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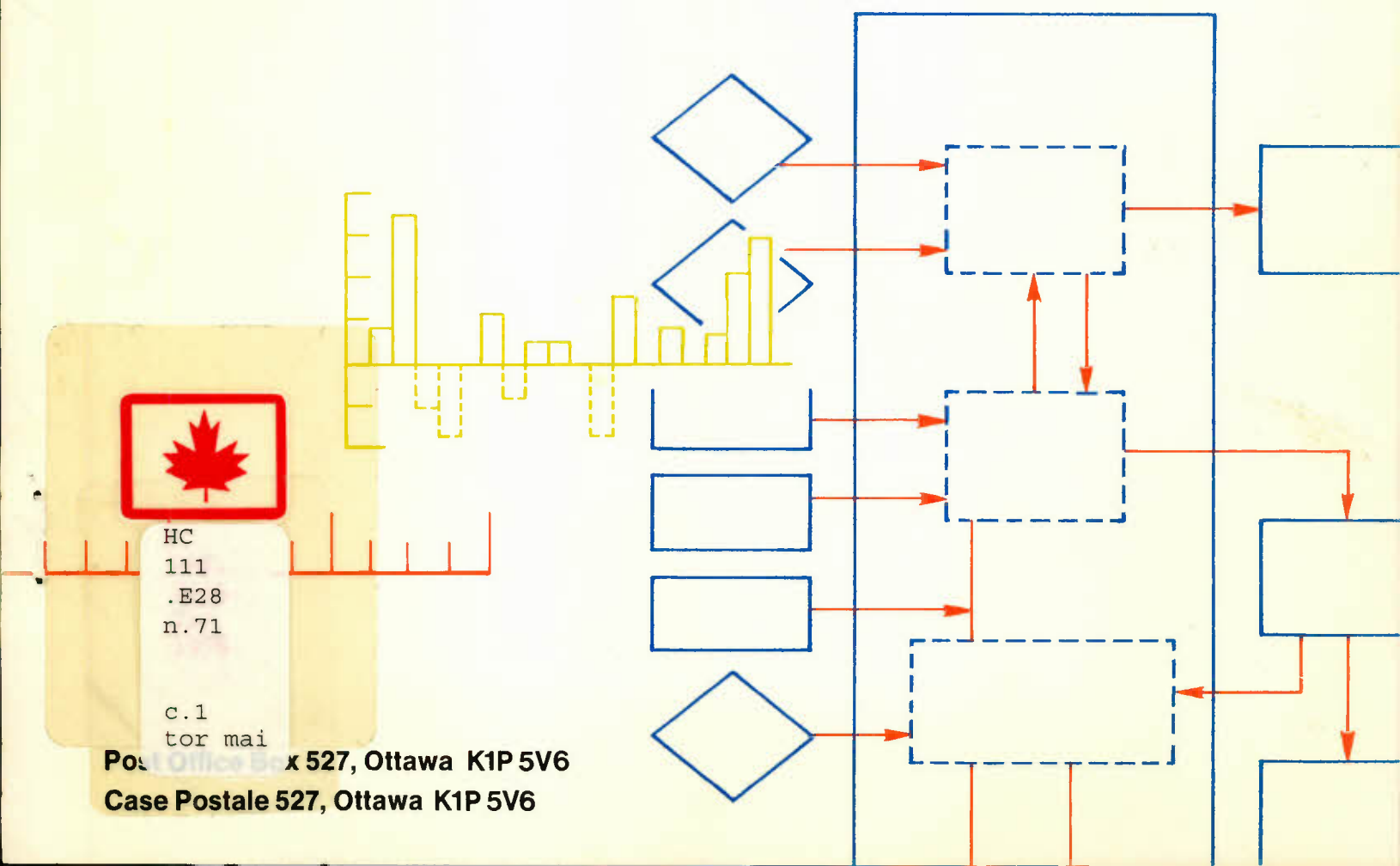

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DISCUSSION PAPER NO. 71

Anti-Inflation Controls and Decontrol: A Multi-Sectoral Analysis Simulations with CANDIDE 1.2M

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December 1976

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RÉSUMÉ

Les mesures de contrôle des prix et des salaires au Canada existent maintenant depuis plus d'un an et elles n'ont cessé d'être controversées. Si l'on a bien enregistré une diminution de taux d'inflation, certains prétendent qu'un tel résultat aurait-été acquis de toutes façons même en l'absence de ces mesures. D'autres estiment qu'il faudrait plutôt, pour lutter contre l'inflation, s'en remettre à des interventions plus traditionnelles, telle que des politiques monétaires et fiscales plus restrictives que d'avoir recours à des mesures de contrôle. Quant à ceux qui se prononcent en faveur de ce dernier type d'intervention, plusieurs d'entre eux se posent la question de savoir si le programme de lutte contre l'inflation a été mis en oeuvre de façon efficace et si en pratique il n'a pas tendance à freiner davantage les salaires que les prix. On s'inquiète par ailleurs des réactions éventuelles que pourra susciter la levée des mesures de contrôle.

Ce document se propose d'examiner l'ensemble de ces questions à l'aide du modèle CANDIDE 1.2M. En utilisant onze projections établies à partir du modèle pour la période 1975-1985, il décrit et compare les répercussions sur les niveaux de chômage et d'inflation de trois situations distinctes.

1. Dans le premier cas, on suppose qu'il n'existe aucune mesure de contrôle et qu'il n'y a aucun changement dans les taux d'imposition. Deux variantes sont proposées pour tenir compte de l'influence des conditions favorables en matière de commerce extérieur dans un

cas, et de conditions moins favorables dans l'autre .

2. Dans la deuxième situation, on prend en considération les mesures de lutte contre l'inflation. On effectue plusieurs simulations selon que les mesures de contrôle sont efficaces à 100 pour cent (les rythmes de hausses de prix et de salaires sont égaux ou inférieurs aux normes édictées par la CLI) ou à 75 pour cent, ou selon qu'elles s'appliquent aux salaires seulement. Au total, huit projections sont effectuées, en partant d'hypothèses différentes quant à l'évolution du commerce extérieur, et quant à la possible détérioration de la productivité de l'économie nationale par suite des mesures de contrôle.

3. Dans une dernière projection, on suppose que des politiques monétaires et fiscales restrictives sont mises en oeuvre. L'impôt sur le revenu est augmenté et la croissance de la masse monétaire est réduite.

En général, le programme de lutte contre l'inflation s'avère efficace pour juguler à la fois le chômage et l'inflation, aussi longtemps qu'il est mis en application. Cependant, dès la levée des mesures de contrôle, les niveaux de chômage et d'inflation augmentent. Cette recrudescence est d'autant plus rapide que les mesures de contrôle sont plus efficaces. Alors que les niveaux de prix, en 1985, sont plus bas après l'abandon des mesures de contrôle qu'en l'absence de toute politique de lutte contre l'inflation, les taux de chômage sont plus élevés. Ce sont les mesures monétaires et fiscales "traditionnelles" qui conduisent aux meilleurs résultats

du côté de l'inflation, mais au prix d'un taux de chômage estraordinairement élevé, qui atteint 8.9 % de 1982 à 1985.

Ce document met en outre en évidence comment d'autres compartiments de la vie économique pourraient être affectés par des mesures de contrôle efficaces à 75 %, par opposition à la situation qui prévaudrait en l'absence de mesures de contrôle, ou dans le cas de politiques monétaires et fiscales plus restrictives. Il examine notamment l'impact respectif de ces trois alternatives, sur la répartition des revenus, les salaires réels, les prix, la structure de l'emploi et de la production, ainsi que sur le budget de l'Etat.

ABSTRACT

Canada's wage and price controls have been in effect for more than a year amid continuing controversy over their usefulness. Although inflation rates have declined since the program began, some feel that this would have occurred even in the absence of controls. Others believe that inflation should be fought in the traditional manner, using stronger monetary and fiscal measures instead of controls. Among those who support the idea of controls, there are questions about how effectively the anti-inflation program has been implemented and whether, in practice, it tends to concentrate on holding back wages rather than prices. As well, there is general concern about what to expect after decontrols.

This paper investigates such questions with the aid of CANDIDE Model 1.2M. Using eleven projections generated by CANDIDE for the 1975-85 period, it compares three alternative situations in terms of their impact on unemployment and inflation:

1. No controls or tax changes. Two projections are used to take account of the influence of either favourable or less favourable terms of foreign trade.
2. Anti-inflation controls. Simulations are made for controls which are 100 per cent effective -- that is, where wages and prices remain within the AIB guidelines -- and for controls which are 75 per cent effective, including the situation of wage controls

only. Altogether, eight projections are made using different assumptions for foreign trade conditions and for the possible worsening of national productivity as the result of controls.

3. Monetary and fiscal policies of restraint. In this final projection, income taxes are increased and the growth of the money supply is restricted.

It is the comparison of the differences between the results of these simulations which is important, rather than the level of the individual projections. The anti-inflation regulations generally prove to be effective in combatting both unemployment and inflation as long as they are in effect. However, once the controls are lifted, both unemployment and inflation rise. The more effective the controls, the greater these increases after decontrols. Although price levels are lower by 1985 after controls than they would have been without any anti-inflationary policy, unemployment rates are higher. "Traditional" monetary and fiscal measures result in the best price performance but this is at the expense of an extraordinarily high rate of unemployment, averaging 8.9 per cent in the 1982-85 period.

In addition, the paper examines how other economic conditions would be affected by (75 per cent effective) controls as opposed to a situation of no controls or of tighter monetary and fiscal policies. Specifically, it analyzes the consequences of these alternatives for income distribution, real wages, prices, composition of employment and output, and government budgetary position.

I. Introduction

The significance of this paper lies in the differences between the results of the alternative scenarios -- not in the level of the individual simulations. The research for this paper was done in the spring of 1976. On June 17, 1976 Statistics Canada released a set of National Accounts data which contained very substantial upward revisions of wage and price changes (and thus of inflationary momentum) for the 1973-75 period. Simulations performed after June 17 with the revised data indicate that the main findings of the present paper regarding the differences between simulations have not changed as a result of these revisions.

II. Events Leading up to the Anti-Inflation Program

In recent years Canada suffered from high unemployment and strong inflation. At the same time wages and salaries were growing at a fast rate as well (Table 1).

Table 1

Selected Economic Indicators, Canada

Year	Unemployment rate	Consumer price index, percentage change	Average hourly wages in manufacturing, percentage change
1966	3.6	3.7	6.1
1967	4.1	3.6	7.0
1968	4.8	4.1	7.4
1969	4.7	4.5	8.1
1970	5.9	3.3	8.0
1971	6.4	2.8	8.9
1972	6.3	4.8	7.8
1973	5.6	7.6	8.9
1974	5.4	10.9	13.5
1975	6.9	10.8	15.7

Source: Canadian Statistical Review

Also, in the 1973-75 period prices and wages were growing faster in Canada than in the United States (Table 2).

On October 14, 1975 the federal Government announced price and incomes controls and the creation of the Anti-Inflation Board (AIB). The anti-inflation program was intended initially, to be in force for three years.

The AIB regulations are numerous, lengthy and complicated. The very first set of regulations[1] runs to 60 pages of small print, We have incorporated the main features of the regulations in the CANDIDE Model 1.2M.[2]

Table 2

		Hourly Earnings in Manufacturing Percentage Change at Annual Rates		Consumer Price Index Percentage Change at Annual Rates	
		Canada	U.S.A.	Canada	U.S.A.
1973	I	8.7	8.5	7.4	5.9
	II	10.4	4.1	9.5	9.0
	III	7.8	6.1	11.7	9.1
	IV	10.8	9.1	7.4	9.7
1974	I	11.7	5.9	10.0	11.6
	II	15.6	8.8	13.9	12.0
	III	22.9	13.6	12.6	12.7
	IV	17.0	14.1	11.4	12.0
1975	I	15.2	7.1	9.0	7.4
	II	15.6	5.2	9.0	6.4
	III	9.1	7.8	14.3	9.0
	IV	13.4	8.5	8.5	6.4

Source: Canadian Statistical Review, Survey of Current Business.

From our model's point of view the highlights of the anti-inflation program are the guidelines setting upper limits on wage and salary increases and the limits restricting price increases to the recovery of added costs.[3] The description of the way how the program is modelled in CANDIDE 1.2M may be found in Appendix II of this paper.

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1 Anti-Inflation Board: Anti-Inflation Act Regulations, Ottawa, 1975.

2 CANDIDE Model 1.2M: A Description for Model Users, Economic Council of Canada, Ottawa, 1976, mimeo.

3 Government of Canada: Highlights of Canada's Anti-Inflation Program, Ottawa, 1975, pp. 8-15.

III. Simulating the Anti-Inflation Controls and Decontrol, 1975-85 -- Macro Economic Results

In this section we report some of the results of eleven projections for the 1975-85 period. In order to explain and simplify the similarities and differences between the simulations we present the following schematic guide:

GUIDE TO THE SIMULATIONS

	Terms of Foreign Trade					
	Favourable Productivity Loss			Less Favourable Productivity Loss		
	0% p.a.	0.5% p.a.	1% p.a.	0% p.a.	0.5% p.a.	1% p.a.
No controls No tax changes	(1)			(9)		
Controls 75% effective in 1977-78	(2) (3)*	(5)	(6)		(10)	
Controls 100% effective in 1977-78	(4)	(7)	(8)			
No controls Income Tax Increased Money supply Growth restrined	(11)					

*Wage controls only, no price controls.

1. Projection Without Anti-Inflation Measures (Appendix I, Table 1)

As a starting point we prepared a projection to 1985 under the assumption that no anti-inflation measures are in force. During the forecast period all tax rates were left at their current level -- in particular the tax rate of the second income tax bracket, which is used as a proxy for the overall implicit income tax rate, was left at 18 per cent throughout. This is true for all simulations reported in this paper, with the single exception of Simulation (11).

Simulation (1) suggests that inflation would gradually decline, even without controls, to 6.5-7.0 per cent by 1980 to 6.0-6.5 per cent by 1985 (columns 4 and 5). However, we must keep in mind that CANDIDE, like most econometric models, has been too optimistic in this respect in the past. Also, even the projected price increases of this simulation are too high for comfort, as they imply a doubling of prices over 10 to 12 years. The unemployment rate remains unacceptably high during the seventies -- around 7 per cent -- and stabilizes around 6 per cent by 1985 (Column 3). By 1979 the government account begins to show substantial surpluses (Column 13) and this would permit stimulation of the economy to accelerate the reduction of unemployment. The current account balance of payments is continually in deficit (Column 14) but the size of the deficit is not high by historical standards.

2. Anti-Inflation Controls 75 Per Cent Effective -- No Productivity Loss (Appendix I, Table 2)

In this solution we introduced a simplified model of the announced anti-inflationary program of the government. We assumed that the program will not be completely effective. There could be many reasons for such incomplete effectiveness: not all industries and enterprises are subject to the controls; even some of the subject enterprises are excepted; "historical relationships" and "catch-up clauses" alleviate the severity of the regulations; export prices are of regulation and this would inavoidably influence domestic price formation; and so on. We assumed that the regulations will be 50 per cent effective in the first year of the program, 75 per cent effective in the second and third years, and that there will be a 37.5 per cent "spill-over effect" even if the first year after the end of the controls, due to wage contracts concluded less than one year before the end of controls. For the definition of "effectiveness" of the AIB program see Appendix 2, p. 52 and 55.

Column 4 and 5 of Table 2 indicate that inflation now declines to the 4.5 per cent rate by 1979, but not to 4 per cent (the official target). It is interesting to note that the anti-inflation controls lead to faster real GNE growth than in Simulation 1 during the 1976-78 period (Column 1) and the unemployment rate declines to 5.2 per cent by 1979 (Column 3). Corporate profits after taxes hardly grow at all (Column 7) and actually decline in real terms (Column 10). Real Disposable Income grows faster than in Simulation (1) (Column 12) and the government budget position improves faster (Column 13). Due to faster economic expansion, higher consumption

and investment (Column 15) the current foreign account deficit is somewhat higher, but still viable (Column 14). With inflation restrained, the industrial bond yield declines to 9 per cent by 1978, even though this is still quite high by historical standards (Column 22).

As the anti-inflation controls expire at the end of 1978 Solution 2 displays unattractive features. Hourly wages begin to accelerate their increase and by 1981 we have 11.0 per cent wage inflation (Column 6). After 1981 wage inflation subsidies to 9.0 per cent by 1985, but even this course of events is unacceptable because it first leads to about 8.5 per cent consumer price inflation in 1980 and then to a slow decline of inflation to about 6 per cent in the early eighties (Column 5). As most econometric models have a tendency to under-estimate inflation, such a projection may prove conservative.

During controls only a pass-through of unit costs is permitted; no mark-up on cost increases is allowed. In consequence, profit margins shrink and profits as a percentage of National Income decline (Column 16). After the control wages accelerate, and at the same time firms try to re-establish their tradition mark-up. In consequence prices and profits increase even faster than wages (Column 10). Real disposable income slows down in 1979 and 1980 (Column 12). The economy slows below its potential growth rate (Column 1) and unemployment starts rising, levelling off around 6.5 per cent by 1985 (Column 3).

While the picture after the control is cause for concern, we should not be carried away by pessimism. First of all, the price level in 1985 is some 3.5 per cent lower than in Simulation (1),even though the rate of inflation in 1985 is about the same in Simulation 1 and 2, in spite of the price jump immediately following the controls. The accelerating wage-inflation after the control may be partly due to imperfect modelling of expectations. After all, we have no experience of three consecutive years of abating inflation in our database, so it would not be surprising if our model needed improvement in handling such situations. Can wage equations be specified in such a way as to explain the historical experience of wage growth and still not lead to a flare-up of wage-inflation after the controls? In particular, is there a critical level of inflation, beyond which it tends to be self-perpetuating (or even self-accelerating)? If the answer to this question is "yes", there may be a hope that reducing inflation below the critical level by controls could prevent a renewed flare-up after the controls. Our current equation system produces 5.5-6.0 per cent CPI inflation around 1985 in <u>all</u> simulations performed for this paper except in Simulation (11), where 5.0 per cent inflation is achieved at the price of 9 per cent unemployment.

3. <u>Wage Controls Without Price Controls (Appendix I, Table 3)</u>

Some critics of the current anti-inflation controls maintain that <u>in practice</u> we have only controlled wages and not controlled prices. Simulation (3) imposed wage controls as in Simulation (2),but not price controls: firms were permitted to maintain their traditional mark-up on cost increases. We

find now, that by 1978 CPI inflation declines to 5.9 per cent only (Column 5), as against 4.6 per cent in Simulation (2), when wage controls and price controls were imposed. Real disposable income (Column 12), real GNE (Column 1), and government surplus of per cent of GNE (Column 13), all grow slower in Simulation (3) than in Simulation (2). Also unemployment declines slower. On the other hand, the flare-up of prices after the control is minimal (Column 5), and this simulation settles at the lowest level of inflation by 1985 among all those investigated in this paper![4] But also at the highest level of unemployment.) Our model indicates that even a temporary run-up in inflation is difficult and painful to wind down, becuase of the mutual interdependence between prices and wages. It is less dangerous to have four years of four per cent inflation than two years of one per cent and two years of seven per cent. All this emphasises the importance of reventing the flare-up of prices after the controls are removed.

It is worth noting that Simulation (3) leads to lower unemployment rate during the period when AIB controls are in force than does Simulation (1), even though real GNE growth does not differ between the two simulations. The explanation for this phenomenon lies in the fact that Simulation (3) leads to a lower real wage rate than does Simulation (1) and the labour

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4 This statement excludes the simulations with an unfavourable external environment (Simulations (9) and (10), and the simulation with no AIB controls but strongly restrictive fiscal and monetary policy (Simulation (11)).

force participation rate of males under 25 years of age is specified in CANDIDE 1.2 as a positive function of the real wage rate.

4. Anti-Inflation Controls 100 Per Cent Effective -- No Productivity Loss (Appendix I, Table 4)

As pointed out in the discussion of Simulation (2), there are many reasons to believe that the controls will not be fully effective. The staff of the AIB admits that there were too many exceptions to their guidelines granted in the first year of the program. Nevertheless, they insist that full effectiveness of the controls will be enforced in the second and third years. Column 5 indicates that in such a case inflation would decline even faster -- to 3.3 per cent in 1978 (!), unemployment to 4.4 per cent in 1980, and real growth of GNE grow at 6.6 - 6.7 per cent in 1977 and 1978. The extraordinary success on the price front is due to the fact that the AIB program assumes 2 per cent productivity increase in the calculation of permissible wage increases. CANDIDE, however, estimates that during the period of improving capacity utilization of the economy output per man-hour would increase by 3 to 4 per cent per annum, provided the controls do not cause rigidities and inefficiencies in the economic system (Column 22). The productivity gains in excess of those allowed for in the calculation of wage increases have a further moderating effect on prices. The "too good to be true" price performance of 1978 is followed, however, by an even bigger explosion than in Simulation (2).

5. Anti-Inflation Controls -- Productivity Loss (Appendix I, Table 5-8)

Up to this point we have assumed that the AIB controls will not result in inefficiency and a loss of productivity. This assumption is relaxed in Simulations (5) to (8). Simulation (5) is the counterpart of Simulation 2 in the sense that both assume 75 per cent effectiveness of the anti-inflation controls in 1977 and 1978. Simulation (5) in addition assumes that output per man-hour in the nonagricultural commercial industries will grow by one-half per cent less in each of the three years of the controls than it would in Simulation (2). Also, Simulation (5) assumes that the inefficiencies created by three years of controls cannot be set aright immediately after the controls are removed, but that it will take until 1980 to undo their ill effects on productivity. The result is about one-half per cent more inflation during the period of the controls in Simulation (5) than in Simulation (2) and about 0.8 per cent less unemployment by 1978. After 1980 the course of the economy is very similar in the two simulations.

Simulation (5) assumes a rather mild loss of productivity growth: 0.5 per cent annum in a period when output per man-hour would have grown on the average by 3.6 per cent per annum. In Simulation (6) we doubled the loss to 1.0 per cent. Also we assumed that it would take until 1981 to get rid completely of the misallocations and inefficiencies caused by the controls. The progress in the fight against inflation is now about twice as slow as in Simulation (5) -- the increase in CPI, which in 1978 was 4.6 per cent in Simulation (2) and 5.1 per cent in

Simulation (5) is now 5.6 per cent. Unemployment, on the other hand is now down to 3.8 per cent by 1978. Once again, from 1981 on the three simulations, numbers (2), (5), and (6), describe very similar courses.

We also duplicated the experiments of productivity loss using Simulation (4), when the efficiency of the controls is assumed to be 100 per cent in 1977 and 1978 -- Simulation (7) and (8), (Tables 7 and 8). These simulations essentially confirm the results of Simulations (5) and (6): a half per cent and one per cent loss in productivity growth increases inflation by approximately one half and one per cent respectively. The unemployment rate is, by 1978 about 1.5 per centage points lower with a 0.5 per cent annual productivity loss and almost 3 percentage points lower with a 1.0 per cent annual productivity loss.

6. Weaker External Environment, Less Favourable Terms of Trade (Appendix I, Table 9-10)

All the preceding simulations assumed a reasonably favourable outlook for international economic growth, exports, and international price developments favourable to Canada. In this and the following simulation we changed the assumptions to less foreign trade growth and less favourable terms of trade. The difference between the assumptions of Simulations (1) to (8) and (9) and (10) summarized as follows:

	Simulations Average Growth Per Annum 1975-85	
	1-8	9,10
	(Per cent)	
Real U.S. GNP	4.3	4.1
U.S. GNP deflator	5.5	4.6
Export prices	4.4	4.0
Import prices	4.6	4.3

The changed assumptions lead to the following terms of trade:

	Simulations	
	1-8	9,10
1975	1.086	1.086
1978	1.080	1.077
1982	1.069	1.063
1985	1.063	1.051

The terms of trade deteriorate under both sets of external assumptions, but the deterioration is more pronounced in Simulations (9) and (10).

The slowdown in foreign prices has only a moderate effect on domestic price formation. Comparing Table 9 with its counterpart Table 1, we find that real GNE and the consumer price index in 1985 are only about 2 per cent lower under the slow foreign growth scenario than under the faster growth scenario. The effect on unemployment and the current balance of payments is, however, much more significant. Unemployment in 1985 is 0.5 per cent higher and the current account deficit

deteriorates by $3.4 billion. Most of the latter is due to the deterioration in the terms of trade. These findings are confirmed by comparing the weak foreign environment Simulation (10) with its strong counterpart Simulation (5).

7. "Traditional" Anti-Inflationary Measures (Appendix I, Table 11)

Anti-inflation controls are, for a variety of reasons, unpopular with many economists. Some maintain that faulty fiscal and monetary policies brought us to the current perilous position and we should extricate ourselves by applying stronger fiscal and monetary measures, instead of controls. In Simulation (11) we raised the personal income tax rate from 18 per cent to 21 per cent during the 1976-85 period and slowed the rate of high powered money growth by about one-third (Column 20). Now growth rate of the economy falls substantially below the potential growth rate (Column 1) and unemployment rises to 9.2 per cent by 1985. Even this draconic policy can reduce inflation less in the 1976-80 period than do the solutions which incorporate AIB controls. In the 1981 period the price performance of this simulation is superior to all others but we have to pay for it by an unemployment rate that is frighteningly high: average 8.9 per cent during 1982-85.

8. Summary of Macro-Economic Findings

(a) CANDIDE 1.2M indicates that without any anti-inflationary policy, inflation would slowly decline to about 6 per cent by 1983 and then stabilize at that level. Unemployment would also decline to about 6 per cent.

(b) Where a 3 point increase in the personal income tax and restrictions in the growth of high-powered money by one third are introduced in 1976, and kept in force throughtout the simulation period, inflation declines to 5 per cent but the unemployment rate increases to over 9 per cent.

(c) AIB regulations are, in general, effective in restraining inflation and reducing unemployment, as long as they are in force. After decontrol inflation and unemployment increase. The increase is bigger, the more effective the controls were when in force. However, by 1985 the price level is marginally lower (and unemployment higher) in the simulations with controls than in the reference simulation without anti-inflation measures.

The unemployment-inflation trade-off by sub-periods is summarized in Table 3.

Table 3

Average Unemployment and Inflation Rates of Eleven Simulations by Subperiods

	Years	Average unemployment rate	Average inflation of consumer price index
1. No AIB measures	1976-78	7.2	8.1
	1979-81	6.5	6.7
	1982-85	6.0	6.0
2. AIB controls 75 per cent effective in 2nd and 3rd year	1976-78	6.3	5.6
	1979-81	5.5	7.6
	1982-85	6.4	6.2
3. Wage controls only, no price controls, 75 per cent effective	1976-78	7.0	7.1
	1979-81	6.3	6.0
	1982-85	6.5	5.7
4. AIB controls 100 per cent effective in 2nd and 3rd year	1976-78	6.0	4.8
	1979-81	4.9	8.2
	1982-85	6.5	6.5
5. AIB controls 75 per cent effective in 2nd and 3rd year 0.5 per cent productivity loss per annum	1976-78	5.7	6.3
	1969-81	5.5	8.0
	1982-85	6.4	7.0
6. AIB controls 75 per cent effective in 2nd and 3rd year 1 per cent productivity loss per annum	1976-78	5.1	6.4
	1979-81	5.5	7.7
	1982-85	6.3	6.2
7. AIB controls 100 per cent effective in 2nd and 3rd year 0.5 per cent productivity loss per annum	1976-78	5.5	5.1
	1979-81	5.0	8.1
	1982-85	6.4	6.4
8. AIB controls 100 per cent effective in 2nd and 3rd year 1 per cent productivity loss per annum	1976-78	4.8	5.5
	1979-81	5.0	8.3
	1982-85	6.4	6.4
9. No AIB measures weak foreign environment	1976-78	7.0	8.0
	1979-81	6.4	6.5
	1982-85	6.5	5.8

Table 3 (cont'd)

	Years	Average unemployment rate	Average inflation of consumer price index
10. AIB controls 75 per cent effective in 2nd and 3rd year, 0.5 per cent productivity loss per annum weak foreign environment	1976-78	5.5	5.9
	1979-81	5.4	7.4
	1982-85	7.0	6.0
11. "Traditional" anti-inflation measures; 21 per cent personal income tax, slow high-powered money growth	1976-78	8.1	8.1
	1979-81	8.5	6.3
	1982-85	8.9	5.2

IV. Simulating the Anti-Inflation Controls and Decontrol, 1975-85 -- Some Disaggregated Findings

Section III dealt with the macro-economic consequences of the AIB controls. In this section we shall discuss some findings at a lower level of aggregation. In order to help the study to a managable size, we shall concentrate on the following three simulations:

(1) Simulation (1) -- no AIB controls, no tax changes, no major increase in interest rates,

(2) Simulation (6) -- AIB controls 75 per cent effective in 1977 and 1978, productivity loss 1 per cent per annum;

(3) Simulation (11) -- no AIB controls, personal income tax rate increased, tight monetary policy.

However, when necessary, we shall refer to the other simulations as well. We shall present our results for four selected years (or the three intervening time periods).

(1) 1975 -- the last year before AIB controls,

(2) 1978 -- the last year of controls,

(3) 1981 -- the peak year of inflationary flare-up after de-controls,

(4) 1985 -- the last year of the simulation.

1. Income Distribution

Table 12 indicates that in the absence of AIB regulations (Simulation 1), the share of wages as percentage of gross domestic product would decline between 1975 and 1985. This is not surprising, because 1975 was a recession year and in such years profits are more depressed than wages. In 1985, while still displaying relatively high unemployment (6.0 per cent), is close to "normal" than in 1975. Most industries show a declining wage share in Simulation (1) between 1975 and 1985 -- the exception being construction, trade and services. These industries have historically displayed a strongly growing wage-share (partly due to the gradual reduction of the unincorporated business income of the self-employed) and the results show a further growth in the projection period, though at a declining rate. Also, the specification of CANDIDE 1.2 implies a high (perhaps unduly high) inertia of wage inflation in the construction industry.

A word of explanation may be appropriate regarding the seemingly very low wage share in Mining, Quarrying and Oil Wells and Finance Insurance of Real Estate. In the case of Mining the Gross Domestic Product of the industry rises sharply as energy prices increase to world prices. However, it would be a mistake to expect that the decline in the wage share implies automatically an increasing share of the after-tax profits. Indeed, Table 13 Simulation (1) indicates that corporation profits after taxes take about the same percentage of Gross

Domestic Product in 1985 as in 1975 -- the reduction of the wage share has been "skimmed off" at the various levels of government in the form of higher taxes. In the case of Finance, Insurance and Real Estate we must keep in mind that this industry includes owner-occupied housing. This latter component yields an imputed unincorporated income but has no wage bill.

Turning now to the simulation which tries to combat inflation by higher personal income tax and tighter monetary policy(Table 12, Simulation (11)), we find that slowing down the economy leads in CANDIDE 1.2M to a declining share of wages and an increasing share of after-tax profits when foreign trade prices remain unchanged. The increased unemployment rate of Simulation (11) as compared to Simulation (1) acts as a damper on wages. Prices, on the other hand, are in a number of industries, strongly influenced by international prices, which are essentially exogenous in the model. In consequence, the prices (and revenues) of these industries are "stickier" than their wages and profit margins increase when unemployment reduces wages (Table 13, Simulation (11)). This effect is particularly pronounced in the case of manufacturing. The opposite phenomenon can be observed in Finance, Insurance and Real Estate: high interest rates of tight money restrict owner-occupied housing (which has no wage-component)

relative to other branches of the industry, and thus increase the wage share.

As mentioned in the section dealing with the macro-economic consequences of AIB regulations, restricting the profit-margin by controls is equivalent to raising the share of wages in the Gross Domestic Product. In Table 12 Simulation (6) we find that in the last year of controls the wage-share in the total economy is 63.6 per cent as against 62.2 per cent without controls (Simulation (1)). The increase is particularly pronounced in manufacturing. Simulation (6) settles back to the levels of Simulation (1) by the time the after-effects of de-control have worked themselves through the system; however, the dynamic adjustment path varies from industry to industry.

2. Real Wages

Table 14 gives details about the growth of real wages per hour. As the AIB regulations imply a narrowing of markup over unit labour cost, we should expect that, other things being equal, real wages should grow faster under AIB controls during 1976-78 than without controls. However, in Simulation (6) other things are emphatically not equal -- in particular there is a one per cent per annum productivity loss assumed when the AIB controls are in force. This productivity loss is big enough to more than counterbalance the real wage gain due to

the AIB controls. Thus the increase in real wages per hour is marginally lower in Simulation (6) than in Simulation (1) where an absence of AIB controls is modeled. In Table 15 we investigate two counterparts of Simulation (6), namely Simulations (2) and (5). All three simulations assume AIB controls with 75 per cent effectiveness in 1977 and 1978, but while simulation (6) assumes an annual productivity loss of one per cent, Simulation (2) assumes no loss and Simulation (5) assumes half a per cent loss per annum. In Table 15 we find real wages per hour growing faster in the 1976-78 period than with no AIB regulations (Table 14, Simulation (1)). Thus, the gain in real wages under AIB controls depends crucially on the size of the loss of productivity caused by inefficiencies, rigidities, misallocations of resources, etc. The potential gain is as big as 1 per cent to 1.5 per cent in manufacturing and the service industries. In constrast to these gaining industries, the cutbacks in wage inflation in construction and trade are so drastic that the growth in real wages is reduced even when there is no productivity loss. Thus, while in 1976-78 wage earners in the country as a whole would gain by AIB controls provided there is no productivity loss, according to our model employees of the contruction and trade industries would loose compared to the "no AIB" case. After decontrol the situation is reversed: the bigger the gain relative to

the no AIB case during the 1976-78 period, the bigger the loss in 1979-81.[5] Fighting inflation with fiscal and monetary weapons (Table 14 Simulation 11)) leads to lower wage increase than in Simulation (1) except in the case of mining and trade.

3. Prices

The effect of the specification of wage-inflation in construction -- which as mentioned above, displays a high degree of inertia -- shows up in the investigation of disaggregated prices. In Table 16 we find that in the absence of AIB controls the rise in the deflators of both Consumer Expenditures and of Business Gross Fixed Capital Formation would gradually subside at the same pace (Simulation (1) row (3)). When applying fiscal and monetary brakes (Simulation (11)) the inflation of consumer goods is mitigated more than that of investment, because the brakes act least effectively on construction prices. With AIB controls (Simulation (6)), the growth of both deflators are lowered in 1976-78 compared to no controls, and approximately at the same rate. After decontrol (1979-81) the consumer deflator inflation accelerates more than that of the deflator of capital formation, because the stickiness in construction inflation helps to moderate the latter; in the 1982-85 period the moderation in the consumer deflator inflation is stronger than of that of the investment deflator, for the same reason of inflation-inertia in construction.

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5 Once again, construction is an exception. The big inertia of wage-inflation built into the specification keeps its growth relatively low after decontrol.

Comparing the inflation in the price of Gross Domestic Product with that of imports (Table 17) we find that the former consistently outruns the latter. This is not surprising, as Gross Domestic Product contains many goods and services which are not subject to international competition. Tax increase and monetary restraint (Simulation (11)) improves, in the long run, Canadian price competitiveness, as compared with the "no AIB, no tax change", Simulation (1). AIB controls improve our international competitiveness during the 1976-78 period (Simulation (6); however the three-year period of controls is not sufficient to lead to significant substitution of domestic products for imports.

4. Composition of Employment and Output

Table 18 projects the composition of employment and output by industry to 1985. Simulation (1) indicates that the projection continues many of the trends observed during the last twenty years: a leveling out of the share of manufacturing and mining output, a declining share of the employment of the same industries, and a growing share of employment in the service industries. As the productivity growth in services is lower than that in manufacturing and mining, or, as in the case of public administration is assumed to be zero, it follows that productivity gains are projected to level off in the 1975-85 decade.

The high income tax, tight monetary policy scenario of Simulation (11) squeezes the industries with slow productivity growth more than it does the ones with high productivity growth. Evidently, the income elasticity of demand for service industries is higher than that of manufacturing and of mining. Also, the restrictive policy lowers prices and leads to some substitution of domestic output for imports. Construction, on the other hand, looses its share of output and of employment relative to Simulation (1) because slower growth leads to lower investment activity, and also, higher interest rates contribute to lower construction activity and employment. Overall productivity growth is lower in Simulation (11) compared to Simulation (1); and even though the scenario of Simulation (11) is relatively more favourable to industries with higher productivity growth, this change in mix is not sufficient to counteract the productivity-depressing effect of high taxes and high interest rates.

Simulation (6) indicates that AIB controls have a relatively small effect on the composition of output and employment. There is some gain in the share of manufacturing and construction compared to Simulation (1). This gain is more pronounced in Simulations (2) and (5), which assume no loss or less loss in productivity-growth than does Simulation (6) (Simulations (2) and (5) are not presented in Table 18.) The chief loser is the service industry. Gains (or losses) disappear during the years of decontrol and by 1985 the composition of output and employment is very similar to that of Simulation (1).

5. Government Surplus or Deficit

Table 19 deals with the Government Revenues, Expenditures and Surplus (or Deficit) by level of government. This table demonstrates that fiscal and monetary restraint substantially improves the government budgetary position by 1985. The bulk of the improvement occurs on the nonfederal level. Federal revenues and expenditures are reduced in Simulation (11) compared to Simulation (1) by similar amounts. In the case of nonfederal governments the reduction of expenditures ($15 billion) is much bigger than that of revenues ($7 billion). A substantial part of nonfederal government revenues is derived from sales taxes, which in turn are strongly influenced by commodity prices. The bulk of nonfederal expenditures are wages and salaries. Policies leading to wage restraint tend, in the long run to improve the nonfederal government position. Simulation (11) also leads to an increased surplus for the government pension funds: in particular the high interest income caused by the tight money and high interest rate policy of Simulation (11) yields about an additional billion dollar revenue to the pension plans by 1985. This is only partly offset by reduced contributions caused by slower growth and higher unemployment.

In the case of AIB controls much depends on the severity of productivity loss. In the absence of productivity loss (Simulation 12), not included in Table 19), both federal and nonfederal governments improve their budget position

compared to Simulation (1) by 500-600 million dollars in 1978. This improvement is due to a decline in expenditures which is even bigger than the decline in revenues. If we assume a loss of productivity in the nonagricultural, nonadministrative industries (Simulation (6)), the additional employment generated by the productivity loss leads to bigger payrolls and higher income tax revenues. The chief beneficiary of these income tax revenues is the federal government. After decontrol prices shoot up faster than wages, this swells the sales tax revenue, of which the nonfederal governments are the chief beneficiary.

APPENDIX I: TABLES

Table 1

No Anti-Inflation Measures, No Tax Changes -- 18 Per Cent Throughout

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.2	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.366	58,052	5.7
1976	5.1	15.2	7.2	9.6	9.2	12.2	13,724.0	215.00	6,383.3	1.422	59,947	3.3
1977	4.9	14.1	7.2	8.8	7.8	11.8	15,510.1	237.05	6,542.9	2.500	62,625	4.5
1978	4.6	12.9	7.1	7.9	7.4	10.9	16,994.0	260.00	6,536.2	2.103	65,242	4.2
1979	5.2	13.1	6.9	7.5	6.9	10.6	19,057.0	282.45	6,747.0	3.225	68,306	4.7
1980	5.3	12.6	6.4	6.9	6.4	10.4	21,227.0	304.35	6,974.5	3.371	71,692	5.0
1981	4.5	12.4	6.2	7.6	6.7	10.0	24,908.0	329.25	7,565.1	8.467	74,689	4.2
1982	3.9	11.1	6.2	7.0	6.3	9.8	28,212.0	354.30	7,962.7	5.255	77,712	4.0
1983	3.9	10.9	5.9	6.7	5.9	9.6	31,819.0	379.45	8,385.6	5.311	80,927	4.1
1984	3.5	10.3	5.9	6.5	5.9	9.4	35,219.0	404.70	8,702.5	3.779	84,092	3.9
1985	3.2	10.0	6.0	6.5	5.9	9.1	39,295.0	433.05	9,074.0	4.268	87,043	3.5
1985 Level	121,533.0	488,187.3	741.19	401.7	358.9	13.6						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.1	-2.3	13.8	15.1	72.1	3.4	3.4	8.3	10.2	3.9
1977	-0.2	-1.3	13.8	15.5	71.5	4.6	3.9	13.7	10.3	3.0
1978	0.2	-1.4	14.5	15.4	71.3	4.5	5.6	12.7	10.3	2.8
1979	0.7	-1.3	15.3	15.5	71.1	5.0	6.2	11.6	10.3	3.1
1980	0.9	-1.2	16.0	15.2	71.2	4.8	5.8	11.8	10.3	3.1
1981	1.0	-0.8	16.6	15.6	70.9	4.8	4.3	11.3	10.5	2.7
1982	0.5	-0.7	16.7	15.5	70.9	3.8	3.7	11.2	10.6	2.5
1983	0.3	-0.9	17.2	15.5	71.1	4.1	4.4	10.1	10.7	2.5
1984	0.0	-1.0	17.5	15.4	71.4	3.9	4.3	9.8	10.8	2.4
1985	-0.3	-0.6	17.3	15.5	71.4	3.3	2.9	9.2	10.9	2.3
1985 Level	-1,437.8	-2,921.7				3.1034	2.8929	27,357.3		

Table 2

Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,052.2	192.35	6,265.8	-12.756	58,052	5.7
1976	6.0	14.0	6.9	7.5	7.3	11.4	12,373.3	210.50	5,878.1	- 6.188	60,980	5.0
1977	6.1	12.1	6.4	5.7	5.0	9.4	12,696.8	224.55	5,654.3	- 3.808	64,470	5.7
1978	6.0	10.9	5.6	4.7	4.6	7.7	13,127.1	237.95	5,516.7	- 2.434	67,496	4.7
1979	5.1	12.3	5.2	6.8	6.7	8.0	16,647.0	255.80	6,507.8	17.965	69,252	2.6
1980	3.9	13.0	5.3	8.8	8.4	10.3	21,519.0	279.00	7,712.9	18.517	70,791	2.2
1981	3.2	12.0	5.9	8.5	7.7	11.0	25,215.0	304.30	8,286.2	7.433	73,504	3.8
1982	2.4	10.4	6.4	7.8	7.1	10.5	28,303.0	321.85	8,793.8	6.125	75,942	3.3
1983	3.3	10.5	6.4	7.0	6.2	9.9	31,456.0	355.00	8,860.8	.761	78,939	3.9
1984	3.6	10.3	6.4	6.5	5.8	9.5	34,293.0	379.50	9,036.4	1.981	82,172	4.7
1985	3.4	10.0	6.5	6.5	5.8	9.0	37,737.0	406.35	9,286.8	2.771	85,197	3.7
1985 Level	119,820.9	458,039.4	794.59	382.3	346.7	12.7						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.2	-2.6	13.8	13.9	72.9	3.4	3.2	8.3	9.7	4.2
1977	-0.1	-1.9	14.0	13.6	72.8	4.6	3.9	12.6	9.4	3.3
1978	.7	-2.2	14.9	13.4	72.7	4.5	5.8	10.9	9.0	3.2
1979	1.6	-1.8	15.9	15.0	71.4	5.0	6.5	9.8	9.3	3.0
1980	1.5	-1.1	16.4	16.4	70.3	4.8	6.1	11.1	10.1	2.6
1981	.9	-0.3	16.6	16.5	70.1	4.8	4.3	11.7	10.5	2.3
1982	-0.1	0.2	16.4	16.2	70.3	3.8	3.6	10.8	10.6	2.1
1983	0.0	0.0	16.7	16.0	70.4	4.1	4.2	9.4	10.6	2.4
1984	-0.3	-0.3	16.9	15.9	70.7	3.9	4.1	9.5	10.7	2.5
1985	-0.0	0.0	16.8	16.1	70.7	3.3	2.8	9.3	10.8	2.4
1985 Level	-2,398.2	-127.9				3.1044	2.899	25,804.8		

1 Effectiveness of controls -- 1976 0.50
1977 0.75
1978 0.75
1979 0.375

Table 3

*Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.5	192.35	6,294.0	-12.365	58,052	5.7
1976	5.1	14.7	7.2	9.1	8.8	11.3	13,695.3	213.65	6,410.2	1.846	59,915	3.2
1977	4.9	12.7	7.0	7.5	6.7	9.6	15,546.2	232.00	6,700.9	4.535	62,295	4.0
1978	4.6	10.9	6.8	6.0	5.9	7.8	17,138.0	249.30	6,874.4	2.589	64,388	3.4
1979	5.1	11.5	6.5	6.1	5.9	8.6	19,258.0	266.20	7,234.4	5.237	66,933	4.0
1980	5.0	11.5	6.2	6.2	5.9	9.4	21,410.0	283.75	7,545.4	4.299	69,908	4.4
1981	4.0	11.4	6.3	7.1	6.3	9.3	23,870.0	305.05	8,152.8	8.050	72,497	3.7
1982	3.4	10.2	6.5	6.6	6.0	9.2	27,871.0	326.65	8,532.4	4.656	75,128	3.6
1983	3.6	10.0	6.3	6.2	5.6	9.0	31,199.0	348.55	8,951.1	4.907	77,965	3.8
1984	3.4	9.5	6.4	6.0	5.5	8.8	34,376.0	370.20	9,285.8	3.739	88,844	3.7
1985	3.1	9.4	6.6	6.0	5.5	8.5	38,293.0	394.30	9,711.6	4.585	83,571	3.4
1985 Level	119,232	442,989	808.8	372	338.	12.2						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.1	-2.3	13.8	15.2	72.0	3.4	3.4	8.3	10.1	3.9
1977	-0.3	-1.3	13.8	15.8	71.0	4.6	3.9	13.2	9.9	3.0
1978	0.2	-1.3	14.5	16.1	70.2	4.5	5.7	11.4	9.6	2.8
1979	0.8	-1.1	15.5	16.5	69.8	5.0	6.3	9.8	9.5	3.1
1980	1.0	-0.9	16.2	16.4	69.9	4.8	5.9	10.4	9.6	3.0
1981	1.0	-0.3	16.7	16.8	69.5	4.8	4.4	10.4	9.9	2.6
1982	0.5	0.1	16.7	16.7	69.5	3.8	3.7	10.2	10.0	2.4
1983	0.2	-0.1	17.1	16.7	69.6	4.1	4.4	9.2	10.1	2.5
1984	-0.2	-0.1	17.4	16.6	69.9	3.9	3.9	9.0	10.2	2.4
1985	-0.5	0.3	17.1	16.8	69.8	3.3	2.9	8.6	10.3	2.3
1985 Level	-2,011	1,114.1				3,1047	2.9065	25,175		

*PSWTCH = 0

1 Effectiveness of controls -- 1976 0.5
1977 0.75
1978 0.75
1979 0.375

Note: Wage controls but no price controls.

Table 4

Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,052	5.7
1976	6.0	14.0	6.9	7.5	7.3	11.3	12,373.3	210.50	5,878.1	- 6.605	60,980	5.0
1977	6.6	11.3	6.1	4.4	3.8	8.8	11,803.6	221.65	5,325.3	- 9.404	65,110	6.8
1978	6.7	10.2	5.1	3.3	3.3	7.1	11,179.6	231.55	4,828.2	- 9.335	68,896	5.8
1979	5.4	12.3	4.4	6.6	6.5	7.4	14,987.0	248.20	6,038.3	25,063	70,449	2.3
1980	3.3	13.9	4.8	10.3	9.8	10.4	21,591.0	273.70	7,888.6	30.643	70,975	0.7
1981	2.7	12.2	5.6	9.2	8.4	11.9	25,306.0	300.50	8,421.3	6.753	73,797	4.0
1982	1.8	10.4	6.5	8.4	7.7	11.1	28,412.0	327.55	8,674.1	3.002	76,037	3.0
1983	3.1	10.6	6.5	7.3	6.5	10.3	31,491.0	353.95	8,897.0	- 8.033	79,031	3.9
1984	3.7	10.6	6.5	6.7	5.9	9.8	34,206.0	379.40	9,015.8	1.335	82,418	4.3
1985	3.5	10.3	6.5	6.6	5.8	9.2	37,420.0	407.00	9,194.1	1.978	85,583	3.8
1985 Level	119,820	459,170	795.75	383.	348.	12.8						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.2	-2.6	13.8	13.9	72.9	3.4	3.2	8.3	9.7	4.2
1977	-0.2	-2.1	14.0	12.9	73.3	4.6	3.9	12.6	9.1	3.6
1978	0.9	-2.6	15.0	12.0	73.7	4.5	5.8	10.2	8.5	3.5
1979	2.0	-2.2	16.1	14.1	72.1	5.0	6.7	9.2	9.0	3.0
1980	1.9	-1.2	16.7	16.6	70.3	4.8	6.3	11.1	10.2	2.3
1981	0.9	-0.3	16.6	16.5	70.2	4.8	4.2	12.5	10.7	2.2
1982	-0.4	0.4	16.3	16.1	70.4	3.8	3.6	11.0	10.8	1.8
1983	-0.7	0.2	16.5	15.8	70.6	4.1	4.2	9.3	10.8	2.3
1984	-0.6	-0.2	16.7	15.7	70.9	3.9	4.0	9.6	10.9	2.5
1985	-0.6	-0.0	16.6	15.9	70.8	3.3	2.8	9.6	10.9	2.4
1985 Level	-2,829	-210				3.1045	2.8982	25,805		

1 Effectiveness of controls -- 1976 0.5
1977 1.0
1978 1.0
1979 0.5

Table 5

Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout. Productivity Loss During Controls 0.5 Per Cent Per Annum

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,052	5.7
1976	5.9	14.1	6.6	7.7	7.5	11.1	12,367.0	211.10	5,858.4	- 6.918	60,848	4.8
1977	5.8	12.3	5.8	6.1	5.4	9.4	12,621.2	226.05	5,583.4	- 4.694	64,173	5.5
1978	5.6	11.0	4.8	5.2	5.1	7.7	12,937.5	240.60	5,389.3	- 3.476	67,024	4.4
1979	5.0	12.3	5.0	7.0	6.8	8.7	16,360.0	258.75	6,322.7	17.320	68,980	2.9
1980	4.1	13.1	5.6	8.7	8.3	10.9	21,240.0	281.80	7,537.3	19.210	70,837	2.7
1981	3.5	12.2	5.9	8.4	7.6	11.0	25,009.0	307.00	8,146.3	8.080	73,662	4.0
1982	2.6	10.6	6.4	7.8	7.0	10.5	28,193.0	332.45	8,480.4	4.101	76,181	3.4
1983	3.5	10.6	6.3	7.0	6.1	9.9	31,442.0	357.60	8,792.5	3.680	79,247	4.0
1984	3.6	10.4	6.3	6.5	5.8	9.5	34,337.0	382.20	8,984.0	2.178	82,511	4.1
1985	3.4	10.1	6.4	6.5	5.8	9.0	37,795.0	409.15	9,237.4	2.821	85,546	3.7
1985 Level	119,996	462,647	783.77	386	350	12.9						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.0	-2.6	13.8	13.9	73.0	3.4	3.3	8.3	9.8	3.7
1977	0.1	-1.9	14.0	13.5	73.0	4.6	4.0	12.7	9.5	2.7
1978	1.0	-2.1	14.8	13.1	73.0	4.5	5.8	11.0	9.2	2.6
1979	1.5	-1.7	15.8	14.7	71.7	5.0	6.5	9.9	9.5	3.5
1980	1.3	-1.0	16.3	16.1	70.6	4.8	6.0	11.1	10.1	3.4
1981	0.8	-0.4	16.5	16.2	70.4	4.8	4.2	11.8	10.5	2.5
1982	-0.1	0.1	16.4	16.0	70.5	3.8	3.6	11.0	10.6	2.2
1983	-0.4	-0.1	16.7	15.8	70.7	4.1	4.2	9.5	10.7	2.5
1984	-0.5	-0.4	16.9	15.7	70.9	3.9	4.1	9.6	10.7	2.5
1985	-0.6	-0.2	16.8	15.9	70.9	3.3	2.8	9.3	10.8	2.4
1985 Level	-2,614	-718				3.1042	2.8973	26,034.5		

1 Effectiveness of controls -- 1976 0.5
1977 0.75
1978 0.75
1979 0.375

Table 6

Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout. Productivity Loss During Controls 1.0 Per Cent Per Annum

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,052	5.7
1976	5.8	14.3	6.2	8.0	7.8	11.0	12,360.6	211.65	5,840.1	- 7.209	60,717	4.6
1977	5.5	12.4	5.2	6.5	5.8	9.4	12,541.4	227.55	5,511.5	- 5.627	63,872	5.2
1978	5.3	11.2	3.8	5.6	5.6	7.8	12,748.2	243.40	5,237.6	- 4.970	66,496	4.1
1979	4.7	12.4	5.0	7.4	7.2	9.8	16,039.0	262.25	6,115.9	16.769	68,738	3.4
1980	4.3	13.6	5.4	8.9	8.5	11.3	20,891.0	286.20	7,299.4	19.351	70,725	2.9
1981	3.7	12.4	6.2	8.4	7.5	11.8	24,627.0	311.60	7,903.4	8.275	73,894	4.5
1982	3.0	10.9	6.4	7.7	6.9	10.6	27,935.0	337.25	8,283.2	4.806	76,596	3.7
1983	3.6	10.9	6.2	7.0	6.1	10.0	31,326.0	362.65	8,638.1	4.285	79,757	4.1
1984	3.8	10.5	6.2	6.5	5.8	9.6	34,337.0	387.45	8,862.3	2.595	83,135	4.2
1985	3.4	10.2	6.2	6.5	5.8	9.1	37,881.0	414.80	9,132.4	3.048	86,203	3.7
1985 Level	120,324	471,159	766.24	392.	355.	13.2						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-0.8	-2.7	13.8	13.9	73.0	3.4	3.3	8.3	9.8	3.3
1977	0.3	-1.9	14.0	13.3	73.2	4.6	4.0	12.8	9.6	2.2
1978	1.4	-2.1	14.8	12.9	73.3	4.5	5.8	11.1	9.3	1.9
1979	1.4	-1.5	15.7	14.4	72.1	5.0	6.5	10.1	9.6	3.9
1980	1.3	-1.0	16.2	15.7	71.0	4.8	5.8	11.2	10.3	3.5
1981	0.6	-0.4	16.4	15.8	70.8	4.8	4.2	12.2	10.6	3.2
1982	-0.2	-0.1	16.3	15.6	70.9	3.8	3.6	11.1	10.7	2.4
1983	-0.4	-0.3	16.7	15.5	71.0	4.1	4.2	9.8	10.8	2.6
1984	-0.5	-0.6	16.9	15.4	71.3	3.9	4.1	9.8	10.8	2.6
1985	-0.6	-0.4	16.8	15.6	71.3	3.3	2.8	9.5	10.9	2.4
1985 Level	-2,842	-1,784				3,1038	2.8926	26,448.3		

1 Effectiveness of controls -- 1976 0.5
1977 0.75
1978 0.75
1979 0.375

Table 7

Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout. Productivity Loss During Controls 0.5 Per Cent Per Annum

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,052	5.7
1976	5.9	14.1	6.6	7.7	7.5	11.2	12,367.0	211.10	5,858.4	- 6.918	60,848	4.8
1977	6.4	11.5	5.6	4.8	4.2	8.8	11,724.4	223.10	5,255.2	-10.296	64,810	6.5
1978	6.4	10.3	4.3	3.6	3.7	7.1	10,969.0	233.95	4,688.6	-10.782	68,420	5.6
1979	5.2	12.2	4.3	6.6	6.5	8.0	14,694.0	250.70	5,861.2	25.010	70,149	2.5
1980	3.5	14.0	5.1	10.1	9.7	11.1	21,329.0	276.00	7,727.9	31.848	70,967	1.2
1981	3.1	12.4	5.7	9.0	8.2	11.9	25,117.0	302.65	8,299.0	7.390	73,894	4.1
1982	2.0	10.5	6.4	8.4	7.6	11.1	28,312.0	329.65	8,588.5	3.488	76,202	3.1
1983	3.2	10.7	6.4	7.3	6.4	10.3	31,478.0	355.95	8,843.4	2.968	79,255	4.0
1984	3.7	10.7	6.4	6.7	5.9	9.8	34,243.0	381.40	8,978.2	1.524	82,667	4.3
1985	3.5	10.3	6.4	6.6	5.8	9.2	37,462.0	409.05	9,158.3	2.006	85,836	3.8
1985 Level	119,934	462,768	788.	386.	350.	12.9						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.0	-2.6	13.8	13.9	73.0	3.4	3.3	8.3	9.8	3.7
1977	0.1	-2.1	14.0	12.7	73.5	4.6	3.9	12.7	9.2	3.0
1978	1.1	-2.6	15.0	11.8	74.0	4.5	5.8	10.3	8.7	2.9
1979	1.9	-2.1	16.0	13.9	72.4	5.0	6.6	9.3	9.1	3.5
1980	1.7	-1.1	16.6	16.4	70.5	4.8	6.1	11.0	10.2	3.1
1981	0.9	-0.3	16.6	16.3	70.4	4.8	4.1	12.6	10.7	2.4
1982	-0.4	0.3	16.3	15.9	70.6	3.8	3.6	11.1	10.8	1.9
1983	-0.7	0.1	16.5	15.7	70.8	4.1	4.2	9.4	10.9	2.4
1984	-0.7	-0.3	16.7	15.6	71.1	3.9	4.0	9.6	10.9	2.6
1985	-0.7	-0.1	16.6	15.7	71.0	3.3	2.8	9.6	11.0	2.5
1985 Level	-3,027	-690				3.1042	2.8960	25,985.9		

1 Effectiveness of controls -- 1976 0.5
1977 1.0
1978 1.0
1979 0.5

Table 8

Anti-Inflation Measures,[1] No Tax Changes -- 18 Per Cent Throughout. Productivity Loss During Controls, 1.0 Per Cent Per Annum

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,052	5.7
1976	5.8	14.3	6.2	8.0	7.8	11.0	12,360.6	211.65	5,840.1	- 7,209	60,717	4.6
1977	6.1	11.6	4.9	5.2	4.6	8.8	11,638.7	224.50	5,184.3	-11.229	64,509	6.2
1978	6.1	10.4	3.3	4.0	4.1	7.1	10,757.2	236.45	4,549.5	-12.245	67,887	5.2
1979	5.0	12.2	4.2	6.9	6.8	8.8	14,384.0	253.60	5,671.9	24.671	69,856	2.9
1980	3.8	14.4	4.8	10.3	9.9	11.4	21,010.0	279.70	7,511.6	32.435	70,771	1.3
1981	3.2	12.5	5.9	9.0	8.2	12.7	24,756.0	306.40	8,079.6	7.562	74,034	4.6
1982	2.3	10.8	6.5	8.2	7.5	11.1	28,061.0	333.50	8,414.1	4.140	76,502	3.3
1983	3.4	10.9	6.4	7.3	6.4	10.3	31,351.0	359.95	8,709.8	3.514	79,632	4.1
1984	3.9	10.8	6.3	6.7	5.9	9.8	34,217.0	385.50	8,876.0	1.908	83,147	4.4
1985	3.5	10.4	6.3	6.6	5.9	9.3	37,510.0	413.40	9,073.5	2.225	86,342	3.8
1985 Level	120,160	469,488	773.	391.	355.	13.2						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-0.8	-2.7	13.8	13.9	73.0	3.4	3.3	8.3	9.8	3.3
1977	0.3	-2.1	14.0	12.6	73.7	4.6	3.9	12.8	9.3	2.4
1978	1.5	-2.5	14.9	11.6	74.3	4.5	5.8	10.5	8.8	2.2
1979	1.8	-1.9	15.9	13.6	72.8	5.0	6.6	9.3	9.2	3.9
1980	1.8	-1.0	16.4	16.1	70.9	4.8	6.0	11.0	10.3	3.2
1981	0.6	-0.4	16.5	15.9	70.8	4.8	4.1	13.0	10.8	3.1
1982	-0.4	0.2	16.2	15.6	71.0	3.8	3.6	11.3	10.9	2.1
1983	-0.8	-0.1	16.5	15.4	71.1	4.1	4.2	9.7	10.9	2.5
1984	-0.7	-0.5	16.7	15.3	71.4	3.9	4.0	9.8	10.9	2.6
1985	-0.7	-0.3	16.6	15.5	71.3	3.3	2.8	9.7	11.0	2.5
1985 Level	-3,244.	-1,581.				3.1039	2.8919	26,312.		

1 Effectiveness of controls -- 1976 0.5
1977 1.0
1978 1.0
1979 0.5

Table 9

No AIB, Weaker External Environment, Lower Foreign Prices for Goods

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,082	5.7
1976	5.4	15.4	7.1	9.6	9.2	12.2	13,750.4	214.90	6,398.5	1.664	60,045	3.4
1977	5.2	14.3	7.0	8.6	7.6	11.9	15,455.8	236.65	6,531.1	2.072	62,927	4.8
1978	4.8	13.0	6.8	7.8	7.1	10.9	16,856.0	259.10	6,505.6	- .390	65,698	4.4
1979	5.4	13.0	6.5	7.2	6.6	10.5	18,670.0	280.55	6,654.8	2.293	68,938	4.9
1980	4.6	11.9	6.3	6.9	6.3	10.1	20,422.0	301.20	6,780.2	1.884	72,100	4.6
1981	3.8	11.6	6.4	7.5	6.5	9.7	23,705.0	324.85	7,297.2	7.625	74,861	3.8
1982	3.5	10.6	6.5	6.8	6.1	9.4	26,870.0	348.85	7,702.5	5.554	77,636	3.7
1983	3.6	10.3	6.3	6.4	5.7	9.2	30,286.0	373.05	8,118.5	5.401	80,609	3.8
1984	3.2	9.6	6.5	6.2	5.6	8.9	33,489.0	396.95	8,436.6	3.918	83,497	3.6
1985	2.8	9.3	6.8	6.2	5.7	8.5	37,415.0	423.90	8,826.4	4.620	86,088	3.1
1985 Level	119,387	471,646	840.63	395.	352.	133						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-1.0	-2.2	13.8	15.1	72.1	3.3	3.3	8.3	10.2	4.0
1977	-0.1	-1.2	13.9	15.4	71.6	3.9	3.4	13.9	10.3	3.1
1978	0.3	-1.3	14.6	15.3	71.5	4.0	5.1	12.8	10.3	2.9
1979	0.8	-1.3	15.4	15.2	71.4	4.1	5.2	11.7	10.3	3.1
1980	0.7	-1.4	16.1	14.8	71.7	3.9	4.7	11.7	10.2	2.8
1981	0.5	-1.3	16.5	15.2	71.4	4.5	3.6	10.7	10.4	2.4
1982	0.0	-1.2	16.6	15.2	71.3	3.7	3.7	10.4	10.4	2.4
1983	-0.3	-1.5	17.0	15.2	71.5	3.9	4.4	9.5	10.5	2.5
1984	-0.8	-1.6	17.3	15.1	71.8	3.6	4.2	9.3	10.5	2.3
1985	-1.2	-1.3	17.0	15.4	71.7	3.0	2.9	8.7	10.6	2.3
1985 Level	-5,632	-6,278				2.9784	2.7910	26,671.3		

Table 10

AIB Controls,[1] Weaker External Environment, Lower Foreign Goods Prices. Productivity Loss During 0.5 Per Cent Per Annum.

	(1) Real GNE % Change	(2) Current $ GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35'	6,293.8	-12.367	58,052	5.7
1976	6.2	14.3	6.4	7.7	7.5	11.2	12,394.9	211.00	5,874.4	- 6.664	60,945	5.0
1977	6.1	12.4	5.5	6.0	5.2	9.5	12,612.9	225.65	5,589.6	- 4.848	64,445	5.7
1978	5.8	11.1	4.5	5.0	4.9	7.7	12,894.8	239.90	5,375.1	- 3.837	67,422	4.6
1979	5.1	12.1	4.7	6.7	6.5	8.7	16,056.0	257.20	6,242.6	16.139	69,544	3.1
1980	3.5	12.4	5.5	8.6	8.2	10.7	20,390.0	279.10	7,305.6	17.028	71,222	2.4
1981	2.8	11.4	6.1	8.3	7.4	10.7	23,772.0	303.05	7,844.3	7.374	73,806	3.6
1982	2.3	10.0	6.8	7.6	6.9	10.1	26,827.0	327.60	8,188.9	4.393	76,088	3.1
1983	3.2	10.1	6.8	6.7	6.0	9.6	29,895.0	351.90	8,495.3	3.742	78,927	3.7
1984	3.3	9.7	7.0	6.3	5.6	9.1	32,607.0	375.30	6,688.2	2.271	81,924	3.8
1985	3.0	9.4	7.2	6.2	5.5	8.5	35,935.0	401.05	8,960.2	3.131	84,607	3.3
1985 Level	117,838	447,196	885.38	380.	343.4	12.7						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages, Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	-0.9	-2.6	13.8	13.9	73.0	3.3	3.2	8.3	9.8	3.9
1977	0.2	-1.8	14.0	13.4	73.1	3.9	3.5	12.9	9.5	2.9
1978	1.1	-2.0	14.9	13.1	73.1	4.0	5.2	11.2	9.1	2.6
1979	1.6	-1.7	15.9	14.5	72.0	4.1	5.5	10.0	9.4	3.5
1980	1.1	-1.2	16.3	15.7	71.1	3.9	4.9	10.9	10.0	3.0
1981	0.3	-0.8	16.4	15.8	70.9	4.5	3.5	11.2	10.4	2.2
1982	-0.7	-0.5	16.2	15.6	71.0	3.7	3.7	10.2	10.4	2.1
1983	-1.1	-0.8	16.5	15.5	71.1	3.9	4.3	9.0	10.5	2.4
1984	-1.3	-1.1	16.7	15.4	71.4	3.6	4.1	9.1	10.5	2.4
1985	-1.5	-0.9	16.6	15.7	71.3	3.0	2.8	8.7	10.5	2.3
1985 Level	-6,713	-4,172				2.9791	2.7954			

1 Effectiveness of controls -- 1976 0.50
1977 0.75
1978 0.75
1979 0.375

Table 11

No AIB Controls, Personal Income Tax Rate 21 Per Cent, Tight Monetary Policy

	(1) Real GNE % Change	(2) Current GNE % Change	(3) Unemployment Rate	(4) GNP Deflator % Change	(5) Consumer Price Index % Change	(6) Total Wages Per Hour % Change	(7) Corporate Profits After Taxes	(8) Profits Deflator	(9) "Real" After Tax Profits	(10) "Real" After Tax Profits % Change	(11) Real Disposable Income	(12) Real Disposable Income % Change
1975	-0.1	9.3	7.1	9.3	9.4	13.5	12,106.2	192.35	6,293.8	-12.367	58,052	5.7
1976	3.5	13.9	7.8	10.0	9.5	12.0	13,568.2	215.35	6,300.5	.106	57,437	-1.1
1977	4.3	13.2	8.1	8.6	7.6	11.5	15,155.2	237.40	6,383.8	1.319	59,764	4.1
1978	3.6	11.7	8.5	7.8	7.3	10.4	16,387.0	260.50	6,290.6	- 1.460	61,665	3.2
1979	4.2	11.7	8.6	7.2	6.7	9.8	18,095.0	282.75	6,399.6	1.733	63,961	3.7
1980	4.6	11.3	8.5	6.4	6.0	9.4	19,997.0	304.00	6,578.0	2.788	66,650	4.2
1981	3.9	11.2	8.6	7.0	6.1	8.8	23,379.0	327.85	7,131.0	8.407	68,879	3.3
1982	3.3	9.8	8.7	6.3	5.6	8.5	26,419.0	351.40	7,518.2	5.430	71,089	3.2
1983	3.4	9.4	8.6	5.9	5.1	8.1	29,739.0	374.50	7,941.0	5.624	73,419	3.3
1984	3.0	8.7	8.9	5.5	5.0	7.8	32,764.0	396.80	8,257.1	3.981	75,623	3.0
1985	2.7	8.3	9.2	5.5	5.0	7.3	36,320.0	421.70	8,612.8	4.308	77,585	2.6
1985 Level	112,839	432,839	1,110.4	384.	345.	12.7						

	(13) Govt. Surplus as % of GNP	(14) Current Acct. Surplus as % of GNP	(15) Private Nonres. Inv. as % of GNP	(16) Profits as % of Net Nat. Inc.	(17) Wages Salaries and Supplies as % of Net Nat. Inc.	(18) Goods Exports Price % Change	(19) Goods Imports Price % Change	(20) High-Powered Money % Change	(21) Industrial Bond Yield	(22) Output Per Man-Hour
	(All levels)		(Current $)							
1975	-3.2	-3.4	14.4	15.1	73.1	10.8	14.8	16.4	9.8	-0.5
1976	0.3	-1.6	13.7	15.1	72.1	3.4	3.8	5.2	10.4	3.3
1977	1.1	-0.4	13.7	15.4	71.5	4.6	3.8	9.6	10.7	3.0
1978	1.4	-0.1	14.2	15.4	71.2	4.5	5.8	9.2	11.0	2.5
1979	1.8	0.3	15.0	15.5	71.0	5.1	6.3	8.0	11.3	2.9
1980	2.0	0.6	15.6	15.3	70.9	4.8	5.8	8.3	11.6	3.0
1981	2.3	1.0	16.2	15.8	70.3	4.8	4.3	8.1	12.1	2.6
1982	1.9	1.3	16.4	15.9	70.1	3.8	3.7	8.1	12.5	2.4
1983	1.9	1.2	17.0	16.0	70.1	4.1	4.5	7.0	12.9	2.4
1984	1.7	1.2	17.3	16.0	70.2	3.9	4.4	6.8	13.2	2.2
1985	1.5	1.7	17.1	16.3	70.0	3.3	2.9	6.2	13.7	2.2
1985 Level	6,507.	7,559.				3.1051	2.9231	20,200.3		

Table 12

Income Distribution, Selected Industries (Wage bill as percentage of Gross Domestic Product)

	Simulation 1				Simulation 6				Simulation 11			
	1975	1978	1981	1985	1975	1978	1981	1985	1975	1978	1981	1985
Mining, quarries and oil wells	25.0	18.6	17.3	17.4	25.0	18.0	16.4	16.7	25.0	18.9	17.7	17.6
Manufacturing	72.4	70.4	67.6	66.5	72.4	73.3	69.2	67.5	72.4	70.2	66.1	62.2
Construction	75.8	78.0	78.5	79.0	75.8	78.7	78.4	79.0	75.8	78.1	78.4	78.7
Trade	73.1	75.3	77.0	78.7	73.1	76.2	75.9	78.0	73.1	75.3	76.9	78.7
Finance, insruance and real estate	33.0	32.3	31.0	28.9	33.0	32.5	31.3	29.5	33.0	32.5	31.5	29.7
Services	77.3	78.1	78.7	79.3	77.3	80.0	78.7	79.3	77.3	78.1	78.7	79.2
Total Economy (includes industries not detailed above)	63.2	62.2	61.7	61.7	63.2	63.6	61.6	61.7	63.2	62.1	61.1	60.1

Table 13

Corporation Profits After Taxes as Percentage of Gross Domestic Product

	Simulation 1				Simulation 6				Simulation 11			
	1975	1978	1981	1985	1975	1978	1981	1985	1975	1978	1981	1985
A. Corporation profits	19,465	29,629	43,065	64,063	19,465	23,775	41,976	62,133	19,465	28,783	40,890	59,522
B. Corporation profits after taxes	13,426.2	18,861	27,533	43,152	13,426.2	14,293.2	27,198	41,623	13,426.2	18,209	25,882	39,920
C. Corporation profits after taxes as percentage of Gross Domestic Product	9.7	9.1	9.3	9.6	9.7	7.2	9.5	9.6	9.7	9.1	9.3	10.0

Table 14

Average Annual Percentage Change in Wages Per Hour and Real Wages Per Hour (Selected industries)

	Simulation 1						Simulation 6						Simulation 11					
	1976-78		1979-81		1982-85		1976-78		1979-81		1982-85		1976-78		1979-81		1982-85	
	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour
Mining, Quarrying, Oil Wells	11.85	3.7	10.58	3.8	10.26	4.2	9.04	2.9	11.48	3.4	10.56	4.4	12.10	3.8	10.39	4.0	9.57	4.3
Manufacturing	11.43	3.3	9.39	2.7	8.22	2.2	9.64	3.5	11.42	3.4	8.69	2.6	10.95	2.8	8.02	1.8	5.76	0.7
Construction	16.77	8.2	14.90	7.9	13.32	7.1	10.99	4.7	12.93	4.8	13.82	7.4	16.54	7.9	14.24	7.7	12.28	6.9
Trade	14.63	6.2	12.07	5.2	11.02	4.9	10.53	4.3	10.85	2.9	12.25	6.0	14.56	6.1	11.98	5.5	10.46	5.2
Finance, Insurance, Real Estate	6.99	-0.80	6.53	0.0	6.27	0.4	4.92	-1.0	8.40	0.6	5.81	-0.11	6.82	-1.07	5.89	-0.2	5.63	0.6
Services	10.46	2.4	9.20	2.5	8.84	2.8	9.07	2.9	10.37	2.4	9.00	2.9	10.19	2.1	8.38	2.1	7.39	2.2
Total Economy (includes industries not detailed above)	11.62	3.4	10.31	3.5	9.47	3.4	9.40	3.2	10.96	3.0	9.81	3.7	11.26	3.0	9.37	3.1	7.94	2.8

Table 15

Average Annual Percentage Change in Wages Per Hour and Real Wages Per Hour, By Industry

	Simulation 2						Simulation 5					
	1976-78		1979-81		1982-85		1976-78		1979-81		1982-85	
	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour	Wages Per Hour	Real Wages Per Hour
Mining, Quarrying, Oil Wells	9.22	3.9	10.66	2.7	10.74	4.5	9.13	3.4	10.93	3.0	10.68	4.5
Manufacturing	9.65	4.3	9.27	1.4	8.59	2.5	9.64	3.9	10.09	2.2	8.61	2.5
Construction	10.94	5.6	12.16	4.0	13.91	7.5	10.97	5.2	12.36	4.4	13.85	7.5
Trade	10.61	5.2	10.07	2.1	11.98	5.7	10.57	4.8	10.41	2.5	12.04	5.7
Finance, Insurance, Real Estate	4.80	-0.3	8.27	0.4	5.69	-0.3	4.85	-0.6	8.25	0.5	5.77	-0.2
Services	9.19	3.9	9.27	1.4	9.02	2.9	9.12	3.4	9.66	1.8	9.02	2.9
Total	9.47	4.2	9.77	1.8	9.72	3.5	9.43	3.7	10.21	2.4	9.74	3.6

Table 16

Average Annual Percentage Change, Implicit Price Deflators, Consumer Expenditure and Gross Fixed Capital Formation

	Simulation 1			Simulation 6			Simulation 11		
	1976-78	1979-81	1982-85	1976-78	1979-81	1982-85	1976-78	1979-81	1982-85
1. Deflator of Consumer Expenditure (Table 8, line 1)	7.90	6.53	5.85	5.97	7.77	5.93	7.97	6.10	5.03
2. Deflator of Business Gross Fixed Capital Formation (Table 12B, line 35)	9.80	8.04	7.17	7.52	8.24	7.47	9.78	7.73	6.54
3. No. 1 plus No. 2	0.806	0.812	0.816	0.794	0.943	0.794	0.815	0.789	0.769

Table 17

Annual Average Percentage Change, Gross Domestic Product Deflator and Imports Price Deflator

	Simulation 1			Simulation 6			Simulation 11		
	1976-78	1979-81	1982-85	1976-78	1979-81	1982-85	1976-78	1979-81	1982-85
1. Gross Domestic Product Deflator	8.69	7.42	6.84	6.53	8.32	7.09	8.71	6.92	5.92
2. Imports Price Deflator	4.45	5.47	3.99	4.50	5.54	3.89	4.59	5.51	4.07
3. No. 1 plus No. 2	1.953	1.356	1.714	1.451	1.502	1.823	1.898	1.256	1.455

Table 18

Percentage Distribution of Employment and Output (Selected industries)

	1975		1978		1981		1985	
	Employment	Output	Employment	Output	Employment	Output	Employment	Output
				Simulation 1				
Mining, Quarrying, Oil Wells	1.41	4.30	1.37	4.43	1.30	4.52	1.20	4.63
Manufacturing	21.09	25.63	20.77	26.47	20.07	26.81	18.82	26.30
Construction	6.40	5.43	6.20	4.96	6.20	5.02	5.93	4.96
Trade	17.51	13.28	17.87	13.31	17.96	13.18	18.04	13.11
Finance, Insurance, Real Estate	4.93	11.97	5.14	12.24	5.32	12.40	5.61	12.91
Services	26.93	15.05	28.02	14.69	29.25	14.32	31.21	14.13
Total Economy (includes industries not detailed above)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
				Simulation 6				
Mining, Quarrying, Oil Wells	1.41	4.30	1.37	4.38	1.28	4.52	1.19	4.65
Manufacturing	21.09	25.63	20.86	26.62	19.99	26.80	18.83	26.35
Construction	6.40	5.43	6.34	5.09	6.19	5.02	6.06	4.93
Trade	17.51	13.28	18.28	13.40	18.59	13.07	18.21	13.12
Finance, Insurance, Real Estate	4.93	11.97	5.14	12.21	5.31	12.59	5.59	12.85
Services	26.93	15.05	27.96	14.54	28.93	14.25	30.91	14.08
Total Economy (includes industries not detailed above)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
				Simulation 11				
Mining, Quarrying, Oil Wells	1.41	4.30	1.38	4.50	1.32	4.64	1.24	4.82
Manufacturing	21.09	25.63	20.80	26.54	20.28	27.19	19.19	27.10
Construction	6.40	5.43	6.06	4.83	6.02	4.78	5.85	4.69
Trade	17.51	13.28	17.76	13.10	17.60	12.91	17.37	12.76
Finance, Insurance, Real Estate	4.93	11.97	5.13	12.26	5.27	12.16	5.49	12.31
Services	26.93	15.05	27.94	14.73	29.02	14.31	30.84	14.06
Total Economy (includes industries not detailed above)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 19

Government Revenues, Expenditures and Budget Position, by Level of Government

	Simulation 1				Simulation 6				Simulation 11			
	1975	1978	1981	1985	1975	1978	1981	1985	1975	1978	1981	1985
Federal Government:												
Revenues	29,614	45,414	66,273	101,556	29,614	43,040	62,521	97,059	29,614	47,354	67,551	100,001
Expenditures	34,543	45,920	61,302	91,002	34,543	41,435	59,496	89,324	34,543	46,689	62,205	90,049
Surplus or deficit	-4,602	76	5,797	11,789	-4,602	2,151	3,808	8,920	-4,602	1,247	6,161	11,134
Nonfederal Government:												
Revenues	33,863	50,792	71,122	103,231	33,863	48,913	69,268	100,779	33,863	51,058	69,531	96,253
Expenditures	38,355	56,396	82,448	130,404	38,355	53,891	79,772	126,235	38,355	55,146	77,547	115,369
Surplus or deficit	-2,582	-2,661	- 7,021	-20,445	-2,582	-2,219	- 6,428	-19,040	-2,582	-1,162	- 3,798	-12,702
CPP and QPP:												
Revenues	2,842	4,267	6,552	11,169	2,842	4,284	6,558	11,189	2,842	4,275	6,691	11,904
Expenditures	641	1,287	2,110	3,951	641	1,249	2,057	3,911	641	1,289	2,098	3,829
Surplus or deficit	2,202	2,980	4,442	7,218	2,202	3,035	4,501	7,278	2,202	2,986	4,592	8,075
All levels of Government:												
Revenues	58,594	88,782	126,889	188,771	58,594	85,191	121,681	182,512	58,594	91,203	127,683	184,075
Expenditures	65,895	91,931	128,821	198,190	65,895	85,547	124,678	192,972	65,895	91,659	125,778	185,180
Surplus or deficit	-4,983	395	3,218	- 1,438	-4,983	2,967	1,881	- 2,842	-4,983	3,070	6,955	6,507

Note: Surplus or deficit equals revenues minus expenditures plus capital consumption allowance (not shown separately)

APPENDIX II

Wages, Prices and the Anti-Inflation Control in CANDIDE 1.2M

1. Wages

Wages are modelled in CANDIDE according to the Phillips curve specification: in Block 13 the (hourly or per capita) wages in each of 12 industries increase as a function of some current or lagged indicator of labour market tightness, of the change in real productivity and of current or lagged inflation of the consumer price index. Block 13 is retained in the CANDIDE 1.2M version of the model, but an additional Block 47 follows it in order to incorporate the highlights of the AIB wage regultsions.

The regulation apply to:

(a) firms employing more than 500 persons;

(b) firms with employees who take part in industry-wide bargaining;

(c) to construction firms employing more than 20 persons;

(d) federal departments, agencies and corporations;

(e) participating provincial governments and all their offshoots;

(f) individuals or firms in a professional undertaking.

In Block 47 wage controls are modelled for ten industries (agriculture and fishing are excluded, as the above-mentioned six categories are unlikely to apply to them):

(i) Forestry

(ii) Mining

(iii) Manufacturing

(iv) Construction

(v) Transportation, storage and communication

(vi) Utilities

(vii) Trade

(viii) Finance, insurance and real estate

(ix) Public Administration and defence

(x) Services

According to the Anti-Inflation Board (AIB) regulations, the annual increase in hourly wages is determined by three factors:

(a) the basic protection factor against inflation (BASIC) -- 8, 6 and 4 per cent in the first, second and third year of the program respectively;

(b) the productivity allowance (PRØDY) -- two per cent in each year;

(c) a catch-up, or hold-back allowance of at most 2 per cent per annum, based on past wage experience.

If the basic protection factor of the first year of controls proves too low, the basic protection factor of the second year will be augmented by the shortfall of the first year, yielding an increase protection factor (BASTØT). We have decided not to code the catch-up (or hold-back) allowances into the controlled-wage equations, but to permit their incorporation into wages via constant adjustment (see below).

We permit in our code that the AIB regulations may not be fully effective, due to exemptions, exceptions, historical relationships and various other reasons. Thus each industry's (exogenous) wage efficiency factor influences its wage bill under the AIB controls.

The structure of Block 47 is easiest to explain by references to the code of a typical wage equation -- in the present instant to Forestry Wages.

```
B 47    ***WAGE CONTROLS***
C       CONTROLS IN FORCE WSWTCH=0 OR 1. 0 REFERS TO THE FIRST
C       YEAR OF THE CONTROLS AND 1 TO ALL SUBSEQUENT YEARS OF CONTROLS
C       ANY VALUE OTHER THAN 0 OR 1 WILL CAUSE THIS BLOCK TO BE SKIPPED
C       ALTOGETHER, WAGES UNDER CONTROL CAN BE CONADJUSTED BY CONADJUSTING
C       THEIR RESPECTIVE LEGISLATED IMPACTS WITH OPPOSITE MATHEMATICAL SIGN
S       IF (WSWTCH-1) 1,2,999
F   1   CONTINUE
O ON
E   1   BASTOT=BASIC                                                    (A)
F       GO TO 3
F   2   CONTINUE
E   1   BASTOT=BASIC+AMAX1(0.,(CPI<-1>/CPI<-2>-1.-BASIC<-1>))          (B)
F   3   CONTINUE
E   2   BENCH=BASTOT+PRODY
S       BENCH=1.+BENCHW                                                 (C)
C       CONTROLLED WAGES-FORESTRY                                       (D)
S       TFOWA=SP('FOWA')                                                (E)
S       SP('FOWA')=AMINI(TFOWA,(FOWA<-1>*SP('FOETH')/FOETH<-1>)*BENCH   (F)
S       DFOWA=TFOWA-SP('FOWA')                                          (G)
S       LIFOW=DFOWA*WEFFO+C(3)                                          (H)
S       SP('FOWA')=TFOWA-LIFOW                                          (I)
```

As mentioned above, in the first year of controls (exogenous variable WSWTCH=0) the total basic inflation protection factor (BASTØT) is equal to the basic protection factor (BASIC), (Line (A) of the code). In subsequent years of the controls BASTØT equals BASIC plus the excess of last year's consumer

price index (CPI) inflation over last year's BASIC (line (B)). BASTØT plus the productivity factor (PRØ DY) form the Benchmark for wages (BENCHW) (Line (C)). A local Fortran variable (BENCH) is formed by addiing 1.0 to BENCHW (Line (D)). Another local Fortran variable (TFØWA) is used to store the value of FØWA generated in Block 13 (Line (E)). In Line (F) we chose the lesser value of FØWA from the one generated in Block 13 and from the one generated according to the anti-inflation control rules; this means that wages can be, at most, as high as the controls permit, but may be lower. In Line (G) a local Fortran variable (DFØWA) is used to generate the difference between the Block 13 value of FØWA and the one chosen in Line (F).

The Legislated Impact on Forestry Wages (LIFØW) is DFØWA multiplied by its corresponding exogenous efficiency factor (WEFØ) in Line (H). Finally, we substract the legilsated impact from the Block 13 value of FØWA to obtain the controlled wages (Line (I)). Exogenous changes to legislated wages can be made by constant adjusting LIFØW with the mathematical sign opposite to the one intended for the adjustment of wages. The use of the efficiency factor permits us, in effect, to adopt, if we wish, a weighted average of the wages calculated by the Phillips specifications in Block 13 and of the controlled wages of Block 47.

After the calculation of controlled wages, the identities contained in Block 13 are recalculated in Block 47. It should be kept in mind that when entering the blocks for solution, Block 47 must follow Block 13.

2. Prices

"Deflators of domestic final demand components are determined in a three step procedure.... The first two steps involve the use of input-output matrices. Commodity prices are first derived... from industry (value added) prices, import prices, tax rates and tax deflators. Then we obtain approximations of final demand prices as weighted averages of the commodity prices, after also taking account of indirect taxes as well..."[1] Thus the industry value added prices are crucial ingredients of almost all other prices in the model. 75 industry value added prices are calculated in Block 14, mostly as functions of unit labour cost, of output change and of export or import prices. However, in CANDIDE 1.2 we have wage equations (and therefore unit labour costs) only for 12 industry groups. For example we have a wage equation for total manufacturing, but not for each of the 19 manufacturing industries. In consequence we had to use the unit labour cost of total manufacturing as a proxy for the manufacturing industry-specific unit labour cost.

AIB price controls are introduced in CANDIDE 1.2M at the industry value added price level and are modelled in Block 49. "Price of farm and fish products are exempt from the guidelines at the producer level."[2] Also, energy prices

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1 CANDIDE Model 1.2M: A Description for Model Users, p. 62.

2 Government of Canada: Highlights of the Government of Canada's Anti-Inflation program, p. 11.

are subject to other regulations. We have decided to model in Block 48 all industry value-added prices except agriculture (AGP), fishing (FSP) and energy mining (MI02P and MI03P). AIB rules permit pass-through of increases in unit labour cost, but no mark-up on the increases.

The structure of Block 48 is explained by references to the code of a typical price equation - in the present instance to machinery manufacturing prices (MA14P).

```
B 48     ***PRICE CONTROLS***
O ON
C        THIS BLOCK HAS TO FOLLOW BLOCK 14 IN BLOCK ORDERING
C       CONTROLS IN FORCE PSWTCH=1.ANY VALUE OTHER THAN 1 WILL CAUSE
C       THIS BLOCK TO BE SKIPPED ALTOGETHER
C       CONTROLLED PRICES CAN BE CONADJUSTED BY CONADJUSTING THEIR
C       RESPECTIVE LEGILSATED IMPACTS WITH OPPOSITE MATHEMATICAL SIGN
S       IF(PSWTCH-1) 999,1,999                                        (A)
F    1  CONTINUE
S       OFTMAN=1+(((SP('MAWA')/SP('MAY'))/(MAWA<-1>/MAY<-1>)-1)*
S                MAWA<-1>/(MAY<-1>*MAP<-1>))                          (B)
C       CONTROLLED PRICE-GDP.DEFL.-MACHINERY
S       TMACP=SP('MA14P')                                             (C)
S       SP('MA14P')=MA14P<-1>*(OFTMAN-0.0052)                         (D)
S       DMACP=TMACP-SP('MA14P')                                       (E)
S       LIVMAC=DMACP*PEFMA+C(25)                                      (F)
S       SP('MA14P')=TMACP-LIVMAC                                      (G)
```

During the period when price controls are in force the exogenous variable PSWTCH has to be set equal to one (Line A of the code). According to the AIB rules, if manufacturing would be a single industry, prices could be increased by the increase in manufacturing unit labour cost, i.e., by multiplying last year's price with the increase of unit labour cost multiplied by the wage bill's weight in the industry's Gross Domestic Product.

This concept is calculated and stored under the local Fortran variable name ØFTMAN (Line (B)). For the individual manufacturing industry prices (MA*nn*P) a complication arises, due to the fact that we have only one -- aggregate -- manufacturing wage equation and in consequence, only one -- aggregate -- manufacturing unit labour cost in our model. We are dealing with this complication in the following manner:

As with all other prices, we use a local Fortran variable TMACP to store the value of MA14P generated in Block 14 (Line (C)). In Line (D) we multiply last year's MA14P by (ØFTMAN minus 0.0052). An analysis of the price trend of total manufacturing and of machinery manufacturing over the 1962-72 period indicates that the annual price increase of machinery manufacturing amounted to 0.52 points less than the increase of total manufacturing prices. We assumed that this difference is due to the difference between the unit labour costs of machinery manufacturing and total manufacturing. This is why we substracted 0.0052 from)FTMAN. Line (D) approximates the value of MA14P which would prevail if the price controls of the AIB would be fully effective, without exceptions.

In Line (E) we generate the difference between the Block 14 value of MA14P and the one generated in Line (D) and store it as the local Fortran variable DMACP. The Legislated Impact on Machinery Manufacturing prices (LIVMAC) is DMACP multiplied by the exogenous efficiency factor of manufacturing prices (PEFMA) in Line (F). Finally, we substract the legislated

impact from the Block 14 value of MA14P to obtain the controlled price (Line (G)). Exogenous changes to the legislated price can be made by constant adjusting LIVMAC with the mathematical sign opposite to the one intended for the adjustment of the price.

After the calculation of controlled prices the identities contained in Block 14 are recalculated in Block 48. When entering the blocks for solution, Block 48 must follow Block 14.