Wages and Interest Arbitration: A Case Study of the Canadian Federal Public Service

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I. Introduction

The Public Service Staff Relations Act of 1967 (PSSRA) gave Canadian federal public servants a choice of procedures for negotiating their collective agreements. Before commencing negotiations for a new collective agreement each of the 100 odd certified bargaining units representing about 250,000 federal civil servants selects arbitration or conciliation/strike as the method of dispute settlement.[1] If arbitration is selected, the right to strike is renounced for those particular negotiations and impasses must go to final and binding arbitration. If conciliation/strike is selected then impasses first go to an ad hoc conciliation board before strike rights can be exercised, subject to employees within the bargaining unit who are designated as not having this right because they are deemed to be essential to the safety or security of the public. Bargaining units can change this choice before each round of negotiations. The government-employer must abide by the decision of the bargaining unit.

This unique system of collective bargaining has been extensively studied and commented on but very little attention has been paid to its impact on wages (Finkelman, 1974; Barnes and Kelly, 1975; Anderson and Kochan, 1977). Recent actions by the federal government to encourage or even force its

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[1]The number of bargaining units changes because of new certifications, decertifications and mergers of units. During the course of the 1967-78 period the number varied between 101 in 1975 and 115 in 1971. The number of public servants covered by these units has also varied from a low of 198,000 in 1967 to a high of 263,000 in 1978 (no figures are available for 1970 to 1973) (PSSRB, Annual Reports).

employees to make greater use of arbitration for the settlement of impasses presumably to control conflict elevates the question of the impact of this method of dispute settlement on wages (Barnes, 1982; House of Commons, 1978).[2] Specifically, should arbitration become the mode of dispute settlement what will be its impact on the wages of Canadian federal civil servants. This paper attempts to provide some answers to this question by comparing the wage outcomes of the two methods of dispute settlement, that is, "the arbitration route" and "the conciliation/strike route", during the period 1967-78.

The paper is divided into seven sections. The following section, Section II reviews the literature on wages and arbitration. Section III provides further pertinent information on the Canadian federal choice of procedures system. The data are discussed in Section IV and Section V reports on the results of the wage comparisons. Section VI discusses these results and assesses the probable impact of arbitration. Section VII concludes the paper.

II. Review of the Literature

Writers have not yet made up their minds about the impact of arbitarion on wages. The literature on the subject is relatively sparse compared to the literature on the impact of arbitration on collective bargaining. The few studies on wages that exist are conflicting (Delaney, 1983; Downie, 1979; Loewenberg, 1976; Olson, 1980; Stern et al, 1975; Thompson, 1981). Some writers argue that arbitration raises wages, others say it lowers wages and still others maintain that arbitration is neutral with respect to wages.

Those that argue an upward impact do so for two main reasons.

1) arbitration serves to raise the wages of "weak" unions when the system is first introduced bringing them into line with the market.

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[2] Bills C_{22} and C_{28} tabled in the House of Commons in 1978 would have encouraged greater use of arbitration, if they had passed and become law. The success of the government to designate air traffic controllers in 1981 despite the objections of the controllers and the decision of the PSSRB will to all intents and purposes remove the right to strike from this group and encourage or force them to opt for arbitration.

2) the criteria used by arbitrators impart an upward bias because they include factors which favour larger as opposed to smaller wage increases (Gunderson, 1982). According to this argument arbitrators tend to ignore market forces that may otherwise restrain wage increases, they are more strongly influenced by tight as opposed to loose labour markets and their notions of a socially acceptable minimum are generally higher than those found in other sectors or markets.

The supporters of a downward impact of arbitration rest their case on the conservatism of the arbitration process and the consciousness of arbitrators of their position of trust, particularly in the public sector (Saunders, 1980). In most legislation providing for interest arbitration in the public sector governments have little recourse but to pay for awards handed down by arbitrators. In these situations arbitrators may be acutely aware of the effect of their decisions on the government's fiscal position and this awareness could lead to lower awards than would otherwise prevail.

Those writers who support a neutral position for arbitration point to the common use of comparability criteria (Gunderson, 1982). Because of their objectivity and relative ease of use, these criteria enjoy general acceptance by the parties as a means of setting wages for public sector workers.

Empirical studies support all three positions with the majority showing arbitration as having a small upward bias (Downie, 1979). However, the limited number of such studies, their different coverage and different methodology make it difficult to draw firm conclusions. Clearly this is an area where more research is required before a consensus is possible.

III. Choice of Procedures and the PSSRA

A choice of procedures system introduces another dimension to the debate. Choice of procedures is a relatively new method for dispute settlement and is

found only in the public sector in five jurisdictions in North America.[3] The choice of dispute settlement method, arbitration or strike, may rest with the union, the employer or the two jointly. In the three Canadian jurisdictions where the system is found the choice rests with the union.

At the federal level once the choice is made by the union, either party is free to request third party intervention during the course of negotiations. Thus, either party may request arbitration in the arbitration route or a conciliation board in the conciliation/strike route should an impasse develop in negotiations. These requests are made to the Public Service Staff Relations Board (PSSRB), an independent agency established to administer the PSSRA.

In the conciliation/strike route, if the parties do not accept the recommendations of the conciliation board, the union is free to strike. Strike rights are subject to certain employees in the bargaining unit staying behind to ensure the continuation of emergency or essential services. The designation of these employees is itself subject to negotiations by the parties with the PSSRB making the final decision should the parties be unable to agree.[4] Under the PSSRA the government-employer does not have lockout rights.

The two major forms of third party intervention, arbitration in the arbitration route and the conciliation board in the conciliation/strike route have very different structures. The arbitration function is administered by the Arbitration Tribunal, a permanent body of the PSSRB. The tribunal comprises a chairman, who is a full-time employee of the PSSRB, and panels of

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[3]In Canada, the system is found at the federal level where it first appeared, New Brunswick and British Columbia. In the U.S. the system or some form of it is found in Wisconsin and Minnesota (Ponak and Wheeler, 1980).

[4]The question of joint determination is now up in the air as a consequence of the recent unilateral designation of air traffic controllers by the government, an action which has been upheld by the courts.

neutral experts and individuals selected to represent the interests of the labour and management sides. These experts and individuals are from outside the public service, are appointed for fixed periods and serve on a part-time basis. Each arbitration case is handled by a chairman, either the full-time employee of the PSSRB or a neutral member from the panel, and one person from the labour panel and one from the management panel.

In contrast conciliation boards are established on an ad hoc basis comprising three members, two members nominated directly by the parties and a chairman chosen by the party nominees, or, in the case where there is no agreement, by the Chairman of the PSSRB. While arbitration awards are binding, conciliation board recommendations are not. Further, arbitrators are not required to give reasons for their awards and seldom do. Conciliation boards operate more openly giving explanations for their recommendations and consider issues that are or might be interpreted to be outside the jurisdiction of public service collective bargaining.

The PSSRA limits the scope of collective agreements generally to pay, hours of work, leave entitlement, standards of discipline and other related terms and conditions of employment directly related to these matters and not covered under separate legislation. Pensions, for example, are excluded from agreements because they are covered by the Superannuation Act.

On matters of pay, the PSSRA specifies five criteria to guide the parties in their negotiations. These criteria apply in particular to the arbitration function. They include:

a) the needs of the Public Service for qualified employees;

b) the conditions of employment in similar occupations outside the Public Service, including such geographic, industrial or other variations as the Arbitration Tribunal may consider relevant;

c) the need to maintain appropriate relationships in the conditions of employment as between different grade levels within an occupation and as between occupations in the Public Service;

d) the need to establish terms and conditions of employment that are fair and reasonable in relation to the qualifications required, the work performed, the responsibility assumed and the nature of the services rendered; and

e) any other factor that it appears to be relevant to the matter in dispute.

Most of the bargaining on the employer side is handled directly by Treaury Board, which shares personnel responsibility for the civil service with the Public Service Commission. Government departments employing some 95 per cent of the employees who bargain under the PSSRA, are represented at the bargaining table by Treasury Board. On the employee side, some 16 bargaining agents bargain on behalf of the 100 or more bargaining units. Bargaining units are pre-determined in the legislation along occupational lines and parallel the wage determination process, which is occupationally-oriented.

Given these characteristics of the dispute settlement system for Canadian government employees, "weak" bargaining units would be expected to select the arbitration route for the conduct of their negotiations while "strong" units would opt for the conciliation/strike route. Under normal circumstances, "weak" units should fare better in an arbitration regime than in a test of strength in a strike regime. Similarily, it could be argued that "strong" units will make greater gains negotiating in the conciliation/strike route than in the arbitration route.

Several features of the system emphasize or qualify this expectation of an upward bias from arbitration.

1) The five criteria would enhance the upward bias. The first and possibly the fifth can be related to market factors. These two criteria would be important in tight labour markets when recruitment is difficult. The presentations of both sides before the arbitration tribunal would be mutually supportive. In slack markets the employer presentations would use the weak labour market to support lower awards while union presentations would emphasize the other criteria such as internal relativity and equity considerations to obtain awards higher than could be justified by market considerations.

2) Arbitration might tend to favour the union side since it is that side which decides whether or not the arbitration route will be selected. However, given the permanent nature of the arbitration tribunal and the fact that the government-employer is in a position to change the legislation should it be perceived that tribunal awards are biased, tempers the effect of this feature. Nevertheless, evidence that it may be a factor is revealed by recent changes in the arbitration function to update it and make it more relevant for the employee side.

3) The Treasury Board presentation in collective bargaining, particularly before the arbitration tribunal are, in general, less persuasive and convincing because they do not focus as sharply on the issues in dispute affecting a particular group of employees. This follows from its position of common employer and hence its remoteness from individual bargaining units. Further, Treasury Board finds it difficult at times to propose a more acceptable resolution of a particular dispute because of its potential precedent in subsequent disputes. On the other hand, the Treasury Board position can weigh heavily where pattern setting is important in the resolution of disputes. Pattern setting can be important given the common employer element and the interrelationship of the process (Finkelman and

Goldenberg, 1983).

4) The designation process serves to weaken the union position in the conciliation/strike route and this can be an important leverage in determining outcomes of disputes in pattern-setting situations in both routes.

5) The permanent nature of the arbitration tribunal and the method of selecting its members contribute to a conservative bent. Moreover, the PSSRA provides that the government must meet the financial costs of arbitration awards. This puts the tribunal in a position of possibly affecting the government's fiscal position thereby enhancing the tribunal's conservatism. Since reasons are seldom given for awards it is difficult to assess the extent of this conservatism.

6) Finally, the greater openess, informality and readiness of conciliation boards to consider issues of concern to the parties, particularly the union side, may be an important consideration in the union choice of procedure. This factor could result in "weak" units opting for the conciliation/strike route despite the possibility of a lower wage outcome.

From this discussion the impact of arbitration on wages under the federal choice of procedures system is not clear "a priori". The system itself may have a basic upward wage bias but given the way the system operates at the Canadian federal level the wage outcome is indeterminate. We, therefore, resort to empirical evidence for some insight into the issue.

Two oberservers who have commented on the wage impact of the Canadian federal choice of procedures system conclude that there is little difference between arbitral awards and negotiated settlements (Anderson, 1978, Barnes and Kelly, 1975). A third observer found significantly higher settlements in the conciliation/strike route compared to the arbitration route (Subbarao, 1979). However, Subbarao's analysis was restricted to the experience of one year of bargaining, 1974-75, while the other two covered a number of

years.

The evidence used in these studies was sparse or incomplete. For example, the Anderson and Subbarao studies were based on settlements involving bargaining units of 500 or more employees. In the Anderson study this restricted the sample to some 50 units, or about 45 per cent of the units bargaining in the Canadian federal public service. Wage information for all bargaining units has recently been compiled by the PSSRB and made available for the current study. We now turn to an analysis of this new data base.

IV. The Data

The wage data for this study come from the settlement files maintained by the Pay Research Bureau (PRB), a unit of the PSSRB. The files cover all negotiations of bargaining units since the inception of the PSSRA in 1967 and ending in 1978. The data are in the form of a listing of wage and salary changes expressed in percentage terms from the old maximum to the new maximum in each bargaining unit by effective date, period covered by the changes, and method of settlement (that is negotiation in the arbitration route, arbitral award, negotiation in the conciliation/strike route, or settlement at the conciliation board or strike stage).

For a number of bargaining units a range of percentage increases either according to level, region or subgroup were negotiated. In these instances an unweighted average was computed to represent the wage change for the unit.

The wage changes in each collective agreement were converted to an annual average using a compound rate formula.[4] This procedure, which is commonly

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[4]The formula for the conversion was as follows

$$A_Y = \prod_{i=1}^{n} \left(1 + \frac{i}{100}\right)^{\frac{12}{d}} - 1 \times 100$$

referred to as "annualizing", is designed to put all agreements on the same basis, thereby facilitating comparisons among them. In any event, agreements whether negotiated in the arbitration route or the conciliation/strike route were remarkably similar in terms of the number of separate wage increases provided in each agreement and the duration of each agreement (Saunders, 1980).

A total of 621 agreements signed in the Federal Public Service between 1967 and December 1978 are included in this study.[5] Some 110 were negotiated in the conciliation/strike route and the remaining 511 in the arbitration route. Of the latter, 106 were arbitral agreements and 405 were settled without recourse to arbitration.

V. The Results

The 621 agreements produced an unweighted average annual wage increase of 7.8 per cent. The average for agreements negotiated without resort to arbitration in the arbitration route was 7.3 per cent, the 106 arbitral agreements averaged 7.7 per cent and the 110 agreements negotiated in the conciliation/strike route averaged 9.0 per cent. Agreements negotiated in the conciliation/strike route, therefore, had wage increases that were, on average, some 1.3 percentage points or 17 per cent more than the average of arbitral awards and 1.7 percentage points or 20 per cent more than the average of directly negotiated settlements in the arbitration route.

Table 1 records average wage increases by year. In the first five years (1966-70), there is little difference among the three methods of settlement.

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[4] cont'd:

Where A_y = average annual increase for agreement y
a_i = a wage increase provided for in agreement y
n = number of such increases
d = duration of agreement y

[5] Some 628 agreements in total were signed altogether but data were not available for seven of them.

Table 1

Wage and Salary Increases, Federal Public Service,

by Method of Settlement and Year, 1966-78*

	Arbitration Route				Conciliation/Strike Route		All Settlements	
	Negotiated		Arbitral Award					
Year	Number of Contracts	Average Percentage Increase	Number of Contracts	Average Percentage Increase	Number of Contracts	Average Percentage Increase	Number of Contracts	Average Percentage Increase
1966*	10	5.8	-	-	1	6.9	11	5.9
1967	78	6.6	1	7.0	7	6.6	86	6.7
1968	6	6.6	4	6.7	1	8.4	11	6.6
1969	57	5.6	5	5.7	8	5.9	70	5.6
1970	54	5.9	12	6.0	2	6.1	68	6.0
1971	11	6.6	7	5.6	6	7.3	24	6.5
1972	27	6.3	8	5.8	3	10.3	38	6.5
1973	34	8.2	11	8.6	6	9.1	51	8.4
1974	27	10.3	8	13.2	7	13.9	42	11.5
1975	24	13.2	9	11.5	15	15.2	48	13.5
1976	34	9.5	15	7.6	19	9.6	68	9.1
1977	32	6.3	21	7.1	23	6.5	76	6.6
1978	11	6.6	5	6.2	12	6.7	28	6.6
1966-78	405	7.3	106	7.7	110	9.0	621	7.8

Notes: Increases are percentage changes in wage and salary rates over the life of the contract expressed at an annual (compound) rate. The annual increase for each contract is shown against the year the first increase became effective.

Lump sum payments including those of $500 granted to most groups in April 1974, are not shown because they were not converted to percentages. The $2400 increases granted to some of the higher paid units under the wage and price control program of 1976-78 have been converted to percentages and are included.

Percentage increases are unweighted averages. That is each contract has a weight of one in the computations.

*Since several agreements provided for increases retroactive to 1966, that year becomes the starting point of the statistical analysis.

Source: Computed from PRB tabulations.

Beginning in 1971, units negotiating in the conciliation/strike route enjoyed an advantage which continued to 1975. After 1975 this advantage tapered off and increases between the two routes came closer together. There was no significant difference between wage increases provided for in settlements negotiated in the arbitration route and those provided in arbitral awards.

For ease of analysis, in Table 2, the data are grouped into three sub-periods, 1966-70, 1971-75 and 1976-78 and tests of significance are provided of the wage differences between the two routes. The first sub-period represents the first round of collective bargaining in the public service. The second sub-period is characterized by an inflationary period in the Canadian economy and the third sub-period covers the national wage and price controls program introduced in October, 1975. The table shows more clearly the advantage of the conciliation/strike route in the first half of the 1970s. Before and after this period there is little difference between the two routes. Also settlements at the conciliation board stage were on average about 2 percentage points higher than arbitral awards, with the difference again being accounted for in the 1971-75 sub-period. The highest level of settlements were those negotiated as a result of strike action. Most of the 17 legal strikes which occurred under the PSSRA during this period were conducted by postal workers and air traffic controllers, the two most militant civil service goups. Over the entire period, strike settlements averaged 11.2 per cent per year compared to 9.7 per cent for settlements at the conciliation board stage and 7.7 per cent for arbitral awards.

Table 3 presents disaggregated data for two major occupational groups, the highly paid professional and scientific catagories whose bargaining units are representative of the type of units found in the arbitration route, and the low paid administrative support and operational categories, which tend to

Table 2

Average Annual Wage and Salary Percentage Increases, Federal Public Service, by Method of Settlement and Sub-Period, 1966-78

	Arbitration Route		Conciliation/ Strike Route			All Settlements
Sub-Period	Negotiated	Arbitral Award	Total	Conciliation Board	Strike	
1966-70	6.1 (205)	6.1(22)	6.4(19)	6.5(4)	6.8(2)	6.1(246)
1971-75	9.1 (123)	9.1(43)[1]	12.3(37)[2]	14.0(8)[3]	13.3(11)	9.7(203)
1976-78	7.7 (77)	7.2(41)	7.7(54)	6.2(6)	7.5(4)	7.6(172)
1966-78	7.3(405)	7.7(106)[1]	9.0(110)[2]	9.7(18)[3]	11.2(17)	7.7(621)

Figures in brackets represent number of agreements

Significance tests were run for the following comparisons:
Conciliation/Strike Route Total and Arbitral Award
Conciliation/Strike Route Total and Arbitration Route-Negotiated
Conciliation Board and Arbitral Award
Arbitration Route - Negotiated and Arbitral Award

[1]Difference between conciliation/strike route, total and arbitral award is significant at 5 per cent level.

[2]Difference between conciliation/strike route, total and arbitration route-negotiated is significant at 5 per cent level.

[3]Difference between arbitral award and conciliation board is significant at 5 per cent level.

All other differences for which significance measures were calculated are not significant at the 5 per cent level.

Source: Computed from PRB tabulations

TABLE 3

Wage and Salary Increases, Federal Public Service,

by Occupational Category, Method of Settlement and Sub-Period, 1966-78

Sub-Period	Professional and Scientific				Administrative Support and Operational			
	Arbitration Route		Conciliation/ Strike Route	Total	Arbitration Route		Conciliation/ Strike Route	Total
	Negotiated	Arbitral Award			Negotiated	Abitral Award		
	Average Annual Percentage Increase							
1966-70	6.2(56)	5.8(11)	7.3(2)	6.2(69)	6.1(68)	6.8(6)[3]	6.5(10)	6.2(84)
1971-75	8.2(42)	7.2(18)	10.8(9)[1]	8.3(69)	9.4(33)[2]	12.3(10)	13.8(18)	11.2(61)
1976-78	7.1(25)	7.8(21)	7.5(16)	7.4(62)	8.5(25)	6.8(6)	7.9(23)	8.1(54)
1966-78	7.0(123)[2]	7.2(50)	8.6(27)[1]	7.3(200)	7.4(126)[2]	9.3(22)[3]	9.7(51)	8.4(199)

Number of contracts is in parenthesis.

[1]Difference between conciliation/strike route and arbitral award is significant at 5 per cent level.

[2]Difference between conciliation/strike route and arbitration route-negotiated is significant at 5 per cent level.

[3]Difference between arbitration route-negotiated and arbitral award is significant at 5 per cent level.

All other differences among the three methods of settlement are not significant at the 5 per cent level.

Source: Computed from PRB tabulations.

dominate the conciliation/strike route. These two categories are at opposite ends of the federal public service wage scale and since they are usually considered to be exposed to different factors in their pay determination a comparison between the two routes may reflect this fact rather than differences between the routes themselves.

The results are little changed when examined by occupational category. Conciliation/strike route wage increases continue to exceed those in the arbitration route with most of the gain in favor of the former route occurring in the 1971-75 sub-period. These results are particularly marked for the professional and scientific category but are less clear for the administrative support and operational category. In this latter category arbitral awards and conciliation/strike wage increases are about the same on average (9.3 per cent vs. 9.7 per cent). However, negotiated wage increases in the arbitration route for this occupational category are significantly lower than in the conciliation/strike route and this accounts for the advantage of the latter route.

VI. Discussion

The statistical evidence shows that significant differences in wage increases occur between bargaining units negotiating in the conciliation/strike route and bargaining units negotiating in the arbitration route. The difference between the two routes occurred in the 1971-75 sub-period. The differences were negligible in the other two sub-periods. Within the arbitration route units on average enjoyed similar wage increases whether they settled directly or went to arbitration.

The evidence raises two questions.

(1) Why were bargaining units negotiating in the conciliation/strike route more successful in achieving higher wage settlements than their counterparts in the arbitration route in the middle sub-period compared to the

other two sub-periods?

(2) Was the advantage of the conciliation/strike route a product of the nature of the units negotiating in the two routes or does it reflect real differences between an arbitration and a non-arbitration regime?

In answer to these two questions it will be argued (a) that of the factors listed earlier in the paper to explain the relative behavior of arbitrated wages in the Canadian federal choice of procedures system, the most dominant is the conservatism of the arbitration process. This conservatism has operated to keep arbitrated wages down. (b) that the differential results over the period are a product of special circumstances in the first and third sub-periods.

In support of these two arguments three additional pieces of evidence are offered.

1. data on the switching of bargainiig units between the two routes
2. the wage experience of switching units
3. the arbitration experience of high paid vs low paid civil servants.

1. Unit Shifting

Between 1967 and 1970 at the end of the first round of bargaining almost 90 per cent of the 114 certified bargaining units representing 80 per cent of federal public servants eligible for collective bargaining opted for the arbitration route to conduct their negotiations with the government-employer. The few that chose conciliation/strike included postal workers, electronics workers, ships crews, air traffic controllers and other blue collar units whose traditional links with the private sector trade union movement are reflected in their selection of procedure.

In 1978, the proportion of units opting for arbitration fell to 67 per cent and included, in the main, the large number of small professional units. The proportion of employees fell to 30 per cent. In the space of 11 years,

the conciliation/strike route had become the dispute settlement procedure for the great majority of civil servants.

Almost all of the shifting occurred in the 1971-75 sub-period. A variety of reasons have been offered for this large scale abandonment of the arbitration route, most of them reflecting a slow-moving, conservative, restrained, arbitration process out of touch with a rapidly changing environment (Barnes and Kelly, 1975; Anderson and Kochan, 1977). In the first sub-period the arbitration system was well-suited to the needs and objectives of employees. Most civil servants of the time viewed the strike weapon with some abhorrence. There was a reluctance to use it in the historical context of the informal, personal and consultative atmosphere which prevailed before 1967 in the determination of pay and benefits for civil servants (Barnes and Kelly, 1975).

Further, the arbitration system responded well to the basic objective of "catch-up" in wages, fringes benefits and contractual language and this is reflected in similar wage increases enjoyed by employees in both routes. (Anderson, 1979). Wage increases during this first sub-period were of the uniform across-the-board type which prevailed with little differentiation in both routes.

In time, these early objectives were met and the shift to the conciliation/strike route took advantage of a more flexible, innovative procedure in an environment characterized by rapidly rising wages and prices and an expanding public service. Wage increases in the conciliation/strike route exceeded those in the aribtration route, the arbitration process was proving to be too ponderous, rigid and slow and the arbitration tribunal too judicial in its proceedings. Bargaining units responded by opting for the conciliation/strike route. Some 31 units representing close to 135,000 public servants (more than 1/2 of federal employees eligible for collective

bargaining) changed their dispute resolution specification. This widespread move to the conciliation/strike route came to an abrupt halt in 1976 coinciding with the disappearance of the wage advantage of the conciliation/strike route. Between 1976 and 1978, the third sub-period, three units switched to the conciliation/strike route and four units changed their option from conciliation/strike to arbitration (PSSRB, Annual Reports).

As already noted, Canadian wage and price controls were imposed in October 1975 for a three year period. Under the program, ceilings were placed on wage increases throughout the economy. For collective bargaining in the federal public service these ceilings effectively kept wage increases in the two routes in line with each other. It no longer paid units to switch from the safer, less costly arbitration route to the uncertainty of the conciliation/strike route in the hope of gaining a wage advantage.

Although this evidence supports a strong wage sensitivity to bargaining unit switching throughout the period, there remained a hard core of units that stayed with the arbitration system. These comprised, in the main, units representing professional, scientific, supervisory and similarily highly paid personnel who historically have remained outside the mainstream of the Canadian labor movement and who in principle oppose the use of the strike weapon (Barnes, a, 1978).

This experience with the Canadian federal choice of procedures system challenges the notion that so-called "weak" units negotiate in the aribtration route and "strong" units negotiate in the conciliation/strike route. In the absence of acceptable definitions of "weak" and "strong" bargaining units it is difficult to be precise about this matter. But the rush of units representing workers across the broad spectrum of the federal public service

occupational structure to negotiate in the conciliation/strike route in the early 1970's and the characteristics of the resultant distribution of units in the two routes in 1978 strongly support the position that both weak and strong units negotiate in both routes. The presence of this mixture emphasizes the significance of the observed wage differences between the two routes. If strength of unit is a factor in wage determination then there should be little difference in wage increases between the two routes. The fact that a significant difference was found suggests that the arbitration process exercised an independent downward pressure on wages.

2. The Wage Experience of Shifting Units

The data base permits an analysis of the wage changes of units before and after shifting. The 34 units that switched to the conciliation/strike route over the 1967-78 period experienced wage settlements while operating in the arbitration route some three per cent below the average of all settlements in those years (Saunders, 1980). After switching their settlements rose three per cent above the all-settlement averages in the years they operated in the conciliation/strike route.

The nine units that switched to the arbitration route enjoyed average wage increases five per cent above the all-settlements averages in the years they operated in the conciliation/strike route. After switching their wage increases fell to two per cent below the all-settlements averages (or 8 per cent below, if the extraordinary firefighter arbitration award of 21.5 per cent in 1974 is excluded).

Thus, bargaining units that changed their dispute resolution specification from the arbitration to the conciliation/strike route gained by the change. Units that switched the other way, from conciliation/strike to arbitration, lost ground in their wage increases. This evidence further supports the position of an arbitration system exerting a downward pressure on

wages.

3. The Arbitration Experience of High Paid vs. Low Paid Categories

A third piece of evidence to support the position of a downward wage bias of the arbitration system can be found in the differential experience of high and low paid categories. An examination of Table 3 shows that the highly paid professional and scientific categories did not fare as well in the arbitration route as did their counterparts in the conciliation/strike route. Professional and scientific arbitral awards were significantly below settlements made by these categories in the conciliation/strike route.

Administrative support and operational categories, on the other hand, enjoyed arbitral awards that were not significantly different from settlements won by their counterparts in the conciliation/strike route. Further, a direct comparison between these high and low paid groups shows that the administrative support and operational categories received significantly larger awards in the 1967-78 period than did the professional and scientific categories (Saunders, 1980). Both groups enjoyed roughly similar settlements in the conciliation/strike route.

These results cannot be explained by market forces alone. If the arbitration tribunal had given greater weight to market factors, then on the basis of relative demand for employees in these two categories and the relative size of their pay increases in the outside market in the key 1971-75 period, professional and scientific awards should have been larger than they were and, perhaps, larger than those received by the administrative support and operational category (Foot et al, 1978 and Ostry and Zaidi, 1982). That this was not the case reflects a hesitancy on the part of a conservative arbitration process to grant large awards to an already well-paid group, a hesitancy that did not necessarily spill over to lower paid civil servants.

It will also be noted from Table 3 that within the arbitration route negotiated settlements for the administrative support and operational categories were significantly below arbitral awards. Given this difference it would have paid these units to have gone to arbitration. Why they did not is not clear or evident from the analysis in this paper. Their failure to take advantage of arbitration may reflect a trade-off between settling for a smaller wage increase or suffering the frustrations of going through the lengthy, time consuming, legalistic process of arbitration with an uncertain result at the end.

Thus, there is a strong presumption that the differences in wage increases in favor of the conciliation/strike route are a product of a conservative arbitration process. This process has operated to depress the wages of civil servants who negotiated their contracts in the arbitration route. The evidence in support of this finding is clear for the first half of the 1970s, a period of rapidly rising wages and prices in the Canadian economy. The evidence is less clear for 1967-70 and 1976-78, both periods of relative stability in wage and price behavior but also periods in which special circumstances may have been more important in explaining wage determination in the Canadian federal public service. The presence of these other factors: the dominance of arbitration as a method of dispute settlement in the 1967-70 period and wage and price controls in the 1976-78 period, make it difficult to isolate the effects of arbitration.

Since most of the units negotiating in the arbitration route tend to be the smaller-sized professional and scientific units, this downward bias may not be evident in either the officially published wage settlement statistics (Labour Canada) or in other studies such as that by Anderson (1979) which are based on negotiating units of 500 or more employees.

VII. Conclusions

The purpose of this paper has been to examine the impact of interest arbitration in the Canadian federal civil service on wages of civil servants. Canadian federal civil servants enjoy collective bargaining rights under a unique choice of procedures system. Since the choice of bargaining, with arbitration or strike as the ultimate step in dispute resolution, rests with the union side it would be expected that the system would give arbitration an upward bias in wage determination. However, given the particular legal environment, the nature of the Canadian federal arbitration system and the rules under which the system operates the result has been a downward bias in the wages of federal civil servants who negotiated in the arbitration route compared to their counterparts in the conciliation/strike route. Further, since wage increases in the Canadian Federal public service were below those in the private sector and in other public sectors during the period under review, it is possible that these arbitrated wage increases were depressed compared to wage increases in other sectors of the Canadian economy (Auld, 1979; Auld et al, 1979; Cousineau and Lacroix, 1977; Finkelman and Goldenberg, 1983; Gunderson, 1980; Labour Canada). In this respect the study belongs to the minority of investigations that have found arbitation to lower wages.

It appears that much of the downward bias is a product of a conservative arbitration process. Although reasons for awards are seldom given, arbitrators' decisions and the negotiated settlements they influence do not seem to heed market forces, particularly those forces operating in an environment of rapidly rising wages and prices. Recent or proposed changes to the arbitration function may reduce or offset the effects of this conservative bias (Barnes, b, 1978; Barnes, 1982; Finkelman, 1974; House of Commons, 1978). These changes are intended to make the process more sensitive both to market

forces and to the needs and objectives of civil servants. The results may be a return of units to arbitration and the granting of awards that are in line with wage settlements elsewhere.

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