研究ノート

Intra-capital Relations, Coordination and Wage Determination*

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Abstract

When examining the extent to which capital -labor relations affect economic performance, some researchers began to put more stress on capital than labor. They also criticized the views that inclined to treat capital and labor as coherent or unitary actors. In line with the idea, this brief paper paid special attention to employer coordination. Specifically, using a simple wage determination model, we tentatively analyzed if employer coordination had effect on wage hikes. The result of our estimation showed that employers in higher productivity firms tended to refrain from raising wages.

1 Introduction

Many researchers more focused on labor, precisely on the power of trade unions, than on capital when studying the connection between capital-labor relations and economic performance.

Based on empirical studies on the U.S. economy in the postwar period, French régulation school has demonstrated that labor accepted a compromise with capital, which led to the unprecedented growth of productivity. Specifically, labor accepted the Taylor's"separation of planning and execution" principle in return for wage hikes in line with productivity increases (Boyer [1988]).

From the standpoint of Corporatist theory, some researchers found that the connection between

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centralization of wage bargaining and wage restraint led to better macro-economic performance (Cameron [1984], Calmfors and Driffill [1988])[1]. In this view, the role of peak organizations on the labor-side is considered as crucial because they are expected to limit the capacity of individual unions to free-ride on the wage restraint of other unions.

It is true that the above theories and the accompanying empirical evidence are instrumental in understanding the relationships of economic performance with capital-labor relations. However, they seem to have the following problems.

- Those theories are inclined to view labor and capital as coherent and opposing groups[2].
- Although those theories refer to employers' organization or behavior at times, they are preoccupied with the analysis of labor[3].

Recently, interesting new ideas have been advanced, which are likely to solve the problems. Nilsson [1996] found that opportunistic attacks by individual capitalists on the capital-labor accord was responsible for a significant portion of the breakdown of the accord, followed by the deteriorated economic performance. Based on the case studies on Sweden and Denmark, Swenson [1991] addressed that centralization of the industrial relations systems in the both countries came about as the result of a cross-class alliance between groups of workers and employers which imposed wage restraint on other groups[4].

What has been demonstrated in these ideas is that thinking of capital and labor as coherent and opposing classes is misleading. Those ideas are likely to transcend the misleading ones.
Thus, it is important to note the following.

- Individual employers are likely to take opportunistic behavior at the expense of employers as a whole.
- It is misleading to treat capital and labor as unitary actors. Rather, intra-class conflicts should be stressed.

Turning to the second problem. We can find that most studies in the Régulation school and Corporatism theory seem to be inclined to analyzing labor although they stress that labor made a

[1] According to this view, both centralized and decentralized wage bargaining systems achieved better economic performance in comparison with countries whose degree of centralization was ranked as the middle.
[2] For example, Carter and Rayner [1996] criticized Régulation school for paying insufficient attention to non-class social divisions.
[3] Pontusson [1995] attached the label "labor-centered view" to those theories.
[4] See also Swenson [1992] and Iversen [1996].

compromise *with capital* in the postwar period.

On the basis of empirical studies, some scholars have recently demonstrated that employer coordination has been more important in securing wage moderation than union coordination (Soskice [1990], Riel [1995], Bean [1994] and Glyn [1995]). It is also showed that in most advanced capitalist countries employers have taken initiative in pushing for decentralization of wage bargaining system since the early 1970s (Pontusson [1992]).

Based on these empirical studies, it is essential to take account of employers' behavior and their coordination when considering the extent to which capital-labor relations affect economic performance.

In line with the idea, we would like to explore the relationship between employer coordination and economic performance in Japanese economy since the mid 70s. More specifically, we will examine if employer coordination is significant in containing wage increases.

This paper is as follows. First, we will make up the coordination coefficient and then address it briefly. Second, we will form the simple wage determination model, into which the effects of factors specific to individual firms on wage determination are also incorporated. Using this model, we will examine if concerted actions of employers have effect on wage hikes in individual firms. Finally, we will show a few findings, derived from the estimated results.

2 Employer Coordination and Wage Moderation

Depending on the economic situation specific to individual firms, they are likely to show different profitability. In that situation, each employer tends to determine wages according to its own profitability level. Wage dispersion will be increased if employers don't coordinate with each other in determining wages.

On the contrary, wage dispersion will be decreased if employers coordinate with each other. As the result of their concerted actions, employers are likely to settle wages irrespective of their own profitability level. Based on the idea, we form the coefficient of coordination:

$$\textit{the i-th firm's coordination coefficient}$$
$$= \frac{\textit{firm's productivity in the first quartile} - \textit{the i-th firm's productivity}}{\textit{the i-th firm's productivity}}$$

In computing the coefficient, the data, i.e. the logarithm of productivity, are arranged in ascending order and divided into four quarters. The first quartile in the productivity is the value below which the lowest quarter of productivity fall. We suppose that those firms are marginal and highly vulnerable to wage hikes.

We incorporated this coefficient into the following wage detemination model:

$$ln\ (wage_{it}) = const. + a_1\ ln\ (pr_{it}) + a_2\ ln\ (emp_{it}) + a_3\ coord_{it} + e_{it}$$

$wage_{it}$ indicates labor cost per employee in the i-th firm at the fiscal year t. pr_{it} indicates gross value-added per employee in the i-th firm at the fiscal year t. emp_{it} is the number of employees in the i-th firm at the fiscal year t. e is the error term.

Considering institutions concerning wage determination in the postwar Japanese economy, our model includes micro factors as well as macro ones[5]. We are not concerned here with macro factors other than employer coordination since the qestion we have to ask here is whether employer coordination has effect on wage determination.

Wages are expected to be sensitive to firms' earnings, i.e. productivity and the correlation between them is expected to be positive. Employers are supposed to settle wages flexibly in order to maintain employment. The correlation between wages and employment is accordingly expected to be negative. From the industrial relation's point of view, we can say that labor accepted a compromise with capital. Specifically, wages are sensitive to firms' earnings in return for employment security.

$coord_{it}$ indicates the coordination coefficient of the i-th firm at the fiscal year t . The coefficient is the deviation ratio of the i-th firm's productivity from the firm's productivity in the first quartile. We assume that each employer determines wages in line with wages which marginal firms[6] can afford to pay if employers coordinate with each other in determining wages.

This coefficient can be interpreted as follows. If coordination among firms works effectively, firms above the first quartile will determine wages less than their ability to pay (in other words, productivity) in order to bring wages close to the level in which marginal firms can pay. That is to say, employers above the first quartile pay a common level of wages irrespective of their better productivity. As a result, they are ready to contain wage increases.

In the case of employer's concerted actions, firms with productivity above the first quartile are expected to have negative effects on wages. Firms with productivity below it are expected to have

[5] See, for example, Tachibanaki [1995] and Mori [1981]

[6] In this paper, firms below the first quartile of productivity are supposed to be marginal.

positive effects on wages. Consequently, the sign of coordination coefficient is expected to be positive.

On the contrary, in the case that employers don't take concerted actions in settling wages, the coefficient of coordination is expected to be negative.

3 Estimated Result and Interpretation

We picked up 231 firms out of the firms' data in the manufacturing sector, which we could trace from the fiscal year of 1975 to that of 1990[7]. Then we constructed panel data set. Using the data, we estimated the above model[8].

The estimated result is shown in the Table-1. It shows that coefficients of productivity and employment are significant and signs are in accordance with our expectations. Employers are likely to regard their own situations as important when determining wage hikes.

Table 1: Employer Coordination and Wage Determination: 1975-90

ind.	*coefficient*	*t − value*
const.	5.990	(61.605)
pr	0.350	(48.187)
emp	− 0.0823	(− 10.157)
coord	1.485	(11.831)
adjusted R^2		0.358

The more important part of our estimated result is that the coordination coefficient is significant and positive. This finding suggests that employers are likely to have taken concerted actions in settling wage hikes.It seems reasonable to suppose that employers in higher productivity firms tend to refrain from raising wages.

In the light of case studies on capital-labor relations in Japan, more specifically, ones in the Spring offensive in 1975[9], we can interpret our estimated result as supporting the claim that employer coordination as well as cooperative labor unions was instrumental in securing wage mod-

[7] Taking a look at the evolution of industrial relations in the postwar period, labor unions seem to have changed the strategy for the wage bargaining in 1975 (See Ohmi [1994] and Nakamura and Nitta [1995]). This is the reason why we took the period from 1975 to 90. Data available here are ones in manufacturing sector and they are all standardized. See appendix about data.

[8] In estimating the model, we used a random effects model.

[9] See Shinkawa [1984].

eration in those days.

However, when we confront the evolution of capital-labor relations in the 80s with the estimated result, we encounter difficulties. We can find that wage dispersion increased in the 80s. Besides, some case studies on intra-capital relations show that it became hard for employers to take concerted actions because of increased disparities in productivities[10]. This implies that there may have been a sift from cooperative-based relations between employers toward conflict-based ones in the 80s.

A close attention to the intra-capital relations, however, will show that a cleavage has developed between industries, specifically, between domestic demand-oriented industries and export- oriented ones[11]. In this respect, our model is not sufficient since we supposed that there was a cleavage between individual firms. Thus, it is necessary to incorporate variables standing proxy for conflicts between industries rather than ones between firms. The future direction of this study will be one that encompasses the industry-based conflicts.

4 Concluding Remarks

When addressing the extent to which capital-labor relations affect economic performance, some researchers began to put more stress on capital than on labor. They also criticized the views that inclined to treat capital and labor as coherent or unitary actors. In line with the idea, this brief paper paid special attention to employer coordination.

Specifically, we analyzed if employer coordination had effect on wage hikes. This tentative analysis showed that:

- employer coordination as well as factors specific to individual firms have effect on wage hikes.
- In the estimated period, employers in higher productivity firms are likely to refrain from raising wages.

Thus, it is essential to take intra-capital relations into consideration when addressing the relationship between capital-labor relations and economic performance in Japanese economy.

[10] See Tohyama [1996]

[11] Nakamura and Nitta [1995] pointed out that while major corporations in export industries such as steel and shipbuilding were facing increasingly sever competition in the mid 80s, companies in domestic demand-oriented industries were not subject to such intense competition.

Data Sources

Labor cost per employee, gross value-added per employee and *the number of employee* in individual firms are all from"Waga Kuni Kigyo no Keiei Bunseki—Kigyobetu Tokei-hen (Business Analysis of Japanese Firms—by Firms)", ed. by Ministry of International Trade and Industry, Policy Office, 1975-1990. Firms listed in this report are the representative in their industries and those found are *above a billion-yen*.

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