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## JAPANESE LABOR'S SPRING WAGE OFFENSIVE AND WAGE SPILLOVER\*

HARUO SHIMADA\*\*

### INTRODUCTION

*Suntō* or Japanese Labor's Spring Wage Offensive is undoubtedly one of the most influential union wage policies in post-war Japanese trade unionism. Beginning in 1955, *Shuntō* has included approximately one half of the union membership. To be noted is the fact that negotiated wage increases<sup>(1)</sup> of around 10 percent or more have been successfully gained during every spring this past decade.

With each *Shuntō* a phenomenon has grown increasingly noticeable. Wage negotiators among employers and among unions refer to or emulate others. Correspondingly, negotiated wage increases for various negotiating units have converged markedly in recent years. Under these circumstances wage increases attained at certain negotiating units seem to spillover to other units.

This present paper, focussing primarily on this phenomenon of wage spillover, attempts an anatomy of the mechanism and the working of *Shuntō* and tries an evaluation of its net impact upon wage increases in Japanese economy.

I shall, in section II, review briefly the historical development of *Shuntō* and discuss the mechanism and some of the leading characteristics of the offensive. Section III examines the evidence for the intentional reference or emulation behavior of the wage negotiators. A comprehensive attitude survey conducted by a Keio University Research Group is utilized for this examination. Section IV analyses quantitatively the relationship between negotiated wage increases and key explanatory variables. The nature of wage spillover in *Shuntō* is discussed using a simple regression model. Section V attempts a provisional assessment of net impact of *Shuntō* upon general wage increases. Summary and concluding remarks are put in the final Section VI.

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\*\* Keio University and Cornell University.

(1) Negotiated wage increases in *Shuntō* are usually termed *Base-Up*. A fair amount of the data have been collected by the Ministry of Labor since the beginning of *Shuntō*. Though the data are basically average increases by an enterprise union (in effect equivalent to a firm in terms of organizational coverage), this paper uses the industrial average for convenience. For a further explanation of the term *Base-Up* see pp. 51-53 of this paper.

I. HISTORICAL DEVELOPMENT AND THE MECHANISM OF *Shuntō**A History of Shuntō*

In the summer of 1954 Kaoru Ohta,<sup>(2)</sup> chairman of *Gōka Roren* (Synthetic Chemical Workers Union), challenged Minoru Takano, then Secretary General of *Sōhyō* (Japan Federation of Labor Unions)<sup>(3)</sup>, for *Sōhyō*'s leadership at its fifth regular convention. Ohta was proposing the idea of organizing a joint struggle by industrial unions<sup>(4)</sup> primarily for economic goals. Although he did not win the position of Secretary General at this convention, his basic idea was incorporated in the general struggle plan for 1955 which was adopted at this convention.<sup>(5)</sup> And this event was to make an epoch in the course of postwar Japanese trade-unionism.

The confrontation of two major policy proposals, then represented by Takano and Ohta respectively, had its roots in the origin of the post-war Japanese union movement. That is to say, both proposals originally stemmed from the agony associated with trying to determine how to overcome and get rid of a built-in weakness of enterprise unionism, which itself was commonly thought to be an unwelcomed bequest from pre-war industrial relations which unfortunately formed a somewhat crippled benchmark for the post-war union movement. As a remedy Takano proposed a merged struggle of all classes of people including industrial workers, peasants, self-employed and even house-wives across communities and regions. Ohta, quite to the contrary, advocated a united action of unions across the lines of industries. A clearcut distinction between the two is found in the fact that while the former is more likely to have a political inclination with a stress on class struggle, the latter concentrates in effect almost exclusively on an economic goal, namely wage hikes for member workers.

During 1954, however, *Sōhyō* did not launch any substantial preparation for the joint struggle. The preparation was undertaken, in fact, somewhat separately from the formal *Sōhyō* leadership.<sup>(6)</sup> The initial organization for joint struggle

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(2) He was then vice-chairman of *Sohyō*.

(3) The position of secretary general in those years was in effect the most powerful in administering the entire *Sohyō* activities. This is why challenging for the position meant challenging for the overall leadership.

(4) The organization of an industrial union usually termed *Tansan* is more or less comparable to that of national or inter-national unions in the U.S. In fact, however, it is merely a somewhat loose confederation of enterprise unions. Ohta's proposal meant to set up an inter-industrial wage drive.

(5) The description of events presented in this section is mainly based upon the following references: Ministry of Labor, *Shiryō Rōdō Undō Shi* (Collected Documents of Labor Movement), issues of relevant years. Japan Productivity Center, *Chingin Hakusho* (White-paper on Wages—Spring Labor's Wage Offensive and Wage Determination Mechanism) 1969, Sumiya, Mikio, *Nihon Rōdōundō-shi* (A History of Japanese Labor Movement), Tokyo Yushindo, 1966, Ch. 12, and Okazaki, Saburo, *Sōhyō 15 nen* (15 years history of *Sōhyō*), Tokyo Rōdōjumpōsha, 1965.

(6) The office of the Council was established tentatively in the Synthetic Chemical Workers Union headquarters. This fact may be illuminating of the situation.

was thus formed in the winter of 1954 under the title of *Kyōtō Kaigi* (Joint Struggle Council). Among the participants were *Shitetsu Rōren* (Private Railway Workers Union), *Tanrō* (Coal Miners Union), *Goka Rōren* (Synthetic Chemicals Workers Union), *Kamipa Rōren* (Paper and Pulp Industry Workers Union) and *Densan* (Electric Power Industry Workers Union). Shortly after its formation three more unions, *Denki Rōren* (Electric Machine Workers Union) and *Kagaku Dōmei* (Chemical Industry Workers Union), joined it.<sup>(7)</sup>

During the initial several years, the spring wage offensive did not turn out to be admirably successful. The form of the joint struggle organization itself remained somewhat unsettled. Not only the form but also the title of its headquarter was altered from year to year, for instance, *Shunki Chin Age Kyōtō Kaigi* (Spring Wage Hike Struggle Joint Council) for 1955, *Shunki Chin Age Gōdō Tōsō Hombu* (Headquarters of Amalgamated Spring Wage Hike Struggle) for 1956, or *Shuntō Gōdō Senjutsu Iinkai* (Amalgamated Committee on Spring Offensive Strategy) for 1958 and so forth.<sup>(8)</sup> The content of the package of demand seems to have been considerably affected by the then political problems of the labor movement. Timing of organizing a drive was not necessarily strictly in spring as has been the case in later years. In short, the nature of the joint wage struggle remained by and large temporary in its early years.

What may probably be more important to be noted in those years is the bitter resistance of employers. Those cases occurred much frequently in early years, so much so that some unions had to conclude their struggles with no substantial gains. Perhaps a typical example is seen in steel industry. In 1957 *Tekkō Rōren* (Iron and Steel Industry Workers Union) organized a united action demanding a wage increase, which after all ended with zero replies from the companies.<sup>(9)</sup> Moreover, long lasting painstaking strikes by two major enterprise unions<sup>(10)</sup> in the spring of 1959 resulted not only in no gains but also weakening seriously the leadership of those unions.

Making a sharp contrast with the employers' harsh defense, enterprise unions have been in quite a few cases damaged fatally by a split as a consequence of unsuccessful struggles. Among conspicuous victims are the Coal Miners Union, Auto Workers Union, etc. In spite of all these unfavorable situations however, activities to organize labor's spring wage offensive have never been ceased nor

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(7) Thus the Council expanded to be, in effect, an inter national-center organization although its formal formation was to await until 1959 when *Chūritsu Rōren* (Independent Federation of Labor Unions) formally joined the Council.

(8) Japan Productivity Center, *op. cit.*, p. 104.

(9) Though the struggle actually was tried in the fall, the case is worth noting as an illuminating example of the general situation. In this particular struggle, the unions persistently engaged (eleven times) in short strikes (work stoppages) during the period of two months. Work stoppages which last this long and with this much persistence is very unusual in the recent experience of the Japanese union movement.

(10) They are unions of *Fuji* and *Nippon-Kōkan* companies. They could not after all break the very tightly united defence of five major companies.

been given up. Even under various types of hardship, participants in the joint struggles have, if not remarkably, steadily increased.

Upon the turn of a new decade, the 1960's, the overall situation seems to have shifted to a distinctly favorable one. First to be noted is the remarkable increase in the number of participants in the broad drive of labor's spring wage offensive. This consists of the increased number of unions who present wage demands in the spring in addition to the increased union which actually join the Council. As seen in Table I, the growth was especially sharp at the beginning of the 1960's.

Second negotiated wage increases recorded surprisingly high rates. Starting with a remarkable high of 13.8 percent in 1961 annual rates of more than 10 percent have become more or less customary, as seen in Table II.

Third, employers response has changed its tone markedly. In stead of protecting themselves with stubborn resistance, employers became keenly anxious about the social standard of negotiated wage increases. A rationale for the change in their attitude may be summarized: (1) they did not want to lose their shares in product markets in the growing economy by work stoppages, (2) they did not want to lose their advantageous position in the labor market in recruiting the then scarcer new entrants by giving them an impression of a poorly paying company. These considerations may well have enforced employers to pay no less than others did. However, to the extent that there is no reason to pay any more than the minimum amount which is sufficient to keep employees' morale to work and to

TABLE I. UNION MEMBERSHIP PARTICIPATING *Shuntō*  
(UNIT: THOUSAND PERSONS)

Year	Membership of Unions Spring Labor's Wage participating to Offensive			Ratio of participants to entire union member- ship (%)	Ratio of participants to total number of employed (%)
	Joint- Council	Non-member of the Council	Total		
1955	( 700)	—	( 700)		
1956	(1600)	—	(1600)	25.45	9.63
1957	1870	—	1870	28.93	10.25
1958	2039	—	2039	30.15	10.70
1959	2396	—	2396	34.31	11.80
1960	2609	274	2883	39.98	13.43
1961	2864	929	3793	36.45	12.31
1962	3287	527	3814	45.62	16.47
1963	3611	1367	4978	55.49	20.10
1964	3723	1282	5005	53.49	19.29
1965	3805	884	4734	48.31	17.53
1966	3933	1213	5166	50.91	18.38
1967	3994	1192	5186	49.85	17.65

Source: Keizai Kikaku Kyokai (Economic Planning Association), *Chingin Hendō no Bunseki* (An Analysis of Wage Movement) 1968., p. 32.

TABLE II. NEGOTIATED WAGE INCREASES AND DISPERSION  
(AVERAGE OF ALL *Shunto* PARTICIPANTS) a.

Year	Absolute (yen)	Percentage	Quartile range dispersion b.
1956	1063	6.3	0.57
1957	1518	8.6	0.39
1958	1050	5.6	0.58
1959	1281	6.5	0.39
1960	1792	8.7	0.34
1961	2970	13.8	0.27
1962	2515	10.7	0.26
1963	2237	9.1	0.31
1964	3305	12.4	0.20
1965	3014	10.3	0.31
1966	3273	10.4	0.24
1967	4214	12.1	0.13
1968	5213	13.5	0.14

Source: Ministry of Labor, quoted from Furuya, Nakamura, Auzuki, *Chingin Hendō Yōin no Kenkyū* (A Study of Determinants of Wages) Economic Research Institute, Economic Planning Agency, 1969, Research Series No. 20, p. 181.

Notes: a) Average of private sector.

b) Difference of first and third quartile divided by median.

retain a "good" reputation among potential entrants, employers had necessarily to become earnest observers of prevailing "social standard" as long as the standard is the rate which satisfies the above requirements. Correspondingly, dispersion among negotiated wage increases as seen in column 3 of Table II has shown a marked decline. It should be noted here that the dispersion is measured in terms of absolute wage increases and not percentage increases.

Turning back to labor's side, the organization for the joint struggle has been more firmly established<sup>(11)</sup> and the annual campaign has become more or less routinized. The basic nature of the entire labor's spring offensive has now become admittedly economic. Though political goals frequently are added to the package of demands, their role is only incidental. A routinized procedure for each spring's labor offensive seems to have been almost invariably established.

#### *The Working of Shuntō—Pattern Bargaining*

A closer observation of this routinized procedure of *Shuntō* will be useful for understanding the mechanism of wage determination in the context of *Shuntō*.

Following the season of preliminary debate between unions and employers

(11) "Labor's Spring Offensive Joint Struggle Council" has been established firmly with an international-center joint organization in a formal sense in 1954 when *Chūritsu Rōren* (Independent Federation of Labor Unions) formally joined the Council.

based upon their own "White Paper of Wages"<sup>(12)</sup> substantial steps are to be taken at the Council, namely setting up of a concrete timetable of struggles for the forthcoming spring offensive. This, in turn, is brought back to individual member industrial unions of the Council for approval and confirmation. Through this process of repeated interactions, a fairly elaborate strategic time-table is made up. A similar process is developed within the individual industrial unions between a "central enlarged committee for struggle" and its member enterprise unions.<sup>(13)</sup>

The basic strategy which has been most commonly adopted by the joint council is first to select the then most promising union and let it enter into negotiations expecting that it would obtain the maximum possible gain from its employer. Selection of the union is usually made on the basis that (1) its industry is prosperous, (2) it maintains agreeably strong organization, (3) its leaders and members have a good deal of strong spirit for struggle. Thus the union to be selected may well be altered from year to year as a consequence of a change in the above mentioned conditions. This selected union who fights first is usually called the "Top Batter".

The next step is to encourage and aid other unions to follow the top batter if its struggle turns out to be successful. Yet, to the extent that the selected top batter's ability to achieve the expected results sometimes does not look too reliable, a second group or a third group might be allocated in the strategic program. This plural selection is more often the case. According to the specific character of its strategic allocation, almost every *Shuntō* has created a catch phrase which depicts this character in short words, such as *High Plateau Struggle*, *Champion Struggle*, or *Central-Core-Unions-Go-First Struggle*<sup>(14)</sup> and the like.

However, the top batter selected intentionally in this way may or may not be the substantial pattern setter in *Shuntō* wage round. In evaluating a wage leadership in *Shuntō*, a special attention would perhaps have to be paid to the role of private railway industry. The private railway industries have been one of the principal foci of attention in almost every *Shuntō*. This has been so perhaps partly because of the fact that the Private Railway Union is one of the oldest members of the *Shuntō* Council and the one which maintains an outstandingly solid industrial organization. Yet, probably a more important reason seems to lie in the fact that the financial condition of the industry is relatively free from cyclical fluctuations due to its nature of public transportation and because the wage determination there usually involves the mediation of the Central Labor Board. Since the determination through mediation by a third party takes more time than otherwise and the recommendation is usually not announced until after the overall picture

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(12) Issuance of the "White Paper" by union national-centers and employers federation is relatively recent phenomenon. This "Paper" is in effect the basic plans or policy proposals prepared for forthcoming *Shuntō*.

(13) By means of this procedure, within an industry, it is often the case that a more or less uniform demand is to be formed across all member enterprise unions.

(14) Japan Productivity Center, *op. cit.*, p. 105.

becomes somewhat clear, the settlement in this industry is likely to be at a later stage of the *Shuntō* process. It would be reasonable to think that all these factors have helped the results of private railway negotiations to have come to be regarded as a sort of social standard. And as a matter of fact, a good many unsettled negotiations tend to speed up to arrive at conclusions immediately after the settlement in the private railways.

Thus, most of major negotiations reach settlements usually during the period between the top batter's struggle and the railways' settlement. This relationship has been most compactly visualized by Tsuneo Ono as seen in Fig. I. These outcomes in the private sector are in turn followed by the public sector, namely public corporations and government offices. Since the right to bargain and to strike are considerably limited in this sector, the role of Public Corporations Labor Board and Government Personnel Bureau is somewhat decisive in the determination of wages. Yet, this is the area where the role of national center of the union is often appreciable in settling complicated matters through negotiations with the government.

Throughout such a process it has been found that in every *Shuntō* some industries (and industry-wide federation of unions) have performed a relatively greater role than others in the formation of the "social standard."<sup>(15)</sup> The following industries (union federations) are commonly regarded as the substantial pattern setters, in this sense, for every *Shuntō* wage round.<sup>(16)</sup>

1960.....	Iron and Steel industry
1961.....	Public Corporations
1962.....	Iron and Steel industry
1963.....	Private Railway industry
1964.....	Iron and Steel industry
1965.....	Private Railway industry
1966.....	Synthetic Chemical industry
1967.....	Iron and Steel industry
1968.....	Private Railway industry

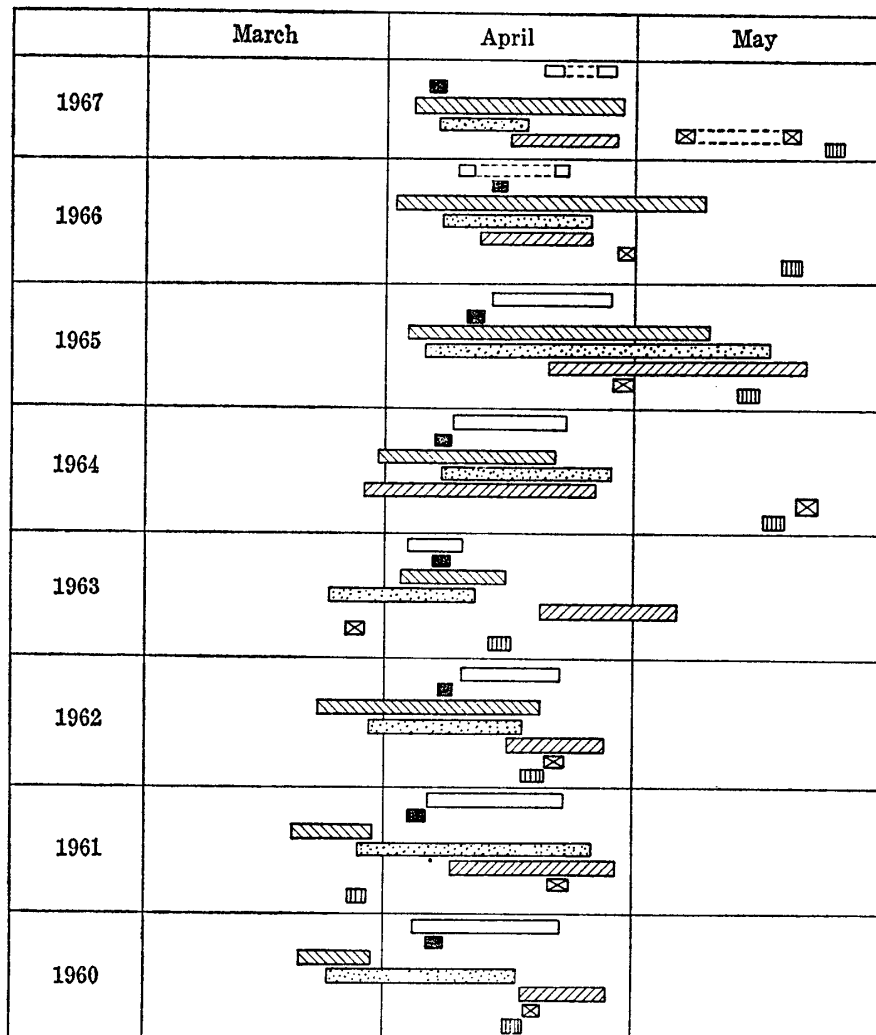
A comparable situation is observed also within an individual industry. What is particular to this case, however, is the fact that the leaders are seldom altered from year to year. In other words, wage leadership is somewhat stable within an industry. In most instances, some large firms and their unions set the pattern and smaller firms and unions follow afterwards. It is also common in many negotiations that a wage offer of a company is revised several times before reaching the final outcome. Throughout the course of these repeated revisions negotiators

(15) This social standard implies the prevailing social standard of negotiated wage increases in *Shuntō*, which is most commonly termed *Shuntō Sōba*.

(16) Since *Shuntō* is held regularly in spring, wage round is as a natural consequence formed regularly every year. A pattern-setter therefore leads the annual wage round. The cited list of setters is quoted from Furuya, Nakamura, Suzuki, *Chingin Hendō Yōin no Kenkyū* (A Study of Determinants of Wage Movement) 1969, p. 79.



Fig. I. Relationship of Principal Industries  
With Respect to Timing of Settlement



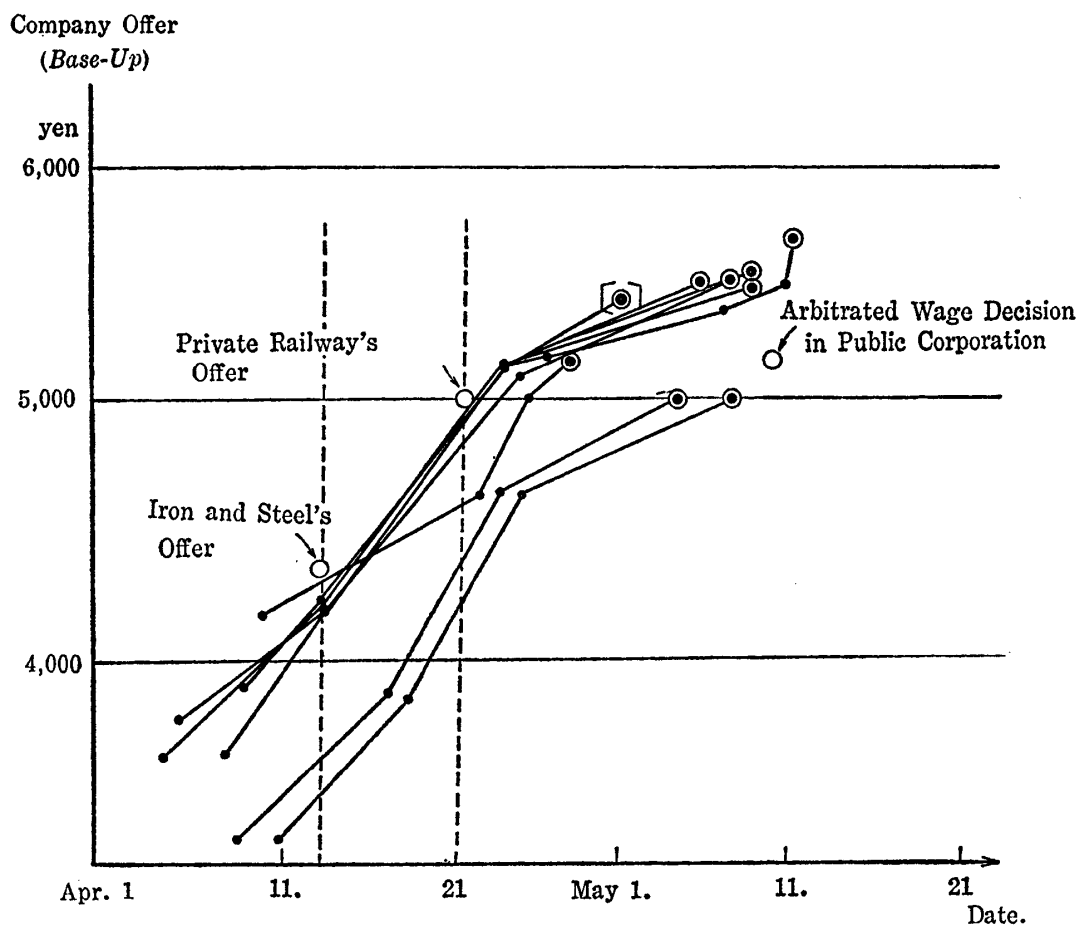
Source: *Koza Rodo Keizai* (Lectures on Labor Economics) Nihon Hyōron Sha Tokyo, 1967 Vol. 3 (Labor Union), p. 153.

Notes: Industry, Main Enterprises

- Iron and Steel; *Yawata, Fuji, Sumitomo, NKK, Kobe*
- Chemical; *Sumitomo, Tōatsu*
- Ship-building; *IHI, Mitsubishi, Mitsui, Hitachi Kawasaki,*
- Electric Machine, *Hitachi, Toshiba, Mitsubishi Matsushita*
- Mining, *Mitsui, Mitsubishi, Sumitomo, Dōwa, Furukawa*
- Private Railway; 13 Major companies
- Public Corporation.

may estimate outcomes of others with fair amount of accuracy. Therefore the followers usually reach agreement after the leader's settlements or at least after having fairly accurate estimates of them. Figure II is based on information from the 1968 negotiations of the ship-building industry and it allows one to clearly

Fig. II. Process of Wage Negotiation in Ship-Building  
Industry 1968 Spring



Source: Japan Productivity Center, Committee on Wage Determination Mechanism, *Chingin Hakusho: Shuntō to Chingin Kettei Kikō* (White Paper on Wages: Spring Labor's Wage Offensive and Wage Determination Mechanism), 1969, p. 83.

Notation:

- ; Company offer to be revised.
- ; Final offer.
- ⊖ ; Settlement with mediation of Central Labor Board.

visualize this relationship. The picture is also indicative of the fact that negotiators closely refer to one another's activity throughout the process of negotiation. Although not all industries would present exactly the same picture, it is safe to say that the basic relationship is more or less comparable.<sup>(17)</sup>

#### *Some Important Characteristics of Shuntō Wage Negotiation*

##### A. *Base-Up* or Enterprise Average of Negotiated Wage Increases

Negotiated wage increases determined in *Shuntō* is usually termed *Base-Up*.

(17) Japan Productivity Center, *op. cit.*, Part I Chapter 6 and Part II Chapter 3.

This is simply the increased wage bill of a firm divided by the number of its regular employees. The amount of this is the principal target of the unions. While intense debate is held centering on this magnitude and the magnitude is usually contracted precisely between a company and a union, increases in actual earnings of individual workers are often but little touched upon in the negotiations. In other words, in sharp contrast with the exactness of the *Base-Up*, internal distribution of the increased wage payroll remains somewhat obscure. Despite attempts to include various related subjects such as revision of the wage system, fringe benefits and so forth into *Shuntō* negotiations, principal interest remains after all in the amount of *Base-Up* and nothing else.<sup>(18)</sup>

This conspicuous feature of *Shuntō* seems to stem from two underlying conditions which strongly characterize Japanese labor problems; namely, the length-of-service wage system and enterprise unionism.<sup>(19)</sup>

A length-of-service wage system essentially implies that the wage of an individual employee is determined primarily according to his length of service within the particular firm which is a proxy for his contribution to his firm. Consequently wage determination is only barely connected with the concept of job or skill to which a trade union may have much more to say than to a worker's contribution to a firm as represented by his length of service.

Therefore to the extent that this traditional wage system is predominant, a union has little to do with the determination of an individual worker's wages or what is equivalent, the internal distribution of an increased payroll. Wage rates are determined largely in terms of a group of entire employees rather than in accordance with the skill level of or job performed by individual workers. Although *Shuntō* gave rise to an increased role of the unions in wage determination, the unions have tended to concentrate on the amount of the *Base-Up*, leaving the entire administrative business of internal distribution in the hands of the labor-management department of the company.

The unions' weakness in this respect is also due to their basic structure, namely enterprise unionism. There, the principal basis of organization is not a job, skill nor industrial demarcation. It is merely the fact that workers are employed in

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(18) The point is evidenced by the attitude survey which will be disclosed fully in the following section III of this paper. The survey reveals the fact that the outstanding focal point of negotiators is the *Base-Up* magnitude.

(19) These two aspects of Japanese labor problems have been discussed thoroughly by students of Japanese labor problems. I will only mention briefly these essential characteristics since my purpose here is simply an attempt to combine these underlying conditions with the peculiar feature of *Shuntō* wage negotiation, namely *Base-Up* wage negotiation. For reference to discussions of those underlying facets of Japanese labor, Ohkochi, "Nihon teki Roshikankei no Tokushitsu to Hensen (Character of Japanese Industrial Relations and Its Change), *Nihon Rōdō Kyōkai Zasshi* (Monthly Journal of Japan Institute of Labor), No. 1, 1959. Sumiya, *Nihon no Rōdō Mondai* (Japanese Labor Problems), 1964 Tokyo, Tokyo University Press, and Tsuda, *Nenko teki Rōshi Kankei Ron* (Length-of-Service-Reward Type Industrial Relations), 1968 Kyōto. Minerva Publishing Co., may be mentioned.

the same enterprise. In other words the enterprise itself constitutes the basis of organization. No matter to what different categories a job may belong workers are eligible to be organized into the same enterprise union. Consequently this mixed union lacks a job or craft consciousness. It is on the other hand, however, quite sensitive and heavily subject to the financial situation of the enterprise. This particular nature of Japanese union seems to have given rise to the *Base-Up* negotiation cited above.

#### B. Union Strength and Pressure

A series of well organized simultaneous offensives by unions with large wage increases as their consequence would look like eloquent evidence of the great strength of unions. However, there is also another fact which does not seem to allow us to so easily come to this conclusion. The fact is not to say that union strength is denied. It rather seems to suggest the need for a specific qualification in interpreting the meaning of union strength in the context of *Shuntō*.

Let us look at the attainment ratios in *Shuntō* wage negotiation. The attainment ratio is defined as the ratio of the union demand to the actual attained wage increase. As seen in Table III the attainment ratio in various industries falls roughly in the range of 46 percent through 76 percent.

TABLE III. ATTAINMENT RATIOS<sup>a</sup> IN *Shunto* WAGE NEGOTIATION  
(IN PERCENTAGE)

Year	Attainment Ratios
1957	76.5
1958	52.7 <sup>b</sup>
1959	69.5
1960	63.2
1961	73.2
1962	50.2
1963	46.4
1964	59.5
1965	46.9
1966	46.2
1967	57.6
1968	58.9

Source: Japan Productivity Center, *Chingin Hakusho-Shuntō to Chingin Kettei Kikō*- (White Paper of Wages-Spring Labor's Wage Offensive and the Mechanism of Wage Determination) pp. 306-309.

Notes: a) Figures are averages of participant industrial unions.

b) In 1958, the percentage was computed by the author from lesser number of unions.

What does this percentage mean? A straightforward interpretation would be that unions were only able to attain 46 percent to 76 percent of their demands. However it is difficult to say whether this ratio is high or low. For if the union

demands were close to their resistance points<sup>(20)</sup> these ratios would be low, while if the demands were close to the target points then the ratios should be high. Furthermore, it can be observed that during the years of a sharp rise in *Shuntō* activities<sup>(21)</sup> there is a decline in the attainment ratio. This is indicative of the particular nature of the union demands in that they bear not only elements of desired targets but also of normative goals.<sup>(22)</sup> In this sense it is difficult to conclude that union strength is low or getting weaker in spite of the expansion in *Shuntō* seemingly leading to a lowering of attainment ratios.

On the other hand, however, there is no powerful evidence that the ratio is high,<sup>(23)</sup> that is, that a union substantially attains what it really wants by means of its strength. For in order for this to be said it would have to be expected that a union struggles persistently until it obtains at least its minimum satisfactory

TABLE IV. MAN-DAY LOST AND LENGTH OF STRIKES IN *Shunto*  
(DAY)

Year	Man-day Lost per Union Member	Average Length of Strikes
1960 .....	0.1	2.0
1961 .....	0.4	3.3
1962 .....	0.3	2.7
1963 .....	0.1	2.1
1964 .....	0.2	2.9
1965 .....	0.3	2.9
1966 .....	0.2	2.2
1967 .....	0.1	2.8
1968 .....	0.2	2.4

Source: Furuya, Nakamura, Suzuki, *Chingin Hendo Yoin no Kenkyu* (A Study of Determinants of Wage Movement) Institute of Economic Research in Economic Planning Agency, Research Series No. 20, 1969, Tokyo, p. 197.

(20) The concept of resistance point and target point mentioned here is close to what has been developed by Walton and McKersie. In short the concept may be put as the minimum agreeable amount and the maximum desirable amount, respectively. For a precise definition see Walton, Richard E. and Robert B. McKersie, *A Behavioral Theory of Labor Negotiations*, 1965.

(21) One way of looking at the union strength may be the rate of increase of unionization as Hines puts it. A vigorousness of *Shuntō* activities measured in this term (the rate of increase of the ratio of *Shuntō* participant membership to entire union membership computed from Table I) shows a somewhat negative relationship with attainment ratios. For Hines' concept, see A.G. Hines, "Trade Unions and Wage Inflation in the United Kingdom, 1893-1961," *Review of Economic Studies*, October, 1964.

(22) A best example of normative goals adopted in *Shuntō* demand may be in 1963, when the Joint Council strongly advocated the demand for "*Yohroppa nami Chingin* (European Level Wages)". The fact that different enterprise unions of the same industry often present exactly the uniform demand to their corresponding employers may also serve as an evidence for a normative nature of their demand.

(23) Put it differently, unions attain at least more than their resistance point.

amount. This would occasionally give rise to long-lasting strikes. Available data on this aspect suggest that this is not the case. Rather, the data show that the length of work stoppages experienced in the past is very short. In the *Suntō* period, man-days lost per union member due to strikes in the past decade fall in the range 0.1 to 0.4 days. The length of workstoppages in the same period varies from 2.0 to 3.3 days.

This seems to suggest that wage disputes are somewhat far from persistent in nature. It seems more likely one of a short-lasting or temporary nature although simultaneous spring offensive and its regular repetition is certainly dramatic.<sup>(24)</sup>

## II. PSYCHOLOGICAL FRAMEWORK OF REFERENCE OF NEGOTIATORS: EVIDENCE OF INTENTIONAL WAGE COMPARISONS

A mere conformity of negotiated wage increases may not straightforwardly be attributed to the effect of wage spillover. Because it may simply be a result of an unexpected coincidence. For spillover to be said to be effective, evidence of intentional reference between negotiating units would have to be found.

Let us trace the results of an attitude survey to see if there really is any evidence and to see what the orbit of the reference looks like. The attitude survey reviewed here was conducted by a Keio University Research Group<sup>(25)</sup> in 1967. The survey analysed 630 and 675 responses of employers and unions. The questionnaires (1264 employer sets and 1259 union sets were mailed to companies and enterprise unions.) were designed to collect comprehensive information about the reference behavior of wage negotiators.

Responding to the question of whether or not they refer to others in one way or other in the process of negotiations, most of them replied, yes. The strength of reference, however, varies from very strong to a more moderate degree.

The observed results clearly indicate that intentional reference to the outcome of others is a common behavior of wage negotiators and in quite a few instances the reference bears a somewhat extended function of wage pattern following.

The next relevant question will be what the focal point is to which the reference was most frequently undertaken. As long as wage structures are highly diversified and complex, there may be a variety of points to be compared. Some of these relevant points are absolute wage increases, percentage rates of wage increases, absolute starting wage increases, rates of increase of starting wage, and wage rates

(24) In view of these facts, one may want to stress its "ceremonial aspect". See Robert Evans Jr., "*Shuntō*: Japanese Labor's Spring Wage Offensive," *Monthly Labor Review*, Vol. 90, October 1967, 23-28.

(25) The members of the Research Group were Yōko Sano, Kazuo Koike (Hōsei University, then), Hideo Ishida, Toshiaki Izeki, Shōzō Inoue and the author. Sano, Koike, Ishida, eds. *Chingin Kōshō no Kōdō Kagaku* (A Behavioral Science of Wage Negotiation), 1969, Tokyo, Tōyōkeizai and Keio University Institute of Labor and Management Studies, Sangyō Kenkyū (The Review of Industry and Labor), 1968 December, Vol. 6 are the principal publications of the results of the survey.

TABLE V. STRENGTH OF REFERENCE (WITHIN INDUSTRY)  
(PER CENT)

Strength a. of Reference	Company	Union
I Exact pattern following	5.2	5.7
II Pattern following	4.7	5.5
III Considerable reference	53.4	52.8
VI Moderate reference	31.9	30.7
V No reference	4.7	5.3
Total percentage	100.0	100.0
Actual number of replies	(423)	(472)

Source: Sano, Koike, Ishida, (*A Behavioral Science of Wage Negotiation*) *Chingin Kōshō no no Kōdō Kagaku*, 1969 Tokyo, Tōyōkeizai, p. 98.

Notes: A. Strength of reference is classified into five degrees. In degree I are those who answered that they decided upon exactly the same amount as those whom they refer. In degree II are those who decided with a certain difference with the outcome of the others. Degree III implies considerable strength of reference or serious reference. Degree IV corresponds to the mere fact of reference.

TABLE VI. FOCAL PPOINT OF REFERENCE  
(WITHIN INDUSTRY: PER CENT<sup>a</sup>)

Focal Point	Company	Union
I Absolute increase	77.8	73.5
II Percentage increase	18.6	12.5
III Absolute increase of starting wage rate	32.5	24.5
IV Percentage increase of starting wage rate	6.3	2.7
I Individual wages	32.0	33.8
Total number of replies	(533)	(601)

Source: Keio University Institute of Management and Labor Studies, *Sangyō Kenkyū*, Vol. 6 (1968 December), p. 59.

Notes: a. The percentage figure is derived from the number of answers in each categories of focal point divided by the total number of replies. Since multiple answers were permitted in the original questionnaire, the vertical summation (column total of the table) may exceed 100 per cent.

of individual workers or of various categories of workers. The one which attracted the outstanding degree of attention was the average absolute amount of wage increases by an enterprise, namely *Base-Up*.

Let us remove our viewpoint from that reference behavior and try to look at the psychology of negotiators. The question is the subjective criteria for wage determination. In other words the factors which negotiators thought most important

in making the final decision for the settlement in a particular negotiation.<sup>(26)</sup> A high concentration was observed on a relatively small number of criteria out of the thirteen criteria listed in the questionnaire. These were the financial condition of the enterprise, the level of starting wages, the level of prices in general, the strength of will of the rank and file union members for the wage demand, and the social standard of wage increases. The most frequently mentioned above all was the social standards.

TABLE VII. SUBJECTIVE CRITERIA OF WAGE DETERMINATION

Criteria	Weight (per cent)	
	Company	Union
1. The enterprise financial conditions	14.8	11.1
2. Financial conditions of others	1.5	1.8
3. Solidarity of employers	0.7	1.0
4. Working conditions	2.2	2.0
5. Superior union organization's conditions	0.8	2.0
6. The union leadership situations	1.0	4.6
7. Will of union members	3.4	14.0
8. Starting wage level	14.2	11.5
9. Necessity for labor force acquisition	4.6	4.9
10. The level of prices	24.3	22.1
11. General economic conditions	6.0	5.4
12. Mediation, arbitration	1.2	0.7
13. Social Standard	25.2	19.0
Total	100.0	100.0

Source: Sano, Koike, Ishida, *op. cit.*, pp. 168-169.

Since the survey covers the responses only at a point in time, our analysis is cross-sectional. The difference in the distribution of the weight was examined also by the size of firms (which is almost equivalently, that of enterprise unions). What is seen in the above Table is the fact that the role of the social standards is more important in larger firms, while the starting wage level is more important in smaller firms. The level of prices is more critical in smaller firms while general economic conditions attract more attention in larger firms. An increasing role for labor market factors as the size of firm becomes smaller is clearly shown by adding up weights placed on item 8 and 9 of the Table VII. The weight increases from 6.5, 15.1, 21.9 to 26.7 percent as we move from firm size category G, L, M, to S.

An impressive point which may be worth noting here is the fact, as can be seen in Table VII, that the criteria used by employers and unions are strikingly analogous with the only conspicuous difference being with respect to the evaluation

(26) The 1966 *Shuntō* negotiation was the case actually examined.



TABLE VIII. DIFFERENT WEIGHT PLACED BY THE SIZE OF FIRM

Criteria	Rank				
	size of firm a.	S	M	L	G
1. The enterprise financial conditions		3	3	3	3
8. Starting wage level		4	4	4	
10. The level of prices		1	2	2	2
11. General economic conditions					4
13. Social Standard		2	1	1	1

Source: The same as Table VII.

Notes: a) In size classification of firm, S,M,L,G, stand for a firm employing 100 through 499 workers, 500 through 999, 1000 through 4999, and more than 5000, respectively.

of the will of union members.

In view of all these facts, one may reasonably believe that Japanese wage negotiators are so closely interdependent that the psychological basis for a spillover effect to operate may well have been formed with the development of the *Shuntō* movement. Let us try before proceeding to the next section to see how the basis or the orbit of mutual reference would look.

Relevant information was made available by the survey concerning what kind of linkages are important for the negotiators in making references to others. It is conceivable that a company or a union may want to compare with those who have the most similar characteristics. In other words, the reference behavior is most likely to be taken along lines which relate certain types of similarities. These linkages may be, similar locations, the same industry, the same labor organization, size of firm, e.t.c.

These linkages may be grouped in four broad categories,<sup>(27)</sup> labor market linkage, firm characteristics linkage, union linkage, and a normative linkage.

We may summarize the observed facts as follows: the role of a labor market linkage becomes greater as the size of firm becomes smaller; firm characteristics linkage appears to be strongest among medium sized firms and weakest in largest sized firms; union linkage is more important in larger firms; and the normative linkage clearly increases its importance with the size of the firm. Another interesting fact found here is the similarity between the employer and union responses.

(27) The reference behavior along the line of labor market linkage includes the response to the following specific items: similarity in labor mix of the firm, within the same area or the same location, and similarity in hiring terms. The firm characteristics linkage includes: similarity in profitability of the firm, within the competitive relation, similarity in the size of firm, and capital linkage. The union linkage includes: affiliation with the same industrial federation, and affiliation with the same union organization. The normative broad linkage includes: reference to leading firms (or unions) without necessarily organizational connection, reference to leading industries, reference to results due to mediation or arbitration by labor board of various levels.

TABLE IX. LINKAGES FOR WAGE REFERENCE

Linkages firm size a.		Weight in percentage			
		S	M	L	G
Employer	Labor market linkage	16.0	17.7	14.8	10.5
	Firm characteristics	55.0	56.9	50.9	41.1
	Union organization	21.0	16.5	22.4	32.3
	Normative linkage	8.0	8.9	11.8	16.1
	Total (percentage)	100.0	100.0	100.0	100.0
	Number of replies	(100)	(181)	(356)	(124)
Union	Labor market linkage	21.7	14.3	14.2	10.2
	Firm characteristics	44.6	49.2	46.0	39.1
	Union organization	23.9	24.5	29.0	32.2
	Normative linkage	9.7	12.0	10.9	18.4
	Total (percentage)	100.0	100.0	100.0	100.0
	Number of replies	( 92)	(175)	(431)	(174)

Source: Sano, Koike, Ishida eds., *op. cit.*, p. 106.

Notes: a) The notation of size classification of firm is the same as that of Table VIII.

The overall similarity in their attitude may be due to the basic character of enterprise unionism. Or put it differently, the similar attitude between the employer and the union may well portray an aspect of enterprise unionism.

On the basis of these observations,<sup>(28)</sup> one may be able to draw a brief sketch of the orbit of intentional reference. The larger firms tend to be closely linked together through their intimate mutual references beyond the scope of pure market linkages. For smaller firms, the extent of reference is likely to be confined into the scope of their respective industries. Also firm characteristics linkage defined to include product market competitive relationship appears to play a more important role. Down further into smaller firms, the labor market

(28) An additional finding derived from separate observations on intra-industrial and inter-industrial reference may also serve as evidence supporting the following sketch. A summary of the finding will be useful though no presentation of numerical data will be made here. Inter-industrial comparison is almost exclusively one found among larger firms and unions. They have a much stronger inclination, relative to smaller ones, to compare their own outcomes with those of large and eminent companies beyond the limited scope of their own industry. Somewhat closer scrutiny of the data discloses the fact that these far-reaching comparisons may well be subdivided into several streams along with broadly defined industrial sub-sectors. Inter-industrial reference of smaller firms or unions is barely significant.

Turning to intra-industrial comparisons, the picture becomes somewhat clearer since overall weight is much heavier relative to inter-industrial comparison. A clearcut distinction may be drawn among firms or unions of different sizes. Larger firms refer more closely to leading firms, whereas smaller firms pay more attention to those in the same geographical area. Medium sized firms are, among other things, interested in equivalent sized firms and/or competitors in the sub-divided product market.

linkage emerges more and more.<sup>(29)</sup> The picture roughly sketched here may here in a sense be interpreted as a map of wage spillover.

### III. A QUANTITATIVE ANATOMY OF NEGOTIATED WAGE INCREASES: EVIDENCE OF WAGE SPILLOVER AMONG *Shuntō* PARTICIPANTS

In this section I shall try to see whether or not there is any evidence which is indicative of the operation of spillover effect among those negotiating units which take part in *Shuntō*. The data of negotiated wage increases (*Base-Up* data) mentioned at the outset of this paper which are exclusively applicable to *Shuntō* participants will be used for this purpose in the following analysis.

First, let us look at the relationship between the negotiated wage increases attained by pattern setters<sup>(30)</sup> and the average negotiated wage increases for all participants.

TABLE X. RELATION BETWEEN THE PATTERN AND AVERAGE  
NEGOTIATED WAGE INCREASES  
(UNIT: YEN)

Year	(Pattern (Setter))	Average
1960	1840 (Iron and Steel)	1792
1961	3260 (Public Corp.)	2984
1962	2634 (Iron and Steel)	2507
1963	2228 (Private Rail.)	2248
1964	3160 (Iron and Steel)	3300
1965	3035 (Private Rail.)	3002
1966	3772 (Chemical.)	3280
1967	4286 (Iron and Steel)	4221
1968	5043 (Private Rail.)	5204

Source: Furuya, Nakamura, Suzuki, *op. cit.*, p. 79 and Japan Productivity Center, *op. cit.*, 307-309. See also p. 17 of this paper.

A striking conformity, as may be seen in Table X, of the two series from year to year suggests that wage negotiations in these groups are in one way or another closely inter-related.

Yet, to the extent that possible deviations of individual wage increases are averaged out in the mean increases, this correlation found in the aggregated data may not necessarily serve as a good indication of a close relationship between the pattern setter and the followers. An examination of finer sub-groups will

(29) Since the research does not cover the widely spreading stratum of smallest firms, where union organizing rate is almost negligible, there remains a possibility that the labor market linkage would be still greater on the ground of extrapolation of above mentioned result toward even smaller firms than those covered by the survey.

(30) The selection of a pattern setter for each year's wage round was based upon intuitive information given on the page 13 of this paper.

be needed to answer this question. The relevant information has been made available by the Economic Planning Agency Research Group<sup>(31)</sup> (henceforth called the EPA Group). The estimation of a simple regression of individual industry negotiated wage increases on the pattern setter's negotiated wage increase over eight wage rounds is summarized in Table XI.

Statistically significant regression coefficients and quite high coefficients of determination were found in each estimation. This indicates that the influence of the pattern setter is strong for each individual industry. Therefore it is probably safe to say that a substantial wage spillover effect is functioning in the determination of *Shuntō* wage increases.

TABLE XI. INFLUENCE OF WAGE PATTERN ON NEGOTIATED<sup>a</sup>  
WAGE INCREASES OF INDIVIDUAL INDUSTRIES

Industrial Union	Regression Coefficient of Wage Pattern	Coefficient of Determination
<i>Kamipa Rōren</i> (Paper and Pulp)	0.79 (2.66) b.	0.541
<i>Gōka Rōren</i> (Chemical)	1.04 (9.15)	0.796
<i>Tekkō Rōren</i> (Iron and Steel)	0.91 (3.67)	0.692
<i>Zenkoku Kinzoku</i> (Metal)	0.80 (5.42)	0.831
<i>Denki Rōren</i> (Electric Machine)	0.86 (5.15)	0.816
<i>Zōsen</i> (Ship-Building)	0.95 (5.94)	0.854
<i>Shitetsu</i> (Private Railway)	1.05 (13.11)	0.966
<i>Den Rōren</i> (Electricity)	1.10 (6.98)	0.890

Source: Furuya, Nakamura, Suzuki, *op. cit.*, p. 74.

Notes: a) Observed time span is 1960 through 1967, sample size is therefore eight.

b) The figures in parentheses are t values.

Wage spillover seems also to be reinforced by another finding. It is the fact that while negotiated wage increases move quite closely across various industries over time, relevant economic variables, each of which is presumably a proxy for firm's ability to pay, do not. The fact is clearly illuminated by the following estimation conducted by the EPA Group.

As seen in the table, the explanatory ability of the wage pattern variable is

(31) The group mentioned here is a research group of the Institute of Economic Research, Economic Planning Agency, which specializes in labor research. As of 1969, when the summary of their work was published with the title of *Chingin Hendō Yōin no Kenkyū* (A Study of Determinants of Movement of Wages) from the Institute, members of the group were Kenichi Furuya, Atsushi Nakamura, and Takao Suzuki.

TABLE XII. RELATIVE INFLUENCE OF WAGE PATTERN AND  
ABILITY TO PAY ON NEGOTIATED WAGE INCREASES OF  
INDIVIDUAL INDUSTRIES

Industrial Union	Regression Coefficient of Wage Pattern	Regression Coefficient of Ability to Pay	Coefficient of determination
<i>Kamipa Rōren</i>	0.67 (2.31)	0.66 (1.46)	0.678
<i>Gōka Rōren</i>	0.95 (10.04)	0.48 (2.35)	0.968
<i>Tekkō Rōren</i>	0.68 (3.68)	0.47 (2.93)	0.886
<i>Zenkoku Kinzoku</i>	0.72 (6.13)	0.69 (2.32)	0.918
<i>Denki Rōren</i>	0.75 (5.65)	0.83 (2.39)	0.914
<i>Zōsen</i>	0.71 (4.00)	0.82 (2.04)	0.921
<i>Shitetsu</i>	0.98 (13.79)	1.43 (2.11)	0.982
<i>Den Rōren</i>	1.06 (4.58)	0.28 (0.25)	0.892

Source: The same as Table XI. p. 75.

Notes: The same as Table XI, except for the fact that an annual increment in sales per employee for each industry is employed as a proxy for an ability to pay variable.

clearly superior to that of the ability to pay variable in explaining variation of negotiated wage increases. The results suggest that a wage spillover effect is operating in determination of wages of *Shuntō* participants.

Although a single wage-pattern setter (a single industry) is presupposed in this estimation, the orbit of spillover may not always be from a single setter to plural followers. It may well run from plural setters to a number of followers. In view of the disclosed facts in previous sections and here, it would be more accurate and perhaps sufficient to keep in mind that wage decisions are closely inter-related within the network of intentional reference.

What then are the important determinants of inter-related wage increases? Although there have been quite a few studies in this area, most of them have dealt with average wage increases in stead of negotiated wage increases, so that relevant studies to which we can adequately make reference are relatively limited. One of the most careful studies to which reference can be made has been carried out by the EPA Group.

The multiple equation model tested by them employs two independent variables: sales per employee as a proxy for a firm's ability to pay and unemployment rates as a proxy for labor market conditions. Estimates by individual industry show that both factors have appreciable effects in explaining changes in negotiated wage increases although the effect of the labor market is relatively less clear in heavy industries except chemicals. This result seems to be compatible with another

TABLE XIV. DETERMINANTS OF WAGE INCREASES IN  
LARGE FIRMS AND SMALL FIRMS

Wage Changes	Profit a.	Wage Pattern b.	Coefficient of Determination
Large firms	-164.330 (-1.02)	1.036 (9.05)	0.915
Small firms	77.556 (0.36)	0.858 (5.60)	0.787
Wage Changes	Unemployment c.	Wage Pattern	Coefficient of Determination
Large firms	-1.302 (-3.92)	0.796 (8.01)	0.965
Small firms	-1.622 (-3.68)	0.499 (3.79)	0.914

Source: Fuyuya, Nakamura, Suzuki, *op. cit.*, p. 104.

Notes: a) Rates of profits to sales.

b) Average *Base-Up* of principal firms in private sector.

c) Unemployment rates.

finding of their studies, that in the movement of average wages, the effect of profitability is more pronounced in larger firms relative to smaller ones, while unemployment rates affect in an opposite order. The estimation also suggests that the influence of the wage pattern is more pronounced among larger firms.

We may recall that what the attitude survey found very well conforms to this quantitative finding. In our attitude survey it was suggested that labor market factor has less of an affect upon larger firms, while profitability and wage pattern does affect them more strongly. Put differently, profitability and spillover of wages appear to be somewhat more important in wage determination among larger firms.<sup>(32)</sup> This suggests that a further analysis with respect to the relationship between profitability<sup>(33)</sup> and negotiated wage increases will be meaningful.

In our following study on the relationship of these two variables it may be reasonable to incorporate into the model an interesting finding mentioned in the previous section, that firms have a broader framework of reference than the scope of their industry. To put it in another way, firms are likely to be subject to a somewhat general factor which is common throughout the broader domain of the economy, as well as to factors which are specific to one industry. Thus our model will employ two variables, average profits throughout all industries

(32) The sector of larger firms is mainly dealt with in this section since labor organizations are concentrated in this portion of the economy and hence *Shuntō* is most active in this sector. For instance, the union organization ratio by size of firm in 1966 was 64% for firms employing more than 500 workers, 32% for firms with less than 500 and more than 100, 10% for firms with less than 100 and more than 30, and merely 4% for small firms with less than 30 workers.

(33) As a proxy for profitability, such indices may be relevant as sales, value added. Above all, the profit level will be analysed in the rest of this section.

and specific industry profits. Although these two different series of data are derived from basically the same profits data, their implications are obviously quite distinct. The former stands for the negotiator's broad reference, while the latter represents firm's ability to pay. It is noted here that because of the limitations of available data, industry's profits are used in place of individual firm profits.

A linear expression of our model is written as

$$(1) \quad W = a_0 + a_1\pi_1 + a_2\pi_2 + u,$$

where  $W$  is negotiated wage increases,  
 $\pi_1$  is average profits per worker for all industries  
 $\pi_2$  is profits per worker for individual industries  
 $u$  is random disturbance term.

Because of limitation of data, the regression is run with the pooled data for 13 industries for the time-span 1960–1967 amounting to 104 observations. Fortunately, industrial classification roughly corresponds to the principal industry-wide union demarcations of *Shuntō* participants, and the time-span matches the period when the spring labor offensive has become admittedly prevalent among unions.

We obtained the following result.<sup>(34)</sup>

$$(2) \quad W = -336.4 + 9.524 \pi_1 + 1.420 \pi_2$$

(1.175) (10.025) (6.147)\*

$$R = 0.776$$

\* Figures in parentheses are  $t$  values.

It has been shown that a sufficiently large portion of the variance of negotiated wage increases is explained by the fitted model, which employs two variables, namely average profits for all industries and for each individual industry. It is interesting that the larger portion is explained by average profits of all industries rather than by profits of an individual industry. This result may be interpreted as meaning that a crucial determinant of negotiated wage increases is the wage spillover effect rather than the ability to pay.<sup>(35)</sup>

(34) Figures in parenthesis are  $t$  values. This estimation is an output of a collaborate study with Professor Yōko Sano of Keio University. We also tried an estimation with an index of CPI as one of explanatory variable in this equation. The result was, however, that it turned out insignificant. The price index variable has been omitted from our present equation for fear of multicollinearity. An insertion of a dummy variable for the mining industry improved the result appreciably with a significant negative magnitude appearing in the parameter of the dummy variable. See Haruo Shimada, "A Quantitative Analysis of Negotiated Wage Increases in Japan," *Keio Economic Studies* Vol. 6, No. 1.

(35) Our information at hand is not enough to provide sufficient evidence for this interpretation. The same regression equation applied to the time-span of 1960 through 1966 yields a result in which both variables appear to have approximately equivalent explanatory power. However, our new result of the estimation for the period including 1967 may suggest a tendency of a strengthening of the spillover over time.

This formulation of the model will provide another interesting application. Applying the model to individual industries enables us to make a comparison between different behavioral

Since the *Shuntō* movement has developed remarkably during the period of observation, as shown in section II, it will be interesting to see if there is any shift in this function over the period. A check will be possible by means of inserting a dummy variable representing an unexplained shift between sub-periods. Several alternative time-points have been selected at which the period of observation was divided into two sub-periods. It was found by several trials that there was a sharp shift around 1960-61. The estimates are given by the following.

TABLE XV. THE SHIFT OF WAGE DETERMINATION FUNCTION  
BETWEEN TWO SUB -PERIOD

Critical Time-point	$\pi_1$	$\pi_2$	dummy <sup>a.</sup>	R	d.f.
1959-60	9.719 (0.895)	1.256 (0.196)	-21.958 (171.991)	.873	122
1960-61	7.125 (0.938)	1.323 (0.184)	601.198 (143.657)	.890	122
1961-62	9.198 (0.841)	1.286 (0.198)	-135.426 (136.647)	.874	122

Source: Haruo Shimada, *op. cit.*, p. 72.

Notes: a) Value of 1 is attached to dummy variable for the former period, and 0 for the latter.

b) Figures in parentheses are standard errors.

patterns of different industries. The following estimates were derived from those industries for which relatively longer time series data are available.

Comparison of the Wage Determination Behavior by Industry  
(Standardized regression coefficient)

Union(Industry)	$\pi_1$	$\pi_2$
<i>Shitetsu</i> (Private Railway)	.796	.182
<i>Tekkō</i> (Iron and Steel)	.779	.480
<i>Denki</i> (Electric Machine)	.978	-.006
<i>Sharyō</i> (Railway Car Manuf.)	.840	.091
<i>Gōka</i> (Chemical)	.636	.333
<i>Sekiyu</i> (Oil Refinery)	.906	.082
<i>Semento</i> (Cement)	.839	.160
<i>Tanrō</i> (Mining)	1.079	.408
<i>Denrō</i> (Electric Power)	.527	.463

Source: Haruo Shimada, "A quantitative Analysis of Negotiated Wage Increases in Japan," *Keio Economic Studies*, Vol. 6, No. 1. p. 74.

According to the above results, we can probably divide industries into two groups. One of them appears to have an appreciable strength in  $\pi_2$ , while the other has only negligible strength in the same variable. To the former belong Iron and Steel, Chemicals, Coal Mining, Electric Power industries. The latter group includes Electric machines, Railway Car Manuf., Oil Refineries and Cement. We may recall that this classification roughly meets the classification given in section II between pattern setters and followers. This seems to be suggestive of the fact that wage leaders weight substantially their own financial situation (ability to pay) as well as pay much attention to general economic conditions, while followers almost solely are dependent on the general economic situation.



As can be seen the fit clearly was improved by the insertion of the dummy variable. It is thus reasonable to suggest that the function shifted upward around the beginning of the 1960's. This shift implies that a propensity to pay went up by approximately 600 yen after 1961 for the same level of profits as compared with the period prior to 1961. A possible interpretation of this change would be that spillover effect has been strengthened as a consequence of the development of *Shuntō*. Yet, strictly speaking, as long as no reason for this structural change has been tested explicitly, the reason is of course open to further investigation.<sup>(36)</sup>

Conclusively, findings in this section may be summarized as (1) there is a reasonable evidence to believe that a spillover effect is at work in the determination of negotiated wage increases among *Shuntō* participants, (2) crucial determinants of negotiated wage increases seem to be primarily a profitability of the extended industrial sector and secondarily a self-ability to pay, and (3) it is suggested that some structural change has taken place in the relationship between profits and negotiated wage increases at the beginning of 1960's which in effect shifted the function upward.

#### IV. A SPILLOVER EFFECT UPON GENERAL WAGE INCREASES

In this section I shall attempt some assessment of the effect of spillover upon general wage increases. This is, in other words, to measure the impact of negotiated wage increases on the rise in general wages.<sup>(37)</sup>

As we have learned at the outset of this paper<sup>(38)</sup> negotiated wage increases are only a partial index of the movement of wages. This is because (1) they represent merely average wage increases across the firm and have no necessary relationship with the internal wage structure, (2) the practice of collective determination of wage increases is established within larger firms and only weakly to be found in smaller firms.

This limited coverage of the index implies an important fact, that there is no a-priori reason to believe that the movement of negotiated wage increases per se represent the changes in wages throughout the economy. What has been made

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(36) Another way of looking at the shift of the function is to try to relate the shift with the rapid change in the external labor market conditions. For instance, the level of the hiring wage for middle-school leavers increased 23 percent from 1960 to 1961. An applicant-opening ratio derived from the recorded data of Local Public Employment Security Offices went down drastically from 3.2 in 1958 to 1.4 in 1961. My previous work took the position of trying to relate the shift with these environmental changes in the external labor market. Haruo Shimada, "A Quantitative Analysis of Negotiated Wage Increases in Japan," *Keio Economic Studies*, Vol. 6, No. 1, pp. 69-72.

(37) The term general wages used here specifically implies the average wage index of industries in the *Monthly Labor Survey* of the Ministry of Labor. Its theoretical implication is as an approximation to the average wage of the entire economy.

(38) Section II of this paper.

clear in our preceeding discussion is the fact that there is some evidence indicating the working of a spillover effect with respect to negotiated wage increases among larger firms. And so, it is not clear whether or not wages of individual workers or wages of smaller firms are similarly subject to the spillover effect.

Therefore it is worthwhile to estimate, if possible, the direction and magnitude of the impact of negotiated wage increases on the movement of other wages in general. One approach to the problem is the comparison of time series of negotiated wage increases and the general wage increases as defined in footnote 37.

Estimation of the magnitude of the impact of negotiated wage increases itself, however, embodies some built-in difficulties. These difficulties stem primarily from two sources: (1) available average wage data are subject to a change in over-time hours worked and in the labor mix,<sup>(39)</sup> and (2) the relative effect due to collective bargaining and to external labor market is hardly separable.

An attempt will be made, utilizing the available information,<sup>(40)</sup> to eliminate the first difficulty, namely the effect of over-time hours worked. However, no standardization of the labor mix will be attempted here primarily because uncontrolled average wage data seem to be comparable to negotiated wage data which are also essentially in average terms, and partly because of the shortage in detailed information.

The second source of the difficulty is not touched upon in this paper. It is that for any reasonable estimation to be made in this respect, an underlying model of inter-dependent market mechanisms should be explicitly and specifically constructed.

Comparisons are made between time series of negotiated wage changes and their average wage counterparts. If negotiated wage increases were to give rise to induced increases in general wages through the effect of spillover, it would be expected that the increment in negotiated wages are at least the same or larger than derived increases in general wages. So long as negotiated wage increases are supposed to play the role of a tractor for the increase in other wages, the closeness of movements of two series may serve as a measurement of the effectiveness of the spillover. The more effective the spillover the closer the movements. Since negotiated wage increases are postulated to pull other wages up it is assumed that the difference between them should be positive.

However, it is possible that the difference may turn out to have a negative value, the magnitude of negotiated wage increases being smaller than the general wage increases. Circumstances under which this may take place may be summarized as: (1) because of the peculiar wage payment systems where reported negotiated wage increases account for only a relatively limited portion of total

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(39) The labor mix in this context implies the composition of the employed labor force with respect to sex, age, length of service, type of work, education and so forth.

(40) A time-series of average wage data adjusted for over-time worked, are available in Furuya, Nakamura, Suzuki, *op. cit.*, pp. 173-175.

wage increases,<sup>(41)</sup> (2) changes in the labor mix make the increase in average wages appear higher than negotiated wage increases,<sup>(42)</sup> (3) other sources of wage increases are stronger than the impact of negotiated wage increases.<sup>(43)</sup>

Since no precise standardization of data with respect to (1) and (2), and no specification of an underlying model with respect to (3) is made in this paper, the following estimates can at best serve as a preliminary assessment of the basic direction of the impact.

#### *Impact Upon All Industries*

First, the impact of negotiated wage increases upon the movement of average wages throughout the entire economy will be examined. The impact thus measured presumably includes spillover effects across all industries and structural strata from larger to smaller firms. As seen in Table XVI, there is a noticeable trend toward a compressing of the difference between the two series.

TABLE XVI. DIFFERENCE BETWEEN NEGOTIATED WAGE INCREASES AND  
AVERAGE WAGE INCREASES: ABSOLUTE AND PERCENTAGE POINT  
DIFFERENCE, ALL INDUSTRIES

Year	Negotiated Wage Increases minus Average Wage Increases	
	Absolute	Percentage points
1957.....	n.a.	5.22
1958.....	n.a.	n.a.
1959.....	n.a.	n.a.
1960.....	894	3.84
1961.....	1135	4.36
1962.....	350	.47
1963.....	40	— .31
1964.....	428	1.13
1965.....	463	1.27
1966.....	149	.30
1967.....	223	.39

Source: *Monthly Labor Survey*, Ministry of Labor, relevant issues. Average Negotiated Wage Increases data collected by the Ministry of Labor quoted from Japan Productivity Center *op. cit.*, pp. 306–309.

The computed result presented in Table XVI is indicative of the fact that the spillover effect has become increasingly prevalent over time for the economy as a whole.

(41) The Iron and Steel industry is one of the typical examples of this case. See Japan Productivity Center, *op. cit.*, pp. 138–150.

(42) This is very likely under a length-of-service wage system. It happens in those industries whose employment is declining.

(43) For instance, a remarkable increase in the market wage rate for new entrants due to a sharp shift of labor market conditions might contribute to the increase in average wage level by somewhat larger magnitude than negotiated wage increases.

*Impact Within Individual Industries*

The same relationship will be examined within the scope of individual industries. Since data for the negotiated increases of individual industries are the average negotiated wage increases of large firms, the relationship to be examined is to represent intra-industrial spillover effect. For those industries whose industrial union participated in earlier rounds of *Shuntō*, relatively longer time-series data of negotiated wage increases are available than the data for all industries presented in Table XVI. In Table XVII, a longer time-series than Table XVI will be presented which is the average of those industries for which the longer series is available.

TABLE XVII. DIFFERENCE BETWEEN NEGOTIATED WAGE INCREASES AND  
AVERAGE WAGE INCREASES: ABSOLUTE AND PERCENTAGE POINT  
DIFFERENCE, INDIVIDUAL INDUSTRY

Year	Absolute	Percentage Points
1957.....	444	4.14
1958.....	627	3.61
1959.....	339	1.17
1960.....	718	3.50
1961.....	1129	5.31
1962.....	585	2.40
1963.....	-58	.25
1964.....	264	1.32
1965.....	204	1.21
1966.....	-313	-.45
1967.....	-389	-.20

Source: The same as Table XVI.

Observing industry by industry,<sup>(44)</sup> conspicuous deviations are found in some industries. For instance, in steel and mining industries, the above mentioned sources of deviation (1) and (2) seem to apply. Apart from these specific deviations, the underlying basic tendency does not differ significantly from what was found to be true in the case of all industries. In other words a more or less similar growth of the spillover effect also is found in industry breakdowns. Similarly, the effectiveness seems to have grown more distinctly pronounced since the beginning of the 1960's.

Finally let us try to assess the magnitude of impact of *Shuntō* from these data. A rough estimate will be derived in the following way.

Averaging these figures in Table XVI across these industries and for two sub-periods, namely, *Shuntō* period (1957-1960), two magnitudes are obtained. By subtracting the former from the latter, a rough approximation of impact of wage

(44) Observed data by industry breakdowns are not presented in this paper. In place of the breakdowns, their average is presented in Table XVII.

spillover effect due to the development of *Shuntō* will be derived. This is 329 yen.<sup>(45)</sup> By dividing the contrasted figures by their corresponding average wage levels, one may obtain the percentage magnitude of the same effect which turns out to be 2.23.<sup>(46)</sup> In the same way the magnitude of the impact in terms of percentage points difference may easily be obtained. It is 1.85 percentage points.

This result is subject to several kinds of biases, which I have already mentioned, so that the derived magnitude itself may not be reliable. This fact, however, does not invalidate the whole assessment of the impact of *Shuntō*.

#### V. SUMMARY AND CONCLUDING REMARKS

It is undeniable that Labor's Spring Wage Offensive has been one of the most successful and influential labor union wage policies in the post-war Japan. The basic question pursued in this paper was whether or not and to what extent it was really effective in raising general wages in the economy as well as the wages of *Shuntō* participants. Since the impact of the unions and of economic growth upon wage increases are empirically difficult to distinguish, access to the question is not straightforward or easy.

It is reasonable to think that the union impact on general wages largely depends on the effectiveness of wage spillover. If spillover were not very effective, then a rise in wages in the unionized sector would be limited only to the union jurisdiction. Consequently the union impact on general wages would be hardly significant. This would be so, especially when disemployment effect would simultaneously result. Consequently it is suggested that an empirical examination of the existence of spillover bears an indispensable importance in this study.

Fortunately two sources of relevant information were available for our purpose. One is the data concerning the attitude of wage negotiators representing both companies and unions and the other is the data of negotiated wage increases. Our examination of these data seems to indicate that the spillover effect is at work. The evidence of spillover, however, has a serious limitation in its coverage: namely, it is valid among those who participate in Labor's Spring Wage Offensive and almost exclusively with respect to *Base-Up* or the absolute amount of average negotiated wage increases. In other words, the prevalence of spillover effect can be reasonably affirmed only within this limited extent.

A crude assessment was finally attempted in order to measure the effect of spillover upon the general wage movement. A computed magnitude of the effect due to the development of *Shuntō* appeared to be 329 yen or 2.23 percent. Therefore it is reasonable to conclude that while the impact of *Shuntō* upon wage increases is admittedly substantial among organized participants, especially with respect to *Base-Up*, the impact has also grown more than negligibly for the entire

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(45) 360 yen is approximately 1 U.S. dollar.

(46) If we divide the period between 1961 and 1962, the measured impact will be 602 yen in absolute terms, 3.31 in percentage magnitude and also 2.90 in percentage points expression.

economy with the expansion of *Shuntō*.

To the extent that neither rigorous standardization of data nor construction of an underlying comprehensive economic model is made, the final assessment may be subject to biases. While the direction of the bias due to data control defect is somewhat ambiguous, the one due to lack of specification of market model would most likely be upward. Put differently, some fraction of the magnitude attributed to spillover effect in this study might more truly have been generated by shifts in labor market conditions. Granting this alternative possibility this present paper dared to attribute the resultant change to the impact of spillover. A rigorous identification of this problem will be entirely left to further inquiries.

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