# Article

"Wage Differentials and Market Imperfections: Some Cross Section Results in Canadian Manufacturing Industries"

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# Wage Differentials and Market Imperfections: Some Cross Section Results in Canadian Manufacturing Industries

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*The purpose of this paper is to analyse the extent to which factor and product market imperfections are responsible for wage differentials. The conclusion is that without some form of factor market imperfection, the existence of imperfection in the product market cannot explain wage differentials.*

Standard micro theory makes inter industry wage differentials a function of differences in skills, non-pecuniarities, of factor market imperfections, (unionization, monopsony). Unfortunately, although differentials are a fact of Canadian life, empirical support for received theory is exceedingly modest : while there is some statistical support for skill differentials, there is very little for non-pecuniarities or factor market imperfections. [1]

An alternative view is that differentials are the result of market power in the product market. This proposition, although it is not based on received theory, does have the virtue of some empirical support : several studies have produced significant positive correlations between wage changes and concentration (a proxy for market power in the

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[1] The Canadian evidence is summarized in Sylvia OSTRY and M. A. ZAIDI, *Labour Economics in Canada,* Toronto, Macmillan, 1972, Chapt. XI. For a general survey see, M. W. REDER « Wage Differentials : Theory and Measurement » in N.B.E.R., *Aspect of Labor Economics,* Princeton, Princeton University Press. 1962.

product market).[2] However, this support is not universal and other studies, failing to produce the positive correlations,[3] have concluded that the corroborating evidence is largely spurious.

Therefore, on the one hand we have a consistent body of theory which predicts that — from the point of view of market imperfections — only *factor* market imperfections cause differentials. Unfortunately, there is little empirical support for this proposition. On the other hand, we have a virtual *ad hoc* hypothesis which stresses product market imperfections and for which there is some empirical support. The only thing that is clear is the theoretical and empirical confusion over the role that product and factor market imperfections play in determining wage differentials.

The purpose of this paper is to analyse the extent to which factor and product market imperfections are responsible for wage differentials. The conclusion is that without some form of factor market imperfection, the existence of imperfection in the product market cannot explain wage differentials.

The paper is divided into three parts : I, the theoretical discussion of differentials and market imperfections, the formulation of a testable hypothesis, and the outline of the model ; II, the empirical results ; III, a conclusion.

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[2] T. W. GABARINO, « A Theory of Interindustry Wage Structure Variation », *Quarterly Journal of Economics*, May, 1950 ; W. G. BOWEN, *Wage Behaviour in the Postwar Period : An Empirical Analysis*, Princeton, Industrial Relations Section, 1960 ; H. M. LEVINSON, « Postwar Movements of Prices and Wages in Manufacturing Industries » Joint Economic Committee, *Study of Income, Employment and Prices*, Study Paper No. 21. Washington 1960 ; F. M. SCHERER, *Industrial Market Structure and Economic Performance*, Chicago, Rand McNally, 1970, pp. 300-301. In Canada, OSTRY and ZAIDI found a « weak... positive relationship between market concentration and levels of earnings », *ibid.*, p. 314.

[3] D. SCHWARTZMAN, « Monopoly and Wages » *Canadian Journal of Economics and Political Sciences*, Aug. 1960 ; H.G. LEWIS, *Unionism and Relative Wages in the United States*, Chicago, University of Chicago Press, 1963 ; O. E. ECKSTEIN and T. A. WILSON, « The Determination of Money Wages in American Industry », *Quarterly Journal of Economics*, Aug. 1962 B. T. ALLEN, « Market Concentration and Wage Increases : U. S. Manufacturing, 1947-1964 », *Industrial and Labour Relations Review*, April 1968. L. W. WEISS reported positive significant correlations between concentration and labour earnings, which disappeared when « personal characteristics were introduced », « Concentration and Labor Earnings », *American Economic Review*, March 1966.

## WAGE DIFFERENTIALS AND MARKET IMPERFECTIONS:
## THE THEORETICAL BACKGROUND

### The Theory

To understand the contribution of factor and product market im-
pections to wage differentials it is necessary to start with received theory.
Here two points are crucial : (i) product market imperfections by them-
selves cannot produce wage differentials ; and the corrolary of (i) is
that, *ceteris paribus,* (ii) differentials can only exist if factor market
imperfections exist. Briefly the argument is as follows.

(i) If it is assumed that labour is homogeneous, non-pecuniarities
and market imperfections are absent, and firms desire to maximize profits,
then labour will receive a uniform wage regardless of the degree of im-
perfection in the product market.

In the absence of monopolistic elements in the product market, the
wage will be the highest possible consistent with maximum output and
employment. However, if a segment of the product market becomes
monopolized, the initial consequence will be a reduction in output, em-
ployement and wages, so that a *temporary* discrepancy will exist between
the wage paid by the monopolized and the competitive industries. But
as the unemployed and underpaid labour shifts out of the monopolized
into the competitive sector it acts to depress the wage in the competitive
sector. The movement toward equilibrium is a movement toward wage
uniformity, although the wage will be lower and employment and output
smaller than they were when competitive conditions prevailed in both
sectors.

(ii) Given (i), differentials are caused solely by factor market
imperfections. Here we have two types of imperfection — monopsony
power possessed by employers and monopoly power possessed by labour
— which may interact with each other to produce wage differentials. The
type of differential then obviously depends on the type of imperfection
and the existence of the interaction. For example, in the absence of
labour organizations, firms with monopsony power will pay lower wages
than firms with no monopsony power. If these firms also have some
power in the product market they may realize pure profits, but if they
do not their very existence may depend on the exploitation of labour.
Contrariwise if unions successfully countervail the power of employers,
wages and employment will tend to increase in the industries with some
power in the product market. But, a union's ability to raise wages may

result in forcing a firm out of business if it is operating in a competitive product market.

Beyond these generalizations the existence of differentials depends on specifying the interaction between product and factor markets. The common situation – and also the most complex – is one where employers possessing various degrees of power in the product market bargain with labour organizations of varying strength. However, since there is no general theory of either oligopoly or union behaviour, received theory has little to contribute to the solution of the interaction problem. Nevertheless, our working hypothesis is that, even in this interaction context, product market imperfections are not sufficient to produce wage differentials and must be accompanied by factor market imperfections.

To elaborate on this statement of the hypothesis, let us assume that one of the major purposes of labour organizations is to raise the wage above the level determined by the market and at the same time to maintain employment. It follows that union activity will be more visible in those industries which, in the opinion of labour leaders, can be made to acquiesce to the higher wage demands without reducing greatly employment opportunities for union members. This means that there is not much scope for union activity in the competitive sector of the economy because, since profits of competitive firms tend toward zero, demands for higher wages can be met only at risk of reduced employment. In such circumstances the effectiveness of unions could not be expected to be very great.

On the other hand, if oligopolistic firms operate undisturbed by union demands they will pay the going wage and if pure profits exist they will remain intact. Therefore a union has the potential of getting higher wages only in those industries where pure profits are known to exist. These industries are necessarily the ones characterized by some degree of market power in the product market.

If this is correct we expect the following testable hypotheses. First, a positive relationship between wages and union power. Second, a positive relationship between wages and concentration (a proxy for product market power). However, this latter expectation is based on the crucial assumption of a positive correlation between unionization and concentration. This means that concentration exerts no independent influence on wages and the wage-concentration relationship is spurious.

Whether these hypotheses are true in practice is, of course, an empirical matter.

**The Regression Model**

In this paper we use multiple regression techniques to test the above hypotheses. The complete regression model specifies that wage differentials are a function of : the degree of market power in the product market, which can be alternatively measured by concentration (national and regional), and profits ; the degree of imperfection in the factor market, which is measured alternatively by degree of unionization and unemployment ; productivity and demand.

The variables are defined as follows (see also Appendix (i)).

*Dependent Variables*

Wages $= W =$ ratio of wages to production worker man hours.

*Independent Variables*

| | | |
|---|---|---|
| Concentration | $=$ Con4 | $=$ four firm concentration ratio by value of factory shipments. |
| Regional Competition | $=$ RG | $=$ a dummy variable of 1 if identifiable regional concentration exists. |
| Profits | $=$ P/E | $=$ ratio of profits to equity. |
| Unionization | $=$ U | $=$ percentage of non-office employees covered by collective agreements. |
| Interaction Variable | $=$ U*Con4 | $=$ (U)(con4)/100. |
| Unemployment | $=$ UN | $=$ equals industry unemployment rate. |
| Productivity | $=$ Prod | $=$ equals value of factory shipments/production worker man hours. |
| Demand | $=$ D | $=$ ratio of industry shipments at time t+n to industry shipments at time t. |

The following points should be noted about the content and specification of the model.

(i) Most of the independent variables have appeared in one form or another in previous studies of wage differentials [4] and require little additional explanation. However, the addition of RG, P/E, and U*Con4 as product market variables does require some further comment. The variable concentration (Con4) is almost universally used as the proxy for power in the product market. But, since national Con4 ratios probably provide an underestimate of the degree of market power if regional concentration is ignored, we introduce regional concentration (RG).

In addition to these structural variables we introduce a performance variable, profits (P/E). The reason is that, since the correlation between concentration and performance variables has never been that high, [5] and as some studies of differentials have achieved better statistical results using performance rather than structural variables, [6] P/E is introduced as an alternative proxy for market power.

The introduction of U*Con4 is an attempt, following Lewis, Weiss and Scherer, [7] to disentangle the complex relationship between unionization and concentration. We have argued above that the expected positive wage-concentration relationship is spurious, largely determined by a strong correlation between wages and the degree of unionization, which is itself correlated with concentration. However, as other authors [8] have suggested that concentration has an independent influence on wages, the variable U*Con4 provides some test of these alternatives.

(ii) We assume a continuous linear relationship between the dependent variables and all independent variables. Then, given the above definitions of the variables, we expect the following *a priori* relationships

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[4] See the studies listed in footnotes 2 and 3 above.

[5] In general see the studies reviewed by J. M. VERNON, *Market Structure and Industrial Performance : A Review of Statistical Findings,* Boston, Allyn and Bacon, 1972. For some Canadian evidence see J. C. H. JONES, L. LAUDADIO and M. PERCY, « Market Structure and Profitability in Canadian Manufacturing Industry : Some Cross Section Results, » *Canadian Journal of Economics,* Aug. 1973.

[6] See, for example, ECKSTEIN and WILSON, *op. cit.*

[7] *Op. cit.*

[8] In general see those articles listed in footnote 2 and, Martin SEGAL, « The Relation Between Union Wage Impact and Market Structure », *Quarterly Journal of Economics,* Feb. 1964, and H. M. LEVINSON, « Unionism, Concentration and Wage Changes : Towards a Unified Theory », *Industrial and Labour Relations Review,* Jan. 1967.

between dependent and independent variables : a positive relationship for Con4, RG, P/E, U, Prod, D ; a negative relationship for UN ; while U*Con4 could not be specified.

(iii) The data in the model is derived from two cross section samples of 51 three and four digit manufacturing industries for 1965 and 1969. The size and composition of the sample was determined by how well the available data from the existing sources matched (see Appendix ii). Two comments on the nature of data and the implication for testing the hypotheses are necessary.

First, the use of cross section data means that we are attempting to relate the *wage level at a given point in time* to various independent variables. However, much of the testing of wage differential models has utilized partial time series data making *wage changes over time* the dependent variable. [9] Since appropriate time series data is unavailable in Canada, our findings are not strictly comparable with these studies. Although ideally the use of both time series and cross section data would be desirable, the use of cross section data alone does have advantages. In the first place, it gets away from the frequent criticism that a positive correlation between wage *change* and concentration implies an increasing *wage level* differential over time between highly concentrated and atomistic industries, which unfortunately rarely shows up. [10]

In addition, we cannot afford to ignore the fact that economic conditions change and that wage contracts limit the freedom of response of both unions and highly concentrated firms, but do nothing to impair the freedom of non-union labour and competitive forms. This means that if we use wage *change* data we might not obtain a good test of the wage-concentration hypothesis. That is, although we expect changes in wages to be positively correlated with industry concentration, it is not difficult to visualize the opposite occurring. If economic activity is increasing rapidly, the demand for labour will also rise, and the expected result would be an increase in wages. But if labour is bound by a previously negotiated contract, the change in wages will not occur until the contract expires. If, however, labour is not bound by a contract the in-

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[9] For exemple, ALLEN, *op. cit.*, GABARINO, *op. cit.*, BOWEN, *op. cit.*, LEVINSON « Postwar Movements of Prices and Wages in Manufacturing Industries. »

[10] See REDER, *op. cit.*, pp. 291-296; and Albert REES, *The Economics of Trade Unions*, Chicago, University of Chicago Press, 1962, pp. 84-85.

crease in wage will be immediate. Therefore, the partial regression coefficient for concentration would be insignificant or even negative. This problem is minimized with cross section data.

Second, even for the cross section analysis the data is not consistent. For example, unemployment (UN) by industry is only available from the 1961 *Census of Canada*. In addition, the variables Con4, and P/E, are only available for 1965, while the degree of unionization (U) is only available for 1969.

The regression results are detailed below.

WAGE DIFFERENTIALS AND MARKET IMPERFECTIONS :
THE EMPIRICAL EVIDENCE

Tables I and II show the results of multiple regression equations relating W to various combinations of the independent variables outlined above, for 1965 and 1969 respectively. With minor exceptions both tables show the same pattern in terms of the correlations coefficients and the signs, sizes, and levels of significance of the individual coefficients : the $R^2$ are not consistently higher in one year than the other ; the signs of the individual coefficients differ only in one instance (the insignificant U*Con4 in equation 3) ; the coefficients are slightly higher in Table II but there are exceptions ; and only in equation 6 are the t values consistently higher in 1969 than 1965. The statistical results in both tables are therefore very compatible.

The major hypotheses — that unionization and concentration are positively related to wages — are accepted if the coefficients U and Con4 are significant and positive. In Tables I and II, Con4 is positive and its level of significance varies between 5 and 10 per cent. The coefficient U is also positive and its level of significance varies between 1 and 10 per cent. Its significance increases (see equations 4 and 5) particularly when Con4 and U*Con4 are dropped. This is primarily a result of the multicollinearity involved which is not unexpected particularly given the definition of U*Con4. [11] Therefore, the hypotheses must be tentatively accepted. However, because U*Con4 is not statistically signif-

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[11] This is clear from the partial correlation coefficients for these three variables.

## TABLE 1

### Multiple Regression Analysis, [1] 1965

$$W = A_0 + a_1(U) + a_2(Con4) + a_3(U*Con4) + a_4(RG) + a_5(UN) + a_6(Prod) + a_7(D) + a_8(P/E)$$

| Equation | $A_0$ | $U$ | $Con4$ | $U*Con4$ | $RG$ | $UN$ | $Prod$ | $D$ | $P/E$ | $R^2$ | $\bar{R}^2$ | $n$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 116.836 | 0.759*** | 0.992*** | −0.248 | | | | | | .423 | .386 | 51 |
|   | (3.738) | (1.532) | (1.423) | (−0.266) | | | | | | | | |
| 2 | 115.982 | 0.745*** | 0.979*** | −0.215 | 4.094 | | | | | .425 | .375 | 51 |
|   | (3.666) | (1.488) | (1.390) | (−0.228) | (0.362) | | | | | | | |
| 3 | 67.443 | 0.649*** | 0.324 | 0.226 | | 0.167 | 1.085* | 0.311*** | 1.413 | .570 | .500 | 51 |
|   | (1.379) | (1.391) | (0.466 | (0.258) | | (0.040) | (3.044) | (1.395) | (1.266) | | | |
| 4 | 74.639 | 0.992* | | | | −1.893 | 1.238* | 0.255 | 1.790*** | .534 | .482 | 51 |
|   | (1.871) | (4.350) | | | | (−0.462) | (3.545) | (1.153) | (1.660) | | | |
| 5 | 64.682 | 1.123* | | | | | 1.376* | 0.313*** | | .502 | .471 | 51 |
|   | (1.869) | (5.159) | | | | | (4.290) | (1.419) | | | | |
| 6 | 62.173 | 0.822*** | 1.142*** | −0.406 | | | | 0.367*** | | .452 | .404 | 51 |
|   | (1.328) | (1.679) | (1.646) | (−0.440) | | | | (1.550) | | | | |
| 7 | | | | | | −9.197** | | | 3.577* | .222 | .190 | 51 |
|   | | | | | | (−1.968) | | | (2.808) | | | |

[1] The significance of the regression coefficients was tested using a one-tail t test. The t values are shown in parenthesis. The significance of the $R^2$ was tested using an F test and all $R^2$ were significant.

\* significant at 99 per cent.

\*\* significant at 95 per cent.

\*\*\* significant at 90 per cent.

# TABLE 2

## Multiple Regression Analysis, [1] 1969

$$W = A_0 + a_1(U) + a_2(Con4) + a_3(U*Con4) + a_4(A/Q) + a_4(RG) + a_5(UN) + a_6(Prod) + a_7(D) + a_8(P/E)$$

| Equation | $A_o$ | U | Con4 | U*Con4 | RG | UN | Prod | D | P/E | $R^2$ | $\overline{R^2}$ | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 151.290 (3.559) | 1.035*** (1.537) | 1.375*** (1.451) | −0.413 (−0.326) | | | | | | .410 | .372 | 51 |
| 2 | 148.333 (3.475) | 0.990*** (1.464) | 1.331*** (1.401) | −0.299 (−0.235) | 14.182 (0.930) | | | | | .420 | .370 | 51 |
| 3 | 70.124 (1.093) | 1.035** (1.684) | 0.679 (0.747) | −0.090 (−0.079) | | 1.430 (0.261) | 1.386* (3.608) | 0.438*** (1.492) | 1.289 (0.877) | .587 | .520 | 51 |
| 4 | 92.217 (1.803) | 1.293* (4.330) | | | | −1.139 (−0.213) | 1.572* (4.207) | 0.345 (1.194) | 1.857*** (1.312) | .557 | .508 | 51 |
| 5 | 86.842 (1.958) | 1.420* (5.029) | | | | | 1.670* (4.912) | 0.395*** (1.383) | | .539 | .510 | 51 |
| 6 | 68.195 (1.078) | 1.132** (1.711) | 1.603** (1.711) | −0.654 (−0.524) | | | | 0.558** (1.744) | | .446 | .398 | 51 |
| 7 | | | | | | −12.023** (−1.883) | | | 4.442** (2.552) | .196 | .163 | 51 |

[1] The significance of the regression coefficients was tested using a one-tail t test. The t values are shown in parenthesis. The significance of the $R^2$ was tested using an F test and all $R^2$ were significant.

* significant at 99 per cent.

** significant at 95 per cent.

*** significant at 90 per cent.

icant, no definite statement on whether the wage-concentration relationship is spurious or not, is possible. [12]

|      | Con4   | U*Con4 |
|------|--------|--------|
| U    | .5400  | .7755  |
| Con4 |        | .9146  |

On balance we can conclude that, the union-wage relationship confirms what we would expect regarding the influence of factor market imperfections on differentials ; but it is not clear whether product market imperfections have an independent influence on differentials.

When other independent variables are added the explanatory power of the model is increased (compare equation 3 with equation 1). Although the structural variable RG turns out to be insignificant (equation 2), the variables Prod and D are significant and have the anticipated sign. In particular Prod is strong throughout (equations 3, 4 and 5) and indeed, factor market imperfections (U) coupled with Prod and D (equation 5) provide a robust explanation of wage differentials.

The introduction of UN and P/E as alternative proxies for factor and product market variables provide mixed results. They only become decisively significant with the expected signs in equation 7 when all other variables are dropped. However, $\overline{R}^2$ falls to .19. In equation 3 and 4

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[12] If U*Con4 had been statistically significant the key to whether product market imperfections had an independent influence on wage depends on the sign of this variable. Given that in both Tables I and II both Con4 and U are separately statistically significant, and positive, variables, the negative sign for their interaction can be explained as follows. In those industries where the degree of unionization is low, wages clearly increase with increasing concentration. In those industries where concentration is already high, the degree of unionization appears to have a dampening effect on wages. Putting it in a different way, the wage impact of increasing unionization is greater in low concentration industries and diminishes as the concentration increases. This leads to the tentative conclusion that concentration exerts an independent, and positive, influence on wage differentials, which is almost identical to Scherer's conclusions (op. cit., pp. 300-301). The conclusion is of course « tentative » because U*Con4 is not statistically significant.

Had the sign of U*Con4 been positive, it would have been possible to conclude that this was the result of the relationship between concentration and unionization. This in turn would indicate that Con4 itself exerts no independent influence on wages.

UN is not significant (and once has an unanticipated sign), while P/E is significant at the 10 per cent level only in equation 4. Since P/E is significant only when Con4 and U*Con4 are removed (equations 4 and 7), and Con4 becomes insignificant only when P/E is introduced (equation 3), it appears as if the structural and the performance variables are, to some degree, substitute proxies.

In summary we can say that, on the basis of Tables I and II, the major hypotheses are accepted, although the addition of Prod and D improves the explanatory power of the model.

## CONCLUSION

In conclusion we can say that the empirical evidence in this paper supports the general proposition that *ceteris paribus* factor market imperfections are necessary for the existence of wage differentials. Specifically, the evidence supports the usual contention that unions are instrumental in bringing about differentials.

However, the evidence does not precisely indicate the magnitude of the differential that can be ascribed to unions alone without the presence of oligopolistic market structures. But the evidence likewise fails to indicate the magnitude of the differential which can be ascribed to the presence of oligopoly without the constraint of union power. Obviously, more empirical work is necessary to sort out the wage differential — concentration relationship. While such empirical investigations will doubtless run into major data problems, it appears to us that the prime obstacle to more fruitful work in this area is the lack of formal theoretical models that relate power in the product market to wage differentials that may exist even without factor market imperfections.

## APPENDIX

(i)   *Variable Definitions and Data Sources*

### Appendix Table 1

| *Variable* | *Definition and Source* |
|---|---|
| W = | ratio of wages to production-marker man hours, 1965 and 1969: D.B.S. *Annual Census of Manufacturers, 1970.* |
| Con4 = | four firm concentration ratio: Department of Consumer and Corporate Affairs, *Concentration in the Manufacturing Industries in Canada.* (Ottawa, Information Canada, 1971). |

U =                percentage of non-office employees covered by collective agreements
                   in 1969: Department of Labour, *Working Conditions in Canadian
                   Industry,* 1969 (Ottawa, 1970).

U*Con4 =           (U) (Con4)/100.

RG =               regional concentration dummy has value of 1 for all industries
                   identified as regionally concentrated in *Concentration of Manufac-
                   turing Industries of Canada,* 1971.

P/E =              ratio of profits to equity in 1965: D.B.S. *Corporation Financial Sta-
                   tistics, 1965.*

UN =               industry unemployment rate in 1961: D.B.S. *Census of Canada,*
                   1961.

Prod =             value of factory shipments/production worker man hours: D.B.S.
                   *Annual Census of Manufacturers, 1970.*

D =                ratio of industry shipments in 1969 to 1965. D.B.S. *Annual Census
                   of Manufacturers, 1970.*

(ii)   *The Sample*

The size and content of the sample was determined by the matching of in-
dustries in the sources shown in Appendix Table I with the *Standard Industries
Classification, 1960.* This produced the following 51 industry sample :

Meat Products

Dairy Products

Fish Products

Grain Mills

Biscuit Manufacturers

Bakeries

Confectionary Manufacturers

Soft Drink Manufacturers

Breweries

Tobacco Products

Rubber Footwear Manufacturers

Rubber Tire and Tube Manufacturers

Other Rubber Products

Tanneries

Shoe Factories

Wool Yarn and Cloth Mills

Synthetic Textile Mills

Knitting Mills

Men's Clothing Industry

Pulp and Paper Mills

Paper Boxes and Bags Manufacturers

Iron and Steel Mills

Iron Foundries

Boiler and Plate Works

Structural, Ornamental and
    Architectural Metal Industry

Wire and Wire Products Manufacturers

Heating Equipment Manufacturers

Machine Shops

Agricultural Implements Industry

Miscellaneous Machinery and
    Equipment Manufacturers

Office and Store Machinery
    Manufacturers

Aircraft and Parts Manufacturers

Motor Vehicle Manufacturers

Motor Vehicle Parts and Accessories
    Manufacturers

Shipbuilding and Repair

| | |
|---|---|
| Women's Clothing Industry | Manufacture of Small Electrical Appliances |
| Children's Clothing Industry | Manufacture of Major Appliances |
| Fur Goods Industry | Manufacture of Household Radio and T.V. Receivers |
| Saw, Shingle, and Planning Mills | |
| Veneer and Plywood Mills | Communications Equipment Manufacturers |
| Sash, Door and Flooring Mills | Manufacture of Electrical Industrial Equipment |
| All Furniture Industries | Petroleum Refineries |
| Paint and Varnish Manufacturers | Manufacture of Pharmaceutical and Medicines and Toilet Preparations |
| Manufacture of Industrial Chemicals | |

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## Les différences de salaires et les imperfections du marché : comparaisons dans l'industrie manufacturière canadienne

Dans l'article précédent, l'auteur tente de démontrer dans quelle mesure les imperfections des marchés des produits et des facteurs de production sont responsables des différences de salaire. L'article se divise en trois parties. La première partie est consacrée à l'examen théorique des différences de salaire et des imperfections des marchés, à la formulation d'une hypothèse vérifiable et à l'ébauche d'un modèle. La deuxième partie rend compte des résultats concrets obtenus. S'y ajoute enfin une conclusion.

Théoriquement, deux points apparaissent importants. En elles-mêmes, les imperfections du marché des produits ne peuvent engendrer les différences de salaire ; d'autre part, ces différences ne peuvent exister que s'il y a des imperfections sur le marché des facteurs, autrement dit, si, du côté de l'employeur, il y a monopole ou si, de l'autre, les syndicats sont très puissants.

Par la théorie, on ne peut guère être éclairé sur ce qui se passe généralement lorsqu'il y a interaction du marché des produits et du marché des facteurs. Globalement, selon notre hypothèse, l'existence conjointe d'un syndicalisme fort et la situation de monopole de l'entreprise exerceraient une certaine influence sur la négociation des salaires. Pour approfondir cette hypothèse, il s'agissait de prendre pour acquis que l'objectif principal des syndicats est de faire augmenter les salaires au-dessus du niveau du marché des facteurs tout en maintenant le niveau de l'emploi. Il s'ensuit que l'action syndicale sera beaucoup plus perceptible dans les industries qui, de l'avis des dirigeants syndicaux, sont en mesure d'accepter des hausses de salaire sans réduire les occasions d'emploi pour les membres du syndicat. Ceci signifie qu'il n'y a guère de marge pour l'action syndicale dans les sec-

teurs très concurrentiels de l'économie, étant donné que les profits des entreprises tendent alors vers le point zéro, et que, en conséquence, on ne peut y obtenir d'augmentation de salaire sans risquer de provoquer une réduction des emplois. Dans les circonstances, on ne peut s'attendre à ce que l'efficacité des syndicats y soit très grande.

D'autre part, si les entreprises monopolisées fonctionnement sans être troublées par les revendications des syndicats, elles paieront les taux de salaire courants et, s'il y a profit clair, il restera intact. Par conséquent, un syndicat ne peut obtenir de hausses de salaire que dans les industries où l'on sait qu'il y a des profits clairs. Ces industries sont nécessairement celles qui détiennent une certaine exclusivité sur le marché des produits.

Si ceci est exact, les hypothèses suivantes peuvent se vérifier. En premier lieu, on notera un rapport positif entre les taux de salaire et la puissance du syndicat. En deuxième lieu, il y a aussi un rapport positif entre les salaires et la concentration qui favorise la puissance de l'entreprise sur le marché. Toutefois, cette dernière prévision se fonde sur l'hypothèse déterminante d'une corrélation entre le degré de syndicalisation et le degré de concentration, ce qui voudrait dire que la concentration n'exerce aucune influence sur les salaires et que le rapport salaire-concentration est faux.

En utilisant surtout les données relatives à la concentration, aux profits, au degré de syndicalisation et à la productivité, nous avons examiné leur impact sur les salaires en recourant à la technique de la régression multiple pour évaluer à la fois les coefficients des séries chronologiques et des échantillonnages. Le résultat le plus marquant qu'on a obtenu de cette analyse peut se formuler ainsi : des syndicats puissants et une situation d'oligopole sur le marché exercent une influence positive certaine sur les salaires. Cependant, on ne sait pas par là l'ampleur des différences de salaire dont on peut attribuer la responsabilité aux syndicats lorsque l'on ne décèle pas la présence d'oligopole sur le marché. On ne connaît pas plus d'ailleurs l'ampleur des différences de salaire attribuables à la présence d'un oligopole sans pression de la part des syndicats. Naturellement, il faudrait poursuivre plus avant les analyses pour faire le départ entre la différence dans les salaires et le degré de concentration du marché.

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