

## The Impact of Inflation on Strike Activity in Canada

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Volume 31, numéro 1, 1976

URI : <https://id.erudit.org/iderudit/028689ar>

DOI : <https://doi.org/10.7202/028689ar>

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Éditeur(s)

Département des relations industrielles de l'Université Laval

ISSN

0034-379X (imprimé)

1703-8138 (numérique)

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Citer cet article

Smith, D. A. (1976). The Impact of Inflation on Strike Activity in Canada. *Relations industrielles / Industrial Relations*, 31(1), 139-145.  
<https://doi.org/10.7202/028689ar>

rialisante, asservissante et sociologiquement croupissante des travailleurs embrigadés, inconsciemment en général, dans l'unionisme américain, comment le syndicalisme chrétien, dont l'idéologie s'est avérée prophétique, eut-il pu prendre racine en notre milieu ouvrier sans boussole d'il y a cinquante ans, s'il n'eut reçu la sollicitude morale et l'aide matérielle de l'Église québécoise de même que le concours très efficace du réveil nationaliste de l'époque? Sans ce double soutien, longtemps l'œuvre immense de l'émancipation syndicale des ouvriers québécois, ses pionniers n'auraient pu jamais l'entreprendre chez-nous.

#### PRISE DE CONSCIENCE

Selon Louis-Marie Tremblay, la C.T.C.C. s'«affranchit» fondamentalement de l'aide quasi tutélaire qui l'avait protégée quand elle déclencha la grève d'Asbestos en 1949 en «luttant contre les forces combinées du gouvernement provincial et de la Johns Manville». Cette grève, dit-il, sera l'occasion d'une prise de conscience syndicale (p. 33) dont les symptômes s'étaient manifestés antérieurement dans des grèves à Sorel et à la Dominion Textile, ce qui amorçait un décalage entre «l'idéologie officielle et l'action». La grève du textile ne fut pas qu'un symptôme de la naissance d'une conscience syndicale. Elle fut à son origine même une authentique prise de conscience syndicale globale de la C.T.C.C., ce que ne fut pas la grève de l'amiante à son origine.

Me permettrai-je d'ajouter ici le témoignage de l'Abbé Gérard Dion dans son introduction de mes *Mémoires*<sup>6</sup>. «On constatera que la première manifestation de militantisme syndical qui a contribué à placer la C.T.C.C. au rang d'une authentique centrale vouée à la défense des intérêts des travailleurs n'est pas la grève de l'amiante de 1949, si célèbre soit-elle, mais bien celle du textile de 1937...»

## THE IMPACT OF INFLATION ON STRIKE ACTIVITY IN CANADA

Douglas A. Smith

The system of collective bargaining in Canada has been subjected to substantial criticism in recent years with the focus being on the increasing number of bargaining situations which result in work stoppages. This is an important problem and one that requires careful analysis of the underlying causes of high levels of strike activity. In the press, and elsewhere, one all too often finds criticisms of the collec-

<sup>6</sup> *Op. cit.*, p. XIII.

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tive bargaining system which imply that collective bargaining is not functioning as it should and is therefore adding to the difficulties associated with managing the economic system.<sup>1</sup> However, the alternative, and in my view, the correct line of causation is that the current state of the economic system is the underlying factor in creating disruptions in the collective bargaining system.

Specifically, unanticipated inflation in the 1970's, combined with 2 and 3 year collective agreements, has led to a situation of rather large wage settlements to offset past and expected future inflation and these settlements have been associated with an increasing frequency of strike activity. The purpose of this paper is to investigate empirically the impact of inflation on the level of strike activity in Canada.<sup>2</sup>

As an introduction to the model of strike activity to be tested in this paper, it may be useful to compare what I regard as the two major approaches to strike causation. These two approaches may be described as the "social-political" view and the "economic" view. The social-political view tends to focus on the concept of militancy<sup>3</sup> and attempts to explain why trade union leaders and their membership appear to be more militant at some times than at others. Although it is not possible to totally dichotomize the two approaches, those whose focus is on militancy accept that economic forces will have an impact but that the entire story is "much more complex".<sup>4</sup> The economic view, on the other hand, is characterized by a belief that it is not principally the militancy of the parties in the collective bargaining system that leads to cycles of strike activity but rather that it is fluctuations in the economic environment facing the collective bargaining system. The difference can be formally stated in terms of the concept of an industrial relations system.<sup>5</sup> Such a system is logically divided into

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<sup>1</sup> For example, Ronald Anderson in *The Globe and Mail*, May 27, 1975, page B2 puts it as follows: "Evidence of the unhealthy condition of the collective bargaining system is provided by the increasing number of work stoppages, the frequent refusal of union members to ratify agreements reached by their bargaining teams and the inability of management and labour to settle their differences on a non-inflationary basis."

<sup>2</sup> For a discussion of many of these general issues, without formal statistical tests, see L.A. KELLY and P. KUMAR, *Inflation and Collective Bargaining*, Research and Current Issues Series No. 24, Industrial Relations Centre, Queen's University, Kingston, October, 1974, pp. 1-20.

<sup>3</sup> As an example of the militancy approach, which denies the inclusiveness of an economic explanation, see J.H.G. CRISPO and H.W. ARTHURS «Industrial Unrest in Canada: A Diagnosis of Recent Experience» *Relations Industrielles/Industrial Relations*, v. 23, no. 2, June, 1968, pp. 237-264.

<sup>4</sup> CRISPO and ARTHURS, *op. cit.*, p. 238.

<sup>5</sup> See A.W.J. CRAIG, «A Model for the Analysis of Industrial Relations Systems» in S.M.A. HAMEED, G. SWIMMER, J.D. MUIR and C.B. WILLIAMS (eds.) *Labour — Management Relations in Canada*, University of Alberta, Edmonton, 1974, pp. 1-11.

four segments. They are: the environment, the actors, the conversion mechanism and the outputs. More compactly, the industrial relations system converts inputs into outputs. A collective agreement is an output as is a strike. Logically, the industrial relations system can begin to produce a greater proportion of strike outputs and consequently a smaller proportion of agreement outputs for two reasons. There can be either changes in the environment or changes in the actors. In this paper, the economic system is looked at as a crucial environmental factor whereas militancy refers to changes in the values and goals of the actors. The contention of this paper is that fluctuations in the level of strike activity, and particularly the recent increase, can be explained adequately by economic factors without resort to the much more nebulous and less quantifiable concept of militancy.<sup>6</sup>

The next step is to specify the model of strike determination that would adequately represent the economic view.<sup>7</sup> The primary concern of this paper is with the effect of inflation on the level of strike activity. Unanticipated inflation which occurs in fixed term collective agreements and which varies over time increases uncertainty, tends to decrease the term of collective agreements and generally makes it more difficult to reach agreement without a work stoppage. The inflation rate and the level of strike activity are, therefore, expected to be positively related. Also, the rate of unemployment is expected to have an effect on the level of strike activity since at lower unemployment rates, striking union members have more alternative employment opportunities, thereby reducing the cost and increasing the probability of a strike. In addition, the rate of change of unemployment is regarded as an important variable: at a given level of unemployment, strike effects will differ depending on whether the rate is rising or falling. For instance, in the context of a rising unemployment rate, union «catch-up» wage demands may be based on market conditions of the recent past whereas the employer uses the rate of change of the unemployment rate to forecast the state of the market over the future life of the proposed contract. Such a change would increase the gap between union demand and employer offer, increasing the probability of a strike. On the basis of these hypotheses that economic factors are of crucial importance, we get the following equation to explain strike activity.

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<sup>6</sup> A selection from the Crispo and Arthurs causes of militancy includes: «The Pervasiveness of the Demand for More in Our Affluent Society — Job Insecurity — The Influx of Young People & Lack of Satisfaction of Higher Order Needs — Rising Educational Levels» pp. 247-255. In my view, such concepts are inadequate to explain changes in the level of strike activity. They may explain why Canada has more strikes than some other countries but not why this level fluctuates. The «Demand for More» certainly exists in any society but it existed just as much in 1964 when there were 327 strikes as it did in 1974 when there were over one thousand strikes.

<sup>7</sup> For a more detailed outline of the model of strike activity, see Douglas A. SMITH, «The Determinants of Strike Activity in Canada», *Relations Industrielles/Industrial Relations*, v. 27, no. 4, Dec. 1972, pp. 663-678.

$S_t = \beta_0 + \beta_1 U_t + \beta_2 \dot{p}_t + \beta_3 \Delta U_t + e_t$  where  $S_t$  is the number of strikes<sup>8</sup> at time  $t$ ;  $U_t$  is the unemployment rate at time  $t$ ;  $\dot{p}_t$  is the rate of change of the Consumer Price Index at time  $t$ ;  $\Delta U_t = U_t - U_{t-1}$ . The hypothesized signs are  $\beta_1 < 0$ ,  $\beta_2 > 0$  and  $\beta_3 > 0$ .

The empirical results of three tests of this hypothesis are presented in Table 1. This table presents the results of three regressions. The first regression uses quarterly strike data for all industries in Canada<sup>9</sup>, the second equation uses annual data for all industries and the third presents results for the food and beverage industry, a 2-digit manufacturing industry. This last equation is included as a preliminary report on the initial stage of an attempt to explain strike activity on a more disaggregated basis than is usually investigated. This is important if empirical work on strike activity is to be of any real usefulness; clearly a strike equation that works reasonably well in the aggregate but poorly for individual industries is of limited usefulness.

The results provide rather strong support for a hypothesis that stresses the importance of the economic determinants of strike activity. The coefficient on the inflation variable<sup>10</sup> is particularly strong with the coefficient being several times its standard error. The coefficient of the unemployment variable always has the correct sign and passes the usual test of statistical significance in the quarterly results for all industries. The unemployment change variable again always has the correct sign but really performs adequately only in the quarterly regression. The quarterly results indicate that, in terms of the coefficients on  $B_1$  and  $B_2$ , every additional percentage point of inflation leads to an extra 15 strikes per quarter while an additional percentage point in the unemployment rate will restrain the level of strike activity by approximately 8 strikes per quarter. In terms of overall explanatory power, the annual equation works extremely well for the food and beverage industry with the inflation rate again having a large and statistically significant effect. For this industry, Table 1 indicates that every additional percentage point of inflation leads to an additional 7 strikes per year, a relatively large amount when one considers that the mean over the period of estimation is 34 strikes. The results of this section indicate that strike activity is very closely related to basic economic variables and that the current level of strike activity is not unusual by historical standards — it is in fact quite predictable on the

<sup>8</sup> Strike data are as reported in *Strikes and Lockouts in Canada*, published by the Department of Labour, the C.P.I. is from Statistics Canada *Prices and Price Indices*, cat. no. 62-002 and the unemployment rate is from Statistics Canada, *The Labour Force*, cat. no. 71-001.

<sup>9</sup> This regression uses seasonal dummy variables D1, D2 and D3 which take the value of 1 in that quarter and 0 otherwise.

<sup>10</sup> The precise version of the inflation hypothesis would stress the importance of unanticipated inflation in creating industrial conflict. The actual inflation rate would cease to be a useful proxy for this in the context of an extended period of fully anticipated inflation.

**TABLE I**  
**Regression Results for the Determinants**  
**of Strike Activity**  
**Dependent variable: the number of strikes: 1959-1974.**

<i>Explanatory variable</i>	<i>Coefficients<sup>a</sup></i>			
		<i>All industries</i> <i>Quarterly</i>	<i>Annual</i>	<i>Food and</i> <i>Beverage Annual</i>
Constant term	$\beta_0$	90.66 (23.65)	356.93 (96.39)	12.98 (6.34)
Seasonal dummy	D1	14.26 (11.48)	—	—
	D2	51.87 (11.51)	—	—
	D3	28.10 (11.65)	—	—
Unemployment rate <sup>b</sup>	$\beta_1$	-8.31 (3.89)	-26.60 (15.80)	-0.87 (1.04)
Rate of change of prices	$\beta_2$	14.76 (1.29)	79.18 (6.45)	7.27 (0.42)
Change in unemployment rate <sup>c</sup>	$\beta_3$	43.89 (18.66)	20.74 (25.43)	1.93 (1.67)
Summary Statistics:				
Coefficient of determination	(R <sup>2</sup> )	.775	.935	.964
Durbin-Watson statistic		1.70	2.03	2.19
Standard error of estimate		32.41	64.06	4.21
Degrees of freedom		57	12	12

<sup>a</sup>Standard errors are in parenthesis

<sup>b</sup>For the quarterly analysis a four-quarter moving average was used

<sup>c</sup>With quarterly data, the variable is  $U_t - U_{t-4}$ .

basis of the equations presented in Table 1. The most important single factor in explaining this level of strike activity is the impact of the rate of inflation.

## CONCLUSIONS

This paper has examined the impact of inflation on collective bargaining through a series of empirical tests of the relationship between strike activity and the rate of inflation. These empirical tests provide strong support for the hypothesis that economic variables are of primary importance in explaining the time path of industrial disputes and by implication that many of the studies which attempt to relate strike

activity to variations in militancy are introducing a not particularly quantifiable variable which does not appear to be a necessary part of the explanation of strike activity. In one sense, strike activity and militancy appear virtually synonymous but it is the point of this paper that the underlying mechanism is based on fluctuations in the economic system determining the nature of the outputs in the collective bargaining system. These results have implications for theoretical and empirical studies of the process of wage determination and for public policy to control strike activity in Canada.

This paper expresses serious reservations about the usefulness the concept of militancy as a determinant of strike activity. Many current theoretical and empirical studies of wage determination also refer to militancy as a variable explaining the rate of change of wages and I feel the same objections that are made in the context of strikes also pertain.<sup>11</sup> In this paper, it is argued that militancy is not a necessary aspect of the analysis of fluctuations in strike activity. In fact, if militancy is an important aspect of wage determination and strike activity, then we are really left without an explanation of either. If the militancy view is accepted, we have cycles of strike activity and fluctuations in the rate of change of wages because trade unions are more militant at some times than at others. This is not impossible but it does not appear to be consistent with utility maximization by labour force participants. If militancy pays, why are workers not always militant? Militancy as a determinant of wage and strike outputs of the industrial relations system makes those outputs exogenous.<sup>12</sup> It cannot say anything about what leads to fluctuations in these magnitudes and has as the only logical policy response direct control of militant groups.

This makes the policy implications of the view that stresses economic factors, rather than militancy, quite clear. The current level of strike activity in the labour market does not represent a departure from the relationship of the late 1950's and the early 1960's. The outputs are quantitatively different because the nature of the inputs from the economic system has changed. Collective bargaining is a process which requires a delicate balance between bargaining toughness and acceptance of necessary compromises. The system does not work perfectly when faced with a relatively tranquil economic environment but in the face of significant economic fluctuations which increase greatly the uncertainties of negotiations, it is naive not to expect an upturn in strike activity. Theory and evidence strongly suggest that the flow of causation here is from the economic system to the industrial relations system and that the current level of strike activity will diminish only with improved

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<sup>11</sup> See for example, D.L. PURDY and G. ZIS, «On the Concept and Measurement of Union Militancy», in D. LAIDLER and D.L. PURDY (eds.) *Inflation and Labour Markets*, Toronto, University of Toronto Press, 1974, pp. 38-60.

<sup>12</sup> It is precisely the argument of this paper that wage and strike outputs are closely related to the economic system and that militancy as commonly observed is simply a predictable reaction to the changed economic environment.

performance of the economic system. This has the clear policy implication that the most effective method of reducing strike activity is through economic policy to reduce fluctuations in the rate of inflation rather than through legislated changes in the industrial relations system which would deal only with the symptoms and not the causes of recent strike activity.

## **COST-BENEFIT ANALYSIS OF A STRIKE: A TENTATIVE FRAMEWORK**

**S. M. A. Hameed**

Over a period of 16 years (1950-65), approximately 4,500 strikes took place in Canada; less than 30 or .7 percent of these were regarded as emergency disputes.<sup>1</sup> Government intervention in these cases symbolizes concern for protecting public interest and maintenance of an equilibrium in the exercise of economic freedom by various groups in the society. Government's non-intervention in the remaining 99.3 percent cases is a reflection of the Canadian public policy concerning labour disputes. Free collective bargaining is the corner-stone of labour legislation and practice in this country, indicating governmental commitment, in a legal and economic sense, to upholding the right of the labour unions to strike. It is logical corollary of a pluralistic market system where decisions concerning wages are made through an independent collective bargaining relationship between management and organized labour: management defending the economic principle of free enterprise and labour defending the political principles of «freedom of association» and its extension, freedom to strike.

The strikes in our industrial relations system have a positive function and appear to be in the public interest.<sup>2</sup> The resolution of conflict through this mechanism preserves the fundamental democratic

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\* This research was supported by the Canada Department of Labour and the Faculty of Business Administration and Commerce at the University of Alberta. I am indebted to Tina Lomas and Milt Pahl for their help in calculating strike cost, using input-output tables published by the Dominion Bureau of Statistics, Catalogue No. 15-501.

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<sup>1</sup> Alan PUTTEE, «The Impact of Strikes and Emergency Disputes,» Masters Thesis, McGill University, 1969.

<sup>2</sup> See Thomas KENNEDY, «Freedom to Strike is in the Public Interest,» *Harvard Business Review*, July-August, 1970.