#### **Long-Term Leave and Competence Formation**

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#### 1. Introduction: understanding of the issue

The objective of competence development undertaken by firms is to "fill the gap between the competence required by the firm and the competence that employees have," and this gap called "competence development needs". This competence development needs consist of short-term competence development for "filling the current demand-supply gap between competence and work" (the currently required competence) and long-term competence development for long-term development of business or for "future preparation" for future structural changes in business. The methods of competence development differ between the two. For the former, on-the-job training (OJT) and off-the-job training (Off-JT) inside the firm for acquiring the ability for questioning the causes of a problem; in other words, "the why in pursuit of causes," are effective. For the latter, on the other hand, long-term Off-JT works best. In this situation, people of different backgrounds gather at an outside educational and training institute, away from their firms and workplaces, to discuss and acquire the ability for questioning "why a certain problem is a problem,"; in other words, "the why in pursuit of objectives," is effective.

Firms developed methods for employees to acquire the skills related to "the why in pursuit of causes" and actively promoted competence development. As a result, "the why in pursuit of causes" led to a high level of operational efficiency in the working place (particularly in the manufacturing industry). On the other hand, firms are not enthusiastic about employees acquiring the skills related to "the why in pursuit of objectives." This is because "the why in pursuit of objectives" may lead to disaffirming the policies of the firm or the managerial and supervisory personnel, and employees who take such action are very likely to be disliked within the organization. Therefore, quite a number of employees who attend graduate schools, etc. at night do so by keeping it secret from their managerial and supervisory personnel and their firms.<sup>2</sup>

On "the why in pursuit of causes" and "the why in pursuit of objectives," see Hiroyuki Itami, Tsuyoshi Numagami, Mitsuhiro Seki, and Tadao Kagano (2004).

On the current state of working people attending graduate schools, see Human

As firms find themselves in a difficult market environment, however, they will need to attach high value added to business management. For that, they need not only to have a system for instilling in employees the habit of thinking "the why in pursuit of causes," but also to create a system for allowing employees to acquire the skills related to "the why in pursuit of objectives." On the other hand, employees need to obtain such ability to think about "the why in pursuit of objectives" to accurately grasp the changes in "what is required of them," strategically redesign their competence and career development, and to enhance their ability to exercise their competitiveness within and outside their firms.

Activities of education and training for allowing employees to acquire the ability to think about "the why in pursuit of objectives" require investment of "much time" as well as in "future competence" (hereinafter called the "education and training of the long-term up-front investment type"). Therefore, such activities entail considerable risk for both the firm and its employees. As such, an important consideration in promoting these activities is how to share the risk between the firm and employees and how to prepare new incentives for employees.

Based on the above understanding of the issue, the characteristics of the education and training of the long-term up-front investment type are first explained in relation to the "leave for education and training" and "temporary retirement system." Secondly, the opinions of firms regarding such investment in education and training as well as the background against which those opinions are formed are clarified. Lastly, proposals are made in a summary on the collaborative relation that firms and employees should build in promoting the investment activities for such education and training.

- 2. Education and training of the long-term up-front investment type and the system of leave/temporary retirement for receiving education and training
- (1) Categorization of education and training of the long-term up-front investment type as seen by firms

Figure 1 shows a categorization based on "who" bears "how much"

Resources Development Division, Human Resources Development Bureau, the Ministry of Labor (supervised) and Labor Research Center (edited) (1996) and the Japan Institute for Labor (1997).

expenses and time for the education and training of the long-term up-front investment type. In the first category, the firm bears all the expenses and time (hereinafter called the "large expense & time type"). As elucidated in Ohki (2003a), Ohki (2003b), and Ohki (2005), this type of investment makes up a small portion of all investment made in such education and training by firms.<sup>3</sup> This is because education and training of this type is the "highest risk" investment, and the subject of such investment is limited to certain employees.

The second is the type where the firm bears a whole or part of the expenses but limits the burden of time to a minimum (hereinafter called the "expense-large, time-small type"). A typical example would be for the firm to assist in paying a part or whole of tuition for employees to attend universities, graduate schools, etc. outside working hours.

The third is the type where the firm secures whole or part of the time but limits the burden of expenses to a minimum (hereinafter called the "expense-small, time-large type"). A typical example would be for the firm to show understanding with respect to time and leave. In this case, employees can use a leave for education and training (paid or unpaid) or a system of temporary retirement (unpaid) to engage in activities for receiving education and training.

The fourth is the type where employees bear all expenses and time (hereinafter called the "small expense & time type"). A typical example would be for an employee to engage in activities for receiving education and training outside working hours, keeping it secret from the firm and managerial and supervisory personnel, and without any financial support from the firm.

When total expenses (expenses managed by the personnel department of the head office) for firms' education and training (Off-JT) are regarded as 100 percent, the percentage of expenses "for allowing employees to study at universities, etc. in Japan and abroad" was 0.2 percent. For more details, see Ohki (2003a, b). Similarly, when the entire time spent for education and training (Off-JT, correspondence course) is considered as 100 percent, the percentage of time given "for allowing employees to study at universities, etc. in Japan and abroad" was 0.1 percent. See Ohki (2005) for more details.

Figure 1. Types of Education and Training as Long-Term Up-Front Investment

| Company's bure  |   |       |                         |
|---|---|-------|-------------------------|
| Small   | Large   |       |                         |
| Employee attending universities/graduate schools through an education and training leave system, etc. or based on the understanding of the company regarding time and leave | The company paying for employees to attend universities/graduate schools (during daytime)             | Large | Company's burden (time) |
| Employee attending universities/graduate schools (night programs) without telling the company or managerial and supervisory personnel                                       | The company providing assistance for paying tuition for universities/graduate schools (night courses) | Small | urden (time)            |

#### (2) Characteristics of the education and training of the long-term up-front investment type

With this categorization of the education and training of the long-term up-front investment type in mind, let us look at how firms are carrying out such education and training. We will examine data from the recalculation of research results by Fuji Research Institute Corporation, *Noryoku Kaihatsu to no Katsudo ni Torikumu tameno Choki Kyuka Seido no Donyu Sokushin ni Muketa Chosa Kenkyu* (Survey and Research for Promoting the Introduction of Long-Term Leave System for Engaging in the Activities for Competence Development, Etc.) (2000) (hereinafter called the "Fuji Research survey").

This survey was conducted by randomly sampling, from the company register of Teikoku Databank, Ltd., 2,000 firms with 1,000 or more employees, 2,000 firms with 500 to 999 employees, and 1,000 firms with 100 to 499 employees, as well as another 500 firms from Toyo Keizai's "List of Major Venture Businesses." The number (rate) of effective response was 1,099 firms (20.0 percent). In this recalculation, 125 venture businesses were excluded from the parameter. The distribution of responding firms by size (number of full-time regular employees) was 24.8 percent for firms with "less than 300 employees," 35.7 percent for firms with "300 to less than 1,000 employees," and 33.5 percent for firms with "1,000 or more employees." Because the author cooperated in this research survey, he was provided with the raw data of the questionnaire survey by Professor Hiroyuki Fujimura, who led the research survey project. The author would like to take this opportunity to thank Professor Fujimura.

Firstly, let us examine, with regard to the large expense & time type, the firms that are paying the expenses for employees to study at universities, graduate schools, etc. in Japan. The combined percentage of firms that are "currently conducting a program" for such a purpose and firms that "conducted such a program in the past but no longer do so" was 16.8 percent. The year that employees were first dispatched to universities, graduate schools, etc. was 1984. The total number of employees dispatched so far was 12.4. Therefore, an employee is dispatched about once every year. The percentage of dispatched employees staying with their firms was roughly 80 percent (see Figure 2).

Figure 2. Program for Allowing Employees to Study at Universities, etc.
Within Japan with the Company Paying the Expenses

| Program for allowing employees to study at universities, etc. Japan with the company paying the expenses (%) |        |  |  |  |
|--|--------|--|--|--|
| Total (number of firms)  | 974    |  |  |  |
| Currently conducting such a program  | 9.5    |  |  |  |
| Conducted such a program in the past but not now   | 7.3    |  |  |  |
| Have not conducted such a program to date  | 82.0   |  |  |  |
| No response  | 1.1    |  |  |  |
| Time of introducing such a program   |        |  |  |  |
| Effective number (number of firms)   | 150    |  |  |  |
| Average value (year)   | 1984.6 |  |  |  |
| Total number of employees dispatched so far  |        |  |  |  |
| Effective number (number of firms)   | 152    |  |  |  |
| Average value (number of employees)  | 12.4   |  |  |  |
| Percentage of program participants staying with the company  |        |  |  |  |
| Effective number (number of firms)   | 148    |  |  |  |
| Average value (%)  | 84     |  |  |  |

Note: The questions on "Time of introducing the program," "Total number of employees dispatched so far," and "Percentage of program participants staying with the company" relate to companies that are "currently conducting such a program" and that "conduct

Source: Fuji Research Institute Corporation, Noryoku Kaihatsu to no Katsudo ni Torikumutame no Choki Kyuka Seido no Donyu Sokushin ni Muketa Chosa Kenkyu (Survey and Research for Promoting the Implementation of Long-Term Leave System for Active Involvement)

Secondly, with respect to firms' financial support in paying tuition in the expense-large, time-small type, a high percentage of firms, at 55.1 percent,

provided "financial support for employees to attend various seminars outside the company." However, only 12.1 percent provided "financial assistance for employees to receive training overseas (excluding study abroad)," and 3.5 percent provided "support for paying tuition for employees to attend night courses for working people offered by universities and graduates schools." There was a tendency where the percentage of firms providing financial support declined as the period of training was increased. (See Figure 3).

Figure 3. Companies' Financial Assistance and Understanding Regarding Time (N=974)

|  | (Unit: %) |
|--|-----------|
| Financial support for attending various seminars outside the company   | 55.1      |
| Support for paying tuition to attend night courses for working people offered by universities/graduate schools | 3.5       |
| Financial support for receiving training overseas (excl. study abroad)   | 12.1      |
| Understanding of the company regarding time and leave for employees wishing to studying abroad within Japan    | 5.0       |
| Understanding of the company regarding leave for employees wishing to overseas studying abroad                 | 3.6       |
| System of paid leave for receiving education and training  | 9.4       |
| System of unpaid leave for receiving education and training  | 2.6       |
| Not making employees work overtime that would prevent them from attending school or study                      | 15.0      |

Note: The values indicate the percentage conducted.

Source: same as Figure 2

Thirdly, with regard to firms' understanding with respect to time and leave in the expense-small, time-large type, the largest percentage of firms, at 15.0 percent, took measures "not to make employees work overtime that would prevent them from attending school or study". This was followed by "a system of paid leave for receiving education and training" (9.4 percent), <sup>5</sup>

According to the Ministry of Health, Labor and Welfare, *Shuro Joken Sogo Chosa* (General Survey on Working Conditions), the percentage of firms that provided a system of paid leave for employees to receive education and training had been on the decline, from 9.1 percent in 1994 to 4.7 percent in 1997 and 4.5 percent in 2002, but it rose slightly in 2003 to 5.1 percent.

"understanding of the company regarding time and leave for employees wishing to study within Japan" (5.0 percent), "understanding of the company regarding leave for employees wishing to study abroad" (3.6 percent), and "a system of unpaid leave for receiving education and training" (2.6 percent). Many firms are less inclined to accept the burden of time than they are with the burden of expense.

On allowing employees to take "a long-term leave" for competence development, the majority of firms did "nothing in particular." For the remaining half of the firms, the largest percentage of firms, at 37.3 percent, "instructed employees to use existing leave (ex. annual paid leave, etc.)." On the other hand, the percentage of firms that "treated employees on such leave as inactive" (6.3 percent) and that "granted special leave (paid leave for education and training, etc.) in addition to annual paid leave" (3.0 percent) both accounted for less than 10 percent. Among the firms that granted paid leave for education and training, the average number of employees who used such leave during the 1990s was 43.4 people, which means about four people in each year (see Figure 4). Therefore, among the types of the education and training of the long-term up-front investment type, it can be presumed that, in terms of quantity, the least utilized is the "large expense & time type," while the most utilized is the "small expense & time type".

Figure 4. Company's Response to Long-Term Leave for Competence Development and Number of Employees Who Used a Special Leave System

| Response to long-term leave for competence development (unit: %)                                     |      |
|--|------|
| Total (number of firms)  | 974  |
| Instructs employees to use existing leave (ex. annual paid leave, etc.)                              | 37.3 |
| Grants special leave (paid leave for education and training , etc.) in addition to annual paid leave | 3.0  |
| Employees are treated as inactive  | 6.3  |
| Nothing in particular  | 51.5 |
| No response  | 1.9  |
| Total number of employees who used a special leave   |      |
| Effective number (number of firms)   | 25   |
| Average value (number of employees)  | 43.4 |

Source: same as Figure 2

## 3. Self-responsibility for competence development and education and training of the long-term up-front investment type

#### (1) Firms' opinions on a leave system for assisting in the career improvement of individual employees

According to the Fuji Research survey, close to 70 percent of firms considered that "the firms had the responsibility" with respect to competence development. For the future, however, firms are trying to make the shift from "firms' responsibility" to "individual employees' responsibility," in other words, to increase the responsibility of individual employees regarding competence development. Nonetheless, only 7.7 percent of firms said that 80 percent or more of their employees voluntarily thought about their career development. On the other hand, 16.1 percent of firms said that there were hardly any such employees in their firms, and 73.9 percent of firms believed that from a quarter to a half of their employees voluntarily thought about their career development. 6 The more firms require their employees to be responsible for their competence development, the more firms need to provide the employees with the "opportunity" and "time" for thinking about their careers. Then how do firms regard the education and training of the long-term up-front investment type as an opportunity and time for employees to think about their careers? In the Fuji Research survey, four proposals were made on the education and training, of the long-term up-front investment type, as a leave system for assisting in the career improvement of individual employees, and firms were asked to state whether they agreed or disagreed to the proposals and the reasons for the agreement or disagreement. The four proposals are as follows:

The first proposal was for a paid leave system in which employees are periodically given an opportunity (once, for instance, every five to ten years) to review their careers during a continuous paid leave lasting a month. During the leave, the employees can engage in study, travel, volunteering, or any other activities that will help them to think about their future professional lives (the system hereinafter called the "career building leave system"). The second

According to SRIC Corp. (2000), the percentage of firms that "wanted" their employees to think more than before about their own career design was 58.8 percent, and the percentage of firms that "more or less wanted" their employees to think more about their career design was 29.2 percent. Together, slightly less than 90 percent of firms shared this view.

proposal was for an arrangement lasting up to two years and is available to employees once every five to ten years. Because the employees will be working during the day, there will be no need to provide any special leave. This is a system where an arrangement is made with respect to working hours for employees who wish to study by enrolling in night courses offered by graduate schools and vocational colleges—for instance, they are not allocated work that will require them to do inordinate amount of overtime (the system hereinafter called the "system for securing time for receiving education and training for career development"). The third proposal was for a leave system where an employee takes a full leave of six months to about two years without pay and concentrates on study, etc. for career improvement. The leave is based on the understanding that the employees will return to their firms, but they are not prevented from transferring to another firm (the system hereinafter called the "long-term leave system for career improvement (unpaid)"). The fourth proposal was basically the same as the third proposal, with the only difference being that the employees are paid during the leave (the system hereinafter called the "long-term leave system for career improvement (paid)").

Figure 5 shows approval and disapproval for the proposals. The proposal with the most approval was for the system for securing time for receiving education and training for career development (the total of "approve" and "more or less approve" was 52.7 percent). On the other hand, the proposal with the least approval was for the long-term leave system for career improvement (paid) (6.4 percent). For all four systems, "the difficulty in securing substitute" was cited the most as a reason for disapproval. On the use of a temporary retirement system for competence development by employees where they will be able to engage in long-term study at schools, etc. at their own expense, about 20 percent of firms said they hoped to encourage such a practice.

Figure 5. Approval/Disapproval of Systems for Supporting Career Improvement (N=974)

(Unit: %)

|   | Approve or encourage | More or<br>less<br>approve or<br>encourage | More or<br>less do not<br>approve or<br>encourage | Do not approve or encourage | Unknown |
|---|----------------------|--|---|-----------------------------|---------|
| Career Building Leave<br>System   | 5.0                  | 21.4                                       | 41.5  | 27.1                        | 5.0     |
| System for securing time for receiving education for career development | 9.8                  | 42.9                                       | 30.3  | 11.7                        | 5.3     |
| Long-term leave system for career improvement (unpaid)                  | 4.2                  | 14.4                                       | 42.0  | 34.1                        | 5.3     |
| Long-term leave system for career improvement (paid)                    | 1.6                  | 4.8  | 35.2  | 51.5                        | 6.8     |
| Long-term study using a<br>temporary retirement<br>system               | 1.4                  | 17.9                                       | 54.5  | 23.0                        | 3.2     |

Source: same as Figure 2

#### (2) Factors determining the leave systems for assisting in the career development of individual employees

What factors determine the approval or disapproval of a leave system for assisting in the career improvement of individual employees? It is conceivable that such a leave system will be governed by firms' investment behavior with regard to education and training and by the state of career assistance provided to individual employees. In turn, it is also conceivable that firms' investment behavior with regard to education and training is governed by the following questions: "Under which kind of education and training policy" should education and training be provided and "for which types of work (job types)," "for whom" (the attributes of employees receiving education and training), and "in what scope" (the number of employees receiving education and training) should education and training be provided.

Is approval or disapproval of a leave system for assisting in the career improvement of individual employees then determined based on the above framework? We explain this point using multiple regression analysis. The data

we use is from the "Fuji Research survey." The analysis explains approval or disapproval of the following: (1) career building leave system, (2) system for securing time for receiving education and training for career development, (3) long-term leave system for career improvement (unpaid), (4) the degree of encouragement provided for employees to use a temporary retirement system to engage in long-term study at schools, etc. at their own expense. The long-term leave system for career improvement (paid) was excluded because only less than 10 percent of firms approved of the system.

As for the explanatory variables, the ratio of managers and the ratio of university graduates were used with regard to "for which types of work (job types)." The ratio of university graduates was used to examine the degree of white-collar workers making up the job types. With regard to "under which kind of education and training policy," (1) the policy related to the "entity responsible for competence development" (whether the responsibility rests with the firm or individual employees) and (2) the policy related to "who should receive education and training" (whether the emphasis is on selective education or general education of all employees) were used. For (3) the future policy on increasing or decreasing the education and training budget was used with respect to firms' "ability to pay" (limitations on the education and training budget). With regard to "for whom" (the profitability of those receiving education and training) and "in what scope" (the economies of scale of education and training), the ratio of employees who are 45 years old or above among all regular employees (the ratio of middle-aged employees) and the number of regular employees were used, respectively. In addition, with regard to the status of assistance provided for individual employees' careers, the following were used: (1) the opportunity for interviews between the personnel department and individual employees, (2) the current and future availability of career counseling by those with expert knowledge (efforts to provide comprehensive assistance and advice for employees' career formation through personal interviews conducted by those who have received specialist education), and (3) the firm's instructions to managerial and supervisory personnel to discuss their subordinates' career formation when assessing or interviewing the subordinates.<sup>7</sup>

With respect to dependent variables, the score of four points was given to "approve (or encourage)," three points to "more or less approve (or encourage)," two points to "more or less disapprove (or discourage)," and one point to "disapprove (or

Firstly, the approval on the career building leave system was governed by the education and training budget, types of work (job types), and status of assistance provided for individual employees' careers. Firms that planned on increasing the education and training budget in the future, had high ratios of managers, provided career counseling, and instructed managerial and supervisory personnel to discuss their subordinates' career formation at the time of assessment or interview were more inclined to approve this system (see Figure 10).

Secondly, the approval on the system for securing time for receiving

discourage)." On the other hand, with respect to the explanatory variables, the actual values were used for the "number of full-time regular employees" (as of the end of December 1999), "ratio of graduates of universities or above among all full-time regular employees," "ratio of managers (equivalent of section head and above) among all full-time regular employees," and "ratio of middle-aged and senior employees (45 or above) among all full-time regular employees." A score was given to other explanatory variables: "policy on who should receive education and training" (one point for "emphasis on selective education," two points for "more or less emphasize selective education," three points for "more or less emphasize general education of all employees," and four points for "emphasis on general education for all employees"), "policy on entity responsible for competence development" (one point for "the firm is responsible for providing education and training to employees," two points for "it is more or less the firm's responsibility to provide education and training to employees," three points for "it is more or less the individual employees who have the responsibility for their education and training," and four points for "the individual employees have the responsibility for their education and training"), "policy on education and training (Off-JT) budget" (six points for "increase substantially," five points for "increase slightly," four points for "maintain at the current level," three points for "decrease slightly," two points for "decrease substantially," and one point for "have no budget"), "opportunity for interviews between the personnel department and individual employees" (four points for "the interview is held every year," three points for "the interview is held once in two to three years," two points for "the interview is held when necessary," and one point for "no interview is held"), "the current and future availability of career counseling by those with expert knowledge" (three points for "currently available," two points for "currently unavailable but plan to make it available in the future," and one point for "no plans to make it available now or in the future"), and "the firm's instructions to superiors at workplaces to discuss their subordinates' career formation when assessing or interviewing the subordinates" (two points for "such instructions are given" and one point for "such instructions are not given"). All other variables were dummy variables; a score of one point was given when the variable corresponded with the title given to the variable, and a score of zero points when it did not correspond with the title.

education and training for career development was governed by the education and training budget, profitability of education and training (economies of scale), and status of assistance provided for individual employees' careers. Firms were more inclined to approve this system were: Those that planned on increasing the education and training budget in the future; small- and medium-sized firms that had a small number of employees for education and training, firms that provided many opportunities for interviews between the personnel officers and individual employees; and firms that instructed managerial and supervisory personnel to discuss their subordinates' career formation at the time of assessment or interview.

Thirdly, the long-term leave system for career improvement (unpaid) was governed by the profitability of education and training (employees receiving education and training and their number (economies of scale)), training policy, and status of assistance provided for individual employees' careers. Firms that emphasized general education for all employees were: Those that had a small number of employees (full-time regular employees) who were 45 years old and above, large firms that had a large number of employees for education and training, and firms that instructed managerial and supervisory personnel to discuss their subordinates' career formation at the time of assessment or interview were more likely to approve this system.

Fourthly, the degree of encouragement provided for employees to use a temporary retirement system to engage in long-term study at schools, etc. at their own expense was governed by the education and training budget, training policy, and status of assistance provided for individual employees' careers. Firms that were more inclined to encourage employees to use the temporary retirement system to engage in long-term study were: Those that considered that "the firm had the responsibility" for competence development, planned on increasing the education and training budget in the future, provided many opportunities for interviews between the personnel department and individual employees, provided career counseling, and instructed managerial and supervisory personnel to discuss their subordinates' career formation at the time of assessment or interview

Let us briefly summarize what has been elucidated above. Whereas managerial and supervisory personnel are positive about investing in education and training for their subordinates' "present abilities" and particularly "the why in pursuit of causes," they are negative about investing in their "future abilities",

Figure 6. Factors Governing Temporary Retirement System for Assisting Individual Employees' Career Improvement (multiple regression analysis)

|   | Career Building Leave<br>System<br>(796 firms) |         | System for securing time<br>for receiving education for<br>career development<br>(794 firms) |         | Long-term leave system<br>for career improvement<br>(unpaid) (795 firms) |         | Long-term leave system<br>for career improvement<br>(paid) (816 firms) |         |
|---|--|---------|--|---------|--|---------|--|---------|
|   | Standardization coefficient                    | t-value | Standardization<br>coefficient   | t-value | Standardization coefficient  | t-value | Standardization<br>coefficient   | t-value |
| (Industry dummy)  |  |         |  |         |  |         |  |         |
| Construction  | -0.0517  | -1.2410 | 0.0435   | 1.0386  | -0.0589  | -1.4108 | -0.0539  | -1.3331 |
| Manufacturing   | 0.0040   | 0.0849  | 0.0636   | 1.3517  | -0.0193  | -0.4131 | 0.0750 *   | 1.6519  |
| Wholesale & retail  | -0.1176 ***                                    | -2.7067 | 0.0002   | 0.0042  | -0.0747 *  | -1.7122 | -0.0320  | -0.7495 |
| Finance, insurance, real estate   | -0.0143  | -0.3661 | -0.0414  | -1.0508 | -0.0626  | -1.5959 | -0.0154  | -0.4075 |
| Services  | -0.0718 *                                      | -1.7258 | -0.0543  | -1.2935 | -0.0511  | -1.2247 | 0.0318   | 0.7852  |
| Number of full-time regular employees (logarithm)   | 0.0560   | 1.5282  | -0.0681 *  | -1.8418 | 0.0683 *   | 1.8514  | 0.0456   | 1.2780  |
| Ratio of university graduates   | -0.0020  | -0.0467 | -0.0012  | -0.0267 | 0.0679   | 1.5563  | -0.0027  | -0.0631 |
| Ratio of managers   | 0.0800 **                                      | 1.9811  | 0.0657   | 1.6130  | 0.0328   | 0.8137  | 0.0635   | 1.6194  |
| Ratio of middle-aged employees (45 years old and above) Policy on the entity responsible for competence | -0.0341  | -0.8911 | 0.0553   | 1.4283  | -0.0721 *  | -1.8685 | 0.0015   | 0.0389  |
| development (education as responsibility of firm - responsibility of individuals)                       | -0.0064  | -0.1800 | -0.0296  | -0.8237 | -0.0337  | -0.9444 | -0.0962 ***  | -2.8017 |
| Policy on who should receive education and training (selective education - general education)           | -0.0240  | -0.6786 | 0.0500   | 1.3986  | 0.0799 **  | 2.2451  | -0.0215  | -0.6261 |
| Future policy on education and training budget  | 0.1176 ***                                     | 3.3085  | 0.0938 ***   | 2.6143  | 0.0294   | 0.8230  | 0.0569 *   | 1.6529  |
| Opportunity for interviews between personnel department and individual employees                        | 0.0159   | 0.4398  | 0.0846 **  | 2.3120  | 0.0578   | 1.5883  | 0.1261 ***   | 3.5982  |
| Availability of career counseling   | 0.0891 **                                      | 2.5035  | 0.0146   | 0.4062  | 0.0566   | 1.5805  | 0.0809 **  | 2.3335  |
| Instructions given to employees' direct manager   | 0.1112 ***                                     | 2.9854  | 0.1087 ***   | 2.8900  | 0.0812 **  | 2.1703  | 0.1526 ***   | 4.2155  |
| F value   | 4.356 ***                                      |         | 3.471 ***  |         | 3.846 ***  |         | 6.415 ***  |         |
| Adjusted R squared  | 0.06   |         | 0.05   | j       | 0.05   |         | 0.09   |         |

Note 1: \*\*\* 1% level of significance Note 2: \*\* 5% level of significance Note 3: \* 10% level of significance Source: same as Figure 2 and particularly "the why in pursuit of objectives." Because the education and training of the long-term up-front investment type is long-term training of "future abilities," it is education and training for employees to acquire the ability to think not only about "the why in pursuit of causes," but also about "the why in pursuit of objectives." For employees to engage in such education and training, a framework in which a firm can develop the "present abilities" as well as the "future abilities" (in other words, a framework for assisting and advising employees' career formation) needs to be built on a company-wide basis. At the same time, there needs to be a mechanism to help managerial and supervisory personnel to take interest in the development of their subordinates' "future abilities" and in "the why in pursuit of objectives."

#### 4. Conclusion: towards promotion of the education and training of the long-term up-front investment type

## Characteristics of the education and training of the long-term up-front investment type

To adapt to the difficult changes in the environment, firms and individuals need to cooperate in building a new framework for acquiring the ability to think not only about "the why in pursuit of causes," but also about "the why in pursuit of objectives." For this purpose, both firms and individuals need to actively promote the education and training of the long-term up-front investment type.

From research and analyses already carried out, the following characteristics of the education and training of the long-term up-front investment type can be pointed out. Firstly, because the education and training of this type is highly risky for firms, the amount of time and costs allocated to such education and training is a very small part of all the investments that go into education and training. Secondly, when the education and training of this type is categorized according to "who" bears "how much" of the costs and time, quantitatively, the most common is the type where employees bears all costs and time, while the least common is the type where firms bears all costs and time.

# For promotion of the education and training of the long-term up-front investment type

To actively promote the education and training of the long-term up-front investment type, a mechanism needs to be constructed for the functioning of the "type where the firm will bear little cost but all or part of the time," a type where the firm and individuals share the burden of time, because the period of education and training is long.<sup>8</sup>

With regards to the construction of such a mechanism in the future, firstly, the intent and behavior of managerial and supervisory personnel have a significant impact on the consideration at the workplace with respect to time and leave. Therefore, there is a need to improve the management system that solely pursues short-term gains and the current state of affairs where there is too much dependence on managerial and supervisory personnel to play the role of an intermediary between the firm and employees (the framework of career formation). While superiors are positive about improving abilities that are currently required at the workplace, there is the danger that they may not be positive about career development that takes into consideration employees' long-term careers (future abilities). Therefore, reinforcement of functions for supporting career development, not only for the managerial and supervisory personnel also for a firm's employees, is essential.

Secondly, on the use of the leave for education and training or temporary retirement system for conducting education and training of the long-term up-front investment type, there is a need to combine such a leave or temporary retirement system with assignments, transfers, and in-house staff recruitment systems. The nature of such education and training as provided not for an employee to return to the employee's original workplace, but for the employee to acquire the abilities required for transferring to a new workplace, should be

With regard to costs, expansion of subsidies from the government to firms and of "education and training grants" to workers may be possible. The education and training grants are an employment insurance benefit system designed to support workers in their voluntary efforts in competence development, stabilize employment, and promote reemployment. When those who have been or had been insured under the employment insurance (unemployed people, in the latter case) for three years or more receive and complete education and training designated by the Minister of Health, Labour and Welfare, the sum equivalent to 40 percent of the costs for education and training (20 percent if the insured period of the employment insurance is three years or more but less than five years) paid to institutes of education and training is paid by public employment security offices (but not exceeding \(\frac{\frac{1}{2}}{2}\)00,000, or \(\frac{\frac{1}{1}}{100}\),000 if the insured period of the employment insurance is three years or more but less than five years).

clearly emphasized. In this case, the goals of competence development should be clearly defined in terms of the employee's "jobs" and presented individually to the employee.

Thirdly, in addition to the existing incentives of "money" (remuneration), "status" (post), and "work," the new incentive of "time" (leave) needs to be provided for employees. There is a need to create a new framework for rewarding high performing employees with long-term leave.

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