Man and Economics

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> "The age of chivalry has gone;
> that of sophisters, economists
> and calculators has succeeded."
>
> Edmund Burke, circa 1785

I

Suppose the following scenario were proposed to you: a political crisis triggered by a small war provides the necessary threshold pressures for several sovereign states to agree on a joint course of action. This group of countries controls one-half of the supply of a very important commodity sold on the international markets. It is first agreed that the marketing of this commodity will be drastically restricted and that is done. Shortly thereafter, the price of the commodity is doubled and doubled again. At this point three other states, equally major producers, join the original compact after sales restrictions have been lifted. There is now a world-wide cartel presenting a solid front to the buyers.

What consequences can we predict for the buyers, that is, for the majority of the world's countries, and what consequences for the exporters - in the short and in the long run? Because such predictions hinge largely on scarcities, prices, substitution of resources - in short, on supply and demand considerations -- it is natural that we would first turn with our questions to economists.

And the economist would fairly willingly use his tools of trade to offer some forecasts. He would predict -- we all clearly recognize the outlined scenario -- two primary effects on those who buy oil. First, the consumption of oil and of the products derived from it will decline as the real income (read purchasing ability) of the customers is curtailed: drivers cutting down on pleasure trips, smaller automobiles purchased, tourist trade suffering, temperatures in private homes and public buildings reduced, and so on. Second, and after some time - when it appears that the OPEC price structure may enjoy a longer life - alternative sources of energy will be turned to, whether atomic power, coal, tar sands or simply more intensive oil exploration in less accessible non-cartel areas.

For the oil producers it is easy to forecast, almost immediately, an incredible surge of prosperity. Then, more slowly, cracks appearing in their cartel as opinions diverge on how to increase and divide the loot. And, finally, an absurd situation arising as the sellers will have to bail out the buyers when petropound and petrodollar obligations, rising over a hundred billion dollars, become meaningless pieces of paper carrying unredeemable promises.

But it is also clear that in a scenario of such incredible complexity and unprecedented novelty the analysis furnished by economists cannot be relied on as being fully adequate. The economist recognizes that his analysis and models look at only a part of the total reality and that the knowledge and experience of other scientific disciplines must be drawn upon to round out the picture. Historians, for instance, could furnish us with the precedents that resemble at least remotely the wave of the OPEC (and possibly Canadian) blackmail. What results, as an example, came of the British Continental blockade which cut off the supplies of West Indian cane sugar to Napoleonic Europe?

Political analysts might inform us about the pressures exercised by Palestinians upon more sensible Arab politicians and thus about the likely ultimate behaviour of the kingpin producer, Saudi Arabia. Military experts would speculate on the likely developments attendant upon the rise of a new, sophisticated military force in Iran in relation to its traditional enemy, Iraq, and Iraq's principal ally, Soviet Russia.

The purpose of this introduction is to lay to rest an opinion which you may share with the general public: namely, that economists are qualified -- and believe themselves to be qualified -- to provide general answers to or explanations of most of the problems of modern society.

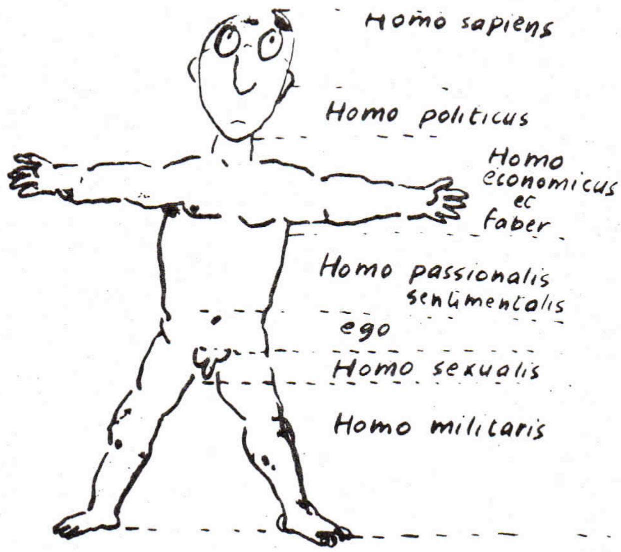


Figure 1. Homo Economicus

While economics is most aptly described as that area of activity in which economists exert themselves (and sometimes is merely designated as the dismal science), it will suffice to state that economics is that branch of social sciences which interests itself in HOMO ECONOMICUS.

The first exhibit, taken from a book called L'anti-économique that was last year on the best seller list in France, gives a first approximation to what part of man this type of HOMO is. (The ladies in the audience will undoubtedly notice the unfortunate undertones of male chauvinism present in the illustration).

Homo economicus et faber is a consciously simplified model or schema which excludes from the economist's analysis much of humanity's rich texture: man's passions, follies, libido, his religious and nationalistic convictions, his artistic strivings. The model views man in his calculating rationality and behaviour aimed at the maximization of his utility with least effort.

Note, however, that the economist is deliberately silent on what constitutes utility to man: it may be a harem, stable of fast cars, a large library, plenty of leisure or a combination of all of these. Being silent on what utility is or on how the utility preferences were formed, the economist does, nevertheless, believe that in general more money will buy more utility; and since almost nobody has unlimited funds, efficient (and rational) behaviour will reduce the costs of utility acquisition.

We may therefore say that economics is a discipline which focuses its attention on the activities of man and man-created institutions whose goal it is to maximize utility (whether it be leisure, income, profit or political power) at the least possible cost. Since on this spaceship earth there are almost no resources left which are free, a body of knowledge that describes man's manifold behaviour in attempting to wring the most utility out of conditions of scarcity seems eminently useful. But economics goes beyond this: basing itself on this positive or descriptive incestigation of economic relationships, it attempts ot prescribe in a normative fashion such modes of behaviour of man-made institutions as will bring the greatest benefits for the least expenditure of effort to the largest number of people.

Manifestly, this appears to me a worthwhile endeavour on the part of any science, natural or social. Even though, and let this be stressed again, economics is not preoccupied directly with man's happiness. Economists have risen to positions of power in our modern societies simply because those societies are putting a premium on economic welfare. You only have to recall the names of Kosygin, Schmidt, Giscard and Wilson, all trained economists, to realize this.

For the last decade or so we have been witnessing a revolt against the cult of the so-called Gross National Hamburger. And we have been told over and over again that life's quality depends on the beauty of our environment, the safety of our streets, the virtue of our citizens and not, repeat not, on the size of our pocketbooks.

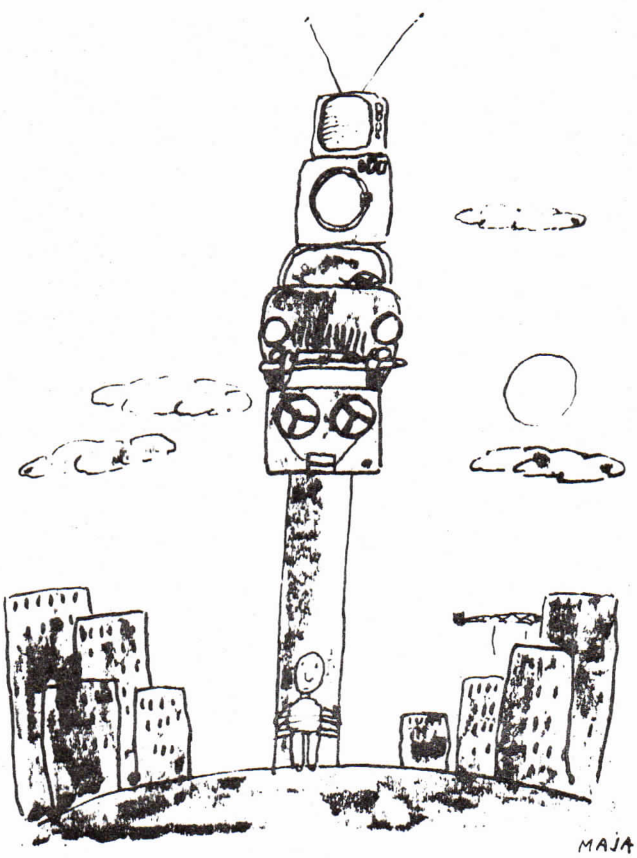


Figure 2. The Gross National Hamburger cult

Now this cry is not heard in countries that suffer overpopulation, disease and poverty. It is heard only in societies which have, by virtue of their efficient economic organization and, let's face it, hard rationality, lifted themselves to a level at which happiness is no longer equated with a full stomach and a roof over one's head. Incidentally, even in our country there has recently been much less discussion of emission standards than of lay-offs in the automobile industry.

Your economist is not equipped and does not pretend to be equipped to dispense wisdom on how to attain happiness. He very much doubts that anybody but a philosopher or a theologian can pretend to such advice. He remembers that at the height of Augustan prosperity, when the riches of the Mediterranean world flowed to Rome, those immortal verses were penned by Horace:

> Beatus ille qui procul negotiis
> ut prisca gens mortalium
> paterna rura bubus exercet suis
> solutus omni faenore.
>
> Happy is he who far from business cares,
> Even as the oldest race of men,
> Tills with his own oxen his patrimonial fields,
> Freed from every debt.

He does, however, also remember that those words were put by Horace into the mouth of a Roman loan-shark.

To conclude, then, this part: economics is but one of the social sciences; it studies man and his institutions as they struggle to achieve goals with only scarce resources at their disposal; it does not study the total man and has only partial prescriptions for man's happiness.

II

Having delineated the scope of economics let us turn our attention to what economists actually undertake in the range of their studies. I said that the interest of economists centers on the individual's utility-maximizing activities under scarcity constraints and on similar behaviour of man-created arrangements and institutions. To see this better consider the following simplified schema:

1. Individual as
   - (a) consumer
   - (b) homo faber: household worker
wage earner
saver, investor
2. Aggregates of individuals as
   - (a) markets for goods
   - (b) electoral entities
3. Institutions:
   - (a) the firm
   - (b) industries
   - (c) national governments

The best way to convey the economist's work and preoccupation is to give concrete examples of his analysis. Inflation will serve us as an illustration of how an examination of the individual elements of the above scheme can be built into a comprehensive economic analysis.

III

Inflation

> "When will we be in the billions?"- "If it goes on like this, in a couple of months." - "My God!" Georg sighs. "Where are the fine peaceful times of 1922? Then the dollar rose from two hundred fifty to ten thousand marks in a whole year. Not to mention 1921 - when it went up a beggarly three hundred percent. Thank God tomorrow is Sunday. No dollar exchange rate. One day in the week the inflation stands still. God surely did not have that in mind when He created the Sabbath."
>
> Erich Maria Remarque, The Black Obelisk

Introduction

Undoubtedly the principal spectre haunting our economic life today is inflation. Describing and examining its features we can weave in the actions and interrelationships of the actors on the economic scene which we just listed.

While the analysis of inflation will of necessity be much simplified, we should, right at the outset, propound a basic assertion. The general public, misled by the macabre dance of our politicians, has the impression that our state of knowledge is inadequate to understand the causes of inflation and that we are therefore unable to cope with it and to stop it. Any competent economist, be he Milton Friedman or J.K. Galbraith, knows very well how to stop inflation in its tracks. What economists do not know is how to stop inflation without other economic consequences any more than a doctor knows how to cure a heroin addict without withdrawal pains. Where experts differ is in their attitude toward paying the price of stopping inflation. That is, which is worse -- inflation or its cure?

Measuring Inflation

Inflation is defined as a sustained rise in the general price level. It can be measured by several yardsticks of which the most commonly used is the consumer price index (CPI). This index measures the percentage change through time of the cost of buying a constant basket of goods and services by a representative sample of the population. The stratified probability sample is drawn from across Canada every month and the month-to-month or year-to-year change is calculated by a formula known as the Laspeyeres index:

$$CIP_1 = \frac{\Sigma_i Q_{oi} P_{1i}}{\Sigma_i Q_{oi} P_{oi}} \times 100$$

where Q_{oi} = base year quantity of good or service i

P_{1i} = current year price of i

EXAMPLE:

$$CIP_{1975} = \frac{(50 \text{ loaves}_{71} \times \$.40_{75}) + (10 \text{ haircuts}_{71} \times \$3.00_{75})}{(50 \text{ loaves}_{71} \times \$.25_{71}) + (10 \text{ haircuts}_{71} \times \$2.00_{71})} \times 100$$

$$= 153.5$$

Figure 3. CPI

Because the composition of the basket changes over time as greater affluence leads to less potatoes and more steak and because new consumer products (such as pocket calculators) lay claim to household budgets, the CPI is periodically overhauled and we tend to have a proliferation of them. No matter which suits the interpreter best (base 1961 or 1971), changes in the CPI point unambiguously to an inflationary rate of over 10% over the last three years -- and that both in Canada and abroad.

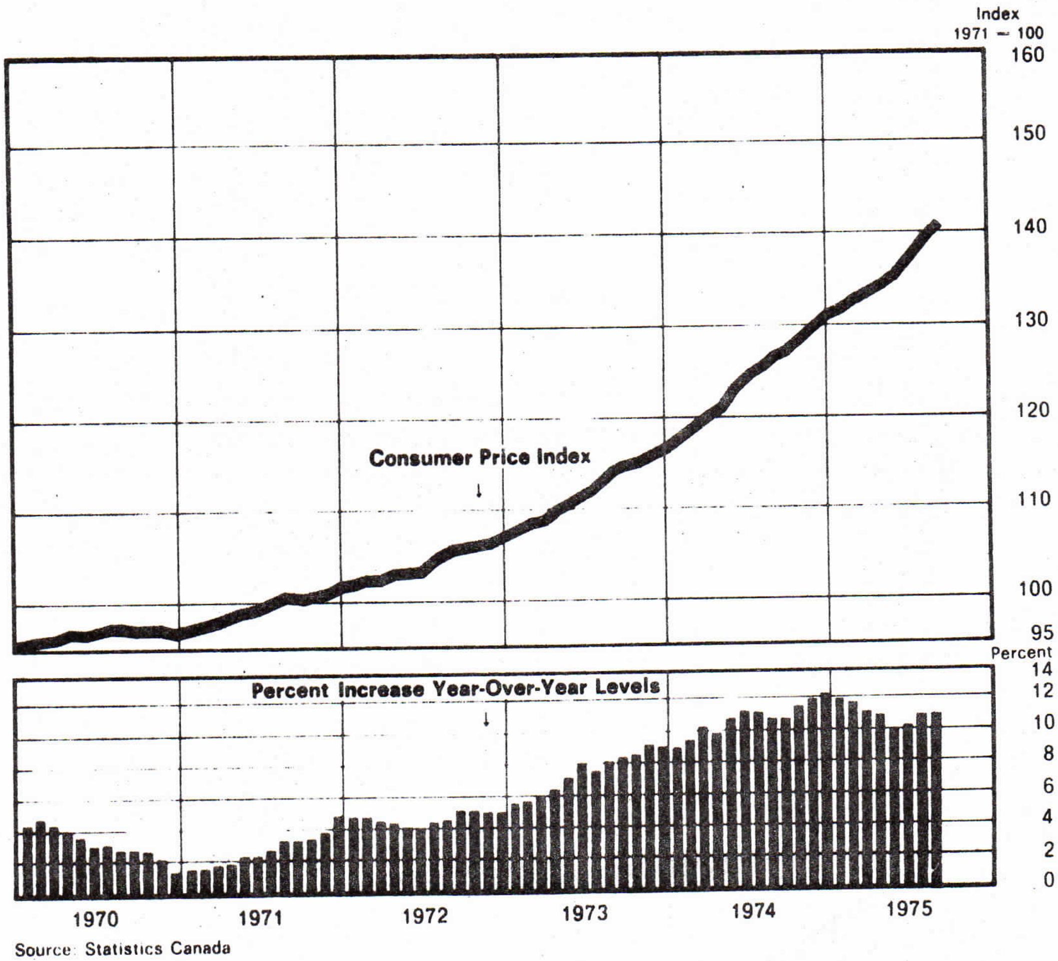


Figure 4. The CPI for Canada

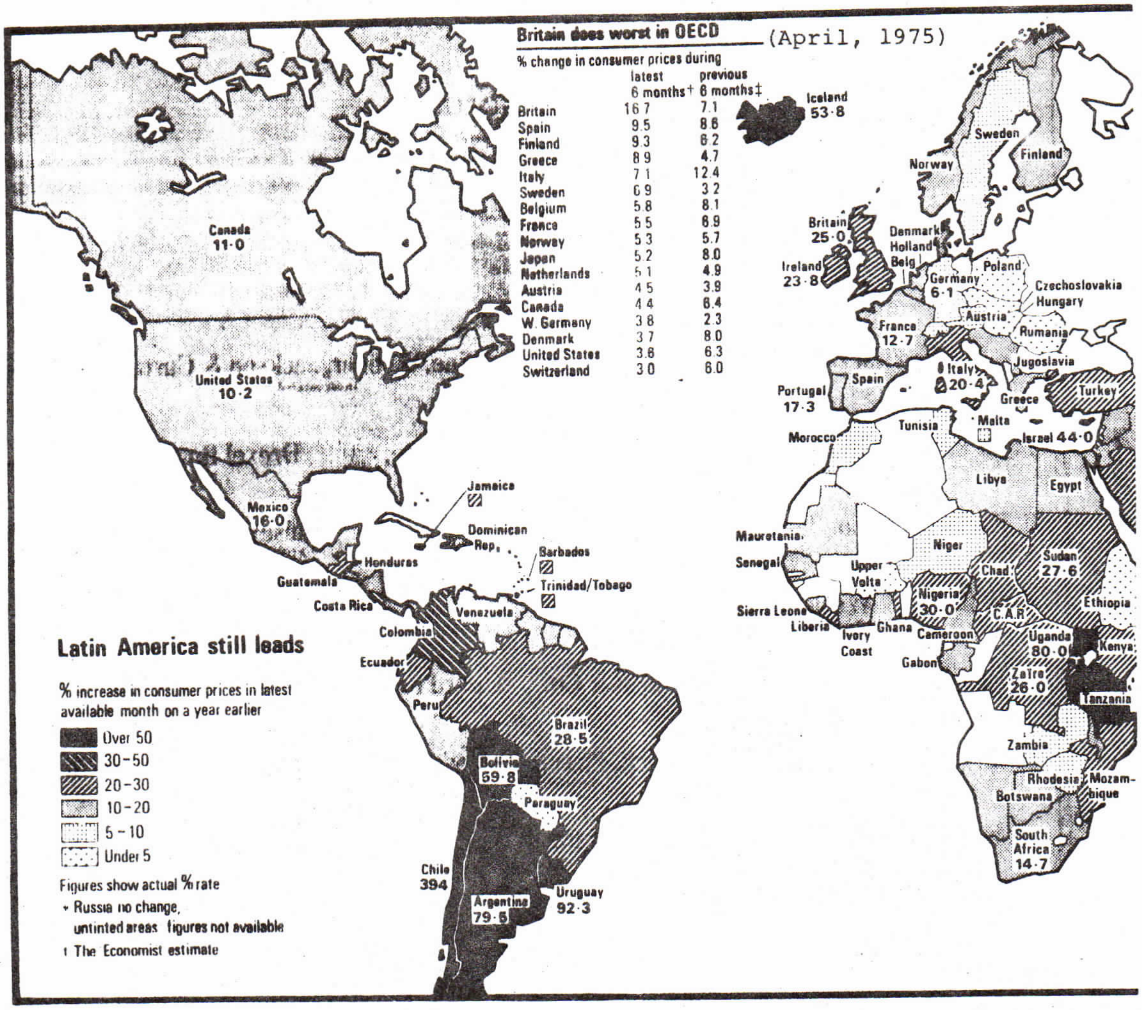


Figure 5. The Percentage Increase in Consumer Prices for the World (calculated on a yearly basis in late 1974, Source: The Economist)

Another way to represent the inflationary trend in the economy is to see its impact on the Gross National Product. Figure 6 compares the United States GNP in current prices with that expressed in 1958 dollars. (Here the deflator is based on a wider range of prices than that contained in the consumer price index.) If the GNP is used as a rough measure of a nation's economic will- being we should make a careful distinction between its real and its illusory growth. (The Gross National Product is defined and discussed in a "diversion" on the next page.)

Some Consequences of Inflation

What are some of the elements of the inflationary process such as has been going on in Canada for the last four years?

Let us assume, for expository reasons, that the first round of unexpected price increases which starts inflation on its course is exogenously determined; that is, has come from "outside" the economic system we analyze. (We could imagine an overgenerous social security program being launched by the Federal government which requires deficit financing by the money press).

When society registers the shock of an unexpected price rise, its members -- individuals and institutions -- respond in self-defence in order to protect their purchasing power. Taken separately, their decisions are rational reactions to signals coming from the market place. Viewed from the perspective of the economy as a whole, however, the legitimate pursuit of self-interest in the face of inflationary pressures does not necessarily bring about a self-correcting process.

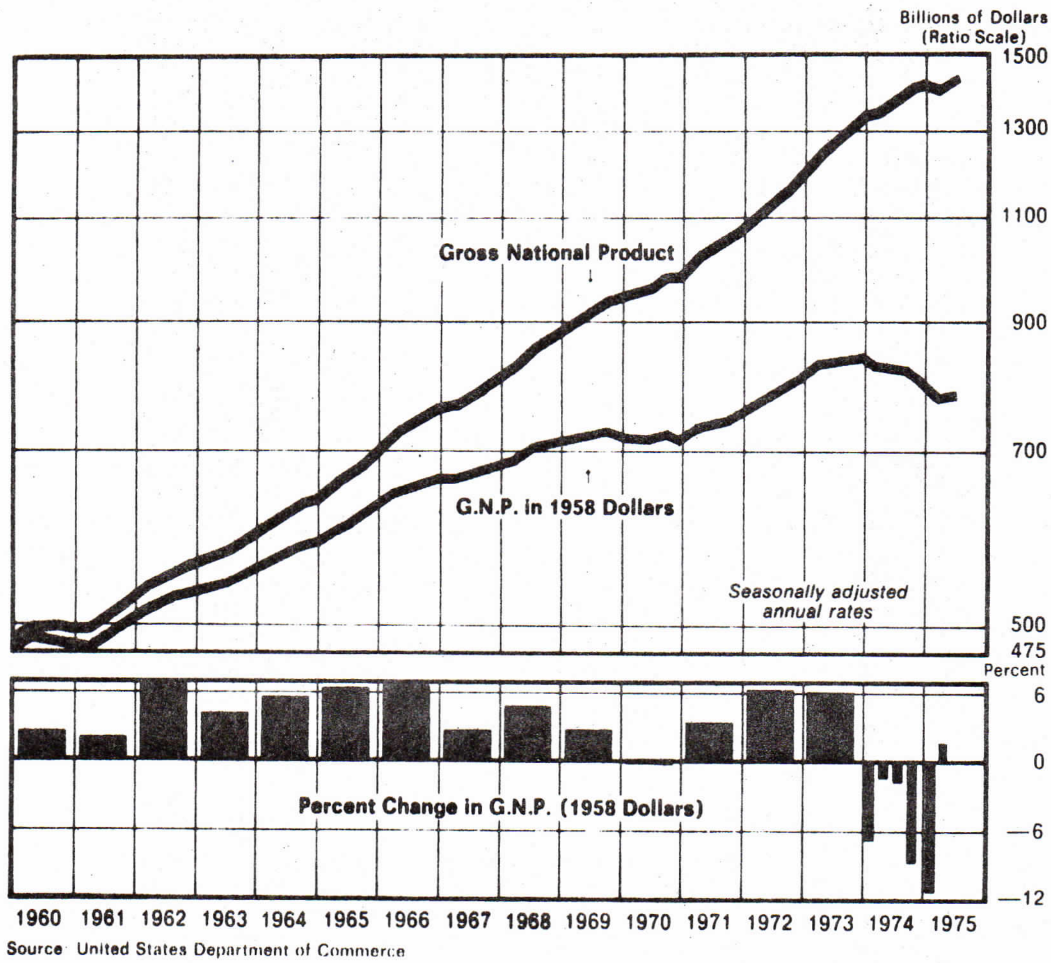


Figure 6. Comparison of the United States GNP in current prices with the GNP expressed in 1958 dollars.

Diversion of the GNP

The Gross National Product is defined as the total market value of all final goods and services produced in the economy over a period. Using market value (price x quantity) approximates the collective satisfaction of the community.

But: a) this does not measure the value of such important items as housewives' services

b) some inputs are valued at cost, such as the time of the government bureaucracy

Note also the adjective final. Intermediate goods and services are already included in the price of the final product -- the GNP is a value-added figure.

EXAMPLE: electric knife

Stage of Production	Value of Sales	Value Added
Mine	$ 1	$ 1
Mill	2	1
Factory	10	8
Wholesaler	12	2
Retailer	20	8
		$ 20

Figure 7a.

Canada - 1974 Billions of Current $

GROSS NATIONAL PRODUCT (INCOME)		GROSS NATIONAL EXPENDITURE	
Wages, Salaries	76.0	Personal Expenditures:	
Military Pay	1.2	Durables	12.1
Corporate Profits before Tax	18.3	Semi- and Non-Durables	37.9
		Services	29.9
Dividends to Non-Residents	-1.5	Government Expenditures:	
Interest etc.	7.0	Current	27.4
		Capital	5.3
Farm Income, Net	3.7	Construction:	
Unincorp. Business-Net Income, Rents	7.3	Residential	7.6
		Non-Residential	9.0
Inventory Valuation Adjustment	-4.3	Machinery, Equipt.	10.9
Indirect taxes less Subsidies	17.9	Value of Physical Change in Inventories	2.7
Depreciation	15.3	Exports	38.5
		Imports	-40.7
		Residual Error	.3
TOTAL GNP	140.9	TOTAL GNE	140.9

Figure 7b. The two faces of GNP.

Inflation can be viewed as a tax imposed unevenly over the participants in the economy. For consumers the first effect of inflation will result in belt-tightening as real income (i.e., monetary income divided by the consumer price index) starts to fall. This will be particularly noticeable among fixed income groups, such as pensioners. But many consumers are also wage-earners and members of strong labour unions. There will be agitation for higher wages to compensate for the loss of purchasing power. If unions have reason to believe that inflation will persist and accelerate, they will try to leap-frog the anticipated erosion of the dollar's real value and demand higher settlements than the current inflation rate warrants. They will also be ready to strike and it is no accident that in 1974 time lost through work stoppages was a major cause of the reduction in economic growth.

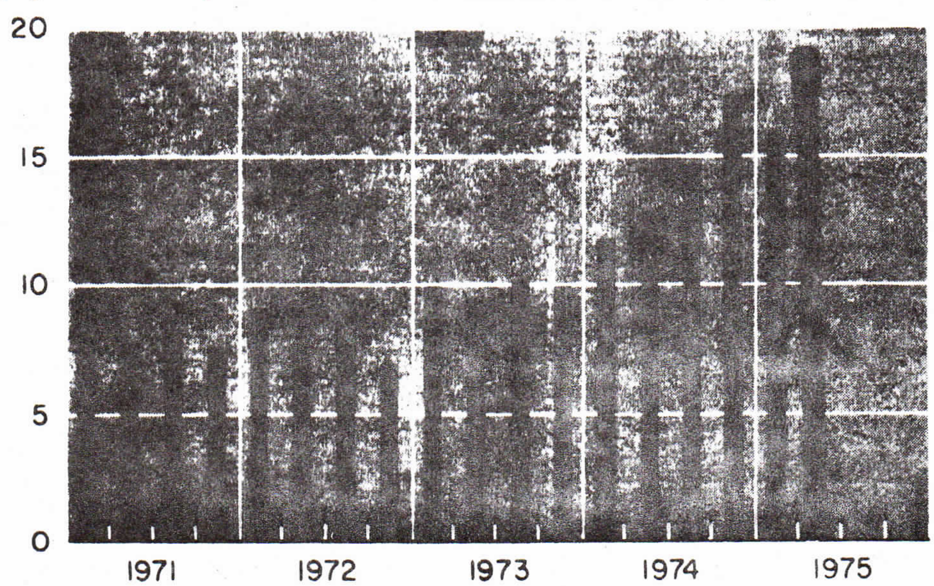


Figure 8. Canada: Wage Settlements Excluding Construction (% increase in base rates) Source: Statistics Canada

The typical homo economicus in our society is also a saver who will notice that the inflation "tax" reduced the real value of his financial assets. To understand this, we must grasp the fact that a saver is also a lender who makes his money available to banks (savings deposits), the government (bonds) and business (stocks and bonds). When traditional financial markets offer a nominal rate of interest of between 6 and 10 percent, while inflation persists above the 11 - 12 percent level, the real return to the lender is negative and he will increasingly turn to such investments (as real estate or commodity markets) which offer potential for capital gains.

Money Rates and Real Rates of Interest in the United States, Selected Years

Year	Money Rate* (%)	Percent Change in Price Level†	Real Rate (%)
1929	5.85	-0.6	6.45
1933	1.73	-7.7	9.43
1940	0.56	-1.1	1.66
1944	0.73	+3.9	-3.17
1949	1.49	+3.4	-1.91
1953	2.52	+1.5	+1.02
1958	2.46	+3.1	-0.64
1969	7.83	+4.7	+3.13

*Interest rate on prime commercial paper, four to six months' duration.

†Average annual change in CPI over the previous two years.

Source: Coloumns 2 and 3 from the *Economic Report of the President*, 1970, pp. 229 and 242.

Figure 9. Money rates and Real rates of Interest in the United States.

Corporations relying on capital markets to finance their industrial expansion will thus find some of their traditional sources of capital diverted to "unproductive" investments and will curtail investment. This will hurt the country's growth-prospects: in the short term through lost construction activity and in the long run, since new industrial capacity will not be available to permit expanded production and employment in the future. Corporations will also try to pass on increased wage costs through higher prices of their output, a phenomenon usually designated as cost-push inflation. They may not, however, be able to protect successfully their real profits and their real capital base. For this there are two principal reasons:

First, Canada's is an open economy and Canadian corporations sell a large part of their output in export markets. (More than 35 percent of Canada's GNP in 1974 was accounted for by exports). If the rate of price increases abroad is slower than in Canada, exporters must either reduce their profit margins or suffer loss of business. (Because of the Bank of Canada's "dirty floating" policy the exchange rate of the Canadian dollar may not reflect appropriately that dollar's real value).

Second, and more importantly, the Canadian government-sanctioned system of corporate accounting reports leads to vastly overstated corporate profits in times of inflation. Since costs are calculated on a historical acquisition basis, the depreciation write-offs on plant and equipment installed some time ago will not provide for their replacement at current values. Artificially low depreciation expense will then lead to artificially high reported income and an erosion of the firm's real capital base. Similarly, inventory valuation methods (FIFO) do not provide adequately for replacement needs and swell reported profits artifically. It has been estimated that corporations' share of inventory valuation adjustment in the GNE is over 90 percent and that in 1974 about 22 percent of reported corporate profits were therefore directly attributable to inflation from this source. (See Figure 7b, GNE table, lines "corporate profits before taxes" and "inventory valuation adjustment"). It has also been estimated that under-depreciation tends to overstate corporate profits by 12 percent. We are thus left with a staggering overstatement of Canadian corporate profits of 34 percent in 1974 on account of government-enforced accounting standards which are not adapted to inflationary situations. For a U.K. comparison see Figure 11.

Elimination of Inflationary Effects -
Impact on Reported Earnings of 120
Major British Companies, 1973

Banks	- 15%	Food retailing	+ 5%
Chemicals	- 15%	Household goods	-35%
Construction	-10%	Oil	-25%
Engineering	-50%	Paper	-35%
Entertainment	+40%	Property	+310%
Food mfg	-20%	Shipping	-40%

etc.

Source: Policy Review and Outlook, C.D. Howe Research Institute, p.139

<u>Figure 10</u>.

Why, may you ask, would such overreporting matter? Among the less important reasons is that it whets the appetite of labour unions and fogs the spectacles of the investment community. The principal reason why this matters is as follows: When businesses are understating their cost, income, and consequently income taxes payable, are greater than they otherwise would be; as a result, the ability of the corporate sector to finance new investment is impaired, the creation of new jobs jeopardized, while government enjoys the benefits of a windfall gain in revenue.

We see then, in summary, a self-defense process culminating in a vicious circle of higher wages, higher interest rates, higher real estate prices, lower real economic growth and, ultimately, higher unemployment. Can the inflationary spiral be broken, and at what cost to whom?

The Sources of Inflation

Some of them are obviously uncontrollable from the point of view of the Canadian economy: the realized greed of oil sheikhs (if we think of foreigners -- or the realized legitimate aspirations of hitherto exploited raw material producers if we think of Albertans), coffee crop failures in Brazil and early frosts in Kazakstan, the rise of the Deutschmark, and so on.

But note that as we were describing the effects of inflation on partners in the economy, we mentioned governments only as <u>beneficiaries</u> of windfall gain in revenue. And, indeed, governments at all levels, but above all the federal government, appear at this stage to be the only net beneficiaries of inflation. While French policemen used to track down culprits by holding to the device "*cherchez la femme*," economists tend to be guided by the question "*cui bono est*" -- to whose benefit? We should therefore enquire, first, to what extent the Federal government benefits by inflation and, second, to what extent it is able to foster it.

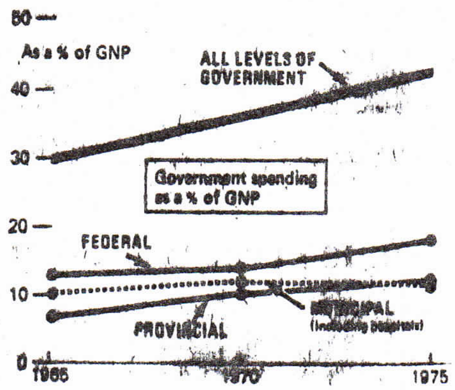
To analyze the behaviour of government it is useful to envisage it as a coalition of bureaucrats maximizing their monetary and fringe benefits and of politicians seeking identical goals by maximizing their chances for re-election. We have had a Liberal government in power since 1963, either in a minority or majority configuration. That's a long time. What happened to government expenditures and to the remuneration of its employees? Consider Figure 11, both the table and the graphs which furnish an imperfect statistical picture.

(a)

GNE and Federal Government Spending
(billions of constant 1971 dollars)

	1964-65 (fiscal year)	1974-75 (fiscal year)	% increase
GNE	$ 65.6	$108.9	167
Fed. Govt. Spending	12.0	22.5	187

(b)



Note: Figures include outlays on goods and services, capital spending, transfer payments, subsidies and interest on public debt. Intergovernmental transfers are excluded. Source: *Financial Post*, Oct. 18/75.

(c)

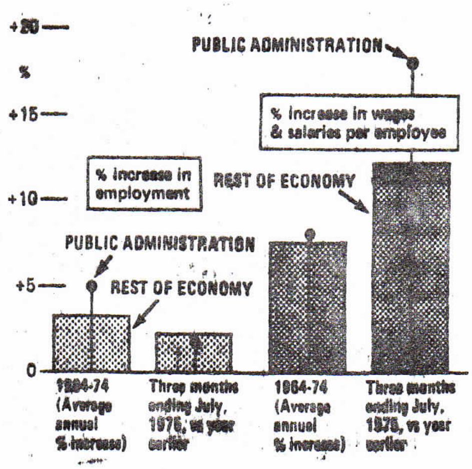


Figure 11.

If we agree that the coalition of bureaucrats and politicians was able to maximize its utility handsomely over the last decade, we should next ask how the inflationary setting favoured this outcome. To some extent, Government's growth is limited by tax revenues. The inflationary windfall accruing to the government from over-stated corporate profits has already been mentioned. Our progressive income tax system (despite recent lagged indexation) constitutes another inflationary bonus. It has been estimated that for every one dollar increase in monetary (not real) output government reaps a dollar and a half in added revenue. Since no distinction is made between real and money income, here is one element which entices government to encourage inflation. The other element is called "seigniorage" and has been well known to mediaeval princes (seigneurs) and Roman emperors debasing currency.

Seigniorage, or gains which accrue to issuers of money, is derived from the difference between the costs of issuing money and the initial purchasing power of new money in circulation. The Federal Government is the ultimate borrower in our economy. It can raise a loan either by selling bonds to the public or by selling them to the Bank of Canada. When the government borrows money from the central bank it receives, figuratively speaking, freshly printed banknotes with which to purchase goods and services -- it thus issues new money. In a period of increasing and not fully anticipated inflation the cost of money which it issues is its obligation to repay principal and interest to the central bank -- and the ultimate total flow of repayments will be worth less than the initial purchasing power which it commanded with the loan at the time of its issue. The money press is thus a forceful means to finance governmental largesse to itself and key voting pressure groups.

The Cause of Inflation

It remains to document the last link in our "*cui bono*" argument, namely, that the issue of new money is largely responsible for the inflation from which government extracts its benefit. This link consists of two elements: an assertion that the Federal Government has indeed issued an "unduly" large amount of new money, and an assertion that "unduly" high increases in the nation's monetary stock lead to inflationary rises in price levels.

From the beginning of 1970 to the end of 1974 the Federal Government's debt to the Bank of Canada increased by 2.9 billion dollars leading to an equivalent amount of new money being created. This newly printed money is called by economists "high-powered currency" and enters the banking system in which it is expanded by the so-called money multiplier to end up as an addition to the total monetary stock held in the economy. On conservative reckoning high-powered currency expands M2, currency in circulation and all privately held deposits at chartered banks, by a multiple of 8. Multiplying 2.9 billion by 8 gives 23.2 billion. Canada's money supply defined as M2 grew from January 1971 to July 1975 from 33 to 63 billion dollars, or by 30 billion, of which on the preceding calculation 23.4 billion -- or 70 percent -- was accounted for ultimately by the government's money printing press. Figure 12 shows our rough calculations. (The rest of the increase in M2 is in part due to the Bank of Canada's actions for policy reasons we cannot discuss here and, in part, to the same bank's endeavours to expand the supply of money to accomodate the normal growth of the economy).

Increase in Bank of Canada's holdings of Govt. of Canada securities Jan 70-Dec 74 ($ billions)	Times 8 (Money Multiplier) ($ billions)	Increase in M2 (currency, private deposits) Jan 71-Aug 75 ($ billions)	Increase in GNP (1971 prices) 71(I) to 75(I) ($ billions)	Increase in GNP implicit price deflator 71(I) to 75(I) ($ billions)
4.1 to 7.0	23.2	33 to 63	90.8 to 107.0	98.2 to 136.9
or		or	or	or
71%		91%	17.7%	39.4%

Figure 12.
Source: *Bank of Canada Review*, August 1975.

But Figure 13 also shows the increase, over a corresponding period, of Canada's real production (GNP in 1971 constant dollars) as being only 17.7%. And it shows a 39.4% rise in the implicit GNP deflator, a sort of super-consumer price index.

We can now conclude our argument. Over the last four and a half years the Bank of Canada can be held directly responsible for a 91% increase in Canada's money supply. About 70% of that increase is traceable to the financing needs of the Federal government. Since real output expanded over this time by only 17.7%, while money held by the public increased by almost exactly five times this percentage, it is not surprising that the general price level rose by almost 40%. Money, after all, is nothing else but pieces of paper exchanged for real output. If its quantity rises more rapidly than real output does, it loses its purchasing power. The Government of Canada printed and is still printing more money than Canadians could have and can possibly spend on new production of goods and services.

The Cure

So the cure is staggeringly simple. The R_x is: Let the Bank of Canada allow Canada's money supply to rise by no more than Canada's real output.

Within three years at most inflation would be reduced to two or three percent per annum. But over these three years at least these withdrawal symptoms (costs) are likely to be encountered:

1. A sharp rise in unemployment as the rate of inflation declines and employers, no longer protected by the automatic passing on of wage costs, prune out the workforce to increase efficiency.

2. Consequent slowdown in the rate of increase of purchasing power and thus a general economic slowdown.

3. Increase in the strength of the Canadian dollar and therefore weakness in the performance of our export industries.

4. Severe constraints on government spending and temporary loss of electoral appeal for the "ins".

Are we as consumers, wage earners, savers, businessmen and voters prepared to take the cure? Our government at least, thinks not and has just offered us the first in a series of ineffective palliatives in the form of wage controls.