



Towards a More Competent Labour Force: A Training Levy Scheme for Canada



By

ROY J. ADAMS

**INNIS LIBRARY
NON-CIRCULATING**

**FACULTY OF BUSINESS
McMASTER UNIVERSITY
HAMILTON, ONTARIO**

TOWARDS A MORE COMPETENT LABOUR FORCE: A

TRAINING LEVY SCHEME FOR CANADA

BY

Roy J. Adams

McMaster University

Chairman, Commission of Inquiry
on Educational Leave and Productivity

One of the principal recommendations of the Commission on Educational Leave and Productivity was the establishment of a training levy scheme in Canada.¹ The commission recommended that Canadian industry be required to spend .5% of payroll annually on training leading to legitimate certificates, diplomas and degrees. Any firm which spent less on training would remit the difference to government. Firms which spent the required sum would have their tax liability reduced by an amount greater than their expenditures. Thus, the proposal utilizes both the stick and the carrot. Companies which renege on their responsibility to train are penalized. Those which meet their responsibility are rewarded with tax relief.

In this paper I shall discuss why such a scheme is necessary, how it might work, what it might cost, and what it would accomplish. The views presented here are my own rather than the official outlook of the commission as a whole. I doubt, however, that the two would differ substantially.

Why is a training levy necessary?

The productive capacity of any economy is dependent on many factors but one of the most important is the competence of the labour force. This statement is, it would seem, self-evident. It is, however, supported by a good deal of research. Many studies have concluded that education and training contribute significantly to economic growth.² At the micro level there is a good deal of research which demonstrates that training has a large and consistent impact on productivity.³

Research carried out by the commission indicates that the Canadian system for providing the education and training necessary to ensure a high level of occupational competence is far from ideal. The great majority of Canadian adults have received little or no systematic occupational training. The most serious problem is the inadequacy of general vocational training designed to produce well-rounded craftsmen, technicians and managers. Consider the following observations.

A recent OECD review of Canadian education found that little vocational training is provided in the primary and secondary schools. Such training is instead delayed to what is the post-secondary level.⁴ However, a good deal of

post-secondary education is not vocationally oriented. It is doubtful if more than 50% of university graduates accept employment in fields directly related to their university education.⁵ Most history majors, for example, do not become historians. The currently popular notion that university graduates are over-qualified for the jobs they are accepting, fails to take this basic observation into account.

Although general vocational education is offered almost exclusively at the post-secondary level, the large majority of Canadian adults have received no post-secondary education. According to the 1976 mini census, only 29% of the out-of-school population have received any post-secondary education. About 18% have completed the requirements for a post-secondary degree, diploma or certificate. Over nine million adult Canadians have not completed the requirements for a secondary school certificate.⁶

Since most Canadians have not been vocationally prepared by institutions of formal learning, one might expect that private industry would take up the slack. The evidence, however, suggests that industry offers very limited opportunities for individuals to acquire the knowledge necessary to be highly effective in today's complex world of work. A survey carried out by the commission indicated that in 1978 only about 20% of the enterprises surveyed reported any training. Only 15% of the employees in the surveyed firms were reported to be recipients of training. Other surveys suggest that these estimates may be high rather than low. For example, a more extensive Statistics Canada survey carried out in 1973 indicated that only about 8% of paid workers received training in that year.⁷ Moreover, the training provided by industry is largely short term and job specific. The commission survey indicated that on average only 7 days training were provided to each trainee. Of those who were beneficiary to training in 1978, 75% received 5 days or less. These data corroborate the findings from other surveys.⁸

A significant and growing number of adults do attempt to improve their occupational capabilities and prospects through participation in programs of

continuing education but there are numerous unnecessary barriers to post-secondary education which make access difficult. Adults are often thwarted by the unavailability of courses at convenient times and places, by distance, by costs, by inflated entrance requirements, by residency requirements, and by their inability to have relevant experience recognized. Some institutions do make serious efforts to lower or remove these impediments but much more could be done. The barriers which exist are obviously less formidable to some. Middle class people already launched in solid careers are the big users of continuing education opportunities.⁹ Those most in need of additional education and training are often the ones least able to participate: women, those who do not live within reasonable commuting distance of educational institutions, dropouts, and people who work irregular schedules.

The Canadian federal government spends approximately \$600 million each year on labour market training but the design of the program is not adequate to the needs.¹⁰ In order to ensure a high level of occupational competence two to four years of systematic training is necessary. However, the Canadian Manpower Training Program, which is available primarily to unemployed adults, does not provide for more than one year of occupational training and development.

As a result of these inadequacies there are chronic shortages of skilled workers. Despite high levels of general unemployment and youth unemployment in particular Canadian firms continue to vigorously recruit skilled people from abroad. In 1979 approximately 40,000 Canadian youngsters secured apprenticeship positions. To put that figure in perspective it may be noted that during the same year about 1.3 million West German youngsters entered the German apprenticeship system.¹¹

The recent sector task force reports sponsored by the Federal Department of Industry Trade, and Commerce indicate serious problems with the level of relevant knowledge possessed by supervisors and managers. Among those industries with the most serious managerial deficiencies are textiles and clothing, commercial printing, construction, food and beverage, footwear, furniture manufacture, and restaurant and

food services.¹²

There are also portability problems. Job specific skills cannot be easily transported from one organization to another. Thousands of Canadians are susceptible to obsolescence caused by technical change. There are quality of worklife problems. A survey carried out by the Federal Department of Employment and Immigration revealed that working Canadians were more dissatisfied with their opportunities for promotion than with any other aspect of their jobs.¹³ There are discrimination problems. The large majority of women in the labour force, for example, continue to be bottled up in low paying job ghettos.¹⁴ Last, but certainly not least, there are productivity problems. It is extremely difficult to estimate the productivity loss created by the inadequacy of training in Canada. However, it is certainly substantial. One need only look to countries like West Germany and Japan to see what may be accomplished as the result of a serious national commitment to vocational excellence.¹⁵

The above observations would seem to clearly indicate that something needs to be done. But why a training levy on industry? The commission concluded that a training levy would be the best way to address the problems for several reasons.

Most education and training in Canada is organized without serious input from industry. Educators offer programs which they believe to be most appropriate whether or not industry agrees. Industrial spokesmen who appeared before the commission expressed considerable dissatisfaction with post-secondary education.¹⁶ The levy would provide industry with clout vis a vis educational institutions. Companies would be able to negotiate programs that met their needs rather than depend upon educators and governments to decide what is best for them. However, since the commission proposal requires that the levy money be spent on legitimate programs leading to certificates, degrees and diplomas considerable leverage would remain with educational institutions to maintain high standards. New programs should be the product of negotiation rather than dictation by either party to the other.

In order to be effective in negotiations companies would have to assess more carefully their training and development needs. Because the current system is largely

outside of their control and because of other pressing day to day business needs, training is often given low priority at present. The potential loss of income would force industry to move training up on its list of priorities.

There are many industrial organizations who do little or no training because they fear that their investment in human resource development will be lost to a competitor. Many firms see no net advantage in doing training as long as they can pirate from other firms, recruit abroad, or make do with the products of the formal educational system. By placing an equal burden on all, this disincentive to train would be overcome.

Smaller firms often cannot afford to provide systematic long range training. If they pooled their resources with other similarly situated organizations considerable progress could be made. The levy scheme would provide the incentive for the development of joint approaches to training.

Finally, experience suggests that the combination of on-the-job and in class training is superior to either type of training done singly. The levy proposal would specifically encourage industry-based co-operative education.

It is very doubtful that alternatives to the levy scheme would be as responsive to the problems which currently exist. Government might, for example, increase the grants provided to industry but there are two good reasons for not doing so. First, the current grant system is a nightmare of bureaucratic red tape. Many companies shy away from the grant route because it consumes too much time and energy with uncertain results. Although the grant system might be streamlined, I am a skeptic. The concern of the government about abuse and wastage of tax dollars is real and as long as it exists there will be red tape tying up grants.

But there is another reason for not going the grant route. Government already pays for 85% of the cost of post-secondary education and by doing so it has made industry dependent on the post-secondary system.¹⁷ That dependence tends to dull any

business enthusiasm for training. What is needed is less dependence by industry on government rather than more.

Another alternative would be to have government demand that the education system offer more vocationally oriented programs but I doubt that such a strategy would work as well as the levy proposal. Liberal education in North America is very highly valued not because it does a particularly good job of preparing people for the world of work, but rather because it provides one with a base for living a productive and satisfying life in all spheres of activity. Liberal versus vocational education has been debated for decades with the former generally coming out on top. By and large Canadians want their children to receive a "good" education and a "good" education is, in general, considered to be synonymous with a liberal education.

It is unfortunately the case that supporters of one type of education are often antagonistic to the other type. Such an attitude is certainly not necessary. Surely it is possible to build a system which provides more credible options. However, a government versus the schools confrontation, with industry on the sidelines, is not likely to efficiently produce that result. On the other hand, the educational system is likely to respond favourably to the prospect of new resources from the private sector. Hard bargaining over specific programs is likely to have a more effective result than general bureaucratic or legalistic guidelines.

In the context of liberal versus vocational education it should be noted that the dividing line is an arbitrary one. For many positions in our complex economy a good background in such liberal subjects as politics, history, sociology, english and mathematics is essential for success.

How might it work in practice?

Presumably the federal government could unilaterally pass legislation which would increase the tax burden of companies by an amount equal to 0.5% of payroll

while simultaneously permitting employers to write off more than 100% of expenditures on acceptable training if the 0.5% level was reached. Each individual province also might pass such a law. Since the scheme would clearly impinge upon educational institutions, a joint approach would be the best solution.

Once the levy was in place the implementation process might work in any of the following ways. A large company might contact a nearby university or college and work out a tailor-made training and development scheme. Several small companies might pool their levy requirement and establish a joint training service. Needed programs might then be negotiated with colleges and universities. A company might decide that current university and college programs are adequate to its needs and designate selected individuals to enter those programs. Universities and colleges might redesign programs to make them more attractive to industrial firms and then market the new programs themselves. Apprenticeship programs should be greatly expanded.

Against the levy employers could write off not only the training expenses per se but also remuneration costs of those who leave work to enter training. A few concrete examples might prove to be useful.

The Saskatchewan government recently developed a scheme whereby clerical people, primarily women, could prepare for advancement to higher level administrative jobs. Those selected for the program are permitted time off from work to attend post-secondary courses. A multi-national firm with a branch in southern Ontario has negotiated a tailor-made Master of Business Administration program with a U.S. university. Employee participants attend classroom sessions full-time for two weeks during both the Spring and the Fall. During the interim periods they work on various projects and assignments at home. Because of a shortage of meteorologists the federal government from time to time selects employees for full-time training in meteorology at university.

A major objective of the levy proposal is to encourage the development of more creative schemes based on the day release and block release principles. Long term leave is also to be encouraged where necessary but it is more expensive. A greater impact can be made through day and block release.

By recommending the spread of day and block release programs we did not mean to denigrate training during non-working hours. Where out of work schemes can be developed which are equitable and effective they should be encouraged. However, day and block release programs are capable of overcoming problems with night school. Working women, for example, often cannot easily attend evening sessions. Nor can people with irregular work schedules or those who live beyond commuting distance. More education can be delivered in a shorter period of time utilizing day and block release and such schemes provide an added incentive to those who might not otherwise participate.

One potential negative outcome of our proposal is the creation of a fly-by-night training industry. To avoid this possibility we specified that the training had to be offered by legitimate educational institutions. On the other hand, it was not our intention to exclude quality in-house training. Presumably some form of agency will have to be established to decide border line cases. It might also be possible for a company to submit its training plans to the agency for evaluation as to their acceptability.

What would it cost?

In 1978 total labour income was approximately \$130 billion of which about \$27 billion was earned in the not-for-profit industries. Since the levy scheme is tax based it would only apply to the private sector resulting in a liability of about \$515 million.¹⁸ It is to be hoped, however, that a supplementary scheme could be developed which would require the public sector to shoulder its share of training responsibility. If that could be accomplished the total amount avail-

able for training would be approximately \$650 million.

Initially the levy would function as if it were a new tax. However, the proposal specifies that if employers spend the required amount on training their tax burden would be reduced by an amount greater than their expenditures. Ideally all firms would spend the required amount on training but inevitably some will pay the levy/tax rather than train. These funds plus any other savings made by government on currently existing programs should be recycled back to the private sector through the tax system. At this point the amount of return cannot be estimated with any accuracy. For illustrative purposes, however, we will assume that all employers do meet the training requirement and that the write off amounts to 120%. In such circumstances employers would spend \$515 million on specified training, their tax bill (including their new liability under the levy/tax scheme) would be reduced by \$618 million, and government revenues would actually decrease by \$103 million. Thus, if industry spent the entire levy requirement, its share of training costs would be \$412 million and government's share would be \$103 million.

The initial reaction of both government and employers to these figures is likely to be that it is too expensive. But how much is too expensive? A recent report in the Globe and Mail quoted a study made by the now disbanded Centre for the Study of Inflation and Productivity which indicated that absenteeism costs Canada \$21 million each day.¹⁹ That adds to over \$5 billion per year. In contrast, the \$515 million is a small figure. If absenteeism could be reduced by ten percent, the levy scheme would be paid for.

There are additional reasons why the real cost burden will not be as onerous as it seems at first glance. Let us assume that all of the new instruction is provided by universities or colleges and students are released during working hours

to attend the courses. Let us further assume that all of the new students will require sufficient time off to complete 10 post secondary courses--the number of courses typically taken by a full-time university student in one year. In fact many students may take only two or three courses per semester under the scheme, but for illustrative purposes it is useful to assume that all students are "full-time". The figures generated may be thought of as "full-time equivalents."

How much time off would the student need? A university level course typically consists of 39 hours of in class instruction. Ten such courses would require 390 hours. The students might also need time to get to the course and return to work and might be granted additional time to prepare for final exams. Let's allow them another 290 hours. Total hours required per student would then be 680 or 17 weeks.

The average cost of educating a post-secondary student in Canada may be estimated at about \$4,500 per year.²⁰ Average weekly income per employed person in 1978 was \$251.²¹ Lost time cost per full time equivalent student under the levy scheme would be (17 weeks @ \$251 per week) \$4,267. Total cost of educating an employed person utilizing the educational leave principle would be \$8,767 per year.

Note that about 50% of the total cost or about 61% of the cost to employers will be lost time rather than hard money cost.²² A critical question is whether or not the \$251 million of lost time will result in a production loss of \$251 million. There are good reasons for believing it will not. There are probably very few companies who make maximum use of the paid time available. In part this is due to the nature of the production process; in part it is, no doubt, also due to management deficiencies.

A few examples will illustrate the point. In 1974 British industry went on a three day week for three months. One would expect production to drop by 40%. In fact, at its lowest point, the production drop was only 10%. In short, people worked only 60% of normal hours but produced at 90% of normal output.²³ More to the point under discussion here, the French adopted an education and training levy

scheme in the early 1970's. The result was a large increase in the number of people receiving instruction during normal working hours. There was, however, no noticeable loss of production. In Germany also, educational leave has been made continually more available during the 1970's with no noticeable adverse effect on productive output.²⁴

In our example government revenues decrease by about \$100 million. In practice such an outcome would be very unlikely even if all firms met their training responsibility. Many current training subsidy schemes could be drastically reduced or terminated. For example, the federal Employment and Immigration Commission now spends about \$100 million subsidizing in-house industrial training and another \$500 million on classroom training.²⁵ The Department of Industry, Trade and Commerce spends thousands of dollars on various entrepreneurial and management development schemes. A good deal of federal money goes into the subsidization of block release under currently existing apprenticeship training. These programs would become largely redundant if the levy scheme were put in place. Some of them might still be desirable but they could certainly be reduced substantially.

What would it accomplish?

The levy scheme should result in a significant expansion of the number of people receiving vocational education. By dividing the average cost per full-time equivalent student (\$8,767) into the amount available for training (\$515 million) we come up with 58,743 full-time equivalent students. Not all of these people will be new students but a substantial number will be. If the cost of instruction could be reduced and the public sector brought into the scheme the number of students could be greatly increased. Since industry will be trying to negotiate the best deal costs should go down. At present, as stated earlier, it costs about \$4,500 per year to educate a post-secondary student. However, the creative

use of space and time can result in a substantial cost reduction.

Continuing education departments, which are often required to "break even" are able to offer courses in demand for as little as \$1.50 to \$2.00 per student, per hour.²⁶ For a full year of student instruction that works out to between \$600 and \$800 per year. Some will say that these figures do not take into consideration the administrative and physical infrastructure required to operate educational institutions and they have a case. However, to illustrate the point that education may be provided less expensively an example may be useful.

Wayne State University in Detroit manages to offer a regular university degree program to people working full-time at a cost of approximately \$800 per student. The program, complete with all of the required infrastructure, is sustained entirely by fees.²⁷

Although the Wayne State experience may not be generalizable, it is likely that if buying power is put into the hands of industry educational institutions would be able to develop packages considerable below current costs. If average costs per student could be held to \$6,500 per year and the public sector could be brought within the scope of the scheme thus making \$650 million available then, in our example, 100,000 working people could receive a year of post secondary education. That would be an increase of about 12% in the number of full-time equivalent post-secondary students in Canada.

The long run results of the levy scheme should be substantial:

1. A more training oriented Canadian economy.
2. New career routes and opportunities for women, young people and others caught in dead end jobs.
3. An end to the chronic shortage of skilled craftsmen.
4. A more creative and competent corps of managers.
5. A major boost to productivity.

Within three or four years we would expect that the program will not only be paying for itself but will instead be resulting in dividends for individuals, for industry and for the economy.

What about the individual?

The levy scheme does not create new employee rights. An individual employer could spend the entire requirement on management development or on apprenticeship or on other specific programs which would exclude the great majority of employees. This aspect of the scheme was of concern to the commission. We decided, however, that for the program to be most effective, bureaucratic and legalistic constraints on employers had to be kept to a minimum. A major strength of the proposal is that it has the ability to slice through the welter of red tape now surrounding government support to training.

The primary mechanism for ensuring that the funds available are spent in the interests of employees will be collective bargaining. The levy will require unions to become thoroughly involved in training if they wish their members to receive equitable benefits from it.

For those capable and motivated people who still find themselves left out, we recommended a subsidiary scheme. Such people would be able to apply to a government fund for support to enter programs likely to significantly improve their economic and social status. Those granted support from the fund would be legally entitled to an unpaid leave of absence for the period necessary to access the program.

This entire package, we believe, would go a long way towards significantly improving the competence of the Canadian labour force.

Footnotes

1. The Commission of Inquiry on Educational Leave and Productivity was established on May 31, 1978 by the Minister of Labour for Canada. The report of the Commission entitled Education and Working Canadians was released on October 23, 1979.
2. See, for example, G. Psarcharopoulos, The Economic Returns of Education in the Process of Development, Elsevier, 1972.
3. R. A. Katzell, D. Bienstock and P. H. Faerstein, A Guide to Worker Productivity Experiments in the United States 1971-1975, New York, New York University Press, 1977.
4. Review of National Policies for Education, Canada, Paris, Organization for Economic Co-operation and Development, 1976.
5. See Horace D. Beach, Education and the Employment of Youth: A Background Paper, Victoria, B. C., University of Victoria, 1978, p. 28-29.
6. 1976 Census, Table 30.
7. Education and Working Canadians, Tables 3-1 and 3-4; Statistics Canada, The Labour Force, January, 1975.
8. Education and Working Canadians, Table 3-5; Statistics Canada, Training in Industry, 1969-70, Ottawa, February, 1973; Training for Ontario's Future, Report of the Task Force on Industrial Training, Ontario Ministry of Colleges and Universities, 1973.
9. Education and Working Canadians, chapter 2. See also, Elizabeth Humphreys and John Porter, Part-Time Studies and University Accessibility, Ottawa, Carleton University, Department of Sociology, October, 1978 and David A. A. Stager and Alan Thomas, Continuing Education in Canada, A Report to the Education Support Branch, Department of the Secretary of State for Canada, Ottawa, 1972.
10. Employment and Immigration Canada, Annual Report for 1977-78, Ottawa, 1978.
11. Education and Working Canadians, p. 89 and p. 52.
12. Ibid., p. 92, 93. See also, D. J. Daly, "Canadian Management: Past Recruitment Practices and Future Needs", Downsview, York University, September, 1979.

13. M. Burstein, N. Tienhaara, D. Hewson and B. Warrander, Canadian Work Values, Ottawa, Information Canada, 1975.
14. See Morley Gunderson, "Work Patterns" in Gail C. A. Cook (ed.) Opportunity for Choice: A Goal for Women in Canada, Ottawa, Information Canada, 1976.
15. K. Weiermair, "Industrial Training and Industrial Excellence: Canada's Record in International Perspective" Paper presented at the Ninth Annual Management Research Forum, Wilfrid Laurier University, September 30, 1978.
16. See, for example, the brief of the Canadian Manufacturers Association To the Commission of Inquiry on Educational Leave and Productivity.
17. Education and Working Canadians, p. 97.
18. See Statistics Canada, Estimates of Labour Outcome, Vol. 32, No. 2, April - June 1979.
19. "Absenteeism Costs Canada \$21 Million Daily, Study Says", The Globe and Mail, October 4, 1979.
20. The estimate is for 1976-77 and was derived as follows:
 1. In that year there were 603,700 full time post secondary students (Statistics Canada, Education in Canada, A Statistical Review for 1977-78, Ottawa, May, 1979.
 2. There was also 2,530,428 course registrations by continuing education students. Dividing by 10, (The number of courses taken by a full-time student) these registrations were converted to full-time equivalent students (253,043). (Education and Working Canadians, table 2-7).
 3. Thus in 1976-77 there were an estimated 867,543 full-time equivalent post-secondary students in Canada.
 4. The 1976/77 total post-secondary expenditures in Canada amounted to an estimated \$3,962,000,000. (Ian Morrison, "Canadian Post-Secondary Education: Some Trends and Issues" in I. Morrison and P. Belanger (eds.) Manpower Training at the Crossroads, Toronto, Canadian Association of Adult Education, 1976.)

5. By dividing the number of full-time equivalent students into the total expenditures one derives the average cost of \$4,567.
21. Total labour income in 1978 including benefits was \$129,884.6 million (Statistics Canada, Estimates of Labour Income, op.cit) and average employment during that year was 9,972,000 (Canadian Statistical Review, August, 1979). Thus, average yearly income was \$13,025 or \$251 per week.
22. Total lost time cost = $\frac{4267}{8767} \times 515$ million = \$251 million
- Percent of employers' cost due to lost time $\frac{251}{412} = 61\%$
23. See, "Chronicle", British Journal of Industrial Relations, March, 1974 and July, 1974, from January 1 to 11 March 1974, British Industry operated a 3 day work week. In November 1973 the index of industrial production stood at 111.1. By January it had fallen to 99.7 but by March it had risen again to 104.7.
24. Education and Working Canadians, chapter 1.
25. Employment and Immigration Canada, Annual Report for 1977-78, Ottawa, 1978.
26. See, for example, "Fees and Instructor Salary Survey, Ontario Community Colleges, Feb., 1979" A survey conducted by the Dean, Continuing Education Division, Canadore College for the Ontario Provincial Committee of Continuing Education Officers.
27. Correspondence with Professor Otto Feinstein, Wayne State University.

Faculty of Business
McMaster University

WORKING PAPER SERIES

101. Torrance, George W., "A Generalized Cost-effectiveness Model for the Evaluation of Health Programs," November, 1970.
102. Isbester, A. Fraser and Sandra C. Castle, "Teachers and Collective Bargaining in Ontario: A Means to What End?" November, 1971.
103. Thomas, Arthur L., "Transfer Prices of the Multinational Firm: When Will They be Arbitrary?" (Reprinted from: Abacus, Vol. 7, No. 1, June, 1971).
104. Szendrovits, Andrew Z., "An Economic Production Quantity Model with Holding Time and Costs of Work-in-process Inventory," March, 1974.
111. Basu, S., "Investment Performance of Common Stocks in Relation to their Price-earnings Ratios: A Text of the Efficient Market Hypothesis," March, 1975.
112. Truscott, William G., "Some Dynamic Extensions of a Discrete Location-Allocation Problem," March, 1976.
113. Basu, S. and J.R. Hanna, "Accounting for Changes in the General Purchasing Power of Money: The Impact on Financial Statements of Canadian Corporations for the Period 1967-74," April, 1976. (Reprinted from Cost and Management, January-February, 1976).
114. Deal, K.R., "Verification of the Theoretical Consistency of a Differential Game in Advertising," March, 1976.
- 114a. Deal, K.R. "Optimizing Advertising Expenditures in a Dynamic Duopoly," March, 1976.
115. Adams, Roy J., "The Canada-United States Labour Link Under Stress," [1976].
116. Thomas, Arthur L., "The Extended Approach to Joint-Cost Allocation: Relaxation of Simplifying Assumptions," June, 1976.
117. Adams, Roy J. and C.H. Rummel, "Worker's Participation in Management in West Germany: Impact on the Work, the Enterprise and the Trade Unions," September, 1976.
118. Szendrovits, Andrew Z., "A Comment on 'Optimal and System Myopic Policies for Multi-echelon Production/Inventory Assembly Systems'," [1976].
119. Meadows, Ian S.G., "Organic Structure and Innovation in Small Work Groups," October, 1976.

120. Basu, S., "The Effect of Earnings Yield on Assessments of the Association Between Annual Accounting Income Numbers and Security Prices," October, 1976.
121. Agarwal, Naresh C., "Labour Supply Behaviour of Married Women - A Model with Permanent and Transitory Variables," October, 1976.
122. Meadows, Ian S.G., "Organic Structure, Satisfaction and Personality," October, 1976.
123. Banting, Peter M., "Customer Service in Industrial Marketing: A Comparative Study," October, 1976. (Reprinted from: European Journal of Marketing, Vol. 10, No. 3, Summer, 1976).
124. Aivazian, V., "On the Comparative-Statics of Asset Demand," August, 1976.
125. Aivazian, V., "Contamination by Risk Reconsidered," October, 1976.
126. Szendrovits, Andrew Z. and George O. Wesolowsky, "Variation in Optimizing Serial Multi-Stage Production/Inventory Systems, March 1977.
127. Agarwal, Naresh C., "Size-Structure Relationship: A Further Elaboration," March 1977.
128. Jain, Harish C., "Minority Workers, the Structure of Labour Markets and Anti-Discrimination Legislation," March, 1977.
129. Adams, Roy J., "Employer Solidarity," March, 1977.
130. Gould, Lawrence I. and Stanley N. Laiken, "The Effect of Income Taxation and Investment Priorities: The RRSP," March 1977.
131. Callen, Jeffrey L., "Financial Cost Allocations: A Game-Theoretic Approach," March 1977.
132. Jain, Harish C., "Race and Sex Discrimination Legislation in North America and Britain: Some Lessons for Canada," May, 1977.
133. Hayashi, Kichiro. "Corporate Planning Practices in Japanese Multinationals." Accepted for publication in the Academy of Management Journal in 1978.
134. Jain, Harish C., Neil Hood and Steve Young, "Cross-Cultural Aspects of Personnel Policies in Multi-Nationals: A Case Study of Chrysler UK", June, 1977.
135. Aivazian, V. and J. L. Callen, "Investment, Market Structure and the Cost of Capital", July, 1977.

136. Adams, R. J., "Canadian Industrial Relations and the German Example", October, 1977.
137. Callen, J. L., "Production, Efficiency and Welfare in the U.S. Natural Gas Transmission Industry", October, 1977.
138. Richardson, A. W. and Wesolowsky, G.O., "Cost-Volume-Profit Analysis and the Value of Information", November, 1977.
139. Jain, Harish C., "Labour Market Problems of Native People in Ontario", December, 1977.
140. Gordon, M.J. and L.I. Gould, "The Cost of Equity Capital: A Reconsideration", January, 1978.
141. Gordon, M.J. and L.I. Gould, "The Cost of Equity Capital with Personal Income Taxes and Flotation Costs", January 1978.
142. Adams, R. J., "Dunlop After Two Decades : Systems Theory as a Framework For Organizing the Field of Industrial Relations", January, 1978.
143. Agarwal, N.C. and Jain, H.C., "Pay Discrimination Against Women in Canada: Issues and Policies", February, 1978.
144. Jain, H. C. and Sloane, P.J., "Race, Sex and Minority Group Discrimination Legislation in North America and Britain", March, 1978.
145. Agarwal, N.C., "A Labor Market Analysis of Executive Earnings", June, 1978.
146. Jain, H. C. and Young, A., "Racial Discrimination in the U.K. Labour Market : Theory and Evidence", June, 1978.
147. Yagil, J., "On Alternative Methods of Treating Risk," September 1978.
148. Jain, H. C., "Attitudes toward Communication System: A Comparison of Anglophone and Francophone Hospital Employees," September, 1978
149. Ross, R., "Marketing Through the Japanese Distribution System"; November, 1978.
150. Gould, Lawrence I. and Stanley N. Laiken, "Dividends vs. Capital Gains Under Share Redemptions," December, 1978.
151. Gould, Lawrence I. and Stanley N. Laiken, "The Impact of General Averaging on Income Realization Decisions: A Caveat on Tax Deferral," December, 1978.
152. Jain, Harish C., Jacques Normand and Rabindra N. Kanungo, "Job Motivation of Canadian Anglophone and Francophone Hospital Employees", April, 1979.
153. Stidsen, Bent, "Communications Relations", April, 1979.
154. Szendrovits, A. Z. and Drezner, Zvi, "Optimizing N-Stage Production/Inventory Systems by Transporting Different Numbers of Equal-Sized Batches at Various Stages", April, 1979.

155. Truscott, W. G., "Allocation Analysis of a Dynamic Distribution Problem", June, 1979.
156. Hanna, J. R., "Measuring Capital and Income", November, 1979.
157. Deal, K. R., "Numerical Solution and Multiple Scenario Investigation of Linear Quadratic Differential Games", November, 1979.
158. Hanna, J. R., "Professional Accounting Education in Canada : Problems and Prospects", November, 1979.

Jnnis
REF
HB
74,5
. R49
no.159