.
- Checklist on Employment Management Policies: It is used to evaluate whether the current employment management policies are appropriate and implemented as intended.
- Checklist on Organizational Performance: It is used by managers to assess their firm's or their division's performance and to identify problems.
- Manager's leadership: A checklist for managers to assess their leadership power (influence) and leadership style.
- Multifaceted appeal of firms: The checklist can be used by firms to check their appeal for job seekers and to use the results for future recruitment activities.

Twelve types of measures and checklists were developed as shown above. There are also two additional checklists that are not included as HRM checklists. Moreover, as HRM checklists on organizational climate, leadership, etc. can be subdivided, we have created close to 20 measures and checklists.

3. Analysis of collected data

As shown in Figure 6 and 7, data on about 8,500 individuals have been collected from HRM checklists for employees. The total number of employees differs in Figure 6 and 7 because figures that were rounded up or down to the nearest ten were added up. The exact number of individuals in both Figures is 8,436. When data that were not tabulated are included, data on about 10,000 individuals have been collected. For HRM checklists for managers and personnel staff, data on about 100 firms have been collected. For the web version of the checklists, there were about 5,000 accesses to the site in the past year. About 800 individuals and firms have input data for the checklists on the website.

From the data on about 8,500 individuals, the tendencies shown below became significant. "Young" include those up to 29 years, "middle" from 30 to 39, and "older" 40 and above. Job involvement, career commitment, and organizational

commitment tended to be greater with older employees and less with younger employees. On the other hand, younger employees had more stress than older employees. When men and women are compared, men had higher job involvement, career commitment, and organizational commitment than women, but women had more stress than men. There were differences by job type, but no clear tendencies could be shown. Organizational commitment and stress also differed by job type. There were many other interesting findings. For more detail, please refer to Section II of the main report and the attached basic statistics chart.

Job involvement:

Young < Middle < Older

Women < Men

Clerical < Engineering and Nonclerical < Specialist and sales

Career commitment:

Young < Middle < Older

Women < Men

Clerical and Nonclerical < Engineer and Sales < Specialist

Organizational commitment:

Young < Middle < Older

Women < Men

Stress response:

Young > Middle > Older

Women > Men

Data collected from about 100 firms using HRM checklists for managers and personnel staff have also made many things clear. There were also significant relation between firms' business conditions, corporate strategy, and organizational performance and the results obtained from HRM checklists for employees. These are included in Section III and the attached basic statistics chart.

The collection and analysis of the data shows trends of Japanese firms and employees in statistical figures, which are very interesting in themselves. The understanding of the overall trends is also useful in the evaluation and analysis of specific firms and organizations.

Figure 6: Collected data

(figures have been rounded up or down; organization size × industry type)

Company size (number of full-time employees)	Construction and manufacturing	Wholesale, restaurants, transportation, communications, electricity, gas and water supplies	Finance, insurance, and real estate	Services (firms and individuals)	Others	Total
1-299	210	60	20	450	210	950
300-2,999	470	460	1130	600	0	2660
3,000 and above	3490	390	70	0	0	3950
Civil servant	0	0	0	0	870	870
Total	4170	910	1220	1050	1080	8430

Figure 7: Collected data

(figures have been rounded up or down; sex × job type)

	Clerical	Engineer	Specialist	Sales	Nonclerical	No response	Total
Men	1040	1090	230	1640	1180	350	5530
Women	1040	150	270	410	330	220	2420
No response	80	60	20	130	60	150	500
Total	2160	1300	520	2180	1570	720	8450

4. The current state and future of research and development

We are planning to continue collecting data using the developed measures and checklists. We are also planning to continue developing systems that can be used on computers and networks for assisting organizations in their employment management.

A large amount of data has been accumulated from HRM checklists. Measures and checklists that are not included in HRM checklists or that were newly developed should be further developed and more data collected using these measures and checklists.

The measures and checklists included in this research can be utilized for future investigation and research. We hope to make them widely available for future research. We are also planning to prepare a better environment for their utilization by accumulating related measures and checklists and providing a wide range of statistical data.