Business Strategy and Human Resource Management in Japanese Companies Today

Extract from JILPT Research Project "Comprehensive Analysis of Corporate Strategy and Personnel Treatment System"

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Introduction

Since the beginning of the 1990s, we have seen major changes in traditional Japanese employment practice, which has been characterized by life-long employment, seniority system (seniority-based wage/promotion) and industry-based labor unions. There has been a decline in life-long employment and the seniority system, which have been replaced with the rapidly emerging "Seikashugi" (Performance-based Evaluation and Pay System, hereinafter called the "PEP"). Three social factors form the background for these changes.

The first factor is the extended recession after the collapse of the bubble economy (economic factor). Due to deterioration of performance during the prolonged recession, beginning in the late 1990s businesses quickly introduced restructuring efforts, downsizing their resources. Japanese companies had traditionally placed importance on the concept of life-long employment, but "employment" was no longer an untouchable, sacred area.

The second factor is the pressure of labor costs associated with the baby boomers (demographic factor). Labor cost rapidly increased in those companies that maintained the seniority-based wage system as the baby boomer generation reached their 40s and 50s. Compared with other generations, the number of births in this group was high, particularly among the baby boomers born in the period between 1947 and 1949. According to Yoshio Higuchi and the Policy Research Institute of the Ministry of Finance (2004), the baby boomer workers are characterized by (1) a higher than average level of education, (2) their position at the peak area of the seniority wage curve, and (3) their long years of service, compared with other generations.

The third factor is the change in the corporate governance structure (financial/institutional factor). As one of the noticeable changes that occurred in the late 1990s, the interests of shareholders received more attention. Strongly influenced by major banks, previously Japanese companies focused attention on their

employees under the practice of long-term employment. When companies began to focus instead on shareholders' interests and aim at short-term gains in their business operations, their employment portfolio¹ changed based on the viewpoint of cost reduction, introducing PEP, limited- term employment agreement and the use of short-term contract employees.

In addition to the social factors noted above, companies have their own internal factors that incite change. In their business activities, companies determine long-term and mid-term policies for achieving their goals—this is the so-called 'business strategy'. It would appear that business strategies have a major effect the human resource management of companies. However, many researchers working on labor issues ignore the importance of the correlation between business strategy and human resource management.

In the research project "Comprehensive Analysis of Corporate Strategy and Personnel Treatment System" conducted by JILPT (the Japan Institute for Labor Policy and Training), in which the author participates, we are attempting to clarify the mechanism of how changes in the business strategy or corporate governance by companies influence their human resource management (hereinafter called the "HRM")². In this report we introduce some of the results

The Japan Federation of Employers' Association (1995) categorizes the employment portfolio in three groups: (1) long-term skill-building group (employment agreement with no limited term; with pay raise, severance pay and pension; in core positions, including management, career positions and technical personnel; some 20 percent of all), (2) highly-skilled professional group (employment with limited term; with no pay raise, no severance pay or pension; professionals (planning, sales, research/development, etc.), (3) flexible employment group (employment with limited term; with no pay raise, severance pay or pension; general, technical and sales staff). It is advocated that these groups be used flexibly in companies.

We already summarized the points of the research project in the JILPT Research Report No. 7: Identification of Issues for Research on Corporate Strategies and Personnel Treatment Systems [in Japanese] (May 2004). Later, based on the result of the survey "General Survey on Business Strategy and Human Resource Management" (hereinafter called the "Company Survey") conducted among people in charge of human resource management for companies in Japan with 200 employees or more as of November 2004, we published a report in the JILPT Research Report No. 33: Transforming Human Resource Management and Governance/Corporate Strategies [in Japanese] (June 2005). In addition, based on the result of the questionnaire survey "Survey on Career Design in the New Age and Human Resource Management Evaluation" (hereinafter called the "Employee Survey") conducted on workers in the period between February and April 2005, we published the JILPT Research Report No. 49: Workers' State of Mind in the Transition Period [in Japanese] (April 2006). Based on the above three research reports, we summarized the general result in the

obtained from the analysis work of the research project, including (1) correlation between business strategy and HRM and (2) correlation between HRM and corporate performance.

1. Business Strategy, HRM and Corporate Performance

Starting from the late 1990s, many Japanese companies began to adopt the PEP. According to our Company Survey, 57 percent of companies adopted the PEP. What is the reason for the PEP being adopted to this extent? One of the possible reasons is that "Introduction of the PEP improves the productivity of workers with the consequence of improvements in company performance," an idea that was promoted by advertisements in the mass media and human resource consultancy in the late 1990s. In reality, however, no scientific verification had been made until recently for the correlation between the PEP and company performance. In the late 1990s, the PEP was propagated only by the expectation that the idea might be effective.

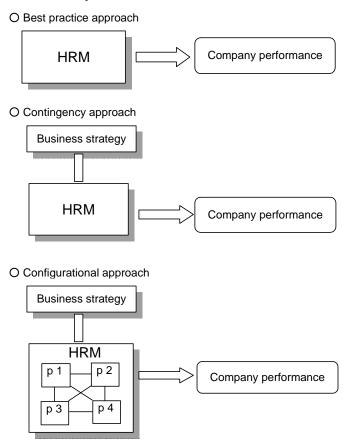
Then, does the PEP really improve company performance? Some claim that HRM practice constitutes only part of the activities that companies perform for their business management. From this viewpoint, the introduction of the PEP provides limited influence on the company performance. In the theory of the "Strategic Human Resource Management (SHRM)", workers (human resources) and HRM practices are considered resources or tools used to achieve competitive advantage. From the viewpoint of assuming this idea, the PEP is one of the tools that may improve company performance.

In the traditional SHRM theory, the correlation of three elements, namely, "business strategy, HRM and company performance," is explained by different approaches that can be roughly divided into three groups: (1) Best Practice Approach, (2) Contingency Approach and (3) Configurational Approach. According to Iwade (2002), "The approach (1) assumes the existence of 'the best HR practice,' including business strategy, which is universally suitable to any situation or organization due to correlation between HRM and company performance. The approach (2) takes importance on the consistency between business strategy and HRM, based on the idea of 'external/vertical fit,' assuming that HRM must be consistent with other aspects to make HRM effective in

JILPT Research Report No. 61: Interim Report on the Research Project on Human Resource Management in Modern Japanese Companies: Comprehensive Analysis of Corporate Strategy and Personnel Treatment System [in Japanese] (June 2006).

improving company performance [some parts omitted]. The approach (3) seeks for 'the best bundle/configuration' of HRM practices for an 'internal/horizontal fit' based on the systematic synergy interacting different HRM practices, also considering the contingency approach in terms of consistency between business strategy and HRM at the same time [some parts omitted]."³ (See Figure 1.)

Figure 1. Categorization of Strategic Human Resource Management Theory



Source: Iwade (2002), 69. The notes of the original figure reads, "Reference to McMahan et al. (1999) but modified by the author."

³ Iwade (2002), 67-68.

Based on the above categorization, it is clear that the theory of "introduction of the PEP will improve/reduce company performance" is related to only part of the correlation among business strategy, HRM and company performance. In reality, the consistency between HRM and business strategy and the synergetic effect between HRM practices also need to be taken into account. Even when the introduction of the PEP proves have a be positive influence on the company performance, it is difficult to determine if the performance is improved only by the introduction of the PEP or if it is achieved through interaction of the PEP and other practices and strategies. In order to prove that the PEP is the best practice,⁴ complicated verification processes are required, and a vast volume of data needs to be analyzed to confirm the interaction. With the limited volume of data obtained through the survey, we can analyze only a specific part of the correlation of HRM, business strategy and company performance. In this report, therefore, we attempt to (1) clarify the direct relationship between the PEP and company performance and then (2) indicate the correlation of business strategy, HRM and company performance.

We have obtained the following data from our research on the relationship between the PEP and company performance (see Table 1).

In the early stage of our analysis, objective quantitative data was not available for the company performance. Alternatively, we used the following method to understand the changes made in the company performance. First, we asked respondents to the survey—people in charge of human resource management—to select one of the patterns that best fitted the trend of their company performance, in relation to the changes that occurred in the company performance in the five-year period from 1999 to 2004. Respondents were asked to select one of the seven predefined patterns (upward, high and stable, downward to upward, large fluctuation, upward to downward, low and stable, downward).⁵ Logistic regression analysis was performed, using the dependent

⁴ As typified by Pfeffer (1994), the existing body of research on the SHRM theory often indicates that the best practice forms part of the measure to enhance commitment of workers in one way or another. In this report, the PEP is considered as "the best practice" literally meaning the "best universal practice." Note, therefore, that the interpretation used in this report is somewhat different from those used in the preceding researches on the SHRM theory. For details, refer to Iwade, *ibid.*, 86.

⁵ The upward trend indicates the situation in which the performance continuously increases with time. The high and stable trend indicates the situation in which the performance remains at a high level. The downward to upward trend indicates the

Table 1. Verification on PEP and company performance

Data used	Analysis 1	Analysis 2		
Verification issue	Whether or not the company with the PEP performed well in the period from 1999 to 2004	Whether or not the company performed well when introducing the PEP in the period from1999 to 2004		
Result	Companies with the PEP are more likely to perform well than those that did not introduce the PEP.	recent years (between 1999 and 2004)		
Type of improvement of company performance	We asked the human resource personnel to select one of seven patterns that best describes the change made in the company performance in the past five years. We used a dummy variable defined as "a company that performed well" when the company performance indicates one of the three patterns, (1) upward, (2) high and stable and (3) downward to upward.			
Number of cases examined	1,214	1,214		
Method	Logistic regression analysis			

Note: For details see JILPT (2004, 163-66).

variable "company that performed well dummy" as a dummy variable that indicates selection of three types of changes, (1) upward, (2) high and stable and (3) downward to upward. Therefore, the company performance is not a quantitative variable but it is qualitative variable reflecting the objective view of the personnel staff. As a result, some may criticize this analysis for containing bias and error. Such criticism, however, can be countered with the following two arguments: Firstly, acquisition of company performance data is somewhat restricted in reality, and appropriate data may not be obtained. Apart from the indexes that listed companies are obliged to publish, it is basically at the discretion of companies to determine which indexes to publish. Secondly, objective indexes that appropriately reflect company performance are not always available. While sales volume provides solid information as an objective fact, profits may vary depending on the way they are handled in the

situation in which the performance once declined but began to increase again. The large fluctuation trend indicates the situation in which the performance frequently moves up and down. The upward to downward trend indicates the situation in which the performance increased at one point but then began to decline. The low and stable trend indicates the situation in which the performance remains at a low level. The downward trend indicates the situation in which the performance continuously declines over time.

accounting process. Consequently, it is highly probable that subjective evaluation of the personnel staff working in the company provides the most true and accurate picture of changes of the company. Therefore, the result shown in Table 1 is not completely irrelevant. To respond to the possible criticism described above, however, we also used and examined the quantitative company performance data as in this report.

The procedure is summarized below. Firstly, we collated the company performance information collected by a private inquiry organization with the information collected in our survey. The company performance data consist of sales, profits, total assets and shareholders' equity in the years 1999 and 2004. Later, ROA and ROE were calculated. However, information on the total assets and shareholders' equity (including ROA and ROE) was obtained only for less than 40 percent of all those surveyed. Therefore, to increase the number of samples for the analysis, sales was selected as the index, and we calculated the change in the sales per employee and used it in our analysis.

2. Direct Relationship between PEP and Company Performance

Quantitative data on company performance are used to verify the influence of introduction of the PEP on the company performance. For the dependent variable, we used the rate of change in the sales per employee in the years 1999 and 2004. The following procedure was used for calculation: The sales per employee of the year 2004 were divided by the sales per employee of the year 1999 and logarithmic transformation was applied. The independent variable is the dummy variable that indicates that it is the company that introduced the PEP, and the control variables include the number of regular employees (after logarithmic transformation) and industry (manufacturing industry as the reference group). Table 2 shows the result of multiple linear regression analysis (OLS), indicating that the introduction of the PEP has a statistically-significant positive influence on the company performance (rate of change in sales per employee) at the level of five percent. Considering the low value of the coefficient of determination, it is difficult to define that the PEP is the best practice. However, despite the fact that the company performance is affected by other factors, we emphasize that the PEP has a positive influence on the company performance when it is introduced.

Table 2. Analysis using the rate of change in the sales per employee (2004/1999) as a dependent variable (OLS)

	Unstandardi- zation factor	Standard error	Significance probability	Significance level
Company with the PEP	0.054	0.027	0.045	*
Construction	-0.155	0.052	0.003	***
Information & communication	0.102	0.059	0.086	
Transportation	0.029	0.049	0.554	
Wholesale & retail	0.073	0.040	0.069	
Finance and insurance	-0.159	0.056	0.004	**
Services	0.079	0.041	0.050	
Other industries (except manufacturing)	0.146	0.074	0.047	*
Logarithm for regular employees	-0.011	0.021	0.605	
Coefficient	0.038	0.027	0.156	

Note: *** p<0.001. ** p<0.05. Logarithmic transformation applied for the rate of change in the sales per employee.

N = 1146. Adjusted $R^2 = 0.029$. Significance probability of the ANOVA (analysis of variance) = 0.00

The result of this analysis does not indicate whether the company performance improved after the PEP was introduced, or if the PEP was introduced to a company that already performed well; nor does it accurately identify the cause-and-effect relationship. This is because no perfect conditions can be obtained unless we create a situation in which two groups of companies are prepared and the PEP is introduced to one of them to monitor the change in the company performance with all other conditions remaining constant. However, by controlling the company performance at the time before the introduction of the PEP, it is at least possible to compare those companies that introduced the PEP with those that did not, and to see whether the companies that introduced the PEP generated better performance than the others or not. Consequently, the following method was used: Multiple regression analysis is used to see the influence, by looking at the rate of change in sales between 1999 and 2004 and controlling the sales per employee of the company performance in 1999. The analysis included two groups of companies, one that introduced the PEP in 2000 or later and the other that did not introduce it before the end of the second half of 2004, which was the time of the survey.

The dependent variable is the rate of change in the sales per employee from 1999 to 2004, the independent variable is the dummy variable that indicates the companies that introduced the PEP in 2000 or later, and the control

variables are the sales per employee (logarithm), industry type and the number of employees (logarithm) in 1999. The result of the multiple regression analysis (see Table 3) shows that a company that introduced the PEP in 2000 or later has a statistically- significant positive influence at the level of 0.1 percent. In short, it indicates that the company performance improved for the companies that introduced the PEP in 2000 or later, compared with those that did not, when the company performance in 1999 is the control.

Table 3. Multiple regression analysis using the rate of change in the sales per employee (2004/1999) as a dependent variable (OLS)

Companies that introduced the PEP in 2000 or later and those that did not

	Unstandardi- zation factor	Standard error	Significance probability	Significance level
Companies that introduced the PEP in 2000 or later	0.118	0.029	0.000	***
Rate of change in the sales per employee in 1999 (log)	-0.205	0.015	0.000	***
Construction	-0.028	0.056	0.623	
Information & communication	0.022	0.065	0.738	
Transportation	-0.085	0.054	0.116	
Wholesale & retail	0.152	0.043	0.000	***
Finance and insurance	-0.235	0.059	0.000	***
Services	-0.121	0.045	0.007	**
Other industries (except manufacturing)	-0.047	0.080	0.551	
Logarithm for regular employees	0.038	0.023	0.094	
Coefficient	2.278	0.162	0.000	**

Note: *** p<0.001. ** p<0.01. * p<0.05. Logarithmic transformation applied for the rate of change in the sales per employee.

N = 917. Adjusted $R^2 = 0.206$. Significance probability of the ANOVA (analysis of variance)= 0.00

3. Business Strategy, HRM and Corporate Performance

In this section, another variable is added to see the correlation of business strategy, HRM and company performance. According to Porter (1980), strategies center around three types: cost leadership strategy, differentiation strategy and focus strategy. Since our survey data do not provide any information on the method of focus or the extent of focus applied by companies, in the analysis described below we limited business strategies of companies to only

two types—the cost leadership and differentiation strategies.

For the companies that selected both (1) development of new technology/product and (2) differentiation of competitive service/product as their business strategy in the survey questions on business strategy, a dummy variable is used to indicate that these companies are applying the differentiation strategy. The companies that selected the reduction of product/service price are considered as applying the cost leadership strategy. As a result, the differentiation strategy is used by 35 percent of the total number of companies, and the cost leadership strategy by 41 percent.

In addition, to take into consideration HRM practices that may fit into the business strategy, dummy variables are used for the following four practices: (1) introduction of the PEP, (2) emphasis on education and training of all employees, (3) emphasis on education and training for selected employees only and (4) use of non-regular employees and external work forces.⁶ Table 4 shows the result of multiple regression analysis, using the independent variables, including the variables related to the business strategy and to HRM practices. Although the value of determination coefficient is small, the dummy variable indicating non-regular employees and external work forces is the only variable that has a statistically-significant positive influence on the rate of change in the sales per employee. In this model, in which HRM practices, except the business strategy and PEP, are controlled, the PEP does not have a statistically-significant influence. Other HRM practices and the business strategy do not have a statistically-significant influence either. In other words, when strategies and HRM practices are controlled, non-regular employees and external work forces contributed to the improvements made by the companies surveyed in the period of five years since 1999.

However, we have two questions to answer here: The first question is how the use of non-regular employees and external work forces contributed to the improvement of the company performance, and the second is whether we can really be sure that none of the business strategies or HRM practices fit into or

⁶ The company is categorized in group (2) when it "provided education and training to improve capability of all employees" (53.1 percent) as part of their key human resource practices in the last five years, in group (3) when it "provided education and training to only selected employees" (37.3 percent), and in group (4) when it put importance on "use of non-regular employees and external work forces" with an increase of non-regular employees by 10 percent or more in the last five years (27.4 percent).

Table 4. Analysis using the rate of change in the sales per employee (2004/1999) as a dependent variable (OLS)

	Unstandardi- zation factor	Standard error	Significance probability	Significance level
Selective education & training	0.030	0.028	0.284	
Use of non-regular employees	0.072	0.031	0.018	*
Differentiation strategy	0.003	0.030	0.930	
Cost strategy	0.052	0.028	0.063	
Construction	-0.136	0.053	0.011	*
Information & communication	0.122	0.060	0.042	*
Transportation	0.036	0.050	0.470	
Wholesale & retail	0.083	0.041	0.043	*
Finance and insurance	-0.147	0.057	0.010	*
Services	0.091	0.041	0.028	*
Other industries (except manufacturing)	0.166	0.074	0.025	*
Logarithm for regular employees	-0.015	0.021	0.467	
Coefficient	0.178	0.073	0.014	

Note: *** p<0.001. ** p<0.01. * p<0.05.

N = 1146. Adjusted $R^2 = 0.035$. Significance probability of the ANOVA (analysis of variance) = 0.00

are consistent with the PEP.

For the first question, after examining multiple models by replacing the independent variable, we found one model that had statistical significance for multiple variables of strategies and practices.

Looking at Table 5, two strategies—the use of non-regular employees and external work forces and cost leadership—are statistically-significant independent variables. Although the value of determination coefficient is small, both have a statistically-significant influence on the company performance. From this result, it is possible that the company promoted the use of non-regular employees and external work forces when applying the cost leadership strategy. While the use of non-regular employees and external work forces may include the use of highly- skilled external professionals, the contribution made in the period between 1999 and 2004 was based on another pattern, which was focused on cost- reduction orientation with the use of non-regular employees and external work forces.

Table 5. Cost leadership strategy, use of non-regular employees and external work forces and rate of change in the sales per employee (OLS)

	Unstandardi- zation factor	Standard error	Significance probability	Significance level
Use of non-regular employees and external work forces	0.077	0.030	0.011	*
Cost strategy	0.058	0.027	0.035	*
Construction	-0.134	0.052	0.011	*
Information & communication	0.132	0.059	0.026	*
Transportation	0.032	0.049	0.512	
Wholesale & retail	0.087	0.040	0.030	*
Finance and insurance	-0.154	0.056	0.006	**
Services	0.087	0.041	0.031	*
Other industries (except manufacturing)	0.172	0.074	0.020	*
Logarithm for regular employees	-0.008	0.021	0.687	
Coefficient	0.208	0.071	0.003	

Note: *** p<0.001. ** p<0.01. * p<0.05. Logarithmic transformation applied for the rate of change in the sales per employee.

N = 1146. Adjusted R^2 = 0.035. Significance probability of the ANOVA (analysis of variance) = 0.00

4. Fitness of PEP, Business Strategy and HRM Practice

In general, companies use new HRM practices, such as the PEP, based on a certain business strategy, while simultaneously developing other HRM practices to manage human resources required for their business operation. In this section, we analyze, without considering the influence on the company performance, the correlation of the PEP, business strategy and HRM practice, which is the second question posed in the previous section.

Firstly, to find out the type of business strategies and HRM practices used by the companies that introduced the PEP, the following logistic regression analysis is presented, in which the dependent variable consists of a dummy variable that indicates the status of introduction of the PEP (see Table 6). As noted above, among the business strategies, the differentiation strategy had a statistically- significant positive influence on the introduction of the PEP. Among the HRM practices, selective education and training had a statistically-significant positive influence. As for the odds for companies that introduced the PEP, the number of companies that applied the differentiation strategy is 1.6 times higher than that of companies that did not. As for the

companies that introduced the PEP, the number of companies that introduced the selective education and training is 1.3 times higher than that of companies that did not. In other words, there is consistency both in the relationship between the PEP and differentiation strategy, and also between the PEP and selective education and training practice. Considering this result as characteristics of the company that introduces the PEP, we can assume that some kind of interaction is generated from the simultaneous execution of the PEP, differentiation strategy and selective education and training. In particular, it is possible that they are used systematically in a mutually reinforcing way.⁷

Table 6. Logistic regression analysis using the PEP as the dependent variable

	Unstandardization factor	Standard error	Significance probability	Odds	Significance level
Differentiation strategy	0.477	0.132	0.000	1.611	***
Cost strategy	0.050	0.124	0.685	1.052	
Education & training to all	0.088	0.118	0.456	1.092	
Selective education & training	0.302	0.123	0.014	1.353	*
Use of non-regular employees	0.111	0.134	0.406	1.118	
Construction	0.553	0.248	0.026	1.738	*
Information & communication	0.627	0.280	0.025	1.872	*
Transportation	-0.148	0.211	0.483	0.862	
Wholesale & retail	0.469	0.183	0.010	1.598	*
Finance and insurance	-0.226	0.251	0.369	0.798	
Services	-0.062	0.174	0.721	0.940	
Other industries (except manufacturing)	0.686	0.352	0.052	1.985	
Logarithm for regular employees	0.325	0.089	0.000	1.384	***
Coefficient	-0.418	0.155	0.007	0.658	

Note: *** p<0.001. ** p<0.01. * p<0.05. N=1280. Significance probability for omnibus verification of the model coefficient = 0.000.

Cox & Snell R² = 0.05, Nagelkerke R² = 0.07. Significance probability of Hosmer and Lemeshow

verification = 0.36.

According to this logistic regression analysis, (1) the rate of introduction of the PEP is the highest in the information and communication industry, followed by construction and wholesale and retail industries, and (2) the larger the company (number of regular employees), the higher the rate of introduction of the PEP.

The idea that these strategies and HRM practices work in a bundle or as a system is discussed by Arthur (1992) and MacDuffie (1995), the main advocates of the configuration approach in the SHRM theory described above. In the same way as it is discovered in this report, Arthur (1992) used the result of the survey conducted at steel works and pointed out that organization of HRM (cost reduction industrial relation system) was preferred, aiming at cost reduction, in promoting he cost leadership strategy.

5. Two Trends among Modern Japanese Companies: Business Strategy and HRM

In this section, we will consider the mechanism of interaction between the two sets of ideas—the differentiation strategy and the PEP, and the PEP and the selective education and training. In this report, a company is defined as selecting the differentiation strategy if it has selected both (1) development of new technology/product and (2) differentiation of competitive service/product. The manufacturing industry, for example, must ensure good human resources to develop new technology or a new product. To do that, they need to introduce a practice with high incentives in their human resource system, such as the PEP. From this point of view, it is highly probable that the PEP contributes to the differentiation strategy.

To this end, the following consideration can be made for the PEP and the selective education and training: In addition to obtaining good human resources with a highly incentive system of larger wages, it is likely that companies that introduce the PEP also invest in the concentrated education and training programs for a selected group of people who have potential to generate and increase the competitive power of the company. In other words, it is conceivable that companies are both "buying" and "building up" good human resources as the source of their competitive power. Furthermore, it is possible that synergetic effects are generated (and companies expect such effects to be generated) from the set of the PEP and the selective education and training, which interact with each other to create a positive influence.

While companies attempt to achieve an advantageous position over their competition by using the differentiation strategy, the set of the PEP and the selective education and training is implemented in the human resource management, creating an interactive influence of the strategy and human resource measures and consequently maintaining the competitive power. This

scenario seems quite convincing.

and training

To summarize our analysis on the business strategy and human resource measures, two broad trends are broadly identified (see Figure 2). For the business strategy of Japanese companies, we assume two strategies—the cost leadership strategy and the differentiation strategy. Companies that apply the cost leadership strategy use non-regular employees and external work forces in their human resource management, which serves to reduce cost. Since there is a limit in how far cost competition can go, companies may not be able to continue the cost leadership strategy in the long term. For the short term, however, this method may provide advantages over other companies, and in fact the analysis of our survey data tells us that it contributes to improvement of the company performance.

On the other hand, companies that apply the differentiation strategy ensure good human resources through introduction of the PEP. Also, companies that introduce the PEP tend to provide concentrated education and training to a select group of

Cost strategy ① Use of non-regular employees and external work forces 2 Increase of non-regular employees Use of non-regular Improved company employees performance Differentiation 1 Development of new technology/product strategy 2 Differentiation of competitive service/product HRM Improved company PEP performance Selective education

Figure 2. Two patterns of business strategy and HRM practice

competent people. It is possible that synergetic effects are obtained through an interactive influence among the differentiation strategy, the PEP, and the selective education and training that is congruous with the PEP. Although the set comprising of the differentiation strategy, PEP and selective education and training did not show a statistically-significant correlation to the company performance, as a system it may have some logic for improving the company performance in the long term.

Conclusion

Traditionally, business strategy and human resource management were handled separately. Analysis of the survey data, however, reveals that in Japanese companies today there is a strong organic linkage between the business strategy and human resource management. Also, this result provides us with a labor policy implication.

Needless to say, the demand and supply balance of the labor market was determined by factors of the demand side and the supply side. The demand forecast, however, was made based on relatively short-term changes in the recruitment behavior of companies or based on the time-series macro data such as changes in the number of people entering/leaving companies and the employment rate of non-regular workers. The analysis in this report, however, indicates that Japanese companies today apply human resource management that fits the business strategy. This implies that a change in the long-term demand of the labor market can be explained mostly by the business strategy of companies. It is very important to understand the business strategy of companies in forecasting the changes in the labor market. Information will make an important contribution to planning and drafting of labor policies, and the viewpoint of future surveys and researches should be widened to include corporate business strategies in addition to human resource management.

Another finding in this report is that the company performance is improved by application of the cost leadership strategy and the use of non-regular employees and external work forces. It is difficult to forecast the extent to which companies are able to compete with each other over cost. As long as competition continues, however, the use of non-regular employees and external work forces will be further advanced. The "White Paper on the Labor Economy" of 2006, published by the Ministry of Health, Labor and Welfare, points out that the number of non-regular employees will most likely increase

further in the future. One of the important problems that drew attention recently in Japan is the large economic gap between regular workers and non-regular workers. As was pointed out by the analysis in this report, such a gap is actually generated within the context of corporate management behavior, and further careful observation is required.

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