VOLUME II

REPORT

of the

ROYAL COMMISSION

on

PRICES

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THE ECONOMICS OF RISING PRICES

THIS chapter is intended to serve as a background for the subsequent analysis of the facts of rising prices in Canada. We believe it will be useful at the outset to reach agreement on some basic definitions and to set down some elementary principles that may help in explaining why prices rise and the implication of the various corrective measures that could be adopted.

THE MEANING OF INFLATION

To begin with, we endeavoured to reach agreement on the meaning to be attached to that popular term "inflation". Because it is so surrounded with ambiguities, some economists have refused to use it at all. Mr. Graham Towers, the Governor of the Bank of Canada, when he appeared before the House of Commons Special Committee on Prices, said:

> "I would sooner get away from using that word 'inflation', not from any great tenderness on the subject, but because it is so often misinterpreted. If the price level had been 100 and it goes to 102, you might say that that is inflation. On the other hand, I think so many people have thought of it as a very extreme situation such as took place after the last war in certain countries. To-day in a great many countries throughout the world, currency is worth from 1/8 to 1/1000 of what it used to be. I would sooner stick to the fact of our case which is that the purchasing power of our dollar in goods and services is less than it was in 1939 by the amount which is indicated by the price index."

However, the word is so commonly used not only by the public (including a number of witnesses before the Commission) but also by many students of prices that some discussion of its meaning can hardly be avoided. Furthermore, exploration of the meaning of inflation may be expected to throw light on the processes of inflation themselves.

Whatever differences there may be in the use of the term inflation, an expansion in the supply of money available for spending is usually implied. An expansion in the supply of money, however, does not always mean significantly higher prices. Under certain circumstances all or most of the "inflationary pressure" which might otherwise have resulted is relieved, not in the form of higher prices, but in the form of additional output. The best example is, of course, what happens during a period of recovery from a depression when new demands bring forth new production as idle men and machines are re-employed. Even during a period of high employment, expansion in the money supply may take place without significant price increases or with small price increases if it is accompanied by increasing output of the existing factors of production.

While related increases in money supply and output may be termed inflation ("expansion" seems a more appropriate term), common usage seems to reserve the term for conditions under which monetary expansion outpaces the expansion of output, if any. Under such conditions, prices are bound to rise unless—and this is an important qualification—there is a compensating change in the rate at which money available for spending is spent.

Thus, during World War II there was undoubtedly a considerable increase in the supply of money in Canada[1] but the rise in prices, even in the final stages of the war when output of civilian goods was most severely restricted, was of relatively modest dimensions. Looking back, Canadians are not inclined to think of the war as a period of inflation; rather they are impressed by the way in which prices were held steady. Yet expansion in money supply did greatly outpace expansion of civilian goods and services. Indeed, available output of some widely consumed articles like automobiles, refrigerators, washing machines, etc., fell to nothing. The explanation is that for various reasons, patriotism was one of the reasons, Canadians saved a larger proportion of the incomes remaining to them, even after paying higher taxes. A decision to wait until certain articles were again available was another. Controls which prevented people from spending more than ceiling prices on available merchandise and which denied business men access to materials, labour and equipment unless they were to be used for war purposes, was still another. The pressure which might have resulted from the spending of rising money incomes was suppressed.

In some senses, therefore, inflation does not necessarily imply rising prices. But to most people inflation has come to mean "price inflation" and it will be so used in this report unless otherwise indicated. It is the condition which arises when increased spending is accompanied by substantially less than a corresponding increase in output. Hence it must be reflected in a significantly higher general level of prices. Obviously, such a condition is most likely to arise in times of high or full employment, although it is to be observed that if scarcities of particular goods or services of general use, such as steel, become acute, competition for that particular item may drive up prices in the area affected and communicate itself throughout the whole economy. Some economists call this kind of inflation by the descriptive term, "bottleneck inflation".

To go one step further, what most people mean when they speak of inflation is a rise in the cost of living, that is in the prices of consumers' goods and services.[2] This is a helpful distinction but, as will appear from what follows, price rises in other than consumption goods markets may bear a vital relationship to the rising cost of living and it is just as well not to draw too sharp a distinction.

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[1]Cf. Chapter 6, Fiscal and Monetary Policy.

[2]One leading economist, Professor James D. Angell of Columbia University, denies that "increases in the prices of raw materials, of other producers' goods in general, or of anything else not bought by individuals for consumption are in themselves 'inflation' ".

Before leaving the meanings of the term inflation, it may be helpful to comment on the particular point which led Mr. Towers to avoid the use of the term.

If people regard rising prices as a temporary phenomenon, which is likely to come to an end in the not-too-distant future or to be succeeded by a fall in prices, they will be content to keep some of their assets in liquid form, that is in bills, coins, bank deposits or in readily negotiable government securities. As a matter of fact, they may actually build up their liquid reserves so as to have enough to buy or replace needed articles at higher prices. (Retention by corporations of larger reserves for replacement or depreciation is a case in point). But if there is a widely held opinion that price rises may be long continued or even accelerated, holders of savings and receivers of current money incomes may distrust the future value of money to such an extent as to attempt, at their first convenience, to turn money units into some "real" asset whose "real" value will remain stable, or, preferably, increase as price levels rise. Carried to its limit this process becomes runaway or hyper-inflation, from which Germany, for example, suffered in the early 1920's, and which China and a number of other countries have endured during and after World War II.

In all periods of inflation there is probably a good deal of hedging against a further rise in prices which has the effect of accelerating the price rise itself. When the term inflation is used in this report, in reference to what has been happening in Canada, it does not, however, imply runaway inflation, but something very different in kind as well as in degree.

The Generation of Inflationary Price Movements

The point of particular significance that emerges from the foregoing discussion is that a general rise in prices, or price inflation, is a symptom of too much spending in relation to the available supply of goods and services. Or to adopt the expressive but rather overworked phrase, too much money is chasing too few goods.

How does it come about that too much money is chasing too few goods? The facts of the Canadian situation which led to the recent rise in the cost of living will be discussed at length in subsequent chapters of this report. Here a few general comments will suffice to indicate the nature of the problem.

In times of full employment (and this situation has prevailed in Canada for some time) all the labour and productive resources of the country are engaged in:

(a) producing consumers' goods and services for domestic consumption,

(b) producing non-consumers' goods and services for domestic consumption; that is, machinery, factory buildings, etc.,

(c) working for governments (including selling goods to governments)

(d) producing goods for export.

Suppose now that without any other change in the situation, an attempt is made to increase the quantity of labour and resources being used for any of these purposes. Quite clearly, assuming full employment, such an increase can only take place if less labour and fewer resources are used elsewhere.

The essence of an inflationary situation is that attempts are made by individuals and groups to attract increased quantities of labour and resources to their own use and that these attempts are resisted.

Consider, for example, what happens when, as at the end of a war, business men decide that the time has come to embark on a program of expansion or that repairs and replacements can no longer be deferred. With money previously accumulated or borrowed for the purpose, they go out to find the necessary additional labour, raw materials and equipment to do the job. Where are they to come from? Assuming full employment and no increase in productivity, they can come only from one or all of the other categories. That is, labour and resources must be withdrawn from the production of consumers' goods and services or from government use or from production for export, unless, of course, some of the requirements can be imported from abroad.

But, on the other hand, spending by business men for capital investment puts money into the pockets of wage and salary earners and business men who work on the projects or supply the materials.

So, unless adequate counter measures are taken, or there are some other offsetting influences, the chase begins. Business men, intent on expanding their productive facilities, endeavour to bid resources away from other uses and from each other. Everyone's income and ability to pay being just as great as before, however, there is resistance to this process of transferring resources. The resulting competitive bidding-up of wages and prices adds to incomes and to the general willingness to spend. Thus the spiral of rising prices moves upward.

Or consider what happens when prices rise in countries from which we buy or to which we sell. What this really means is that non-Canadians want to buy more of our goods or want to keep more of their own goods at home, either because their demands have risen or their alternative sources of supply have been reduced. The basic situation is no different from an internally generated inflation except that the competition for labour and resources is on a world-wide scale rather than on a national scale.

These are merely two illustrations of how an inflationary price movement can get underway and feed on itself. But they serve to show how difficult it is to find the "cause" of inflation.

The business man or farmer who expands does so because of a present or anticipated shortage of consumers' goods and services at home, or because of enlarged export markets. He can hardly be blamed for attempting to increase his productive facilities to meet the known and anticipated demands. But while labour and other resources are being used to build new machinery and factories, they cannot at the same time be used to make shoes and build houses.

The business man who offers to sell for what he believes the market will justify is following normal and legitimate business practice, providing that he does not purposely restrict production to capitalize on a monopoly position or indulge in practices in restraint of trade which have the effect of holding prices at a level higher than they would have been had competition been permitted. The farmer who sells at the going market price is in much the same position.

Wage and salary earners, too, are following a natural enough course in striving to increase their earnings, for, on the one hand, they are faced with rising costs of living, while, on the other hand, employers may seem to be well able to afford a higher wage bill. Yet rising wages mean higher incomes available for spending, and, unless based on greater productivity, mean higher costs.

Consumers, for their part, have a normal human desire to maintain and, if possible, raise their standard of living. For some of them, increased spending is not a matter of choice but of necessity. Those who have incomes which they can either spend or save are not particularly conscious of contributing to inflation if they decide to buy the washing machine or car for which they have been saving or even to go into debt for this purpose on the strength of their expected incomes.

Even larger government expenditures may be unavoidable. When the general level of wages and salaries goes up, governments must follow to some extent at least or lose their employees and thus impair vital public services. It may also seem imperative to build new roads and bridges or to install a new public utility even though costs are rising. Most important of all, the international situation may call for foreign aid and large defense expenditures. Turning to so-called "transfer payments", it may be argued that it is inflationary for governments to put money into the hands of consumers in the form of family allowances, increased old age pensions, veterans' gratuities, re-establishment credits, etc., but from other points of view these are wholly justifiable and desirable expenditures.

In a country like Canada, which is so dependent upon foreign trade, external influences are of major importance in their effect on the internal price level.[1] When the world price of cotton goes up, Canadians must pay more or go without. The same is true of nearly all imported goods because Canadian consumption is only a relatively small fraction of total world demand. So it is with exports. When United States buyers are willing to pay more for newsprint or cattle, Canadian producers may expect consumers at home to pay equivalent prices.

The fact of the matter is that a serious rise in prices can occur even though everyone works efficiently and behaves in what seems to him or to her to be a perfectly reasonable manner. There may be no villains in the piece, only honest, hardworking citizens.

[1]Cf. Chapter 4, External Influences on the Canadian Price Level.

REMEDIES FOR INFLATION

> "Rising prices can, therefore, be cured only by removing the excess of demand over supply. This means either increasing the rate at which goods are being offered in exchange for money, or decreasing the rate at which money is being offered in exchange for goods, or both together. Any other attempt to cure, no matter how different it looks, can succeed only if it somehow or other increases the supply of goods or decreases the rate of spending."[1]

While the principle can be stated in these elementary terms, the working out of an appropriate line of action to remove or reduce the excess of demand over supply is by no means easy, for there are many conflicting considerations, political and social as well as economic, to take into account.

It is obviously better, other things being equal, to increase the supply of goods to be enjoyed than merely to decrease the rate of spending. Therefore, the first and primary aim of public policy during inflation should be to remove any unnecessary hindrances in the way of increased supply, such as restrictive trade practices or unnecessary import barriers, and to give every possible encouragement to increased efficiency of production.

Without in any way underestimating the value of efforts to remove restrictions on trade and to improve production efficiency, it may be assumed, however, that the results during a period of full employment will be small relative to total output and can hardly be expected to come quickly. Supplies available may, of course, increase, not as a result of greater production within the country or the removal of barriers to trade, but simply as a result of the restoration of production in countries which are recovering from the effects of war. If demands still outrun supply, the inflation can be held in check only by reducing the rate or flow of spending.

Unfortunately this is not primarily a matter of curtailing what might be called unnecessary expenditure, although such curtailment will undoubtedly help and should be encouraged. It is likely to be a matter of curtailing expenditure which most of those concerned consider necessary and certainly desirable. For this reason not too much reliance can be placed upon voluntary restraint to check a strong inflationary movement. As we have pointed out before, those who should exercise the restraint find it difficult to believe that their particular activities, which from their own point of view appear quite reasonable, should be curtailed.

> "If consumers could be persuaded by appeals . . . to spend less and save more, if business men could be persuaded to let their inventories run down and to postpone all plant extensions not urgently necessary; if farmers could be persuaded to send more cereals to market and feed less to livestock; if bankers could be persuaded to cut down on loans to business or to consumers; if labor leaders could be persuaded not to ask for higher wages—the inflation could be brought to a halt without any exercise beyond present levels of the anti-inflationary

[1] A. P. Lerner, "Rising Prices", The Review of Economics and Statistics, February, 1948, p. 24.

powers of the federal government. As I have already indicated, I don't believe that there is any experience with inflation, past or recent, foreign or domestic, to warrant faith in the efficacy of this method. It is likely, moreover, that extensive resort to it creates psychological obstacles, on the part of the exhorters against adoption of less unctuous methods, and on the part of those exhorted against recognition that more coercive measures are required and should be submitted to."[1]

Hence, if a serious effort is to be made to check rising prices, the people as a whole, acting together through the instrument of government, must agree to apply restraints of general application. In some respects inflation is like the traffic problem in a big city. It can only be dealt with effectively by the enforcement of rules that keep motorists from getting in each other's way. So that there may be no misunderstanding, let us say at once that voluntary restraint is most desirable during an inflation. For, to return to our simile, traffic rules are of little avail unless motorists use ordinary common sense in their driving.

Leaving aside for the moment questions of constitutional jurisdiction, government, in the widest sense, is in a position to reduce the volume of spending by:

(i) levying higher taxes which have the effect of leaving less money in the hands of the public for spending;

(ii) discouraging borrowing and the raising of capital; such as by higher interest rates and by putting indirect pressure on the banking system to curtail lending;

(iii) encouraging saving and the deferment of expenditures; such as by government bond-selling campaigns and by postponement of its own capital expenditures;

(iv) controlling prices, wages and supplies and thus making it illegal for people to spend as much as they would otherwise have done.

However much these four methods differ from each other, they have one element in common. All four are extremely difficult to apply and are bound to encounter opposition. While there is widespread support for the idea of halting an upward movement in prices, experience has shown that there is a good deal less support for the particular things that have to be done to put the idea into practice.

Taxes are a case in point. It can be demonstrated that additional taxation of the appropriate kind does not really impose any additional burden on the community for it merely takes away money that would otherwise have gone into paying higher prices. Nevertheless, "there will always be resistance to taxation if only because of the feeling that it would be very pleasant for anyone if it were only other people who were taxed to keep spending down".[2]

[1] Jacob Viner, "Can We Check Inflation", The Yale Review, December, 1947, No. 2, p. 208.
[2] A. P. Lerner, Loc., Cit., p. 25.

Higher interest rates encounter opposition of a different kind. Those who invest in government bonds do not like to see a drop in their market value, which is the obverse of a rise in interest rates. Nor do those desiring to borrow money, and this includes the government itself, welcome having to pay higher rates of interest. If anyone is inclined to doubt such a statement, consider what the reaction would be to an increase in the rate of interest on government sponsored housing loans.

In applying fiscal and monetary measures (which include the first three of the methods listed above) the government always has to be careful that it does not produce effects opposite to those which it intended. While taxes, for example, undoubtedly reduce demand, they may be carried to the point where they have an important effect on incentive and thus interfere with supply. Moreover, in its anxiety to mitigate the evils of inflation, the government must be careful not to go too far and bring upon the community what is an even greater evil, serious unemployment.

The fourth method, prices and wage control, and the control of supply, raises considerations of a different order. Whatever difficulties there may be in applying fiscal and monetary measures and of securing a sufficient degree of acceptance for them, the government is not directly involved in the price-making process. Fiscal and monetary measures are designed to reduce the over-all excess of demand. Their effect on prices is indirect and general, like the effects of a decline in demand occurring for any other reason. Direct controls, on the other hand, simply forbid the excess of demand to be reflected in higher prices. They must be administered and enforced and they inevitably involve some degree of government control of production and distribution.

As Mr. K. W. Taylor, Chairman of the Wartime Prices and Trade Board, said to the Special Committee on Prices:

> "Our economic system can be fairly accurately described as a 'free economy'—predominantly based upon and organized by a system of free prices—free that is within the general framework of the law. In a free economy prices constitute the main guide to production, and are at the same time the balance-wheel of supply and demand. Rising prices for one commodity indicate relative shortage and invite both increased production and economy in consumption; falling prices, in turn, indicate relative surplus and produce a tendency to ease up on production and to increase consumption. In other words, it is this constant flexibility of prices that helps to keep production and consumption in reasonable balance and harmony.
>
> If a community embarks upon a system of fixed or administered prices, it must invent some substitute for the flexible price system as a means of finding out what people really want, and what they want more of, and what they want less of. Failing such a substitute, the principle of freedom tends to disappear, and the government has to decide what will be produced and in what

quantities. The free price system has many imperfections, but there has not yet been developed any other system that will preserve in essence what I call a 'free economy'."[1]

In subsequent chapters we shall discuss at considerable length how the Canadian government has used these various methods of restraining inflation and how they might be used in the future. Enough has been said to indicate the general nature of the considerations involved, which is the purpose of the present chapter.

[1]Evidence, Special Committee on Prices, pp. 60-61.

2

THE COURSE OF PRICES AND NATIONAL INCOME

Situation Immediately Preceding The Outbreak of War

THE economic situation in Canada at the outbreak of war was not one in which resources were fully employed. It may be easier to picture the position if we recall briefly what had taken place since the economic collapse of 1929. During the early 'thirties Canada, along with the rest of the world, was in the throes of a depression. The demand for goods had shrunk, prices had declined sharply, production was at a low ebb and unemployment, with its consequent social evils, was widespread and severe. Business profits were low and the outlook for future profits was either poor or, at the best, uncertain. It should be borne in mind that the level of prices is not of great significance in itself; it is of importance only in relation to other factors. To the consumer what matters is the trend of prices in relation to his income. It is quite conceivable that a slightly higher price level might accompany or even stimulate such an increase in economic activity that incomes would rise by a substantially greater degree. To the producer the important relationship is between prices and production costs. Normally in a depression most producers find that they cannot reduce their costs as fast as prices are falling, hence the decline in profits.

From 1933 to the summer of 1937 business steadily improved. The demand for goods increased and simultaneously prices rose. With this recovery of prices, profits and the anticipation of profits also recovered and business activity expanded very materially. Even by 1937, however, the point had not been reached where many industries found that the demand for their product was in excess of their capacity to meet it with their existing plant and equipment. Consequently there was relatively little construction of new plant. In the summer of 1937 this trend towards recovery was abruptly interrupted by an extremely sharp business recession in the United States, which spread to Canada. During the spring of 1938 this recession had reached its low point and the recovery trend was resumed, but more slowly than previously.

As a result Canada, when confronted with war in September, 1939, was no longer in a depression but was nevertheless still far from experiencing what may be termed "conditions of prosperity". There existed what might be called by a more descriptive term, "underemployment of resources". Unemployment was still considerable. Adequate records in all spheres of economic activity were not available at that time, but subsequent studies have estimated that in June, 1939, there were approximately 895,000 unemployed, or 17.1 per cent of the civilian labour force.[1] Few plants were

[1]Appendix to the Budget, 1948-9. For comparison, the unemployed as at September 4, 1948, were estimated at 67,000, 1.8 per cent of the civilian labour force.

operating at full capacity, and consequently there was still little incentive for new industrial construction.

There was also little incentive for residential construction, because, while the increase in income which had taken place since 1931 had caused many families who had been living together to "undouble" and had thus reduced vacancies, there was still in general, ample living accommodation for those who required it. This low level of activity in the construction industry was a concomitant of the general underemployment of resources, depressed prices and the high percentage of unemployment.

Canadian agriculture was in a position of serious disequilibrium. Farm prices had recovered much less of the decline than had prices in general. In 1939 the Canadian general wholesale price index stood at 75.4 on the base 1926=100, while the index of wholesale prices of Canadian farm products, on the same base, stood at only 64.3. The reason for this lag in the farm price index can be attributed mainly to field crops, for that index stood at 54.2 as compared with 81.2 for the index of animal products prices. This failure of grain prices to recover was a major cause of the low level of agricultural income and this had important social consequences as well as economic repercussions. The latter extended to manufacturers, distributors, transportation and finance companies, and in fact to almost all sections of the Canadian economy.

Two important conclusions emerge from this brief survey of the Canadian economy as it was in 1939. The first is that the situation then existing was not one to which anyone would wish to return. Consequently since a price level is to a considerable extent the result of prevailing economic conditions, the Canadian price level in 1939 should not be regarded as a proper economic one against which to assess the merits or demerits of the present price level.

The second conclusion is that there was no immediate danger of any general inflationary pressure, for there were ample unemployed plant and labour to permit a considerable expansion of the production of most goods and services; this provides a background for much of the discussion of wartime developments in the following chapters. The imminent risk, in fact, was that there might be deflation and an increase of unemployment resulting from business men cancelling prospective plans due to the uncertainties caused by the outbreak of war. There were, however, certain specific commodities, for example sugar, which were normally obtained mostly from abroad and where an immediate interruption of supply was threatened. What was described in a previous chapter as "bottleneck inflation" could therefore have taken place, and furthermore, opportunities presented themselves in these and other cases for excessive pricing. Both bottleneck inflation and profiteering could have had highly disturbing effects, as is described in other chapters, and in general would not have raised prices in these commodities where some increase was desirable or would have raised them to an extent far greater than desirable.

THE COURSE OF PRICES SINCE 1939.

Description of Two Main Indicators of the General Price Level

The two main indicators of the general price level are the cost-of-living index and the general wholesale price index. The cost-of-living index measures changes in the level of retail prices of goods and services commonly used by urban wage-earner families. Prices are obtained in stores and other retail outlets on the first of each month. They are then sent to Ottawa where they are submitted to the statistical process of weighting and averaging in order to arrive at a single figure which represents the combined effect of all of the individual price changes. The cost-of-living index is supplemented by a farm cost-of-living index which runs closely parallel to it. Both these indexes are described in detail in Chapter 1, Vol. III, the cost-of-living index.

The general wholesale index measures changes in the price level of a wide variety of primary and manufactured commodities such as wheat, flour and bread, pig iron, steel and hardware, lead, copper and zinc, lumber, wood pulp and newsprint, textile raw materials and fabrics, coal and a variety of chemicals.[1]

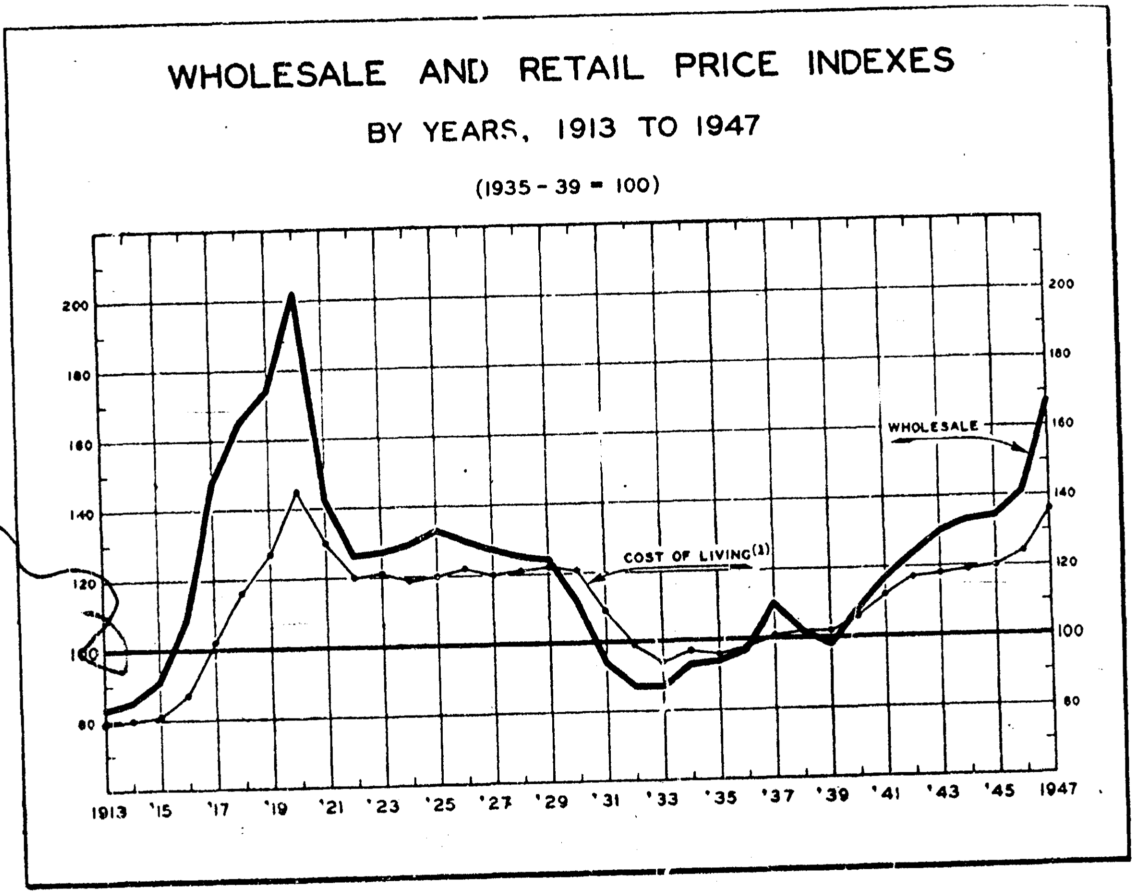
At the present time the cost-of-living index is approximately 60 per cent above pre-war and the wholesale index is 105 per cent above pre-war. But as has been stated above, the period 1935 to 1939 which is used as a base period for these indexes was one of extremely low prices. Chart I shows that in terms of the longer historical perspective, prices in the base period were considerably below the remarkable plateau shown from 1922 to 1929. The chart also shows that both wholesale and retail series had not, in 1947, reached the same heights as shown in 1920, although the cost-of-living index subsequently exceeded its 1920 peak.

From 1913 to the peak in July, 1920, the cost-of-living index rose from 79.1 to 150.6, an increase of 90.5 per cent. From 1939 to September, 1948, it rose from 101.5 to 158.9, an increase of only 56.6 per cent. In other words, the extent of war and post-war inflation as measured by the cost-of-living index, has been smaller than in the earlier period. A similar result is obtained by a comparison of wholesale price indexes for the two war and post-war periods, when they are examined with respect to their pre-war standings. The general wholesale index rose from 83.0 in 1913 to 212.6 in July, 1920, that is, by 156.1 per cent, as compared with the smaller increase of 109.8 per cent between its standing of 97.8 in 1939 and 205.2 in September, 1948.

[1]Approximately five hundred carefully specified wholesale commodity prices are entered each month. They are obtained directly from buyers or sellers in the majority of cases, and secondary or published sources such as trade journals are consulted only in exceptional cases. Terminal markets, organized produce or livestock exchanges and other established pricing points are consulted in a number of important cases. The price as at the fifteenth of each month is taken for most items, with monthly averages being used to represent the more sensitive commodity markets. These prices are then weighted and combined to give the various groupings shown in the tables. The weighting system is representative of quantities of domestic production marketed or exported, plus imports, with modifications to prevent pyramiding of weights at various stages of processing.

An explanation of the weighting system and the method of treatment of subsidies and a complete monthly record of the main commodity price indexes are available in Wholesale Prices Annual Supplement, 1946, Dominion Bureau of Statistics, Ottawa, 1947.

CHART I



Source: Dominion Bureau of Statistics, Ottawa.

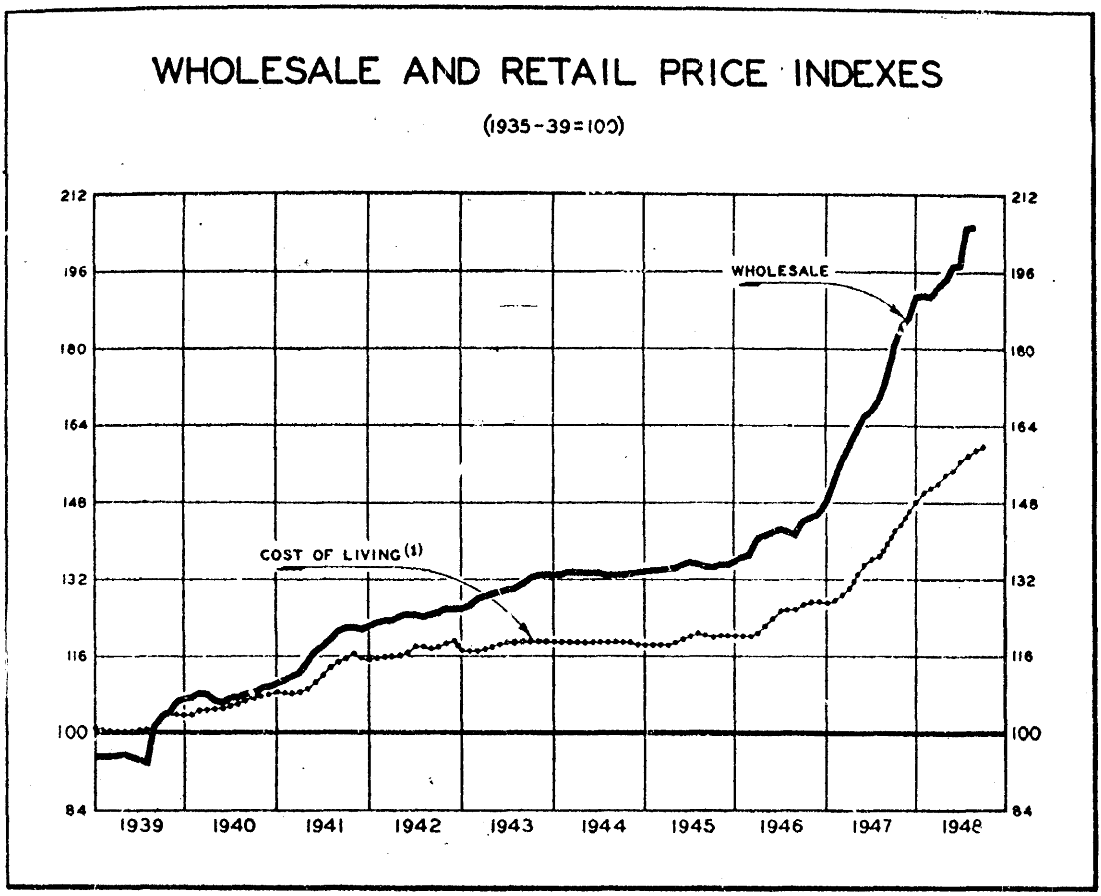
(1) The cost-of-living index is used in lieu of a retail price index. Tests show that a retail price index especially constructed for deflating retail sales will move in close conformity to the cost-of-living index and especially to that part of it which is published as "commodities only in the cost-of-living index". The latter is shown at page 24.

Changes in General Price Levels, 1939 to September, 1945

There was a small flurry in prices between August and October of 1939. The wholesale index rose 10 points and the cost-of-living index three points. One of the important causes was the increase in grain prices. The foreign exchanges had an influence as well. Exchange control was instituted on September 15, 1939. The Canadian dollar was fixed at a 10 per cent discount in terms of the United States dollar, and as a result, exporters received from the Foreign Exchange Control Board $1.10 Canadian for each United States dollar they realized on their sales. Articles such as pulp, newsprint, shingles and non-ferrous metals were priced in export markets in the general wholesale index, and the conversion from United States dollars to Canadian dollars at the new rate caused part of the jump in the wholesale index.

There was a minor pause in these indexes at the time of the fall of France, but they soon began to climb at an accelerating pace. The next point to notice on the graph is the small drop in prices in November, 1941. By this time the wholesale index was up 20 points and the cost-of-living

Chart II



Source: Dominion Bureau of Statistics, Ottawa.
(1) See footnote Chart I.

index 16 points. Chart II shows a small drop in the next two months for both series and this was due to the establishment of retail price ceilings. Prices were established at their September 15 to October 11 maxima. Subsequent increases were controlled and they were much less rapid. The drop in the cost-of-living index at the end of 1942 was due to the consumer subsidy of two cents a quart on milk.

From 1942 onward the cost of living remained fairly constant. The price line was held for nearly four years, with the result that by September, 1945, the cost-of-living index had gained less than three points. During this time, however, heavy pressures were gathering, stemmed only by large scale subsidies and the willingness of the business community to submit to wartime controls. Chart II shows that the general wholesale index continued to climb even though retail prices did not. By September, 1945, the general wholesale index stood at 134.

September, 1945, to September, 1948

The growing disparity between wholesale and retail price levels was checked after September, 1945, and thereafter the two indexes ran a more parallel course. There was a period of hesitancy, for eight months, while the wholesale index held steady near 134 and the retail index held close to 120.

The return to par of the Canadian dollar in July 6, 1946, modified but did not stop the upward trend of the general wholesale price index. Imports were cheaper but this saving was partly taken up by gradually increasing import prices, partly by larger profit margins for importers, and reduced subsidies. The general wholesale price index cannot be used to explore these factors separately. This index contains the prices of goods offered for sale by importers rather than the import prices paid by them. In a few cases (pottery, carbon black, crude oil and sulphur are among the few covered by the sample) the prices of the imported articles did show a temporary decline but soon regained or exceeded their former level. Newsprint and pulp exporters apparently raised their United States prices in order to cover their reduction in terms of Canadian dollars realized.

By September, 1946, a year later, the general wholesale index was at 142 and the cost-of-living index at 126, rises of eight and six points respectively. At this time price control on all items except sugar, cotton and rents was removed in the United States.[1] The effect on prices of our imports from the United States was noticeable. Partly because of this, our wholesale and retail indexes began to increase at the rapid rate of approximately two points per month. A slight recession in food prices in the early spring of 1947 was sufficient to halt the general indexes for a month. This pause lasted three months in the United States and it was a common view then that inflation was over, that a plateau of level prices was about to take form.

The year 1947 had been one of gradual decontrol and removal of subsidies. By December, 1947 the outline for decontrol was practically complete. With the exception of rents, sugar and its products, certain items affected by the emergency import control program and items more or less directly affected by the British food contracts, such as bacon, flour and wheat, decontrol was completed by January, 1948.

The general wholesale index rose from 174 in September, 1947, to 205 in September, 1948. The cost-of-living index rose from 139 to 159 during the same period. These were larger than previous annual increases, reflecting the increased inflationary pressures.

Comparisons with United States and United Kingdom Price Indexes

Wholesale and retail price indexes are calculated by much the same technique in Canada, the United States and the United Kingdom. The weighting systems differ according to the different consumption habits and industrial structures, but the methods used are in effect the same, so that it is reasonable to use these indexes for purposes of comparison.

[1]Cf. Chapter 3, Price Control and Rationing.

Prices in the United Kingdom have risen the most. Their retail price index may be estimated at approximately 75 per cent above pre-war[1] and their wholesale index reads 221.6 at September, 1948, on a 1935-1939 base. The recent change in their retail price index, or cost-of-living index as it was formerly called, is explained in detail in a footnote to Table 3 in the Statistical Supplement (Volume III). In brief, the British discontinued their cost-of-living index in June, 1947, when it became apparent that its list of contents was no longer adequate to measure changes in the level of retail prices. A new index was begun but there was no official overlap with the old one, or with pre-war prices. Incidentally, the rise in the British price level has been a controlled one, to the present time.[2] Their controls include subsidy payments, allocation of supplies, and detailed import-export arrangements.

On the same pre-war base of 1935-1939=100, the United States has a consumer price index reading 173.6 at September, 1948, and a wholesale price index of 209.1 at the same date. Canadian prices have gone up less than those of Great Britain or the United States. The indexes in Canada are 159.6 for the retail and 205.2 for the wholesale. Price levels in other countries might be mentioned briefly. The other Dominions, particularly Australia and New Zealand, have experienced less price rise, their cost-of-living indexes being at least 10 per cent below the Canadian index at September, 1948. European countries have experienced varying degrees of inflation and in some cases hyper-inflation. In general, those suffering most from the war were hardest hit by the subsequent and combined effects of monetary expansion and wartime dislocation of the machinery and channels of production and trade. Several of them, particularly Denmark, Sweden, the Netherlands and Norway, now appear to have stabilized their price levels. The only point to be made in this brief account of Canadian and other price levels is that we are relatively well off by comparison.[3]

Wholesale Price Changes, 1939 to 1945

Wholesale prices in 1939 had recovered somewhat from the lowest points of the depression in 1933 and 1934, but they were still approximately 20 per cent below their pre-depression levels. Many of them had recovered by 1937, only to slip back again in the recession of 1938. The incidence of depression had been most severe for those raw materials and commodities which were traded in world markets. Wheat averaged 96 cents per bushel during the period 1935 to 1939. Steers at Toronto averaged $6.17 per cwt. Hogs sold for $11.97 per cwt. Bacon for 26 cents per pound. Newsprint averaged $38.29 per ton. Fir dimensions such as 2 x 4 sold for $16.00 per thousand board feet.[4] The general wholesale price index on a 1926 base stood at 75.4 in 1939. Canadian farm products were at 64.3 per cent of their 1926 average, being held down particularly by the field products at 54.2, as contrasted to the animal products at 81.2.

[1]The unofficial estimate given was prepared by Mr. R. G. D. Allen and published in the London and Cambridge Economic Service Bulletin for February, 1948.
[2]Autumn, 1948.
[3]Further detail on price series of all countries may be found in the United Nations Statistical Review (monthly).
[4]Further examples, together with present prices, are given in Table 6 of the Statistical Supplement in Vol. III.

Other price indexes were considerably higher. The iron and steel group in 1939 stood at 98.5 per cent of its 1926 average. Non-metallic minerals such as coal and petroleum averaged 85.3.

In summary, some prices were quite low in terms of their long run averages, while others had nearly recovered. The year 1939 was not one of those years such as 1926, when an even flow of production and an even balance of the forces of demand and supply all combined to create a stable price structure. The period from 1922 to 1929 was one of expanding production, of housebuilding and roadbuilding, of rapid growth in automobile assembly and related factories, and of the expansion of electrification. The stable price level was without doubt an important factor in the gains in output and efficiency which occurred during the period.

With these considerations in mind we may now proceed to examine the details of behaviour of wholesale prices from 1939 onward.

The main classifications of the wholesale price record are shown in the following table. In general, those that were lowest in 1939 subsequently rose most rapidly. By September, 1945, field products of Canadian farms had risen by 100.7 per cent, or from 54.2 to 108.8. Wood and paper products had increased from 79.2 to 120.5, that is, by 52.1 per cent.

TABLE 1

WHOLESALE PRICE INDEX GROUPS
1939 TO SEPTEMBER, 1945

(1926=100)

	1939	September 1945	Per Cent Increase September 1945 over 1939
General Index	75.4	103.3	37.0
Vegetable Products	63.7	96.3	51.2
Animal Products	74.6	107.7	44.4
Textile Products	70.0	91.8	31.1
Wood Products and Paper	79.2	120.5	52.1
Iron and Steel Products	98.5	117.1	18.9
Non-ferrous Metal Products	71.3	78.9	10.7
Non-metallic Mineral Products	85.3	101.4	18.9
Chemical and Allied Products	79.8	99.2	24.3
Producers' Goods	70.4	100.3	42.4
Consumers' Goods	75.9	97.9	29.0
Building and Construction Materials	89.7	127.0	41.6
Raw and Partly Manufactured	67.5	105.2	55.9
Fully and Chiefly Manufactured	75.3	94.0	24.8
Canadian Farm Products, Total	64.3	112.8	75.4
Field	54.2	108.8	100.7
Animal	81.2	119.5	47.2

Source: Table 4, Chapter 13, Vol. III, Statistical Supplement.

Wholesale Price Changes, September, 1945, to September, 1948

From September, 1945, to September, 1948, the general gain continued. But there was a balancing out among the various groups so that those which had previously risen most rapidly slowed their rate of increase and those which had not previously risen to a large extent now showed very large increases. For instance, field products of Canadian farms increased by only seven per cent, whereas animal products increased by 57.7 per cent. Non-ferrous metals, the index for which had held steady during the war period, increased by 97.5 per cent. Textile products rose 74 per cent, but wood and paper products had previously shown a larger increase and during this second phase they increased only 57.1 per cent.

The following table shows the main groups of wholesale prices at September, 1945 and September, 1948.

TABLE 2

WHOLESALE PRICE INDEX GROUPS

(1926=100)

	September 1945	September 1948	Per Cent Increase September, 1948 Over September, 1945
General Index	103.3	158.2	53.1
Vegetable Products	96 3	138.5	43.8
Animal Products	107.7	178.4	65.6
Textile Products	91.8	159.8	74.1
Wood Products and Paper	120.5	189.3	57.1
Iron and Steel Products	117.1	165.0	40.9
Non-ferrous Metals	78.9	155.8	97.5
Non-metallic Minerals	101.4	137.1	35.2
Chemical and Allied Products	99.2	126.8	27.8
Producers' Goods	100.3	161.4	60.9
Consumers' Goods	97.9	143.8	46.9
Building and Construction Materials	127.0	200.2	57.6
Raw and Partly Manufactured	105.2	162.7	54.7
Fully and Chiefly Manufactured	94.0	143.8	53.0
Canadian Farm Products, Total	112.8	143.4	27.1
Field	108.8	116.5	7.1
Animal	119.5	188.4	57.7

Source: Table 5, Chapter 13, Vol. III, Statistical Supplement.

The process of averaging which is necessary to arrive at the above group indexes conceals several outstanding cases of individual price changes. These are given in detail in Statistical Supplement in Vol. III, Tables 5, 6 and 7. The six highest indexes for sub-groups of the general wholesale index, on a 1926 base, at September, 1948, were as follows:

Vegetable Oils	320.5
Tea, Coffee, Cocoa	214.4
Livestock	279.1
Lumber	273.7
Lead, etc.	219.2
Coke	219.2

The lowest indexes were as follows:

Rubber and Products	73.6
Vegetables (including potatoes)	92.2
Furs	63.6
Rayon Fabrics	97.1
Rayon Yarns	63.6
Building Stone	80.2
Inorganic Chemicals	94.0
Explosives	85.8

Among individually specified items, the index for steers on a 1926 base was 335.7 in September, 1948. They then sold for $21.75 per cwt. Hogs were at $32.88 per cwt. and bacon at 60 cents per pound in Toronto wholesale markets. The fir dimensions previously mentioned were priced at $52.50 per thousand board feet as compared with $16.20 per thousand in 1935-1939. Lead had increased from $8.16 per cwt. to $17.82. Wheat sold domestically for $2.05 per bushel, less subsidies drawn by millers. It sold to the United Kingdom for $2.05 per bushel and to others the "Class II" or "commercial export" price was $2.37 per bushel in September, 1948.

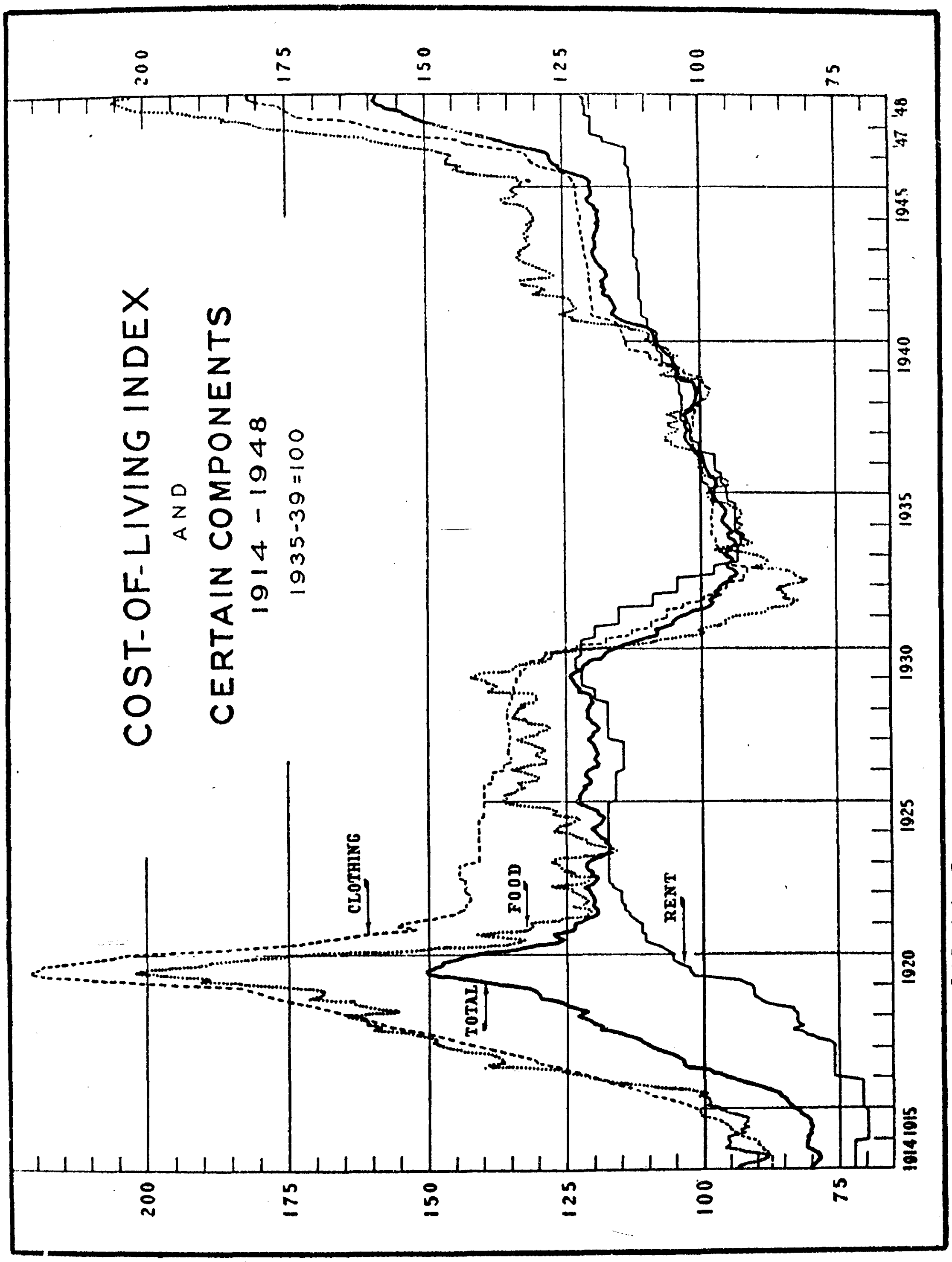
Retail Price Changes, 1939 to 1945

The cost-of-living index contains both commodities and services. Among the services, rent is the largest item and inasmuch as it has been subject to control, it has had the effect of holding down the general average. With rent and services disregarded in the index, the remaining items give a special index for commodities only. By September, 1945, this index had risen to a level of 126.9. Foods were the major contributing factor in the general price rise. They were 34 per cent above pre-war and among the foods, meats were 63 per cent above pre-war.

Three of the main components of the cost-of-living index, food, clothing and rent, are shown on Chart III.

In the following list, cereals were still low in 1945, largely due to the flour subsidy, which held domestic wheat at $1.25, flour at the equivalent of 77 cents per bushel of wheat, and bread at eight cents to 10 cents per loaf, depending on size. The remainder of the items were nearly all within 10 per cent either way of the general index of 119.9. This close grouping about the control point stood in contrast to the wholesale record, which showed very wide variations. There were three main reasons for the

CHART III



Source: Dominion Bureau of Statistics, Ottawa.

smaller differences among retail series. First, ceilings were applied with most rigour at the retail end. Second, wholesale prices of raw materials were traditionally more variable, many of them depending on world markets. Further, as has been stated, certain of them were unduly depressed in 1939 and could, therefore, when controls were instituted, be afforded a larger increase in order to obtain expanded output. Third, producer and other subsidies were paid on certain items in the wholesale record and these were included as part of the price for purposes of the general index calculation.[1]

TABLE 3

COST-OF-LIVING INDEX AND SUB-GROUPS

(1935-1939 = 100)

	September, 1945 Indexes
TOTAL	119.9
Commodities only	126.9
Foods	134.2
Dairy Products	112.4
Eggs	155.8
Cereals	99.7
Meats and Fish	163.4
Dry Groceries	134.1
Vegetables	145.1
Fruits	148.6
Rents	112.1
Fuel and Light	106.7
Coal	118.6
Coke	124.1
Gas	105.1
Electricity	86.3
Clothing	122.2
Men's Wear	126.5
Women's Wear	122.7
Piece Goods	119.3
Footwear	112.5
Home Furnishings and Services	119.4
Furniture	127.9
Floor Coverings	119.9
Furnishings and Textiles	134.2
Hardware	127.5
Dishes and Glassware	122.7
Telephone	103.3
Laundry	102.9
Cleaning Supplies	107.6
Miscellaneous	
Health	109.4
Personal care	111.3
Transportation	109.4
Recreation (inc. tobacco)	116.9
Life Insurance	99.9

Source: Table 9, Chapter 13, Vol. III, Statistical Supplement.

Retail Price Changes, September, 1945 to September, 1948

The cost-of-living index was at a controlled level of 119.9 in September, 1945. By September, 1948, it had risen to 158.9, a rise of approximately 40 points, most of which occurred during 1947 and 1948. The rise was

[1]See "Wholesale Prices, 1913-1946, Annual Supplement", Dominion Bureau of Statistics, Ottawa, 1947, p. 39. The Canadian Farm Products Prices Index includes producer subsidies and participation payments when they are announced.

most rapid in the fall of 1947, two or three points every month. Contributing items are detailed in the following table where it will be seen that the "commodities only" components of the index were considerably higher, at 183.5, in September, 1948.

TABLE 4

COST-OF-LIVING INDEX AND SUB-GROUPS

(1935-1939 = 100)

	September 1945	September 1948	Per Cent Increase September, 1948 over September, 1945
TOTAL	119.9	158.9	32.5
Commodities only	126.9	183.5	44.6
Foods	134.2	203.9	51.9
Dairy Products	112.4	196.9	75.2
Eggs	155.8	185.3	20.5
Cereals	99.7	145.8	44.2
Meats and Fish	163.4	279.5	71.1
Dry Groceries	134.1	167.2	24.7
Vegetables	145.1	167.2	15.2
Fruits	148.6	156.6	6.7
Rents	112.1	121.0	7.9
Fuel and Light	106.7	128.5	20.4
Coal	118.6	160.7	35.5
Coke	124.1	171.5	38.2
Gas	105.1	100.1	decline
Electricity	86.3	85.2	decline
Clothing	122.2	179.9	47.2
Men's Wear	126.5	196.5	56.9
Women's Wear	122.7	167.3	36.3
Piece Goods	119.3	192.6	61.4
Footwear	112.5	160.9	43.0
Home Furnishings and Services	119.4	164.2	37.5
Furniture	127.9	187.8	46.8
Floor Coverings	119.9	147.9	23.4
Furnishings and Textiles	134.2	204.1	52.1
Hardware	127.5	181.7	42.5
Dishes and Glassware	122.7	174.4	42.1
Telephone	103.3	103.7	.4
Laundry	102.9	131.8	28.1
Cleaning Supplies	107.6	163.8	52.2
Electrical Equipment	a	a	a
Miscellaneous	109.5	124.4	15.6
Health	109.4	131.1	19.8
Personal Care	111.3	144.7	30.0
Transportation	109.4	117.6	7.5
Recreation (inc. Tobacco)	116.9	136.8	17.0
Life Insurance	99.9	104.2	4.3

a) Added in fall of 1947.
Source: Table 9, Chapter 18, Vol. III, Statistical Supplement.

Foods continued their rapid rise to lead the list of items at double their pre-war prices by September, 1948. At this time the food index stood at 203.9. Meats and fish were nearly three times pre-war, at 279.5. It will be noted that cereals (mostly bread) had risen to 145.8 from the previously controlled retail level of 99.7. Actual food prices at the several dates of comparison are shown in Volume III.[1] Other items showing large increases included men's wear at 198.5, piece goods at 192.6, and furnishings and textiles at 20[illegible]. These and similar groups of price increases are the subject of particular studies in Volume III of this report.

National Income, Gross National Product and Other National Accounts

The following description and analysis of the national accounts is given in considerable detail for the reason that they are mentioned repeatedly throughout the report. The accounts include wages, consumer expenditures, profits, investment, exports and similar economic data. It will therefore be useful to have a preliminary idea of the size of each of these and of their relationships to one another.

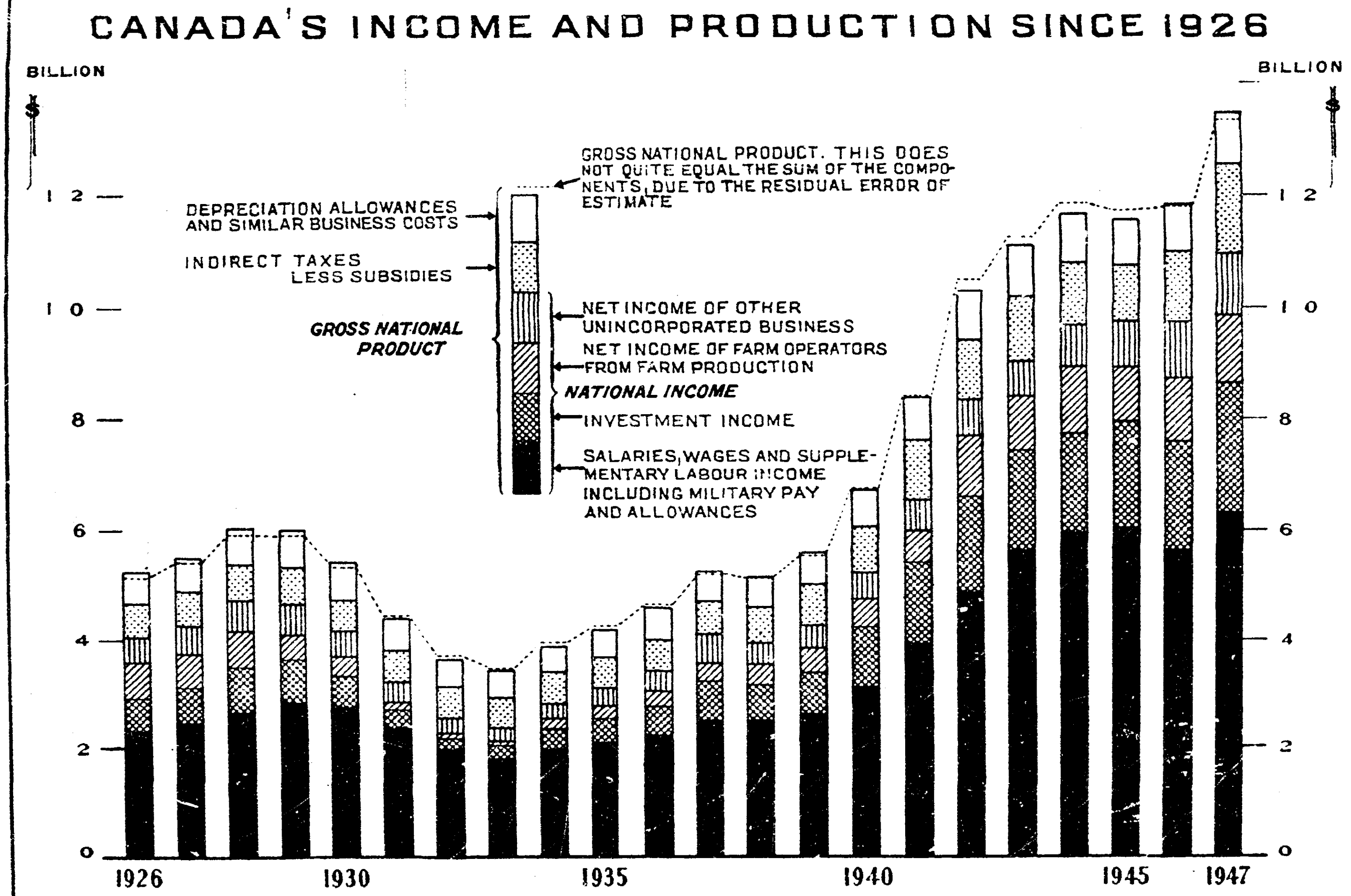
The national accounts provide over-all measurements of production and summaries of the final transactions resulting from the movement of products from the raw material to the finished stage. The output of goods and services is valued in terms of money through the market mechanism and this gives us a convenient common basis on which the separate parts can be totalled and compared.

The value of the total output may increase from year to year, in three principal ways. First, it may increase because prices are rising, but without more goods or services being produced. When the resources of the economy are fully employed the volume of new goods and services produced can only increase slowly from one year to the next. A rapid rise in the value of output under these conditions is due mainly to prices. This accounts for the increase between 1947 and 19[illegible] Second, a rise in the value of output may reflect the increased goods obtained from using more labour and capital. When there are many unemployed resources in the country, even though prices remain stable, a substantial increase in the value of output of goods and services can occur from one year to the next, by bringing into employment the unused resources. Third, a rise in the value of output may take place when the economy uses the same amount of labour and capital more efficiently. This is reflected in long run gains in productivity and technological progress.

The production of goods and services and their distribution involves a myriad of transactions, between manufacturers and wholesalers, between retailers and final consumers, between governments and private individuals, between resident Canadians and foreigners. These transactions are recorded in terms of purchases, sales, incomes, costs and expenditures. It is possible

[1] Table 10, Chapter 18, Vol. III, Statistical Supplement.

CHART IV



Source: Canadian Statistical Review, September 1948.

by proper grouping of transactions to reproduce accounts which measure the market value of the output of goods and services and, at the same time, summarize the main transactions which take place among sectors of the economy. Accounts of this kind are prepared by the Dominion Bureau of Statistics and have been specially arranged and summarized for the present report.[1]

Our discussion is divided into two sections. The first section deals with income and expenditure for the economy as a whole and compares the years 1928, 1933, 1939, 1944 and 1947, for purposes of illustration. The second section deals with income and expenditure accounts for parts of the economy. The years 1939 and 1947 are used for illustration.

Consolidated Accounts for the Economy as a Whole

National Income and Gross National Product

The nation's output of goods and services may be analyzed in terms of costs. For the economy as a whole these costs may be divided into two classes, first, factor costs or the earnings before taxes of Canadian labour and capital in the process of production. These include salaries and wages, interest, rent, corporation profits and net income of unincorporated business. The total of these factor costs is called net national income at factor cost, or more briefly, national income. Second, there are certain costs of production which form part of the market value of goods and services, but are not earnings of capital and labour. These are depreciation allowances for building and machinery, and indirect taxes less subsidies. The grand total of national income, depreciation allowances, and indirect taxes less subsidies measures the market value of the nation's output and is called the Gross National Product. This aggregate measures output without duplication, in that purchases of raw materials and goods in process are not included as such. This is because the production of these raw materials and goods in process involves costs that are counted in the general compilation of all costs of production. Thus Gross National Product is a consolidated total.

The Gross National Product in 1947 was $13,375 million, the highest figure on record. The figure for 1948 promises to be higher by approximately two billion dollars. These figures compare with $5,985 million in 1928 the peak year of the inter-war period, $5,598 million in 1939, the last pre-war year, and $11,887 million in 1944, the peak wartime year.

Since the Gross National Product is expressed in terms of current values, a proper appreciation of these figures can be obtained only if they are analyzed in the light of price changes. The cost-of-living index is used as a general guide for this purpose.

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[1]Reference may be made to "National Accounts, Income and Expenditure, 1938-1947" (November, 1948), "National Accounts, Income and Expenditure, 1926-1947" (September, 1948) and "National Accounts, Income and Expenditure, 1938-1945" (April, 1946), for concepts, methods and sources as well as more complete detail.

TABLE 5
NET NATIONAL INCOME AT FACTOR COST AND GROSS NATIONAL PRODUCT AT MARKET PRICES
(millions of dollars)

	1928	1933	1939	1944	Prelim. 1947
Salaries, Wages and Supplementary Labour Income	2,658	1,791	2,583	4,908	6,235
Military Pay and Allowances	7	8	32	1,068	83
Investment Income	839	233	783	1,774	2,309
Net Income of Agriculture and Other Unincorporated Business					
Farm Operators from Farm Production	693	98	461	1,213	1,235
Other Unincorporated Business	553	257	430	749	1,119
NATIONAL INCOME	4,750	2,387	4,289	9,712	10,981
Indirect Taxes less Subsidies	677	566	737	1,123	1,572
Depreciation Allowances and Similar Business Costs	647	500	582	863	928
Residual Error of Estimate	– 89	15	– 10	189	– 106
GROSS NATIONAL PRODUCT AT MARKET PRICES	5,985	3,468	5,598	11,887	13,375

Source: Dominion Bureau of Statistics, Ottawa.

TABLE 6
GROSS NATIONAL PRODUCT PER CAPITA IN 1935-1939 DOLLARS

Year	1 Gross National Product (billions of dollars)	2 Cost-of-Living Index[a] 1935-1939 = 100	3 Gross National Production 1935-1939 dollars (billions of dollars) Col. 1 ÷ Col. 2	4 Population (millions)	5 Per Capita Gross National Product in 1935-1939 dollars (nearest hundred dollars) Col. 3 ÷ Col. 4
1928	6.0	120.	5[b]	9.8	5
1933	3.5	94.	4[b]	10.6	3
1939	5.6	101.	6[b]	11.3	5
1947	13.4	135.	10[b]	12.6	8
1948	15.4[c]	155.	10[b]	12.9	8

a) The cost-of-living index is used to deflate Gross National Expenditure because the largest single component of the latter is consumer expenditure. This is valued at retail and it contains services such as rent, transportation and recreation. Tests showed that the cost-of-living index was within two or three per cent of a specially constructed deflator for consumer expenditure. This special price index is not kept up to date or issued officially as further experimental work is needed. The remaining groups of national expenditure consist of government and investment expenditure, including net foreign investment. Price indexes for these groups have not been developed as yet, and in the meantime we are advised that the best approximation can be obtained by using the cost-of-living index for the entire expenditure. See p. 15, National Income Statistics 1938-1947. Statistical Office of the United Nations, Lake Success, N Y. 1948.
b) Rounded to nearest billion.
c) Preliminary estimate.
Source: Calculations made from data supplied by Dominion Bureau of Statistics, Ottawa.

The seriousness of the depression of the 1930's and the sluggishness of the subsequent recovery is reflected by the fact that on a per capita basis the Gross National Product in 1939, corrected for price changes, was no higher than in 1928, eleven years earlier. In terms of the approximate figures the above table in per capita output in 1935-1939 dollars dropped from the neighbourhood of $500 in 1928, to $300 in 1933, then recovered to the same approximate level of $500 in 1939. The improvement since 1939 is impressive, even in terms of the rough figures with which we have to operate. These show an increase from the neighbourhood of $500 per capita to $800 per capita, in 1935-1939 dollars. The rise in Gross National Product from 13.4 billion in 1947 to 15.4 billion in 1948, on the other hand, is due largely to the price increase from 135 to 155. The current figures are not refined sufficiently to show the extent to which an improvement in real output per capita has taken place in 1948. The data attest to the improvement in real output over pre-war.

Analysis of the components of national income reveals interesting characteristics in their movement over the major cycle of prosperity and depression of the past twenty years. Thus salaries and wages, including military pay and allowances, fluctuate less than investment income, reflecting the volatility of profits as compared with salaries and wages. (See Table 5). From 1928 to 1933, salaries and wages dropped from $2,655 million to $1,799 million or 33 per cent, while investment income dropped from $839 million to $233 million. From 1933 to 1939, on the other hand, salaries and wages rose to $2,615 million, a rise of 45 per cent while investment income rose to $783 million, a rise of 236 per cent. Comparing 1939 with 1947, salaries and wages were 142 per cent above the 1939 level while investment income was 195 per cent higher than in 1939.

Between 1928 and 1933 net income of farm operators fell from $693 million to $98 million, a reflection of drought in western Canada coupled with drastic decline in the price of agricultural products. After 1933, the trend was slowly upward; by 1939 net income of farm operators from current farm production was $461 million, still 33 per cent below the 1928 level. Favourable crop conditions during the war and post-war period together with a heavy demand for agricultural products brought about a very large increase in net income of farm operators and in 1944 the figure amounted to $1,213 million. In 1947 the figure was $1,235 million. It must be emphasized that these figures apply to income of farm operators from current farm production only and exclude income received from supplementary occupations.

Net income of other unincorporated business declined from $553 million in 1928, to $257 million in 1933, or by 54 per cent. It moved up to $430 million in 1939, and in 1947 it reached a high of $1,119 million.

Gross National Expenditure

What is produced must either be sold or added to inventories. Thus the annual output of Canadian labour and capital can be measured another way, by adding together all final sales adjusted for changes in inventories.

Four main classes of sales can be readily distinguished, sales to consumers, sales to governments, sales to business on capital account (capital formation in Canada) and sales to non-residents (exports). Only final sales are included; sales between businesses of raw materials and other intermediate goods are not included as such because they are accounted for in the market values of the end products sold. For example, the market price of an automobile sold to a consumer by firm A includes the value of tires bought from firm B. The value of these tires is only counted once, in the market price of the automobile. However, a tire purchased by a person to replace an old one is counted as an end-product. Since total sales include the value of imported goods and services and since the purpose is to measure the production of Canadian labour and capital, imports of goods and services are deducted from the grand total of sales. The aggregate obtained in this manner is called Gross National Expenditure and its components indicate the manner in which the nation's output is absorbed.[1]

TABLE 7

GROSS NATIONAL EXPENDITURE AT MARKET PRICES

(millions of dollars)

	1928	1933	1939	1944	Prelim. 1947
Personal Expenditure on Consumer Goods and Services	4,196	2,848	3,861	6,300	8,888
Government Expenditure on Goods and Services	589	521	724	5,075	1,481
Gross Home Investment Plant, Equipment and Housing	940	221	554	756	2,042
Inventories	206	– 105	327	– 82	842
Exports of Goods and Services	1,773	826	1,451	3,566	3,616
Imports of Goods and Services	–1,808	– 828	–1,328	–3,539	–3,599
Residual Error of Estimate	89	– 15	9	– 189	105
GROSS NATIONAL EXPENDITURE AT MARKET PRICES	5,985	3,468	5,598	11,887	13,375

Source: Dominion Bureau of Statistics, Ottawa.

Personal expenditure on consumer goods and services, the largest component of Gross National Expenditure, moves much more slowly through the course of the business cycle than either investment or external trade, thereby exercising a stabilizing influence on the movement of total output. From 1928 to 1933, consumer expenditure declined from $4,196 million to $2,848 million or by 32 per cent. During the same period gross investment in plant, equipment and housing dropped from $940 million

[1]Since they measure the same thing, Gross National Product and Gross National Expenditure should add up to the same total. The incompleteness or inconsistency of available statistical sources, however, is reflected in a difference between the two aggregates. This difference is divided equally as shown in the tables as the "residual error of estimate".

to $221 million, 76 per cent, exports from $1,773 million to $826 million, 53 per cent, imports from $1,808 million to $828 million, 54 per cent. The recovery from 1933 to 1939, on the other hand, witnessed an increase of consumer expenditure of 36 per cent while gross investment in durable assets climbed 151 per cent, exports 76 per cent and imports 60 per cent. The same general picture is revealed in a comparison between 1939 and 1947; consumer expenditure rose from $3,861 million to $8,888 million or 130 per cent; investment in plant, equipment and housing from $554 million to $2,042 million or 269 per cent; exports from $1,451 million to $3,616 million or 149 per cent; and imports from $1,328 million to $3,599 million or 171 per cent.

Per capita real consumption in 1939, appears still to have been below that in 1928, as is indicated by the fact that expenditure per capita on consumption in 1939, was 20 per cent below that in 1928, while the cost-of-living index was 16 per cent below. From 1939 to 1947, expenditure per capita on consumption rose 106 per cent while the cost-of-living index went up 33 per cent.

It should be noted that the investment figures included in the accounts are "gross", that is, they are not adjusted for depreciation, or wear and tear and obsolescence of capital equipment. Available depreciation figures derived from business accounts are not necessarily related to actual consumption of capital assets. Nevertheless, when the depreciation figures are deducted from total investment in plant, equipment and housing the conclusion appears warranted that little or no new net investment took place between 1930 and 1940, and that possibly there was some net disinvestment;[1] that is, more plant, equipment and housing may have been "used up" than was produced.

Government expenditure on goods and services accounted for about 10 per cent of total output in 1928. During the 1930's government expenditure became somewhat more important as a proportion of total output. In 1939, it accounted for 13 per cent of national expenditure. Under the impetus of military requirements the country's output expanded tremendously and in 1944, 43 per cent of total output was absorbed by government. In 1947, government expenditure accounted for only 11 per cent of national expenditure.

Accounts for Sectors of the Economy

Information for the economy as a whole may be expressed in terms of the Gross National Product and Expenditure. They portray the results of the manifold transactions that take place in the economy in a year. It is possible to get behind these aggregates and to summarize the underlying transactions into a number of homogeneous and related groups. Thus we can divide the economy into four sectors with a separate revenue and

[1]See National Accounts, Income and Expenditures, 1926-1947, Dominion Bureau of Statistics, Ottawa, 1948. Investment in plant, equipment and housing in 1933, was $221 million, as compared with depreciation estimates of $500 million.

TABLE 8

BUSINESS OPERATING ACCOUNT

(millions of dollars)

REVENUE	1939	Prelim. 1947	EXPENDITURE	1939	Prelim. 1947
1. Sales to Residents			5. Factor Costs		
(a) Persons (17a)	3,630	8,516	(a) Salaries, Wages and Supplementary Labour Income (10a)	2,132	5,362
(b) Governments (27a)	263	585	(b) Net-Income of Agriculture. Other Unincorporated Business (12)	891	2,354
(c) Business on Capital Account			(c) Corporation Profits[a] (excluding interest and dividends from abroad) (39)	587	1,789
(i) Housing (53a)	145	466	(d) Other Investment Income (excluding interest on the public debt) (40)	343	697
(ii) Plant and Equipment (53b)	409	1,576	6. Other Costs		
(iii) Inventories (53c)	327	842	(a) Indirect Taxes (22)	720	1,746
2. Sales to Non-Residents			(b) Less Subsidies (29)	17	−174
(a) United States (36bi)	752	1,632	(c) Depreciation Allowances and Similar Business Costs (50)	582	928
(b) United Kingdom and Other Empire (36bii)	496	1,322	7. Purchases from Non-Residents		
(c) Other Countries (36biii)	146	600	(a) United States (31bi)	600	2,362
			(b) United Kingdom and Other Empire (31bii)	230	425
			(c) Other Countries (31biii)	85	261
3. Residual Error of Estimate	9	105	8. Residual Error of Estimate	− 10	−106
4. Total	6,177	15,644	9. Total	6,177	15,644

a) For total corporation profits see table 12.
Source: Dominion Bureau of Statistics, Ottawa.

expenditure account for each, the business sector, the personal sector, the government sector and the non-residents' sector. Such accounts are presented in Tables 8 to 11. In addition to the separate sector accounts, two accounts are also presented here dealing with all sectors combined, namely, investment income appropriation account (Table 12) and source and disposition of private saving account (Table 13). Tables 8 to 13 are made up on the basis of the double entry system of bookkeeping. Each item is entered twice and the code number in brackets following each item indicates the account number where the offsetting entry may be located. Wages appear as a cost expenditure in the business account, (item 5a) and as income in the personal account, (item 10a). Consumption, which depends partly on wages, appears as revenue in the business account, (item 1a) and as expenditure in the personal account, (item 17a). Thus the effect of changes in any one component upon other parts of the economy can be located and related.

Business Operating Account

Table 8 portrays the main sources of business operating revenue on the one hand, the main items of business operating expenditure on the other. All private and public economic units selling goods and services on a profit basis are included in the category of business: incorporated and unincorporated private business firms, farmers, landlords, self-employed professionals, and government business enterprises such as the Canadian National Railways. For this particular purpose home owners are regarded as landlords who rent to themselves and are, therefore, also included as business enterprises. Sales by one business to another are eliminated except for sales on capital account.

The main points brought out by this table are as follows: business receipts from the sales of consumer goods to persons were much larger in dollar terms in 1947 than in 1939, but the proportion of these sales to all sales was less in 1947 than in 1939. The proportion was $8,516 million to $15,644 million in 1947, or 54 per cent, as compared with $3,630 million to $6,177 million in 1939, which was 59 per cent. This drop in the proportion of sales to persons was offset by an increase in sales of capital equipment or other revenue from sales to business on capital account. Sales to government and to non-residents, the two other main sources of business revenue, maintained their relative positions in the two years. Sales to government accounted for approximately four per cent of total business revenue both in 1939 and 1947, and sales to non-residents accounted for approximately 23 per cent of business revenue in the same years.

Salaries and wages were $5,3[illegible]2 million in 1947, and $2,132 million in 1939, or 34 per cent of total business expenditure in both years. Corporation profits, on the other hand, rose in relative importance from $587 million in 1939 to $1,789 million in 1947, 9.5 per cent and 11.5 per cent respectively.

Personal Income and Expenditure Account

Table 9 shows the main sources of personal income and how it is spent or otherwise disposed. Private non-commercial institutions, such as charities and hospitals are also included. Personal income measures all income received by Canadian residents; it includes unearned income such as family allowances and unemployment insurance benefits, and excludes current earnings not paid out to persons, such as undistributed profits and government trading profits.

TABLE 9

PERSONAL INCOME AND EXPENDITURE ACCOUNT

(millions of dollars)

INCOME	1939	Prelim. 1947
10. Salaries and Wages		
(a) From Business (5a)	2,132	5,362
(b) From Government (27bi)	327	717
(c) From Persons (17b)	124	156
(d) Less Contributions to Social Insurance and Government Pension Funds (24)	– 34	–166
11. Military Pay and Allowances (27ii)	32	83
12. Net Income of Agriculture Other Unincorporated Business (5b)	891	2,354
13. Interest, Dividends and Net Rental Income of Persons (44a)	504	939
14. Transfer Payments		
(a) From Governments (excluding interest) (28b)	249	824
(b) Charitable Contributions from Corporations (44b)	6	10
15. Total	4,291	10,279

EXPENDITURE	1939	Prelim. 1947
16. Personal Direct Taxes		
(a) Income Taxes (20a)	61	694
(b) Succession Duties (20b)	28	61
(c) Miscellaneous (20c)	21	31
17. Purchase of Goods and Services		
(a) From Business (1a)	3,630	8,516
(b) Direct Services (10c)	124	156
(c) Tourist, Travel and Other Expenditure Abroad (All countries) (32)	107	216
18. Personal Saving (47)	320	605
19. Total	4,291	10,279

Source: Dominion Bureau of Statistics, Ottawa.

Turning to personal expenditure we find that a substantially larger proportion of personal income was paid in taxes in 1947 than in 1939. In 1939 personal direct taxes amounted to $110 million or three per cent of personal income while in 1947, they were $786 million, or eight per cent of personal income. Personal expenditure on consumer goods and services accounted for 90 per cent of personal income in 1939, while in 1947, it was 87 per cent of the total.

Government Revenue and Expenditure Account

Transactions of federal, provincial and municipal governments relating to Gross National Product and Expenditure are summarized in Table 10. For this table conventional government accounting statements of fiscal year revenue and expenditure have been adjusted to exclude purely bookkeeping transactions and purchases and sale of existing capital assets. Corporation income and excess profits taxes have been adjusted to an accrual basis to correspond with business practice and to maintain consistency with the rest of the accounts. Other figures of revenue are, in the main, on a cash basis. Federal government figures have been adjusted from a fiscal to a calendar year basis. Because of these adjustments the surplus and deficit in Table 10 do not agree with the customary government surplus and deficit.

TABLE 10

GOVERNMENT REVENUE AND EXPENDITURE ACCOUNT

(millions of dollars)

Revenue	1939	Prelim. 1947	Expenditure	1939	Prelim. 1947
20. Direct Taxes—Persons			27. Purchase of Goods and Services		
(a) Income Taxes (16a)	61	694	(a) From Business (1b)	263	585
(b) Succession Duties (16b)	28	61	(b) Direct Services		
(c) Miscellaneous (16c)	21	31			
21. Direct Taxes—Corporations			(i) Salaries and wages (10b)	327	717
(a) Income and Excess Profits Taxes (44c)	112	805	(ii) Military Pay and Allowances (11)	32	83
(b) Withholding Taxes (44d)	11	35	(iii) Interest (41a)	102	96
22. Indirect Taxes (6a)	720	1,746	28. Transfer Payments		
23. Investment Income			(a) Interest (41b)	172	466
(a) Interest (44f)	77	133	(b) Other (14a)	249	824
(b) Trading Profits (44e)	22	206	29. Subsidies (6b)	− 17	174
24. Employer and Employee Contributions to Social Insurance and Government Pension Funds (10d)	34	166			
25. Deficit (+) or Surplus (−) (on transactions relating to the national accounts) (55)	42	−932			
26. Total	1,128	2,945	30. Total	1,128	2,945

Source: Dominion Bureau of Statistics, Ottawa.

The table shows that direct taxes have become almost as important a source of government revenue as indirect taxes. In 1939, $233 million or 21 per cent of government revenue was drawn from direct taxes on persons and corporations; in 1947, $1,626 million or 42 per cent was obtained from these sources.

The very large government surplus of $932 million in 1947, is in decided contrast to the deficit of $42 million in 1939.

Examination of the structure of government expenditure indicates that while interest on government debt increased from $274 million in

1939 to $562 million in 1947, this element of government expenditure was relatively more important in 1939 than in 1947, as it was 24 per cent in 1939 and 19 per cent in 1947.

Non-residents' Revenue and Expenditure Account

Table 11 summarizes the transactions between the rest of the world and Canadian residents. The figures are those published by the Balance of Payments' Section of the Dominion Bureau of Statistics, with some modifications and rearrangement.

TABLE 11

NON-RESIDENTS' REVENUE AND EXPENDITURE ACCOUNT

(millions of dollars)

RECEIPTS FROM CANADA (Canadian Imports)	1939	Prelim. 1947	PAYMENTS TO CANADA (Canadian Exports)	1939	Prelim. 1947
31. Receipts from Business			36. Payments to Business		
(a) Interest and Dividends (all countries)	236	280	(a) Interest and Dividends (all countries) (42a)	31	32
(b) Other (mainly for merchandise)			(b) Other (mainly for merchandise)		
(i) United States (7a)	600	2,362	(i) United States (2a)	752	1,632
(ii) United Kingdom Other Empire (7b)	230	425	(ii) United Kingdom and Other Empire (2b)	496	1,322
(iii) Other Countries (7c)	85	261	(iii) Other Countries (2c)	146	600
32. Receipts from Persons			37. Payments to Persons		
Tourist, Travel and Other Personal Expenditure Abroad, (all countries) (17c)	107	216	Interest and Dividends (all countries) (42b)	26	30
33. Receipts from Government					
Interest (all countries) (45b)	70	55			
34. Net Debit (+) or Credit (−) on Current Account[a]					
(a) United States (54a)	−115	−1,129			
(b) United Kingdom and Other Empire (54b)	176	832			
(c) Other Countries (54c)	62	314			
35. TOTAL	1,451	3,616	38. TOTAL	1,451	3,616

a) These figures differ somewhat from the official balance of payments figures because of adjustments for consistency with other national accounts.
Source: Dominion Bureau of Statistics, Ottawa.

Since this is the account of non-residents, our imports appear as revenue to them. In 1947, a total of $335 million was paid to non-residents in interest and dividends which was nine per cent of Canadian debits on international account. Imports of goods and such services as freight or shipping increased very substantially both in absolute and relative terms from $915 million in 1939 (total of items in 31b) or 69 per cent of the total to $3,048 million or 85 per cent of the total in 1947.

Investment Income Appropriation Account

Table 12 summarizes the sources and disposition of investment for all sectors combined. It serves the important function of assembling all elements of investment income and in addition it facilitates carrying out the double-entry system embodied in the accounts.

TABLE 12

INVESTMENT INCOME APPROPRIATION ACCOUNT

(millions of dollars)

Sources	1939	Prelim. 1947	Disposition	1939	Prelim. 1947
39. Corporation Profits (excluding interest and dividends from abroad) (5c)	587	789	44. To Canadian Residents		
			(a) Interest Dividends and Net Rental Income of Persons (13)	564	939
40. Other Interest Income (excluding interest on the public debt) (5d)	343	697	(b) Charitable Contributions from Corporations (14b)	6	10
41. Interest on the Public Debt			(c) Corporation Income and Excess Profits Taxes (21a)	112	805
(a) Portion Included in National Income (27biii)	102	96			
(b) Transfer Portion (28a)	172	466	(d) Withholding Taxes (21b)	11	35
42. Interest and Dividends from Non-Residents Received by			(e) Government Trading Profits (23b)	22	206
(a) Corporations (36a)[a]	31	32	(f) Government Interest Revenue (23a)	77	133
(b) Persons (37)	26	30	(g) Undistributed Corporation Profits (48a)	219	608
			(h) Undistributed Wheat Board Trading Profits (48b)	—	57
			(i) Inventory Revaluation Adjustment (49)	− 56	− 18
			45. To Non-residents, Interest and Dividends received from		
			(a) Business (31a)	236	280
			(b) Government (33)	70	55
43. Total	1,261	3,110	46. Total	1,261	3,110

a) For total corporation profits, add items 39 and 42a.
Source: Dominion Bureau of Statistics, Ottawa.

The significant points of the above table are that corporation profits gained in relative importance from 47 per cent in 1939, to 58 per cent in 1947, and all other components of investment income declined correspondingly. Changes also occurred in the disposition of investment income. In 1947, 30 per cent was paid out to resident persons, 11 per cent was paid out to non-residents and 20 per cent was retained by corporations.

Source and Disposition of Private Saving Account

The nation's gross saving is the amount of the Gross National Product not spent on current consumption. Gross investment is the portion of current output used to increase and maintain the country's stock of capital goods at home and abroad. The saving can take the form of personal saving, undistributed corporation profits, depreciation allowances, and government surplus. A government deficit, on the other hand, represents an offset to saving in the private (business and personal) sectors of the economy. The total of private saving is equal to total investment at home and abroad plus the government deficit or less the government surplus.

TABLE 13

SOURCE AND DISPOSITION OF PRIVATE SAVING ACCOUNT

(millions of dollars)

Source	1939	Prelim. 1947	Disposition	1939	Prelim. 1947
47. Personal Saving (18)	320	605	53. Gross Home Investment		
48. Business Saving			(a) Housing (1ci)	145	466
(a) Undistributed Corporation Profits (44g)	219	608	(b) Plant and Equipment (1cii)	409	1,576
(b) Undistributed Wheat Board Trading Profits (44h)	—	57	(c) Inventories (1ciii)	327	842
			54. Net Foreign Investments[a]		
49. Inventory Revaluation Adjustment (44i)	– 56	– 18	(a) United States (34a)	–115	–1,129
			(b) United Kingdom and Other Empire (34b)	176	832
50. Depreciation Allowances and Similar Business Costs (6c)	582	928	(c) Other Countries (34c)	62	314
51. Residual Error of Estimate	– 10	–106	55. Government Deficit (+) or Surplus (–) (25)	42	–932
			56. Residual Error of Estimate	9	105
52. Total	1,055	2,074	57. Total	1,055	2,074

a) See footnote to Table 11.
Source: Dominion Bureau of Statistics, Ottawa.

In 1939, personal saving amounted to $320 million, undistributed profits to $219 million and depreciation allowances to $582 million. This saving was absorbed for the most part by investment abroad and the government deficit of $42 million. In 1947, the situation was considerably different. Personal saving was $605 million, while undistributed profits amounted to $608 million and depreciation allowances to $928 million. In the same year gross home investment in plant, equipment, housing and inventories reached a record high of $2,884 million, an amount greatly in excess of total private saving. However, large saving also took place in the government sector as indicated by the record government surplus of the year 1947.

Summary and Conclusions

The preceding analysis reveals that, by contrast with the decade 1928-1938, which was characterized by general stagnation, the period since 1939 has witnessed a dynamic growth of the Canadian economy. Under the impetus of wartime demands and post-war accumulated needs the Gross National Product in value terms increased by 139 per cent from 1939 to 1947. Part of this increase was due to price increases, but even after allowing for the increase of 33 per cent in the cost-of-living index in this period, there remains a tremendous expansion in real output of goods and services.

An approximate measure of the increased quantity may be obtained by dividing the index of value (239) by the index of price (133). The result is 180, which means that the quantity of output was 80 per cent above 1939.

Rising production was accompanied by correspondingly high earnings. All types of earnings participated in the advance, labour income increasing from $2,583 million to $6,235 million and investment income from $783 million to $2,309 million. Net income of farm operators increased from $461 million to $1,235 million and other unincorporated businesses from $430 million to $1,119 million.

A relatively larger proportion of the nation's resources was used for investment in plant, equipment, housing and inventories in 1947 than in 1939. Exports of goods and services reached a very high level, while buoyant incomes at home and the requirements of Canadian industry resulted in correspondingly high imports. The requirements of governments on the national output were relatively lower in 1947 than in 1939.

Personal income, the largest component of which was salaries and wages, increased from $4,291 million in 1939, to $10,279 million in 1947. A substantial rise in the standard of living took place during the same period. This is indicated strikingly by the fact that consumer expenditure on goods and services, per capita, was more than double the 1939 level. The index for consumer expenditure per capita, was 206. It can be divided by the cost-of-living index which averaged 133 in 1947, to give an approximate estimate of 155 for the index of consumer expenditure in real terms. In non-statistical terms, this means that the actual quantities of goods and services purchased by consumers in 1947, were 55 per cent larger than in 1939.