

The Compensation Decisions of the Anti-Inflation Board Les décisions de la Commission anti-inflation

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Résumé de l'article

La mise en vigueur d'un programme de contrôle des salaires et des prix en octobre 1975 a soulevé une longue liste de questions prêtant à débat public et à discussions théoriques. Les dossiers de la Commission contiennent une masse considérable de statistiques qui permettent d'apprécier certains aspects du programme et d'en arriver ainsi à des conclusions provisoires.

Pour chaque augmentation de salaire qui tombe sous la coupe de la Commission, l'employeur doit fournir des précisions touchant l'accord négocié ainsi que les renseignements nécessaires pour calculer les normes qui s'appliquent au groupe concerné. Si l'entente conclue excède les normes, la Commission en analyse les motifs et donne son approbation à l'intérieur des limites des normes et du taux convenu.

On a mis au point un modèle d'analyse permettant de connaître, d'après les décisions de la Commission, quel était le nombre de celles où le taux négocié dépassait les normes en prenant comme hypothèse que le principal objectif de la Commission, lors de son établissement, était d'être reconnue comme un instrument légitime de l'application de la politique anti-inflationniste dans son ensemble. Cet objectif premier peut se subdiviser en deux objectifs opérationnels.

D'abord, la Commission devait être perçue comme un outil efficace destiné à contenir le taux d'inflation, soit en matière de gains, à obtenir un certain succès dans l'abaissement de ces gains dans les conventions collectives. En second lieu, la Commission devait s'efforcer d'empêcher l'aliénation des groupes au point de mécontenter le public qui exigerait des modifications dans son mandat. La recherche de ce double but était en soi contradictoire et ne pouvait que rendre difficile la prise des décisions. Comment, par exemple, la Commission réagirait-elle face à un militantisme syndical qui pouvait imposer des règlements supérieurs aux normes établies et décider de faire la grève si l'on considérait inacceptable la décision de la Commission?

Nous pouvions nous attendre à ce que la Commission, face à une grève prévisible si sa décision était défavorable, approuverait une augmentation plus généreuse, hypothèse qui ne peut être vérifiée qu'indirectement en mettant au point un indice fondé sur l'évolution des grèves dans l'industrie, indice qui devait être relié au règlement approuvé.

Nous nous attendions aussi à ce que plus le règlement dépassait les normes, plus l'augmentation accordée serait supérieure aux normes. De pareilles solutions de compromis auraient pu être fréquentes, compte tenu du fait qu'il lui fallait être efficace dans le freinage d'accords trop élevés tout en en ameutant pas les syndicats contre elle. On pouvait encore présumer que la Commission serait mieux acceptée si elle adoptait la ligne dure envers les groupes que le public avait à l'oeil. À tout prendre, les conventions collectives du secteur public ne sont-elles pas plus « voyantes » que celles du secteur privé ? Nous pouvions donc nous attendre à des approbations moins fortes dans le secteur public en général. Plus une institution s'affirme et plus ses procédures prennent un caractère rituel, plus la discrétion des personnes chargées de l'appliquer diminue, phénomène qui devait se traduire par l'existence d'un plus petit nombre d'exceptions à la règle et, partant, d'approbation moins fortes. D'autres variables qu'il fallait inclure dans l'analyse étaient la longueur des conventions, les taux moyens de salaire payés par l'industrie et les conditions régionales.

Les modèles furent vérifiés à partir d'un échantillonnage de 346 décisions de la Commission. Les résultats ainsi obtenus confirment l'hypothèse principale. Les augmentations approuvées par la Commission sont significatives, reliées positivement aux augmentations de salaires négociés et à l'indice des grèves. Les approbations sont nettement plus basses dans le secteur public. Enfin, la Commission a donné des approbations plus faibles à mesure que le temps s'écoulait.

The Compensation Decisions of the Anti-Inflation Board

Allan M. Maslove
and
Gene Swimmer

This paper examines the determinants of compensation decisions of the Anti-Inflation Board during its first year of existence. A bureaucratic behavior model is developed and tested using multiple regression techniques.

The inauguration of a program of wage and price controls in October 1975 raised a long list of issues for public and academic debate. Many of these issues will remain unresolved for a considerable period of time pending the accumulation of sufficient evidence to permit analytical investigations into the impact of the program. However, in at least one area a considerable amount of data have already been gathered, enabling one to examine certain aspects of the program and reach at least interim conclusions. This area concerns the wage and salary compensation decisions of the Anti-Inflation Board (AIB).

In particular, what we examine empirically in this paper are the determinants of the AIB's compensation decisions from which one might draw some conclusions regarding the decision-making process of the AIB.¹ While our results must be regarded as tentative because the program is ongoing, we believe the data reveal relationships that are sufficiently strong to warrant reporting at this time.

The paper is divided into five sections. The first section briefly reviews the mechanics of the decision process of the AIB in the compensation cases it handles. The second discusses two other investigations that have been undertaken into AIB compensation rulings. In the third section, we present the empirical models and in the fourth the results are presented and discussed. A final brief section summarizes the research.

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THE MECHANICS OF THE DECISION PROCESS OF THE AIB

For every wage increase which comes under the Anti-Inflation Board's jurisdiction the employer is required to submit an AIB-2 form. This form provides the Board with the details of the negotiated settlement (NEGOTD)² and the information required to calculate the arithmetic guideline pertaining to that labour group (GUIDELN). In fact, in advance of a settlement the employer or employees may calculate the guideline themselves or have the Board calculate it for them.

The guideline is determined according to a set formula which does not permit any lee-way in its calculation.³ It is determined by summing the following three factors :

- 1) a basic protection or cost-of-living component equal to 8, 6, and 4 per cent respectively in the first, second, and third years of the program ;
- 2) a national productivity factor of 2 per cent ; and
- 3) an experience adjustment factor of between minus and plus 2 per cent per year determined by the group's compensation history over the previous two years and the movement in the Consumer Price Index over the same period.

Officers in the compensation branch of the AIB then process each case to determine the relationship of the negotiated settlement (NEGOTD), including non-wage benefits, to the arithmetic guideline (GUIDELN). If the former is less than the latter the AIB has no authority to recommend any adjustment in the contract. If the former exceeds the latter the officer examines the grounds for special consideration (eg., historical relationship with other comparable groups). A recommendation is then prepared. The case is then presented to the Board itself for a decision. The Board's approved increase (APPRVD) may fall anywhere within (and include) the boundaries set by the guideline at the low end and the negotiated settlement at the high end.

One aspect of the decision process is worth special mention. Cases in which the negotiated settlement is within 2 percentage points of the guideline are treated somewhat differently. In these cases, the senior bureaucrats of the compensation branch determine whether the nego-

¹ We refer here collectively to the Board itself and to its supporting bureaucracy. This is the case throughout the paper unless a distinction between the two is specifically made.

² In the appropriate places the mnemonics which are used in the analysis are identified.

³ The guidelines are subject to an upper limit of \$2400 and to a lower limit for lower paid employees. Any cases in which either of these limits was binding were excluded from our sample.

tiated settlement should be approved or rolled back fully or partially. The case goes to the Board only for *pro forma* approval. This procedure raises the question of differences in the decision patterns between cases above and below this 2 per cent cutoff. We comment on this possibility in section IV.

After the AIB decision is rendered the employer and employee groups involved, if unsatisfied, have the option of going back to the Board with additional information and asking for a reconsideration of their case.⁴ The AIB then may revise its decision. Our sample includes the final decisions in any such cases but we have no way of identifying these cases individually.

INVESTIGATIONS INTO AIB COMPENSATION RULINGS

To our knowledge, thus far, only two pieces of research have appeared which have empirically examined the AIB's compensation decisions. The first study is by Foot and Poirer and the second much briefer piece is by Osberg.

Foot and Poirer⁵ analyse the AIB's compensation decisions as the outcomes of a two-stage process. Their model is «institutional» as opposed to «behavioural» since they believe the latter models are not likely to yield any empirically testable hypotheses. The first decision in their model is to determine whether the contract should be rolled back to the arithmetic guidelines, granted the negotiated settlement or granted some intermediate increase. The second is to decide on the exact recommendation for the intermediate cases.

Their results on the first stage decision model suggest that unionized employees may be less successful than non-unionized in securing approval for their negotiated settlement, that industry type may make a difference, that there is less likelihood of gaining approval for a higher negotiated settlement and more likelihood of gaining approval if the guideline is higher. Other factors (including region, sector, and number of employees) were not significant. The second stage results

⁴ The group may, of course, also appeal to the Administrator who has the power to reconsider and adjust the AIB's decisions. We do not have any information as to which cases may have been formally appealed in this manner.

⁵ D. K. FOOT and D. J. POIRER, «Public Decision Making in Canada: The Case of the Anti-Inflation Board», Institute for Policy Analysis, University of Toronto, Working Paper Number 7709, June, 1977.

suggest that industry and occupation are significant influences as are the guidelines and the negotiated settlements.

Two aspects of the Foot and Poirer paper warrant comment in the context of our own work. First, the two-stage decision process, while statistically elegant, postulates what may be a non-existent dichotomy in the AIB's decision process. Secondly, while we only suggest the outlines of a formal behavioural model, the results we present in the fourth section do support this approach, and in some cases quite strongly so. From these results we would in turn argue that a behavioural (optimizing) approach in studying the AIB's decisions may indeed be fruitful.

The article by Osberg⁶ presents the results of a single multiple (OLS) regression model. Board approved increases are run as a function of the guidelines, negotiated excess over the guidelines (ADIFNEG, in our model) the excess squared (ADIFNEG²) and a teacher group dummy variable. Osberg finds that the AIB approved settlement is negatively influenced by the squared term and positively influenced by the other three. Thus AIB approvals are higher if the guideline is higher, if the negotiated settlement is higher (though at a diminishing rate) and if a teachers' contract is involved.

As will become apparent in the following sections, there are interesting correspondences between Osberg's, Foot and Poirer's and our own results particularly with respect to the influence of the guidelines and the negotiated settlements on the AIB's approved increases.

EMPIRICAL MODELS

In this section, we develop an empirical model for AIB decisions as to the allowable portion (if any) of a wage increase⁷ negotiated in excess of the guideline. Throughout the empirical analysis, two different dependent variables will be utilized: the percentage wage increase approved (APPRVD) and the absolute difference between the percentage wage increase approved and the percentage wage increase allowed by the guideline (ADIFAPP = APPRVD - GUIDELN). The former specification was used by Foot and Poirer and by Osberg. We have no a priori reasons to assume that either is superior.

⁶ L. OSBERG, «A Note on the Wage Decisions of the Anti-Inflation Board», *Canadian Public Policy*, III: 3, Summer, 1977, pp. 377-380.

⁷ Throughout this paper, wage increase is really used as shorthand for the increase in compensation, inclusive of wage scale, fringe benefits and merit pay increases.

Our intention is to examine the impact of a number of variables on AIB compensation decisions for what they reveal about the Board's decision-making process. In general terms one might hypothesize that the main objective of the AIB early in its life was to win acceptance as a legitimate instrument of the government's overall anti-inflation policy with both the rest of the bureaucracy and the general public. In addition to the problems encountered by any new bureau, the AIB began in an uncertain and sceptical environment; thus one might expect that it would be particularly concerned with gaining acceptance. This general goal might be restated in terms of two other, more operational sub-goals. First, the AIB must be seen to be effective in curbing the rate of inflation; on the compensation side this means showing success in lowering negotiated wage settlements. Secondly, the AIB would attempt to avoid alienating affected groups to an extent that would lead to public discontent and demands for changes in its mandate (including, at the extreme, ending the controls program). These sub-goals may very often be contradictory thereby leaving the Board with a series of difficult trade-off decisions.

In this context, the impact of labour militancy on AIB compensation decisions is particularly interesting. Although labour militancy is a multifaceted concept, we can identify two aspects of militancy: the ability to negotiate a settlement in excess of the guidelines, and the willingness to go out on strike if the AIB decision is unacceptable.

The Canadian Labour Congress has advised its member unions to enter contract negotiations under the premise that the AIB does not exist. Affiliates should try to negotiate the most advantageous contracts they can, whether or not they exceed the guidelines, and deal with the prospect of AIB rollbacks at a later date. Obviously, management negotiators generally reject this view although the Ontario Labour Relations Board has ruled that a refusal to discuss a wage increase in excess of the guideline is *not* bargaining in good faith. The degree to which the negotiated settlements exceed the arithmetic guidelines will ultimately depend on the relative strengths of the parties which in turn will be a function of objective criteria such as the demand for labour in the industry, inventory and strike fund levels as well as subjective criteria such as the ability of the union leadership to get the workers out. How will the threat of a strike affect the AIB's reaction to negotiated settlements which exceed the guidelines? One plausible possibility would be that the greater the strike threat, the greater the percentage above the guideline the AIB would be induced to approve. That is, the Board, when faced with the real prospect of a strike if its decision is

viewed unfavourably, will approve a more generous wage increase, other things being equal. In terms of our general hypothesis concerning the Board's acceptance and legitimacy, the costs of a decision which prompts a strike may be very high.

This hypothesis can only be tested indirectly because we could not determine the likelihood of a strike for any labour unit in the sample, or even if the group had a previous history of striking. The existence of a union is a necessary condition for a strike. It thus seems reasonable to assume that non-union workers should be treated less generously by the Board. A dummy variable (NON-UNION) has been included to test this hypothesis. There are, however, huge variations in the militancy exhibited by unions. To hopefully account for the variation we have placed each labour unit into one of 43 different industries. For each industry we were able to develop a strike index (STRIDEX) defined as the average of days lost due to strikes and lockouts for the years 1974 and 1975 divided by the average employment for the two years.⁸ Every observation in a specific industry was assigned the value of the index for that industry. We postulate positive relationships between the strike index (STRIDEX) and both dependent variables.

We also would expect that the greater the negotiated settlement above the guideline (ADIFNEG), the greater the percentage above the guideline the Board will approve (ADIFAPP). In other words, the more you ask for the more you get. Such «compromise» solutions might be expected to emerge given the trade-off problem (between achieving effective rollbacks and avoiding undue alienation of the concerned groups) faced by the AIB. This would suggest a desire to avoid extreme points.⁹ In addition, as did Osberg, we postulate a nonlinear relationship between approved and negotiated rates, where there are diminish-

⁸ A two year average must be used because in many industries the typical agreement lasts two years, so few man-days lost in 1975 could simply mean that little bargaining was done during that year. Data on man-days lost came from Labour Canada, *Strikes and Lockouts in Canada, 1975*. Total employment data came from Statistics Canada, 72-002, *Employment Earnings and Hours*; 72-009, *Local Government Employment*; 72-007, *Provincial Government Employment*; and 72-004, *Federal Government employment*.

⁹ There may be a strong parallel between AIB compensation rulings and labour arbitration decisions. It is a commonly accepted belief that arbitrators will tend to «split the difference» between employer and employee wage positions in an attempt not to alienate the parties and thereby reduce the probability of being employed as an arbitrator again. For example, see Carl STEVENS, «Is Compulsory Arbitration Compatible with Bargaining?», *Industrial Relations*, Vol. 5, No. 2, February, 1966, pp. 38-52.

ing returns to negotiating larger rates above the guideline. In summary then, we expect that the two dependent variables are positively related to the negotiated wage increase and negatively related to the negotiated wage squared:

$$(1) \text{ APPRVD} = f \left(\begin{matrix} (+) \\ \text{NEGOTD}, \end{matrix} \begin{matrix} (-) \\ \text{NEGOTD}^2 \end{matrix} \right)$$

$$(2) \text{ ADIFAPP} = g \left(\begin{matrix} (+) \\ \text{ADIFNEG}, \end{matrix} \begin{matrix} (-) \\ \text{ADIFNEG}^2 \end{matrix} \right)$$

where: $\text{ADIFNEG} = \text{NEGOTD} - \text{GUIDELN}$
 $\text{ADIFAPP} = \text{APPRVD} - \text{GUIDELN}$

Additional independent variables allow us to test other aspects of the Board's decision making. Presumably the AIB will generate more acceptance by being tough on groups who are more in the public eye. On balance, public sector contracts are more visible than those in the private sector and large labour groups are more visible than small groups. We therefore predict that approved wage increases (APPRVD and ADIFAPP) will decrease as the number of workers affected by the decision (NOEMPLY) increases. We also expect lower wage approvals for public sector workers broadly defined to include all federal, provincial and municipal workers (SECTOR).

Another important aspect of AIB decision making is the time pattern of the decisions. As a bureau becomes more established and procedures become more ritualized, discretion for individual officers diminishes. This phenomenon would translate into fewer exceptions to the rule (the guideline) and thus lower wage rate approvals, *ceteris paribus*, as the AIB progresses. In addition, there exists a borderline problem. The Board may have been hesitant to roll back heavily a contract considered soon after the beginning of controls if it meant a large deviation from comparable contract signed just prior to controls. However, over time a "weaning" process would occur as the pre-control settlements fade from prominence. To test these hypotheses, we define an independent variable (BDDATE), as the age of the AIB in months at the time of the specific wage approval decision. We expect a negative relationship between BDDATE and both dependent variables.

Not all contracts submitted to the AIB expire in one year. Some contracts have a two or even three-year duration. Our data only refer to the wage increase approved for the first year. The contract length (CLENGTH) is however included as a separate independent variable. One could speculate that given a choice of which year's wage increase to cut back in a multi-year contract, the AIB would choose to come down harder on the first year and

be softer on subsequent years' wage increases. In this way, the Board gains more credibility in its crucial first year of existence without unduly penalizing the employee group involved. If this scenario is correct, contract length should be inversely related to wage increases approved.

We have included the guideline wage increase (GUIDELN) as an independent variable. For the equation in which APPRVD is the dependent variable, the GUIDELN represents its lower bound. We would therefore expect that the higher is the GUIDELN variable the higher will be the dependent variable, *ceteris paribus*. For the equation in which ADIFAPP is the dependent variable we have no *a priori* expectation as to the direction of influence. One could postulate scenarios in which a higher guideline would prompt the Board to approve a settlement either closer to or more in excess of the guideline.

Another possible determinant of Board decisions is the average wage level of the workers in the bargaining unit. At the extremes, there should be an effect because the regulations state that workers earning less than \$3.50 per hour are exempt from controls and high paid workers are limited to a \$2400 per year increase, regardless of the appropriate guideline. Our data do not include cases in which these upper and lower bounds are relevant. In any event it is more interesting to examine intermediate wage contracts. Is the Board more likely to approve a higher wage increase in percentage terms if the wage base is lower? No direct data on wage levels are provided by the AIB. We again resort to classifying all cases by industry and assigning average industry weekly wage levels (WEEKWGE) for December 1975.¹⁰ If the AIB redistributes income to lower paid workers, WEEKWAGE will be inversely related to the dependent variables.

Finally, previous studies have been concerned with regional preferences, if any, of AIB decisions. Each case has been classified as: ATLANTIC, QUEBEC, ONTARIO, PRAIRIES, B.C. or NATIONAL. From this six-way classification, we construct five regional dummy variables (the NATIONAL dummy has been deleted).

¹⁰ WEEKWGE is defined as the average weekly wage of all employees for December 1975 divided by total employment for 1975. For public sector employees we are forced to use total payroll divided by total employment instead. All data came from Statistics Canada, *Op. Cit.* #72-001; 72-004; 72-007; 72-009.

We summarize the models below for the two dependent variables, the percent wage increase approved (APPRVD) and the percentage point wage increase in excess of the guideline approved (ADIFAPP) indicating where applicable, the expected signs of the coefficients:

$$\begin{aligned}
 (1) \text{ APPRVD} &= f \begin{matrix} (+) & (-) & (-) & (+) \\ \text{NEGOTD}, & \text{NEGOTD}^2, & \text{NON-UNION}, & \text{STRIDEX}, \\ (-) & (-) & (-) & (+) \\ \text{BDDATE}, & \text{SECTOR}, & \text{NOEMPLY}, & \text{GUIDELN}, \\ (-) & & & \\ \text{CLENGTH}, & \text{WEEKWGE}, & & \text{ATLANTIC}, \text{QUEBEC}, \\ \text{ONTARIO}, & \text{PRAIRIES}, & & \text{B.C.}) \end{matrix} \\
 (2) \text{ ADIFAPP} &= g \begin{matrix} (+) & (-) & (-) & (+) \\ \text{ADIFNEG}, & \text{ADIFNEG}^2, & \text{NON-UNION}, & \text{STRIDEX} \\ (-) & (-) & (-) & \\ \text{BDDATE}, & \text{SECTOR}, & \text{NOEMPLY}, & \text{GUIDELN}, \\ (-) & & & \\ \text{CLENGTH}, & \text{WEEKWGE}, & \text{ATLANTIC}, & \text{QUEBEC}, \\ \text{ONTARIO}, & \text{PRAIRIES}, & & \text{B.C.}) \end{matrix}
 \end{aligned}$$

EMPIRICAL ESTIMATES OF THE MODEL

Before presenting empirical estimates of the model, we will briefly describe the sample. All decisions between March and May 1976 were released publicly by the AIB. In addition, the Board was kind enough to provide us with all settlements for the month of November 1976. The sample consists of all complete cases reported in those four months where the negotiated wage settlement exceeded the guideline.¹¹

Case data are the sources of all the previously defined variables except the industry strike index and average wage level. Table I presents the means and standard deviations of all quantitative variables for the entire sample. The relative size of the wage increases negotiated, allowed by the guideline and eventually approved are particularly illuminating. The average wage rate negotiated called for a 15.9% increase compared with a mean guideline of 9.8%. Not surprisingly, the mean wage increase approved was practically at the midpoint of the other two rates, 12.7%.

¹¹ Published decisions can be found in the *AIB News Releases* — 76-56, 76-71, 76-83, 76-94. From the case data, it was not always possible to determine the region and/or the industry of the group involved. These cases had to be deleted. In addition, cases at the upper and lower bounds of the controls program were dropped. The resulting sample contains 346 cases.

TABLE I
Descriptive Statistics

Full Sample: N = 346)¹

<i>VARIABLE</i>	<i>MEAN</i>	<i>STANDARD DEVIATION</i>
NEGOTD	15.86 percent	7.08
GUIDELN	9.76 percent	1.82
APPRVD	12.68 percent	4.20
NOEMPLY	333.29 employees	1101.84
BDDATE ²	3.50 months	2.31
CLENGTH	1.41 years	0.61
ADIFNEG	6.10 percentage points	6.86
ADIFAPP	2.92 percentage points	3.61
STRIDEX ³	2.28 percent	3.06
WEEKWGE ³	222. dollars	52.42
STRIDEX ⁴	2.29 percent	2.47
WEEKWGE ⁴	207. dollars	37.04

¹ Twenty-eight percent of the cases involved public sector labour groups. Seventy-one percent of the cases were unionized bargaining units.

² March 1976 was the first month in the sample.

³ Calculated on the basis of 43 industrial sectors.

⁴ Calculated on the basis of 346 observations.

Tables 2 and 3 present the linear regression estimates of our model using the wage increase approved by the AIB (APPRVD) and the wage increase approved in excess of the guideline (ADIFAPP), respectively, as the dependent variables. The first column of each table gives the estimate of the entire model and the second column shows a simplified version of the model including only statistically significant variables. The overall fit of the models is excellent and no appreciable reduction in R^2 occurs from dropping non-significant independent variables.

It is necessary to address a statistical issue in advance of a detailed discussion of the regression results. Both dependent variables have a limited range of values. APPRVD has the guideline increase as its minimum and the negotiated settlement as its maximum. Likewise, ADIFAPP has a zero minimum and ADIFNEG as a maximum. Linear regression techniques may generate inefficient estimates with limited dependent variables.¹² Consequently, we have also estimated the model using TOBIT analysis. These results are presented in the Appendix. The two techniques generate estimates which are consistent with respect to sign, significance, and magnitude.

¹² For discussion of this problem in detail see FOOT & POIRER, *Op. Cit.*

TABLE II
Regression Results for the Percentage Wage Increase
Approved by the Anti-Inflation Board
(APPRVD = Dependent Variable)

<i>INDEPENDENT VARIABLE</i>	<i>COEFFICIENT OF INDEPENDENT VARIABLES (t VALUE IN PARENTHESIS)</i>	
CONSTANT	- 1.2877	- 2.0986
NEGOTD	.6973 (12.10)***	.7033 (12.79)***
NEGOTD ²	- .0056 (- 5.26)***	- .0057 (- 5.47)***
GUIDELN	.6866 (10.83)***	.6764 (11.26)***
EDDATE	- .1336 (- 2.63)***	- .1262 (- 2.70)***
SECTOR	- .5214 (- 1.68)*	- .6140 (- 2.28)**
CLENGTH	- .3352 (- 1.64)	- .3488 (- 1.90)*
STRIDEX	.1239 (1.84)*	.0999 (2.27)**
WEEKWGE	- .0016 (- .36)	---
NOEMPTY	.0001 (.54)	---
NON-UNION	.0538 (.20)	---
ATLANTIC ¹	- .5069 (- .26)	---
QUEBEC	- .3060 (- .16)	---
ONTARIO	- .6478 (- .34)	---
PRAIRIES	- .7611 (- .39)	---
B.C.	- .3620 (- .18)	---
R ²	.809	.807
F	92.92	202.31
N	346	346

* Significant for a two-tail test at the 10% level.

** Significant for a two-tail test at the 5% level.

*** Significant for a two-tail test at the 1% level.

¹ The regional variable is a six-way classification: ATLANTIC, QUEBEC, ONTARIO, PRAIRIES, B.C., NATIONAL. The «NATIONAL» dummy variable has been dropped.

TABLE III
Regression Results for the Percentage Wage Increase in Excess
of the Guideline Approved by the Anti-Inflation Board
(ADIFAPP = DEPENDENT VARIABLE)

INDEPENDENT VARIABLE	COEFFICIENT OF INDEPENDENT VARIABLES (t VALUE IN PARENTHESIS)	
CONSTANT	- .0830	- .7586
ADIFNEG	.5897 (15.79)***	.5942 (16.96)***
ADIFNEG ²	- .0056 (- 5.52)***	- .0056 (- 5.76)***
GUIDELN	.1911 (3.24)***	.1844 (3.24)***
BEDDATE	- .1373 (- 2.72)***	- .1288 (- 2.77)***
SECTOR	- .5876 (- 1.88)*	- .6889 (- 2.54)**
CLENGTH	- .3164 (- 1.56)	- .3292 (- 1.82)*
STRIDEX	.1146 (1.70)*	.0998 (2.28)**
WEEKWGE	- .0009 (- .20)	---
NOEMPLY	.0000 (.53)	---
NON-UNION	.0760 (.28)	---
ATLANTIC ¹	- .4709 (- .24)	---
QUEBEC	- .3533 (- .18)	---
ONTARIO	- .6573 (- .34)	---
PRAIRIES	- .7760 (- .40)	---
B.C.	- .4230 (- .22)	---
R ²	.743	.741
F	63.51	138.38
N	346	346

* Significant for a two-tail test at the 10% level.

** Significant for a two-tail test at the 5% level.

*** Significant for a two-tail test at the 1% level.

¹ The regional variable is a six-way classification: ATLANTIC, QUEBEC, ONTARIO, PRAIRIES, B.C., NATIONAL. The «NATIONAL» dummy variable has been dropped.

A comparison of Tables 2 and 3 illustrates that the choice of dependent variable, APPRVD or ADIFAPP, makes little difference with respect to the general character of results. The same set of independent variables is significant under either specification as are the respective magnitudes of the estimated coefficients. Although the APPRVD regressions explain 81% (as opposed to 75%) of the variation in the dependent variable, we feel neither specification to be statistically superior. Accordingly, we shall present the results for both dependent variables.

The most powerful variables in explaining the AIB wage increase decisions (APPRVD or ADIFAPP) are the negotiated wage rate (NEGOTD or ADIFNEG) and its square (NEGOTD² or ADIFNEG²). These two pairs of variables explain 71% of the variance in both APPRVD and ADIFAPP. The hypothesis that the more you ask for, the more you get from the AIB, is clearly borne out. Using reasonable negotiated wage rates for our sample we can estimate the AIB wage rate approvals using both dependent variables:

NEGOTD	APPRVD	ADIFNEG (= NEGOTD - GUIDELN)	ADIFAPP (= APPRVD - GUIDELN)
10%	5.9%	2%	1.1%
15	7.9	5	2.7
20	9.5	10	4.8
25	10.4	15	6.3

Although there are diminishing returns within our sample, there are continuing benefits to labour groups from negotiating as large increases as they can.

Our major hypothesis about the Board's reaction to labour militancy appears correct. Holding other influences constant (in particular, the size of the negotiated settlement), industries with higher levels of the strike index (STRIDEX) have been awarded more generous wage rate approvals by the AIB. The relationship is statistically significant at the 10% for the entire model but once statistically unrelated independent variables are dropped to reduce multicollinearity, STRIDEX reaches higher significance levels (5%) in regressions for both dependent variables.

Neither study discussed in section II attempted to measure labour militancy, and Osberg found a significant positive relationship between the teacher dummy variable and wage rates approved by the Board. We believe that this correlation results from the higher levels of the strike index for teachers (more than one standard deviation above the mean) and that other groups of significant size with comparable

STRIDEX values would be similarly treated. We find that the AIB grants public sector (SECTOR) labour groups about a 0.6 percent lower wage increase than otherwise similar private sector groups. This result is consistent with our earlier view that the Board would be tougher on more visible groups of workers.

A definite time pattern in AIB decisions appears to exist. As we hypothesized, the Board became tougher as time passed, cutting wage settlements by additional .13% per month. Other things equal, cases which came before the Board in November 1976 had an extra .65% trimmed from settlements than if they had come before the AIB in March.¹³

As expected, the higher the guideline (GUIDELN), the higher the ultimate wage rate approved (APPRVD). *Ceteris paribus*, a percentage point increase in the guideline is associated with $\frac{2}{3}$ of a percentage point increase in the AIB approved rate. What is more surprising is the significant positive relationship between GUIDELN and the percentage point wage increase above the guideline which is approved by the AIB (ADIFAPP). It appears that the stronger the «merits» of the case (exemplified by the guideline value), the better the likelihood of receiving an exceptional settlement from the Board. A one percentage point increase in GUIDELN is associated with a .19 percentage point increase in ADIFAPP.

The last statistically important variable in the regression equations is the length of the contract (CLENGTH). Though the coefficient is barely significant (10% in the simplified model), it appears that, when faced with a multiyear contract, the Board comes down harder on the first year's increase. We don't know if they make corresponding upward adjustments in later years of the contract, as we hypothesized earlier, but, on average, two year contracts had an additional $\frac{1}{3}$ of a percentage point trimmed from their first year's wage settlement.

The remaining explanatory variables were not significantly related to either dependent variable. There is no regional bias by the AIB as all regional dummies are insignificant. Neither the «need» of a specific labour group, as proxied by the average industry wage level (WEEKWGE), nor the size of the group (NOEMPTY) affects the Board's decisions. Finally, the AIB does not seem to have been impres-

¹³ The relationship between BDDATE and APPRVD or ADIFAPP is as strong when the sample is limited to the months of March, April and May.

sed with the mere existence of a unionized bargaining group. The non-union dummy variable is not significant. Combined with our earlier results for STRIDEX, this fact lends credence to the view that only those unions ready and willing to strike will receive preferential treatment by the Board.

To conclude this section, we divide the sample to determine whether there are differences in decision making between levels of the AIB, particularly with respect to the STRIDEX variable. All cases with negotiated wage settlements above the guideline by no more than 2% are approved by the senior bureaucrats, while those exceeding the 2% criterion are approved by the Board itself.

We did find that in the less than 2% sub-sample, STRIDEX is not significantly related to either dependent variable, and in the other sub-sample STRIDEX exhibits a significant positive relationship with both. However, using an F-test we were not able to reject the null hypothesis that the two coefficients were equal. Nevertheless, these results do suggest that it is the Board itself, as opposed to the bureaucrats, which tends to react to the threat of a strike and be more generous to militant unions.

DISCUSSION

In this final section of the paper we bring together and briefly discuss some of the major results of the analysis.

The regression results outline a pattern of decision making that suggests a prime concern of the AIB during its first year of operation was to establish its legitimacy and acceptance as an instrument of the government's anti-inflation policy. An important part of this objective is the avoidance of disruptive situations that would damage the Board's public credibility. It is in this light that we may interpret the positive impacts of higher negotiated settlements and a higher strike probability on the AIB's approved wage increases. One might view these relationships as attempts to avoid undue dissatisfaction by too strict rollbacks of negotiated settlements to the guidelines and to avert the possibility of strikes in response to AIB rulings, both of which could prove to be damaging to the public image and success of the Board.

Consistent with this interpretation are the negative influences of the board date and public sector variables. *Ceteris paribus*, AIB rulings tended to be more generous earlier on in its life and the more visible

public sector contracts were granted less generous approvals. The interpretation of the influence of contract length is more speculative. The results show that multiyear contracts receive harsher treatment in their first year than do single year contracts, suggesting that the Board may use these opportunities to achieve «better numbers» in the first year while perhaps giving back the wage increases in the latter years of these contracts. In general terms then, the Anti-Inflation Board would appear to be following a course of risk-avoidance and consolidation of its position as an arm of anti-inflation policy.

Finally, while the purpose of this paper has been to examine aspects of the AIB's decision-making process, it is interesting to note some of the possible implications for those groups coming under the jurisdiction of the AIB that arise from our results.

One possibility is that over time the groups coming before the Board learn its behaviour patterns and develop the ability to anticipate its decisions. Employers and employees may then in fact begin to bargain over the AIB approved wage increases and submit to the Board a negotiated settlement that will result in their prior «real» settlement being returned.¹⁴ The more predictable the Board's behaviour the more likely is the occurrence of this result, and the consistency of our results over different specifications suggests the Board's compensation decisions may indeed be predictable within reasonably narrow limits.

Alternatively, if the Board does continue to exert a real influence on the pattern of wage settlements, our results suggest there may be redistributive impacts. Much has been said of the redistribution away from labour and towards capital during a period of controls because wages are more easily controlled than prices. We have no comment to make on the merits of this argument. However, other distributive consequences may follow from controls. The AIB treatment of public sector settlements suggests a redistribution of income from public sector workers to taxpayers (corporations and individuals) in general. In this regard, it is interesting to note the contention that one of the motives behind the government's establishment of controls was the desire to reduce the power that Federal public sector employees gained when granted the right to strike in 1967 without having to explicitly rescind the right. In addition, the AIB's somewhat softer treatment of militant labour groups, combined with the fact that militant groups commanded relatively high wages before the program began, suggests that the Anti-

¹⁴ This possibility is noted by OSBERG, *Op. Cit.*

Inflation Board may widen the gap between higher and lower paid workers. This statement is true for all groups in our sample (i.e., where the negotiated settlement exceeded the guideline). We cannot say how the existence of the AIB affected the overall income distribution of wage earners.

Our results can only raise the possibility of these two alternative scenarios. The determination of which, if either, actually occurs will require further research.

APPENDIX

The dependent variables used in this study, APPRVD and ADIFAPP take limited values. APPRVD has a maximum of NEGOTD and a minimum of GUIDELN. ADIFAPP has a maximum of ADIFNEG and a minimum of zero. Only the minimum value of ADIFAPP is constant from decision to decision, because NEGOTD, GUIDELN and ADIFNEG are themselves variables. The possibility of heteroskedasticity, due to truncation of the dependent variable, should be greatest with ADIFAPP. Our sample contains 56 cases for which ADIFAPP = 0. The simplified model with ADIFAPP as dependent variable has been estimated by TOBIT analysis. The estimation process assumes that an index, I , is a linear combination of the independent variables:

$$I = B_0 + B_1X_1 + B_2X_2 + \dots + B_kX_k$$

If Y is the dependent variable, behavior is assumed to be as follows:

$$Y = 0 \text{ if } I - \epsilon \leq 0$$

$$Y = I - \epsilon \text{ if } I - \epsilon > 0$$

Where $\epsilon =$ is a normally distributed random variable with mean = 0 and standard deviation = σ .

The TOBIT process selects the maximum likelihood coefficients, \hat{B} 's, given the underlying model. Table A-1 presents a comparison of ordinary least squares and TOBIT results. All TOBIT coefficients are larger in absolute size, generally more significant and have the same signs as ordinary least squares. The differences in the coefficients for SECTOR, BDDATE and CLENGTH are substantial, indicating that we have underestimated the AIB's harsher treatment, *cet. par.*, of public sector workers, and multi-year contracts and their increasing general toughness through time.

TABLE A-1
Comparison of Tobit and Ordinary Least Squares
Results for the Percentage Wage Increase in Excess
of the Guideline Approved by the Anti-Inflation Board
(ADIFAPP = DEPENDENT VARIABLE)

<i>INDEPENDENT VARIABLE</i>	<i>COEFFICIENT OF INDEPENDENT VARIABLE</i>	
	Tobit Analysis (pseudo t value in parenthesis)	Ordinary Least Squares (t value in parenthesis)
CONSTANT	- .8160	- .7586
ADIFNEG	.6208 (13.05)***	.5942 (16.96)***
ADIFNEG ²	- .0061 (- 5.38)***	- .0056 (- 5.76)***
GUIDELN	.2238 (3.39)***	.1844 (3.24)***
BDDATE	- .1957 (- 3.51)***	- .1288 (- 2.77)***
SECTOR	- 1.0084 (- 3.37)***	- .6889 (- 2.54)**
CLENGTH	- .4545 (- 2.18)**	- .3292 (- 1.82)*
STRIDEX	.1231 (2.28)**	.0998 (2.42)**
N	346	

* Significant for a two-tail test at the 10% level.

** Significant for a two-tail test at the 5% level.

*** Significant for a two-tail test at the 1% level.

Les décisions de la Commission anti-inflation

La mise en vigueur d'un programme de contrôle des salaires et des prix en octobre 1975 a soulevé une longue liste de questions prêtant à débat public et à discussions théoriques. Les dossiers de la Commission contiennent une masse considérable de statistiques qui permettent d'apprécier certains aspects du programme et d'en arriver ainsi à des conclusions provisoires.

Pour chaque augmentation de salaire qui tombe sous la coupe de la Commission, l'employeur doit fournir des précisions touchant l'accord négocié ainsi que les renseignements nécessaires pour calculer les normes qui s'appliquent au groupe concerné. Si l'entente conclue excède les normes, la Commission en analyse les motifs et donne son approbation à l'intérieur des limites des normes et du taux convenu.

On a mis au point un modèle d'analyse permettant de connaître, d'après les décisions de la Commission, quel était le nombre de celles où le taux négocié dépassait les normes en prenant comme hypothèse que le principal objectif de la Commission, lors de son établissement, était d'être reconnue comme un instrument légitime de l'application de la politique anti-inflationniste dans son ensemble. Cet objectif premier peut se subdiviser en deux objectifs opérationnels.

D'abord, la Commission devait être perçue comme un outil efficace destiné à contenir le taux d'inflation, soit en matière de gains, à obtenir un certain succès dans l'abaissement de ces gains dans les conventions collectives. En second lieu, la Commission devait s'efforcer d'empêcher l'aliénation des groupes au point de mécontenter le public qui exigerait des modifications dans son mandat. La recherche de ce double but était en soi contradictoire et ne pouvait que rendre difficile la prise des décisions. Comment, par exemple, la Commission réagirait-elle face à un militantisme syndical qui pouvait imposer des règlements supérieurs aux normes établies et décider de faire la grève si l'on considérait inacceptable la décision de la Commission ?

Nous pouvions nous attendre à ce que la Commission, face à une grève prévisible si sa décision était défavorable, approuverait une augmentation plus généreuse, hypothèse qui ne peut être vérifiée qu'indirectement en mettant au point un indice fondé sur l'évolution des grèves dans l'industrie, indice qui devait être relié au règlement approuvé.

Nous nous attendions aussi à ce que plus le règlement dépassait les normes, plus l'augmentation accordée serait supérieure aux normes. De pareilles solutions de compromis auraient pu être fréquentes, compte tenu du fait qu'il lui fallait être efficace dans le freinage d'accords trop élevés tout en en ameutant pas les syndicats contre elle. On pouvait encore présumer que la Commission serait mieux acceptée si elle adoptait la ligne dure envers les groupes que le public avait à l'œil. À tout prendre, les conventions collectives du secteur public ne sont-elles pas plus « voyantes » que celles du secteur privé ? Nous pouvions donc nous attendre à des approbations moins fortes dans le secteur public en général. Plus une institution s'affirme et plus ses procédures prennent un caractère rituel, plus la discrétion des personnes chargées de l'appliquer diminue, phénomène qui devait se traduire par l'existence d'un plus petit nombre d'exceptions à la règle et, partant, d'approbation moins fortes. D'autres variables qu'il fallait inclure dans l'analyse étaient la longueur des conventions, les taux moyens de salaire payés par l'industrie et les conditions régionales.

Les modèles furent vérifiés à partir d'un échantillonnage de 346 décisions de la Commission. Les résultats ainsi obtenus confirment l'hypothèse principale. Les augmentations approuvées par la Commission sont significatives, reliées positivement aux augmentations de salaires négociés et à l'indice des grèves. Les approbations sont nettement plus basses dans le secteur public. Enfin, la Commission a donné des approbations plus faibles à mesure que le temps s'écoulait.