



REPORT
OF THE
ROYAL COMMISSION ON
TAXATION

VOLUME 2

THE USE OF THE TAX SYSTEM TO ACHIEVE
ECONOMIC AND SOCIAL OBJECTIVES

1966

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C A N A D A

REPORT
of the

ROYAL COMMISSION ON TAXATION

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ROYAL COMMISSION ON TAXATION

VOLUME 2

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CHAPTER 1

OBJECTIVES OF THE TAX SYSTEM

Many an informal debate about taxation is brought to an end when someone says, "Well, they have to get the money somewhere." It is implied that the essence of taxation is collecting money; that governments have no alternative but to collect money; and that when all is said and done the man on the street is always going to have to surrender to the government a painfully large share of his hard-earned money—one way or another. Unfortunately, the element of truth in these propositions can obscure the important issues. In focusing attention solely on money the shadow is mistaken for the substance. In recognizing the inevitability of some taxes, the other avenues open to government of relying more or less heavily on the creation of money or borrowing, are frequently ignored. Furthermore, in suggesting that the allocation of taxes is arbitrary, the opportunities inherent in the fiscal system for redistributing purchasing power among people to achieve a social purpose are overlooked; and in concentrating on the effect of taxation on individuals the profound implications of the tax system for the economy and for society tend to be neglected. Just what is involved in taxation can best be seen by looking at the alternatives available to the government.

The very existence of a nation requires that its citizens, through their government, be able to defend themselves against aggressors, maintain law and order, and provide minimal public services. This requires that the government command some goods and services. Beyond this basic minimum, public facilities and services must be made available and public programmes instituted to transfer purchasing power from some individuals and groups in the community to others, in order to create an environment in which economic activity can expand rapidly and in which the generally accepted social and cultural needs of the people can be met. The government can satisfy these collective needs only if it commands the use of goods and the services of men.

In addition to obtaining command over goods and services for these purposes, the government must be able to influence the level of private command over goods

and services so that it may be able to offset fluctuations in employment and prices, and to ensure that the total output of goods and services expands as rapidly as possible, given the choices of its citizens between present and future consumption, and between work and leisure. To meet this objective the government must be able to increase or reduce the private command over goods and services from time to time so that, together with the public command, all resources are fully utilized.

ALTERNATIVES OPEN TO GOVERNMENT

There are several methods by which the government can obtain command over resources.

Commandeering Resources

The government can commandeer resources from private individuals and put them to its own use. While this method may have its place in times of national emergency, under normal conditions it is either hopelessly inefficient if it is done fairly, or much more likely, it has completely capricious results. It places the whole cost of government's services on those who are unlucky enough to be within easy reach. Moreover, while the commandeering of resources removes goods and services from private use, it does not reduce private demand for them. Unless the money supply is also reduced, or individuals voluntarily reduce their demand for goods and services, bidding among individuals for the remaining goods and services available is likely to cause prices to rise. Price inflation will then determine whose real income is reduced because the government commandeered resources.

Creating Money

The government can simply create money and use this money to outbid private citizens for the resources it needs. As we shall show later, the creation of money has an important role to play in the achievement of economic objectives; but if practised when all resources are productively employed, increasing the money supply more rapidly than national output expands can bring about a rapid increase in the general level of prices. This may adversely affect the stability

and growth of the economy; it will certainly reduce the command over resources of those on fixed incomes. The weakest, in effect, are forced by inflation to bear the burden of giving up goods and services to the government. It is contrary to the beliefs and standards of our society that this group should bear a disproportionate share of the burden.

Borrowing

The government can borrow from the general public the funds necessary to finance its expenditures. Although the power to borrow money, like the power to create money, is a necessary and an important part of the power of government, it is completely inadequate as the sole source of government finance. Even if government expenditures grew no more rapidly than national output, the public debt would grow more rapidly, because the debt would grow not only by the amount of current government spending but by the amount necessary to meet ever-increasing interest charges. Bond prices would be forced down and those who were unfortunate enough to hold bonds would have their command over resources reduced, again in a capricious manner. With a persistent decline in bond prices, the government would eventually have to compel individuals to buy government bonds. Citizens would, in effect, be taxed in any event.

In addition, ever higher interest rates would tend to deter private investment. Unless the government used the proceeds of its borrowings to increase public investment, and the increased public investment were more productive than the forgone private investment, the rate of economic growth would be reduced, and in either event there would be an increase in the relative size of the public sector.

This total reliance on debt financing, even with no increases in the supply of money, could also create inflationary pressures with all their attendant problems, unless private spending were reduced by an amount equal to the increase in government borrowing.

Taxation

Taxation—compulsory payments to the government—is another means of effecting the transfer of resources from private to public hands. Because taxes

may be shifted through price changes from those on whom they are imposed to those with whom the taxpayer deals, taxes may have a substantial element of capriciousness; but at least taxes can reflect an equitable intention. Taxation can certainly disrupt the economy, by inducing resources to flow to those areas where their owners will bear less tax; but with broadly based taxes this disruption is not likely to be as serious as that caused by confiscation, inflation or ever-rising interest rates. Moreover, changes in taxes, when combined with appropriate changes in expenditures, generally provide the most effective means by which the government can control the private command over goods and services.

The Choice

This brief review of the alternative methods by which the government can obtain command over resources suggests that, if the government had to choose one method to the exclusion of all other methods, taxation would be preferable because it can be more equitable, can be less disruptive to the economy, and can give the government more effective control over the total demand for goods and services. Taxation would be selected not primarily because it gave the government command over resources, for there are other means to the same end; it would be selected because none of the other methods would allow the government to realize as many social and economic objectives as completely, and with as little conflict.

Actually, governments are seldom, if ever, faced with this choice. They do not have to decide whether they will use taxation exclusively or borrowing exclusively, to give but two of the alternatives. The real question is the determination of the best mixture of methods in the particular circumstances. Each method will give the required command over resources; the problem is to select the combination of methods that would further the achievement of the government's economic and social objectives more, or conflict with their achievement less, than other combinations.

Given its basic objectives and knowledge of the economy, there is little doubt that most of the time most of the government's command over resources

should be brought about through taxation. The precise determination of the appropriate combination of methods at any point in time will always be a difficult decision, but it is an inescapable decision that is made either implicitly or explicitly. Because the decision necessarily affects the attainment of the government's economic and social objectives, it is preferable that decision makers consciously take them into account. In spite of all their good will and intelligence, the decision makers may nevertheless fall short of their objectives even though they have set out purposefully to achieve them, for their knowledge and techniques are still inadequate to the task. However, a conscious decision based even on limited information is likely to bring about a better result than a decision made without such foundation.

Taxes Versus User Charges

While few will doubt that taxation must remain an important part of the governmental system, it is often argued that taxes could and would be much lower if the government let the private sector of the economy provide more goods and services and the government acted like a business by selling services to the public and buying with the proceeds the resources necessary to provide them. It is useful to consider why some goods and services are provided by government and why they cannot be sold to the public by the government. Why, for example, is defence provided by the government rather than by the market economy? While perhaps obvious, the answer to this question illustrates the principle involved.

The essence of the market-oriented economy is that the price system serves as a rationing device to exclude from the enjoyment of a good or service all those who cannot or will not pay the price. A market in this sense cannot be established if the people who do not pay for a good or service can nonetheless enjoy its use. In the case of the provision of a defence force, all citizens receive protection from it whether or not they contribute to its costs, and so there is no point in asking citizens to pay these costs voluntarily. The only way people will pay for the provision of a good when it is impossible to exclude them from its use is through its public provision and the imposition of obligatory payments toward its cost; in other words, the government must levy taxes.

Defence is, of course, an extreme case; but there are many other goods and services that have the characteristic that they bestow benefits on those who cannot be made to pay for them in the market. Education, for example, bestows a benefit on the student in terms of higher earnings and perhaps greater personal satisfaction. Education also bestows a benefit on society because it increases the productivity of workers (and hence the rate of growth of national output), and improves the social and political environment. In deciding how much education to buy, the student will consider his personal benefit, but he is unlikely to take into account the full benefit to society that more education would bestow. The individual members of society who benefit from the student's education will not pay for these benefits voluntarily. Unless the government subsidizes the student, or subsidizes that part of the private sector that provides education, or itself provides education below cost, there will be an inadequate allocation of resources to education. The government has to finance the provision of more education by some means other than the revenues from education. There are many other goods and services where this divergence between social and private benefit occurs. Libraries and preventive health measures are obvious examples.

In some cases the problem is not so much that people will not buy enough of a good or service, whether provided publicly or privately, but that levying charges on the users would be cumbersome and would reduce the amenity of the good or service provided. Navigation aids and public parks are examples. These kinds of things are best financed in some way other than by levying charges on the users.

Still another class of goods and services that cannot be financed by user charges may be distinguished. These are the goods and services that confer a benefit on the individual user that is greater than the user apparently realizes. If these goods are sold on a commercial basis, some individuals will consume less of them than the public in general believe to be in the individual's best interest. Subsidies or free provision by the government are therefore implemented to induce individuals to do the "right" thing. Well-baby clinics and free school milk are examples of goods and services which the government cannot finance from sales.

Publicly provided goods and services are often of greater relative importance to those with low incomes than those with larger incomes. To charge the users for these things would frustrate an attempt to increase the flow of goods and services

to those with low income. This can be achieved only when the costs are defrayed by the revenues from a progressive tax system.

Just which goods and services should be provided by the government and which by the private sector of the economy, and how much the government should subsidize particular parts of the private sector, or itself provide the goods or services below cost, are matters of the political attitudes and of the technical and economic characteristics of the country being considered. It is extremely difficult to measure the costs and benefits from many of these activities, so that there can be no simple criteria by which to determine what should be done. Nevertheless, the point is that user charges cannot replace the tax system. There are, of course, goods and services for which it is appropriate for government to finance the cost, in whole or in part, through user charges. However, we believe these to be limited, particularly in the case of goods and services provided by the federal government.

STATEMENT OF OBJECTIVES

An appraisal of the existing tax system and recommendations for its improvement must be predicated on a widely accepted set of goals or objectives that the nation is seeking, and on a knowledge of the potential role that a tax system can play in the achievement of these goals.

We believe that four fundamental objectives on which the Canadian people agree are:

1. To maximize the current and future output of goods and services desired by Canadians.
2. To ensure that this flow of goods and services is distributed equitably among individuals or groups.
3. To protect the liberties and rights of individuals through the preservation of representative, responsible government and maintenance of the rule of law.
4. To maintain and strengthen the Canadian federation.

Our task is nothing less than to try to design a tax system that will assist in the fullest possible achievement of all these goals simultaneously. This is indeed a difficult undertaking, but it is one that is inherent in our assignment.

We shall now examine each of these objectives in turn.

To Maximize the Growth of Output

Tax rate and structure changes form but one of the policy instruments the government has available to assist in the realization of this objective. Adjustments in government expenditures (which is the other side of fiscal policy), and in debt policy, monetary policy, and foreign trade policy are also important. Indeed, the realization of the objective is likely to require a co-ordinated and consistent attack using all of the instruments together.

We believe that the tax system should be used, in conjunction with the other instruments, to achieve the following specific goals under this general objective:

1. Maintenance of full and continuous utilization of Canadian resources through policies designed to maintain an adequate demand for Canadian output.
2. Maximization of the rate of increase in the productivity of all Canadian resources assuming full employment is achieved. This objective has two aspects:
 - a) The tax system should be neutral in the sense that, with explicitly specified exceptions, it should be designed to bring about a minimum change in the allocation of resources within the private sector of the economy relative to the allocation that would take place in the absence of taxes. Such neutrality is desirable because, at least in the present state of knowledge, the allocation of resources in response to free market forces will in general give in the short run the best utilization of resources, and in the long run the most satisfactory rate of increase in the output of the economy.
 - b) Where there are imperfections in the market mechanism, as the result of uncertainty, immobility of the factors of production, monopoly power, and so on, the tax system should be used to change the allocation of resources to compensate

for these imperfections. However, the use of compensatory, non-neutral tax provisions is not justified if other policy instruments could achieve the same result at a smaller total cost than could tax provisions.

3. Prevention of wide or prolonged fluctuations in the general level of prices, and at the same time maintenance of the flexibility of individual prices in the economy.

In the past, Canada has failed to realize its full economic potential. The nation has had prolonged periods of serious unemployment when output was far below what it could have been. This has not only imposed a heavy cost on the unemployed and their dependants, but on society as a whole; for when there is unemployment there is not only a loss of current production, but the rate of investment is reduced and population growth declines, so that potential output in the future is reduced. The tax-expenditure system must be vigorously used to prevent the recurrence of these staggering costs.

Canada has also failed to avoid inflation. There have been periods of rapid increase in the general price level that have seriously hurt people with fixed incomes. Here, too, the costs were not borne only by those directly affected. Inflation in the past may have damaged the country's international competitive position and distorted the structure of the economy. This has reduced Canada's rate of economic growth and the welfare of all. The tax-expenditure system must be used to prevent inflation.

The productivity of Canadian resources has been inhibited, and the output of goods and services thereby reduced, by the misallocation of resources. Some of these imperfections are inherent in markets, such as the disparities between the private and social benefits from education discussed above; other imperfections are the result of government action. If output is to be increased as rapidly as possible, consistent with the choices Canadians make about consumption versus saving (domestic and foreign), and work versus leisure, it must be one of the government's objectives to compensate for the imperfections inherent in the market and to eliminate the imperfections that have been inadvertently introduced.

The Equitable Distribution of Output

The government can change the distribution of the flow of goods and services among individuals and groups of individuals by imposing higher taxes on some than on others, by making larger transfers of purchasing power to some individuals or groups than to others, and by providing public goods and services that benefit some more than others.

In our opinion there is a consensus among Canadians that the tax-expenditure mechanism (including transfers) is equitable when it increases the flow of goods and services to those who, because they have little economic power relative to others, or because they have particularly heavy responsibilities or obligations, would otherwise not be able to maintain a decent standard of living. While we have some comments to make about government transfers later in the Report, our principal concern is that the allocation of taxes, given the existing transfer mechanism and public expenditures, should be such as to achieve an equitable distribution of the flow of goods and services among Canadians.

We believe that, in order to achieve a more equitable distribution of output, the tax system should be consistent with the following objectives:

1. Most of the time most government expenditures should be financed through taxes that are allocated in proportion to ability to pay. This means, in effect, that the government must seek to impose progressive marginal tax rates on all additions to personal economic power, without regard to the source of those increments in power. Wages, salaries, business profits, gifts and capital gains all increase the economic power of the recipients and should be treated on exactly the same basis for tax purposes.
2. In most families incomes are pooled, consumption is collective, and responsibilities are shared. It should be an objective of the tax

system to reflect this fact, by considering families as taxable units. The ability to pay of the family, as distinct from the individual members of the family, must be recognized.

3. The tax system must also recognize that the special responsibilities and non-discretionary expenditures of unattached individuals and families affect their ability to pay. Unusually heavy medical expenses, certain education costs and the number of dependent children, for example, should be taken into account in allocating tax liabilities.
4. It should also be a goal of the tax system to avoid tax concessions to particular industries and to particular kinds of income. While the efficacy of special treatment can be judged only in the light of the particular circumstances, such tax concessions are always inequitable, are frequently inefficient, tend to distort the allocation of resources, and erode the tax base. If such special concessions are to be given, they should be provided in a form that makes it possible to assess their costs, that is, revenue forgone, so that the concessions can be appraised at periodic intervals. Therefore, generally speaking, subsidies should be used rather than tax concessions.

In the light of these criteria, we believe that the present tax system is inequitable in many important respects. The combined effect of sales taxes, corporate income taxes, property taxes, and the present personal income tax rates and base, is such that low income individuals and families pay higher taxes than is equitable when compared to middle and upper income individuals and families.

Sales taxes and corporate income taxes are inequitable because they apply without regard to the ability to pay of the taxpayer.

The present income tax base excludes so-called capital gains and gifts, both of which increase the economic power, and hence the ability to pay, of those who receive them.

Because the present system largely ignores the family unit and taxes individuals, when family income is received by both spouses, and each is taxed on his or her part, the aggregate tax is less than when the same sum is received by another family in which one of the spouses receives all of the family's income. Not only is this inequitable in and of itself, but it creates other inequities. At present when both spouses operate an incorporated business, the salary paid to both spouses is deducted in determining the income of the business and each pays tax on the salary received. However, when the business is unincorporated the salary paid by one spouse to the other is not deductible and all of the income of the business must be taxed to one of the spouses. The result is that two families in essentially similar circumstances will pay different taxes.

While we believe that gifts should be taxed to the recipient, given our concept of the family as a basic tax unit we are convinced that subjection of a widow or widower to an estate tax upon the death of his or her spouse is inequitable. The estate has been generated by the earnings of the family less the spending of the family. In the typical case each spouse has had an influence on at least one of the two determinants of the size of the estate. Accordingly, the savings of the family are a joint product of the efforts, decisions, and sacrifices of both spouses. It is arguable that one half of the estate represents a gift from the deceased spouse to the survivor and should be subject to tax; however, we believe that to divide the estate in this way would be hopelessly arbitrary. This being so, we consider that in most cases it is inequitable to subject transfers between husband and wife to any form of tax.

Costs are incurred in the earning of employment income that do not provide a personal benefit to the worker, and hence should be deducted from gross employment income if the tax bases of employees are to be consistent

with those of business proprietors and partners. We can see no support for the disallowance of virtually all expenses incurred for the purpose of earning employment income, as at present, and therefore consider that such restrictions are unfair. On the other hand, some proprietors, partners, and employees are receiving personal benefits from their businesses or employments that are escaping tax. This is equally inequitable.

The taxation of corporate income, together with the taxation of dividends in the hands of shareholders, creates many inequities. It is certainly inequitable between shareholders in different income brackets, generally taxing those shareholders with low incomes relatively much more heavily than shareholders with high incomes. It provides avenues for tax avoidance and tax postponement. It discriminates between shareholders and members of mutual organizations.

The present corporate income tax is riddled with special concessions. Among the more important are those for mining, oil, and life insurance companies, and the low rate of tax on the first \$35,000 of corporate income.

To meet the objective of an equitable distribution of output these and many other inequities should be removed.

The Protection of the Liberties and Rights of the Individual

In a democracy such as Canada, restrictions on the liberties of individuals are accepted primarily because those who make the laws are representatives of, and responsible to, the public. The legislative process ensures that the laws serve the public good. Maintaining and strengthening this democratic process is a fundamental general objective which in turn implies the following specific objectives with respect to the method of enacting tax legislation:

1. All individuals or groups should have ample opportunity to make their views on tax laws known to members of the legislature.
2. Tax legislation should be fully debated in the legislature.

3. The public and members of the legislature should have available all the information necessary to evaluate the adequacy of existing tax laws, and to formulate recommendations for improving the law.

The democratic process of enactment is the best safeguard of our freedom, but alone it is not enough. The nature of the laws enacted and the application of those laws are also significant. Bad laws can be enacted by democratic governments, and good laws can be perverted by wilful administrators if the individual has no right of appeal.

While laws generally restrict the freedom of individuals by imposing sanctions on certain courses of action, they indirectly define the liberty of individuals; that which is not proscribed by law the individual is at liberty to do without hindrance. Obscure law, and law that is not consistently enforced, creates uncertainty; when the law cannot readily be determined it is impossible for the individual to know in advance what he is free to do. In effect, uncertain law is retroactive law, because the effect of the law is known only after the event. Uncertain law also penalizes those anxious to obey it, and eventually creates contempt for the law. A taxpayer should be able to determine promptly, with great certainty and at modest cost, the tax consequences of a proposed course of action before making a decision. Adherence to the following rules would greatly reduce the uncertainty of tax law:

1. Every effort should be made to eliminate tax provisions that cannot be enforced, and all enacted provisions should be fully and consistently enforced.
2. Tax laws should always be clear and should avoid complexity.
3. The taxpayer should be able to determine from the tax administration the tax consequences of a proposed course of action on the basis of a stated set of facts.
4. Each taxpayer must be guaranteed the right to appeal to the courts all decisions of the government with respect to tax assessments.

Commissions, rather than departments of government, are employed in the United Kingdom and the United States to collect taxes. Commissions have the

obvious merit of removing the collection of taxes as far as possible from the influences of politics. We have heard no strong evidence to the effect that politicians have interfered with fair and efficient tax administration in Canada; but we are convinced that commissions provide less opportunity for such interference.

At the present time the taxpayer's judicial appeal may initially be to a board which operates in much the same way as a court; but its members do not have the prestige or the tenure of judges. This makes the recruitment of able members more difficult. What is more, their judgments may be entirely neglected by the taxpayer or the Department of National Revenue. A new trial can be initiated before the Exchequer Court. This further diminishes the prestige of the Tax Appeal Board, and can put the taxpayer at a disadvantage.

The law should be well known by all taxpayers, and it is the responsibility of the government to explain the law to them in so far as it is possible to do so. What is more, when the law or its administration is altered by a successful appeal, or by administrative practices, it is only fair that such alteration be made known to all taxpayers. The evidence submitted to us during the hearings indicates that there is inadequate information available to taxpayers at the present time.

The law now gives the Minister of National Revenue discretion in assessing tax under certain circumstances. The existence of sections granting ministerial discretion are undesirable in principle because they give rise to uncertainty. To the extent that these sections cannot be removed from the law, we believe it is imperative that the taxpayer should be able to obtain an advance ruling from the administration.

The present system, we are convinced, does not adequately protect the liberties and rights of the individual.

The Strengthening of Federal-Provincial Relations

The division of responsibilities and taxing powers is the essence of a federal state. The actions of the federal taxing authorities, therefore,

have important ramifications for the provinces and municipalities, and vice versa. It would be irresponsible and futile for us to make our recommendations without regard to this essential fact, even though this area is outside our terms of reference. We take the position that the federal tax system should, as far as possible, strengthen the federation. We believe that this objective requires realization of the following goals:

1. The maintenance of the autonomy of the provinces within the agreed division of powers and responsibilities between the federal and provincial governments.
2. The development of a flexible tax system that can adjust to the changing needs and aspirations of the people and the provinces in which they live.
3. The transfer of resources, through the federal government, from rich to poor provinces, so that the residents of the latter can, if they choose, enjoy minimum standards of public service without undue tax burdens.
4. The undivided control of the instruments needed to maintain the stability and growth of the economy if dispersal would reduce control over Canada's collective economic destiny.
5. The acceptance of the proposition that the fiscal relationships among all the governments will require continuous re-examination, re-negotiation and adjustment.

While we do not think that the present tax system as such has weakened the Canadian federal system of government, although it could be argued that the way in which it has been used in the past has done so, we are greatly impressed with the need for a tax system that would be readily adaptable to the changing needs of the people in different provinces, yet would be a firm and strong instrument for the realization of our national objectives. Some of the things that all Canadians want, such as full employment, a rapid rate of economic growth and stable prices, can only be achieved by a dynamic central government with adequate fiscal power.

PRIORITY OF OBJECTIVES

The list of objectives that has been compiled is an extremely ambitious one, and we are under no illusion that all of these desirable ends can be easily achieved. We realize that some of the objectives are in conflict, in the sense that movement toward one goal means that others might be achieved less adequately. Simultaneous realization of all the goals in some degree will constitute success if, as we hope, our choices as to the appropriate compromises adequately reflect the consensus of informed Canadians.

We would have liked to have assigned priorities to each of the objectives so that the reader would be immediately and precisely aware of where we stand, but we found this an impossible task. There are too many potential conflicts, and the weight we assign to one, relative to another, will depend on the context within which a decision has to be reached. But we have been able to go some distance in this regard.

We assign a higher priority to the objective of equity than to all the others. As pointed out above, our task requires us to make recommendations that would lead to an equitable distribution of the burden of taxation. We are convinced that unless this objective is achieved to a high degree all other achievements are of little account. Thus the need for an equitable tax system has been our major concern and has guided us in all our deliberations.

Unless a tax system is generally accepted as fair, the fundamental purpose of taxation is lost; for if fairness is not considered relevant there are certainly simpler means for the government to secure command over goods and services. We hasten to add that the concept of equity does not of itself lead to the easy determination of a tax structure that deserves to be carved in stone like the Codes of Hammurabi. Nothing is clearer from a reading of the taxing statutes of the past than the fact that the concept of equity as embodied in such statutes is peculiarly specific to time and place. It is also clear from the record of the past that a social and political system cannot be strong and enduring when a people becomes convinced that its tax structure does not distribute the tax burden fairly among all citizens.

Consequently, the focus of our Report is the attempt to outline what we feel to be an equitable tax structure that will find wide acceptance among Canadians. We have tried, in our recommendations, to achieve the other objectives only to the extent that they do not bear too high a price in terms of equity forgone.

CONCLUSIONS AND RECOMMENDATIONS

1. Most of the time most government expenditures should be financed through taxation. However, the best mix of taxes, borrowing and the creation of money depends upon the particular circumstances.
2. Heavier reliance upon user charges as a substitute for general taxes to finance government activities would probably result in under-investment in those goods and services that provide indirect benefits to all.
3. The tax system should be designed to assist in the most complete realization of the objectives listed below:
 - a) To Maximize the Growth of Output. The tax system should aim at maximizing the present and future output of the goods and services Canadians want. This objective can be considered to comprise the following specific goals:
 - i) To maintain full utilization of Canadian labour, capital, and natural resources.
 - ii) To increase the productivity of Canadian resources by adopting a tax system that is as neutral as possible so that the market will allocate resources efficiently. However, where other more effective means are not available, the tax system should be used to compensate for the misallocation of resources resulting from imperfections in the market mechanism.
 - iii) To prevent wide or prolonged fluctuations in the general level of prices.

- b) The Equitable Distribution of Output. The tax system should ensure that the flow of goods and services is allocated among individuals and groups so that those who have little economic power or particularly heavy obligations and responsibilities are able to maintain a decent standard of living. With respect to the allocation of taxes this requires the following:
- i) Taxation according to ability to pay, defined as the application of progressive marginal rates of tax to a base that measures the value of increases in the tax units' command over goods and services.
 - ii) The recognition of the family, as well as the unattached individual, as a unit for tax purposes.
 - iii) Reduced tax burdens for those who have special responsibilities and obligations that impose non-discretionary expenditures.
 - iv) The avoidance of special tax concessions to particular industries or kinds of income.
- c) The Protection of the Liberties and Rights of the Individual. The tax system should assist in protecting the liberties and rights of individuals through the preservation of representative, responsible government and the maintenance of the rule of law.
- d) The Strengthening of Federal-Provincial Relations. The tax system should help to maintain and strengthen the Canadian federation.

4. Some conflicts exist among these objectives. This means that compromises will have to be made. While the best compromise depends upon the particular context, we believe that the achievement of equity should have primacy of place.

CHAPTER 2

CONFLICTS AMONG OBJECTIVES

The purpose of this Volume of the Report is to consider how the tax system might be directed toward the more complete realization of Canada's economic objectives in a manner consistent with our equity objective. Although our primary interest is with the tax system, it is meaningless in some contexts to consider changes in the tax system without taking into account changes in expenditures. We therefore look at both aspects of the fiscal system where this is necessary.

The balance of this Volume consists of five chapters. In this chapter we discuss the conflicts among our major economic objectives and between these economic objectives and equity. Our purpose is to indicate how spurious conflicts can thwart effective action, and to specify the real conflicts and the policy instruments available to resolve them. Chapter 3 is concerned with the use of the tax-expenditure system to maintain more adequately Canada's full-employment and price stability objectives. Chapter 4 considers the changes in the tax system that might be made to stimulate the growth rate. To facilitate the presentation, the discussion of the conflicts that arise between the pursuit of domestic objectives and the achievement of stable economic relations with the rest of the world is postponed and dealt with as a unit in Chapter 5. Finally, Chapter 6 deals with the net redistributive effect of the present fiscal system.

POLICY ERRORS IN RESOLVING CONFLICTS

The problem of achieving a number of objectives with limited means is familiar to every householder. The family's income is limited; the more spent on a particular kind of good in order to realize an objective more fully, the less there will be available to buy other goods. Other objectives will necessarily be less adequately realized. There is an exchange or trade-off between objectives. This choice is painful enough; but it is even more painful when members of the family have divergent views about the relative importance that should be attached to the realization of one objective relative to another. Ultimately the members of the family must agree on the relative importance of their respective views if a decision is to be reached.

Although the analogy should not be overdrawn, decision making by households and governments have several essential features in common. Both face conflicting objectives; both have to resolve in some fashion the divergent views of individuals about the relative importance to be attached to the realization of different objectives; and both are subject to two kinds of policy errors:

1. If, under the policy adopted, one or more objectives could have been realized more adequately without sacrificing the realization of other objectives, the policy was clearly inefficient.
2. The importance to be attached to the preferences of groups and individuals is basically a matter of judgment; and it will always be possible for individuals having preferences that were not recognized to argue that a wrong decision was made.

Arguments about the efficiency with which objectives are realized under a policy are essentially arguments about facts. Although the data are often inaccurate and usually incomplete, and can frequently be interpreted in several ways, it should be possible to obtain agreement on efficiency questions on the basis of objective analysis.

Arguments about the weights that should be assigned to the preferences between conflicting objectives of different individuals involve matters of judgment rather than matters of fact. Men of good will may never agree on what constitutes an improvement in policy if they start with different assumptions about what society should be like, or how much weight to assign to the preferences of some individuals relative to others.

In this Report we are concerned both with improving the efficiency of policy and with the weights that should be attached to conflicting objectives. Because improvements in efficiency will result in unequivocal improvements in national well-being, there is something to be gained and nothing to be lost, and because the question of efficiency is susceptible to factual analysis, it is obvious that we have much more to say about it than about the question of the best compromise between conflicting objectives.

The Causes of Inefficient Policies

We have said that a policy is inefficient if an objective could have been more adequately realized without at the same time having to sacrifice the realization of another objective. These inefficiencies can arise for many reasons, but there are six circumstances we particularly wish to discuss:

1. Incomplete or misleading information about the current situation can lead to a belief that an objective is being realized more or less completely than it is. This can lead to policy errors of both omission and commission.
2. Incorrect forecasts will indicate that objectives will be realized to a greater or lesser extent in the future than turns out to be the case. Forecast errors usually result in inefficient policies.
3. Imperfect knowledge of the effects of changes in policy on the realization of objectives, so that policy makers do not get the results they expect when they take action, can readily lead to perverse policies.

The preceding three "diagnostic errors" are extremely important, and subsequently we shall consider how they might be avoided.

4. When there is incorrect information about the trade-offs between objectives, and it is erroneously believed that in pursuing one objective it will necessarily mean that another will be less adequately realized, policy is bound to be inefficient.
5. When policy makers are unaware of the full range of policy instruments available to them, they may be inhibited from acting by conflicts among objectives that would disappear if they marshalled all the tools potentially at their disposal.
6. Policy changes usually are based on a collective decision of several individuals. Conflicts of opinion among these individuals can cause delay until a consensus is reached or until the initiative is taken out of the hands of the deadlocked group. It follows that too little will be done too late.

Avoiding Conflicts by the Development
of Additional Policy Instruments

For many years economic analysts focused most of their attention on monetary and fiscal policy because of their great concern with the full-employment and price stability objectives. If other objectives are considered but additional policy instruments ignored, it is inevitable that conflicts among objectives will be created.

Fiscal policy is the term used to describe changes in effective tax rates and government expenditures for the purpose of changing aggregate demand in order to maintain full employment and stable prices, in other words, for stabilization purposes. It is frequently treated as though it constituted one policy instrument. However, when one considers the multitude of decisions that have to be made in designing a tax structure, what will be taxed, how heavily it will be taxed, and when it will be taxed, it is apparent that the tax system, broadly conceived, constitutes a whole set of policy instruments. Because so many instruments are potentially available within the tax structure, we believe that many of the apparent conflicts among objectives can be avoided. For example, in pursuing policy A, the government may help to achieve objective X, but less adequately achieve objective Y. It is hardly reasonable to claim that there is a conflict among objectives in this case if the government can pursue policy B at the same time to compensate for the negative effects of policy A on objective Y.

A concrete example will illustrate what we mean. Later in the Report we recommend that capital gains should be taxed on the same basis as other types of income, for reasons of horizontal and vertical equity. Imposing tax on these gains may reduce the attractiveness of risky projects and thereby reduce the growth potential of the economy. However, if the level of tax on the other income derived from property is reduced, if business and capital losses are treated liberally, and if a rapid write-off of capital expenditures for risky projects is permitted, to mention only three of the many compensating changes, the impact of taxing capital gains on risky investments can be offset, and the conflict between the equity and growth objectives would disappear. As we try to demonstrate later in this Report there are many tax reforms that do not create

any conflicts between the economic and non-economic objectives; for other reforms, we suggest that compensating action can be taken to reduce or eliminate potential conflicts.

This is not to say that it is always possible to achieve all objectives without conflict. In some areas very real choices between objectives must be made and the costs in terms of forgone alternatives are substantial. The choice between consumption now or greater consumption in the future is one such choice. However, we believe that the implementation of our recommendations would permit Canada to achieve the objectives we have specified with a minimum of conflict. It is our hope and expectation that future students of taxation will continue to look for conflicts that may be inherent in the tax structure we recommend, and that they will attempt to devise compensating policies to make it possible to realize more adequately a greater number of our objectives. Further revision of the tax structure will be necessary from time to time as the objectives of Canadian society undergo change.

THE CONFLICT BETWEEN FULL EMPLOYMENT AND PRICE STABILITY

The behaviour of prices and costs in relation to unemployment and other variables has been examined by our research staff and by others. The salient findings of these analyses can be briefly reviewed.

The evidence clearly shows that there is a relationship between the national unemployment rate and the rate of change of the general price level. (See Appendix A to this Volume.) However, the relationship is relatively complex and not perfectly understood. It can best be summarized with respect to three ranges of the national unemployment rate (seasonally adjusted).

1. When the national unemployment rate is in excess of 4 per cent, it usually can be reduced to 4 per cent without the development of any sustained inflationary pressure.
2. When the national unemployment rate is below 3 per cent, any attempt to reduce it still further by general stabilization policies is unlikely to be successful and will certainly result in inflationary price increases.

3. When the national unemployment rate is between 3 per cent and 4 per cent, attempts to reduce it will generally be successful, but they will also result in more rapid increases in the price level. Just how rapidly the price level will rise depends on the speed with which unemployment is reduced, on whether sectoral bottlenecks develop, and on the actions taken by labour, government, and business 1/.

There is, therefore, a zone of conflict between the unemployment rate and the rate of change of prices when the national unemployment rate lies between 3 per cent and 4 per cent. When the national unemployment rate is moving quickly toward the lower end of the range, the danger of inflationary pressures increases. When the national unemployment rate rises toward the upper end of the range, the danger of inflationary pressure recedes.

Inflation

The word "inflation" is used here to describe a situation in which the general price level rises at a rapid rate. This situation must be distinguished from the slow upward creep of the general price level that has been noticeable in Canada even during recent years of high unemployment. To some extent this upward creep is a statistical illusion that arises from the shortcomings of the existing indices of price levels that do not adequately take into account quality improvements 2/. Some further part results from the effects on the level of Canadian prices of an increase in the level of world prices. Increases in the prices of the goods Canada imports bring about rising prices of Canadian goods, which in turn put upward pressure on Canadian wage rates. To some extent, therefore, the upward creep in the general level is a statistical illusion, and to some extent its cause lies outside our control.

It is unlikely that a situation in which the consumer price index rises at 1.5 per cent to 2 per cent a year holds any real dangers for the Canadian economy if world prices rise as rapidly or more rapidly. Even a slow price rise is not without its costs, however, particularly for those on fixed incomes. The community, through its government, should periodically review the costs imposed by inflation and adjust its tax-expenditure system to compensate at least those

on low, fixed incomes. In any event it seems to us realistic to expect that in the future, as in the past, there will be a slowly rising level of consumer prices.

The acceptance of a slow increase in the general price level as measured by existing consumer price indices does not mean that we are blind to the dangers of inflation. We call particular attention to the following two situations that bear the seeds of inflation and must be carefully watched and, if need be, corrected.

The first situation is structural inflation. Wages and the prices of industrial products rise when there is excess demand, but are not readily reduced when there is deficient demand. Therefore, shortages in some labour markets and pressure of demand upon capacity in some product markets can result in price increases, even when there is excess labour and capacity available in the aggregate. This sectoral imbalance will create a quickening of the rate of price increase before aggregate demand becomes excessive.

The second situation is cost-push inflation. Costs and profits may begin to rise before full utilization and full employment are achieved, either because these costs are determined outside the domestic economy, as in the case of import prices, or because the suppliers of the products, or the suppliers of the factors of production, possess and exercise market power that makes it possible for them to force up the prices and wages they charge. It is difficult to discount the possibility that the possession and exercise of market power in product markets and in labour markets has created an inflationary bias. When wages are determined in part through the bargaining process between giant firms and powerful unions, and when the firms know they have the power to pass on wage increases, it is not surprising that these wages and prices behave differently from the prices in classical commodity markets, where no individual or small group of individuals can affect the price.

The above analysis suggests three problems. How to minimize the upward creep of prices when there is substantial unemployment? How to select the best compromise between stable prices and low unemployment rates if conflict between

the two cannot be eliminated? How to live with a gradual increase in the price level if this is necessary?

The problem of structural inflation can be partially solved if the speed and direction of the advance of aggregate demand can be controlled more adequately. If the rate of expansion during a boom can be slowed so that actual output approaches potential output more gradually than occurred in the 1954-57 boom, for example, the expansion of productive capacity in the capital goods and durable goods sectors where bottlenecks have occurred in the past, can keep pace with the growing demand for these goods. If bottlenecks do occur, temporary specific measures should be used to restrict demand in these areas until productive capacity has increased, as we discuss in the next chapter. What is needed, therefore, are good indicators of the degree of utilization of capacity in each geographic and industrial sector of the economy, reliable forecasts of the future changes in capacity and demand, methods of controlling aggregate demand that make it possible to vary the rate of expansion without stopping the expansion, and techniques for controlling demand in particular sectors of the economy when bottlenecks occur.

To combat cost-push inflation when it arises is more difficult. The pressure of public opinion, whether applied selectively or through the enunciation of guidelines, can be directed toward wage bargaining and product price changes. However, in the light of experience abroad, these policies are unlikely to be effective unless the government has policies with "bite" to supplement the "bark" of public opinion. For example, selective tariff cuts to inject more foreign competition where domestic competition has been unable to limit the wage-price spiral might be of use in some circumstances. Certainly what is needed is a policy that strikes at those responsible for the inflation rather than a policy that represses aggregate demand and eliminates the inflation only by generating unemployment and general idle capacity. This whole matter will be reviewed by the Economic Council of Canada. We are confident that they will be able to offer some useful suggestions. Because the issues of cost-push inflation lie far outside our terms of reference we shall say nothing further about them.

Unemployment

Bearing all the foregoing points in mind, we have concluded that Canada should tentatively adopt a short-term target unemployment rate of 3.5 per cent, which is in the middle of the "zone of conflict" between the unemployment rate and the rate of increase in the price level $\frac{3}{4}$. We expect that if an unemployment rate of 3.5 per cent is realized, it should be possible to keep the rate of increase of the consumer price index somewhere between 1.5 per cent and 2 per cent a year, provided that the rate of expansion of aggregate demand is carefully controlled, specific measures are quickly adopted to eliminate inflationary pressures from sectoral bottlenecks, a strong line is taken against those directly responsible for cost-push inflation when it appears, and foreign prices continue to rise in the future at about the same rate as they have in the past $\frac{4}{5}$. In the balance of our discussion, we will therefore speak of an employment rate of 96.5 per cent as full employment.

The 3.5 per cent target rate of national unemployment is an aggregate concept. Underlying this concept is a complex structure of unemployment rates for different components of the labour force. For a variety of reasons, certain regions are unable to utilize their labour force as completely as others. Similarly, obsolescence of certain skills, and differences in the rate of expansion of industries using certain skills, will mean that some groups of workers will find it harder to find employment than others. The target rate of unemployment of 3.5 per cent we use in this Report has been based on the finding that the differential rates of unemployment among regions have been relatively constant for some time in Canada, and are unlikely to be quickly eliminated. An analysis of regional unemployment rates indicates that when the national unemployment rate is 3.5 per cent the following structure of regional rates is observed. (See Appendix B to this Volume).

Atlantic Provinces	6.0 per cent unemployment
Quebec	4.6 per cent unemployment
Ontario	2.6 per cent unemployment
Prairie Provinces	2.2 per cent unemployment
British Columbia	4.0 per cent unemployment

Studies in the United States indicate that pure frictional unemployment, which is composed of seasonal unemployment, unemployment due to normal voluntary turn-over of experienced workers, and the normal waiting period encountered by new entrants to the labour force before they find a job, does not amount to more than 2.5 per cent of the labour force 5/. The evidence in this country is more fragmentary, but it is generally consistent with the view that a rate of 2.5 per cent would adequately account for normal frictional unemployment 6/.

The 3.5 per cent target selected here, therefore, incorporates unemployment in excess of frictional unemployment in British Columbia, Quebec, and the Atlantic region. We are not complacent about these above-average regional unemployment rates, and long-term policies that might be adopted to reduce them are discussed later in this Report. However, the Ontario rate is high enough to allow for normal frictional unemployment, and the lower Prairie Provinces rate is explained by the predominance of agriculture in that region, a sector of the economy that generally exhibits lower than average unemployment rates. Consequently, the national target we have selected is consistent with the absence of labour shortages in any of the major regions as a whole. At lower national unemployment rates, unless regional differences are reduced, labour shortages would be likely to create strong inflationary wage pressures in the industrial heartland of Ontario.

In the United States a target rate of 4 per cent unemployment is commonly quoted. There are many similarities between the two economies, but we believe it is realistic for us to set our sights a little higher. Before 1957, Canada had lower national unemployment rates than the United States with approximately the same rate of price increase. This was possible because Canada increased immigration when labour shortages developed. The immigration safety valve should permit a lower target rate of unemployment in Canada than the United States. It is safe to say that neither country can maintain, for any period of time, the low unemployment rates experienced in many western European countries since World War II without generating serious inflation or balance-of-payments crises.

As we have noted above, some regions will have much higher unemployment rates when the national average rate is 5.5 per cent. When a region is subject to high unemployment rates that cannot be reduced by increasing the level of aggregate demand, without at the same time increasing the rate of increase of prices in some other region, it can be said to suffer from structural unemployment.

In order to realize the 5 per cent target rate of unemployment set by the Economic Council of Canada without a rapidly increasing price level, it will be necessary, as the Council recognizes, to resolve this structural problem. A long-run solution probably involves the use of both of the following types of policies:

1. Relocation policies designed both to encourage the adjustment of capital and labour between regions, and to improve the distribution of these resources within regions.
2. Rehabilitation policies, including the retraining of workers, the provision of social capital, the encouragement of the growth of private industry where economies of scale or of agglomeration can be reaped, the provision of adequate information about the region's potentialities, and the provision of adequate financing for new firms and industries.

The specific policy or policies that ought to be emphasized in a particular area will depend upon the nature of the structural maladjustment. If the structural problem is rooted in inadequate skills on the part of the labour force, it is better to augment their ability to do more productive and better paying jobs, than to subsidize industries that use unskilled labour to expand in the particular area. The case for inducing capital to move to such areas is valid when it can be shown that the financial markets have an unwarranted bias against them, when entrepreneurial talent in the area is in short supply or when the prospects are good for establishing industrial complexes capable of capturing economies of scale in production or marketing. Finally, it cannot be over-emphasized that structural unemployment problems are of an enduring nature and must be dealt with by long-term policies, rather than by the adoption of piecemeal policies during general lapses from full employment.

There is a strong relationship between the success or failure of stabilization policy and the success or failure of policies designed to alleviate structural unemployment. Efforts to adjust to structural changes in the economy that require a high degree of labour mobility to avoid a serious increase in unemployment are likely to prove most successful under conditions of buoyant aggregate demand when the economy's capacity to absorb workers is highest. Sluggish demand conditions, resulting in an excess supply of labour in most markets, compound the difficulties of reducing the incidence of structural unemployment, of helping "depressed" areas generate new sources of employment, and of implementing policies aimed at reducing regional differences in unemployment rates. Successful stabilization policy makes for more successful "structural" policies.

We have said that by maintaining a target unemployment rate of 5.5 per cent Canada will probably be subject to a rate of increase of the consumer price index of between 1.5 per cent and 2 per cent a year, which would be a slightly lower rate of price increase than the average of that for the period since the Korean War. To the extent that the structural policies are successful, either the target unemployment rate can be reduced, or a lower rate of price increase can be achieved with an unchanged target rate.

Adjustment for Rising Price Levels

Assuming that the consumer price index continues to rise at an average rate of 1.5 per cent to 2 per cent a year, what could and should be done? As we have said, part of the increase in this index is, no doubt, illusory; but part of it is real and will continue to impose some burdens on fixed income groups. We are convinced that there is no easy answer. The government must periodically re-examine its various transfer payments and welfare programmes to ensure that the economic position of the aged, the handicapped, and the indigent is at least maintained and, if possible, improved so that they share with the more fortunate some of the fruits of economic growth. The tax structure should be subjected to the same periodic scrutiny. Later in the Report we shall discuss the adoption of a system of personal income tax credits that would offset all or much of the

burden of taxes imposed on those with low incomes. With an ever-rising price level these credits should be increased so that the low income groups at least do not experience an ever-deteriorating real tax position.

We emphasize the word "periodic" however. We are convinced that it would be a serious error to relate transfer payments and tax credits to a price index so that they increased automatically with inflation. To do so would seriously weaken, if not destroy, one of the basic defences against inflation, the automatic stabilizers that are built into the present tax-expenditure system. Such increases should be made at the discretion of the government, in a manner that conformed to the objectives of full employment and price stability. This certainly does not mean that the government cannot adopt a policy of regular review; indeed we would urge that it do so. Nor does it mean that the government cannot agree to increase transfer payments and tax credits by a specified amount after a period of price level increase. What it does mean is that the timing and magnitude of the particular changes should be determined in the light of the economy's need for stimulus or repression at the time.

The corollary of this position is that the tax structure generally should not be adjusted automatically to take into account changes in the general level of prices. Taxes must be based on current dollar income, including increases in the market value of assets, and no attempt should be made to adjust automatically for changes in the purchasing power of money. To develop a tax system that taxed only increases in "real" purchasing power would irreparably damage the built-in stability of the system. Equally important is the fact that such adjustments would be extremely complex if they were applied universally, and quite unfair if they were confined to some forms of income and not to others. For example, during a period of rising prices, increases in the market value of equities do not necessarily mean that the shareholder has increased his "real" economic power. But to adjust the income tax of this shareholder to take account of the reduced purchasing power of money would be inequitable, if the government did not also reduce the taxes of individuals in receipt of contractual payments that did not increase at all with inflation, or of individuals who received wages that responded only slowly to increases in the cost of living. It will

be time to worry about overtaxing those with gains that are wholly or partially offset by inflation, when compensation has been given to those who have suffered absolute losses as a result of inflation 7/.

THE CONCEPT OF ECONOMIC GROWTH

As the goal of economic growth has come more to the forefront in public discussion of economic objectives, there has been increasing confusion about the appropriate concept of growth. In an attempt to reduce this confusion, we propose to distinguish two types of growth: actual growth and potential growth.

Actual growth is merely the record of past aggregate economic performance, which can be measured by the rate of increase of gross national product (GNP) in constant dollars. This measure suffers from the weakness that observations at any two points of time will reflect the phases of the business cycle that happen to have prevailed at those two dates. For instance, if we examine the period 1933-56 we obtain an average annual growth rate of 5.7 per cent (measured in 1949 dollars). If we take the period 1929-61, however, the rate is reduced to 3.4 per cent. In the first case, the long-term rate of growth is exaggerated because the initial year was particularly depressed while the terminal year was one in which the factors of production were fully employed. In contrast, the latter growth rate is from an initial peak to a terminal trough and the long-term rate of growth is understated.

Potential growth measures not what the economy did produce each year but what the economy could have produced in that year, had all resources available at that time been fully employed. The calculation of what output would be if the nation's available resources were fully employed in each year results in a measurement of the increase over time in the economy's actual capacity to produce 8/.

Per Capita Potential Growth

Canadians are interested in greater economic growth primarily because as individuals they would be able to increase their consumption and thus national welfare would be improved. Potential GNP measures what consumption could be if all output were devoted to that purpose 9/. Although increased population may

be desirable in a country as under-populated as Canada, it would be reasonable to define as Canada's growth goal the rate of increase of per capita potential GNP. However, policies that stimulate immigration are also likely to improve per capita GNP. Highly skilled persons are better represented among immigrants than among the population as a whole. Furthermore, the labour force participation rates of immigrants have been higher than those of the native born. Finally, an expanding market will enable many firms to realize economies of scale. This line of reasoning suggests that in Canada population growth and per capita GNP growth are largely complementary. Therefore, we focus our analysis upon the growth of total potential GNP, and mention the per capita growth consequences only where necessary.

Potential GNP measures the potential of goods and services, but does not reflect the fact that one of the fruits of increased output is that individuals can have both more material things and more leisure. We have not attempted to estimate the output forgone as a result of increased leisure, because it is difficult, if not impossible, to separate voluntary from involuntary increases in leisure. Rapid technical progress and the substitution of capital for labour, together with recurring periods of unemployment, have no doubt led to a shorter work-week and to earlier retirement because skills have become obsolete. The task of sorting out that portion of leisure that has been desired as an end in itself is particularly intractable.

The Distinction Between Potential GNP and Potential Gross Domestic Product

Another distinction should also be made clear before discussing the potential GNP concept in some detail. There are two concepts of gross output for the nation as a whole. Gross domestic product measures the output produced by factors located in Canada; GNP measures the output of factors of production owned by Canadian residents. The main difference is that gross domestic product includes the interest and dividends paid to non-residents, but excludes the dividends paid to Canadians by companies abroad and the retained earnings of non-resident-controlled Canadian corporations, whereas GNP includes the latter but excludes the former.

Each concept has its uses. For example, gross domestic product is the better measure for studies of the relationship between output, and the input of labour, capital and technology, because the productivity of a specific capital good is unlikely to be affected by the place of residence of its owner.

From a public policy standpoint, the growth goal ought to be formulated in terms of GNP, which measures the income accruing to Canadian residents, and therefore is a measure of the potential consumption available to Canadians. A policy which, other things being equal, raised the growth of gross domestic product and lowered the growth of GNP is clearly not in the general interest of Canadians 10/.

Ideally, the measurement of the growth of a nation's economic welfare requires a multidimensional approach. No single measure is wholly adequate. We are satisfied, however, that growth defined as potential GNP successfully covers several of these dimensions. The other dimensions we must try to take into account in a less formal manner.

The Gap Between Actual and Potential GNP

In the period 1957-63 actual GNP increased much more slowly in Canada than it had in the previous decade. This led to growing pressure for policies that would "increase the growth rate", that is, the rate of increase of actual GNP over time. As we shall show, the potential growth rate declined slightly because of a decline in the rate of population growth and a slower rate of capital formation as a result of the under-utilization of productive capacity. But it was the under-utilization of productive capacity that brought about most of the decline in the rate of increase of actual GNP. A substantial gap developed between actual and potential GNP. The use of the phrase "slow growth" probably had the unfortunate effect of diverting attention from the immediate problem of inadequate aggregate demand to the problem of the growth in potential output. The solutions to the long-run problem, such as expenditures for vocational training and the encouragement of basic research, do relatively little to close the gap between actual and potential output in the short run.

Potential output is a measure of the goods and services that the economy could produce at a reasonably stable price level with the existing quantity and quality of labour and capital available, existing norms of full utilization of these inputs (average number of hours worked a week, average labour force participation rates, and normal use of capital equipment), and existing technology. In terms of the "GNP gap" mentioned above, potential GNP is an estimate of the output that could be achieved if the unemployment rate was reduced to 3.5 per cent and all capital was employed 11/. While potential GNP is defined in the context of a reasonably stable price level, it is not suggested that an existing gap between potential and actual GNP can always be closed without inflationary pressure bringing about increases in the price level. The more rapidly the gap is closed the more likely bottlenecks are to arise and the greater the pressure on the price level is likely to be.

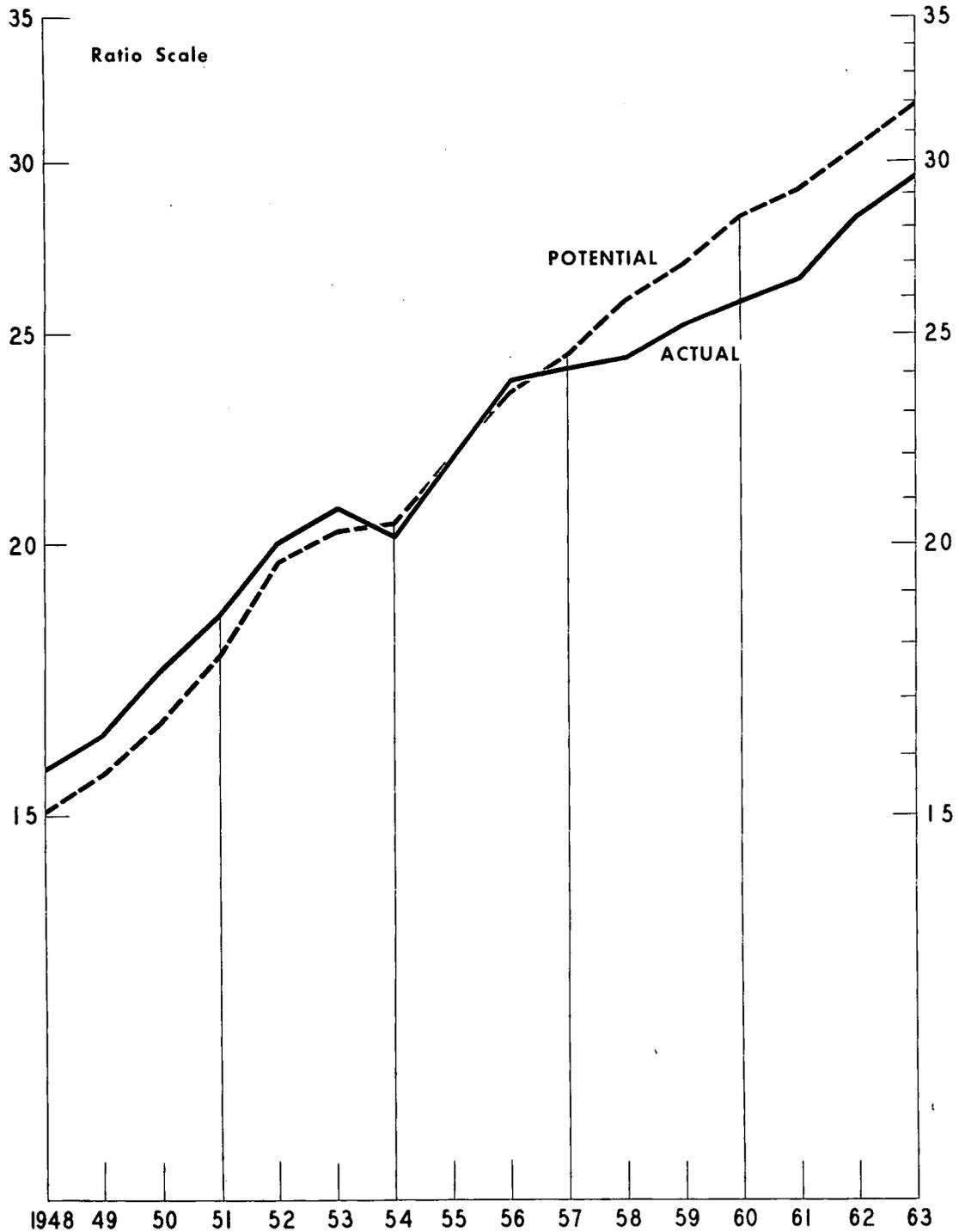
Our research staff made several estimates of potential GNP for Canada for the postwar period. The estimate finally decided upon is illustrated in Chart 2-1, along with actual GNP, for the period 1948-63. 12/

THE CONFLICT BETWEEN ECONOMIC GROWTH AND FULL EMPLOYMENT

For most of the postwar period prior to 1957 the Canadian economy operated either at full employment or at a rate of output in excess of full employment as defined by our estimate of potential GNP 13/. The only time during this period that the actual level of GNP fell short of its full-employment potential for more than a single quarter was during 1954 and the first quarter of 1955. Following the 1957 downturn the GNP gap persisted throughout the period for which estimates were made. The gap reached a maximum of over 9 per cent of potential GNP in the first quarter of 1961, and averaged more than 7 per cent of potential output in 1962 and 1963.

The size of the short-run GNP gap between 1957 and 1963 actually understates the cost of unemployment, in terms of output forgone over this period. This is because potential output is related to, or is to a certain extent dependent on, demand conditions, and hence the size of the GNP gap in the past. For example,

Chart 2-1
POTENTIAL AND ACTUAL GROSS NATIONAL PRODUCT
Billions of 1949 Dollars



Source : T.A. Wilson and N.H. Lithwick, The Sources of Economic Growth, a study published by the Commission

had the economy continued to operate at approximately full employment between 1957 and 1962, the level of output which the economy would have been capable of producing in 1963 without generating inflationary pressures would have been higher than the potential GNP estimate. Had satisfactory levels of aggregate demand prevailed between 1957 and 1962, capital investment would have been higher than in fact it was, with the result that the productive capacity of the economy at full employment in 1963 would have been higher. The capital stock, however, is not the only determinant of potential GNP that can be affected by the economy's past performance. Growth of the labour force in Canada is influenced by net migration which in turn reflects economic conditions in this country and abroad, and by the ability of the Canadian economy to absorb immigrants. The much lower level of immigration and the higher emigration that marked the period after 1957, compared to the earlier postwar period, while also reflecting changing economic and political conditions abroad, was in part a consequence of reduced employment opportunities in Canada. Potential GNP would have grown more rapidly had growth of the labour force, and hence the supply of labour, been more rapid.

The effect of persistent unemployment on the growth rate of potential GNP can be illustrated by comparing two projections of potential GNP. The first assumes a utilization rate of 95 per cent, a rate somewhat better than that achieved in the late 1950's and early 1960's; the second assumes that potential GNP is fully achieved. These projections show that the growth rate would have been about 0.4 percentage points higher per annum if full utilization had been maintained 14/₁₀₀.

Later, when we discuss how difficult it would be to increase the growth rate by other methods, the importance of maintaining full employment will become even clearer.

We do not deny that it is possible to achieve full employment in a way that is inimical to economic growth. A government bent on maximizing current consumption could no doubt devise means to repress investment as output and employment expanded. But in the normal course of events, an increase in employment and

output will enhance the growth of potential output because the absolute level of real investment will tend to rise, that is to say, if the saving and investment habits of the nation remain unchanged, the full-employment, potential-output path will lie above the path achieved with excess unemployment.

What about policies designed to raise the rate of growth after full employment is achieved? Will the adoption of these policies, which we discuss in Chapter 4, tend to jeopardize the maintenance of full employment itself? Will a more rapidly growing economy be more or less subject to cyclical fluctuations in aggregate demand?

At first glance, it would appear that a high growth economy, because it would be a high investment economy, would be subject to greater instability than would a low growth and low investment economy, because investment demand is less stable than consumption demand. On the other hand, the momentum of a high growth economy will be greater, and long-term expectations will consequently be more favourable to the stability of investment. In a high growth economy, the future will be given more weight than the present in arriving at investment decisions. If firms expect the high growth path to be quickly restored, they will be less likely to cut-back investment during recessions. In addition, for reasons to be discussed in Chapter 4, in a high growth economy the propensity to save will be high and the built-in stability of the system will be greater. A given change in investment will therefore have less impact upon income and employment.

In view of these considerations, it is not possible to predict the effects upon the stability of the economy of adopting policies to increase the full-employment growth rate.

In any case, if increased instability of private demand is a counterpart of policies to raise the growth rate, this does not necessarily indicate that there is a trade-off between stability and growth. The more vigorous use of discretionary fiscal and monetary policy can forestall incipient fluctuations and keep the economy moving along the full-employment growth path. Furthermore, the tax-expenditure system can be changed, if necessary, to increase its built-in stabilizing power.

Will a more rapid rate of economic growth lead to an increased level of structural unemployment that would necessitate an upward revision in the target unemployment rate? In a dynamic economy organized largely along private enterprise lines, the adjustments required of labour and capital to adapt to the changes in demand and technology are often great and in many cases painful. However, these adjustments are required because the growth of demand for particular skills or products has not kept pace with the growth of supply. Stepping up the rate of growth in the aggregate will not necessarily increase or decrease the extent of these relative adjustments. However, in a high growth economy, larger relative adjustments can be accomplished without absolute declines in the output of particular products or the necessity to shift particular groups of workers.

Finally, we must consider the argument that periodic recessions, by purging inefficient firms and putting pressure upon the profit margins of efficient firms, are good for the long-run efficiency and growth of the economy. While we agree that a firm that never had its profit position threatened might become increasingly tolerant of inefficient practices and wasteful expenditures, we believe that such pressures will be brought about by the forces of competition both foreign and domestic, and by those changes in relative demands and technology that occur in a dynamic economy. Aggregate stability can, and indeed usually will, conceal instability of the demand for the products of particular firms and industries. These, together with competitive pressures, will eliminate inefficiency when it appears. To tolerate general recessions to achieve this purpose is akin to putting the whole population on a diet because some individuals are overweight.

THE CONFLICT BETWEEN GROWTH AND PRICE STABILITY

Because rapid economic growth and full employment are complementary goals, any conflict between maintaining full employment and a third goal will mean that a conflict will also exist between economic growth and that goal. Therefore, to the extent that the limited conflict between full employment and price stability cannot be resolved, a conflict will therefore exist between price stability and increasing the rate of economic growth.

On the other hand, the adoption of a high growth rate policy may help to reconcile the objectives of full employment and price stability. If productivity and the labour force are growing rapidly, the upward pressure upon wages and prices at a given rate of unemployment will be mitigated. In other words, policies that increase growth at a given rate of unemployment are probably compatible with the goal of increased price stability. Only in the case where productivity changes have a greater than proportionate effect upon money wage changes will this not hold.

THE CONFLICT BETWEEN ECONOMIC GROWTH AND EQUITY

To recapitulate briefly what we have said in Chapter 1, the following are the essential features of an equitable tax structure:

1. A comprehensive income tax base that includes virtually all changes in the taxpayer's economic power.
2. A progressive rate structure that imposes greater tax burdens, both absolute and proportionate, on those with greater comprehensive tax bases.
3. The absence of differentiation among the sources of economic power, that is, the same tax treatment for wages, business income, property income, capital gains, and gifts and bequests, without regard to the source or form of organization through which these increases in economic power flow.
4. Recognition of the family as the basic tax unit, with appropriate tax modifications to take into account variations in the particular circumstances of the unit.

Would the imposition of a tax system with these features reduce the rate of growth of potential output?

Taxes on income and consumption reduce the rewards from additional work, and presumably the amount of work done. Taxes on personal wealth reduce the rewards from saving and investment, and presumably the volume of saving. Saving and investment are also penalized, but to a lesser extent, by taxes on income, and to an even lesser extent by taxes on consumption. In short, it can be said

that virtually all taxes have unfavourable effects on economic growth. But this is not a helpful finding. As we have pointed out, the existence of government is a prerequisite of growth, and public investment can make a substantial contribution to growth. On both counts the government requires command over goods and services, and the alternative methods of securing this command could be both more deleterious to growth and more inequitable than taxation.

The relevant questions are whether equitable taxes necessarily conflict more with growth than do inequitable taxes, and in particular whether the tax system we recommend in this Report would reduce economic growth.

The tax system that provides maximum encouragement to economic growth will differ in general from the tax system that maximizes equity, so that there must be an ultimate trade-off between growth and equity. However, many inequitable tax systems have growth-inhibiting aspects and hence may be inferior to an equitable system with respect to the growth objective. The present Canadian tax system clearly falls into this class, because it contains a number of features inimical to both growth and equity. The modification or elimination of these features would therefore help Canada to achieve both goals.

Of course, not all the specific reforms adopted on equity grounds would also have a favourable impact on economic growth. However, the unfavourable impact of these reforms on growth, to the extent that they existed, must be weighed in the balance against the impact of those reforms that improved both growth and equity. In addition, the negative effects upon growth of these reforms may be further offset by the adoption of certain specific provisions designed to stimulate growth without having much effect, one way or another, on equity.

This means that the effect of our recommended set of reforms upon growth must not be evaluated piecemeal, but rather that their overall impact must be assessed. We have already mentioned that the taxation of capital gains is required if equity is to be achieved. Including capital gains in income may reduce, we might assume, the incentive to invest in risky projects. But by reducing the taxes on some corporate source income, by allowing the write-off of capital losses, and by removing most of the restrictions on the deductibility of business expenses and losses this effect can be substantially offset.

Equity requires that we rely heavily on income taxation. The taxation of income reduces the source of saving and the return to saving. But by allowing individuals to deduct their contributions to retirement savings plans from gross income, and by allowing them to defer taxation on the current earnings of the assets of such plans, the attractiveness of this form of saving, and presumably the volume of saving, could be increased. By extending the limits established on the contributions to such plans, an income tax could be converted into a consumption tax.

Taxes on income make leisure more attractive; but by allowing working women with young children a deduction from income to help defray the cost of child care, it is possible to encourage wives to enter the labour force.

These are examples of compensatory changes in the tax system that would offset the negative effects of other changes on the rate of growth. Some of them are also desirable on equity grounds. We are convinced that the adoption of a more equitable tax system with such features would not reduce Canada's rate of growth and would probably increase it.

Finally, we want to emphasize that maintaining full employment will increase the rate of growth of potential output of the Canadian economy. Later we shall discuss how the tax system might be used to assist in maintaining full employment. If the resulting rate of growth is judged to be inadequate, it will be possible to increase the growth rate still further. In Chapter 4 we outline a number of steps that might be taken for this latter purpose, including some changes in the tax structure. These high growth tax policies would, we are convinced, reduce somewhat the basic fairness of the tax system and would impose other costs. Certainly before they were adopted they should be subject to extensive public scrutiny and discussion. We believe it would be a serious mistake for us to set a target growth rate and propose tax measures that purported to realize the target. There is a reasonable possibility that the growth rate achieved at full employment with an equitable tax system would be accepted as adequate. Before a higher rate is fixed as a target, the public should be made aware of the costs that would be involved in realizing it.

We have already spoken of the costs in terms of a less equitable tax system; but this is by no means all. To increase the full-employment growth rate would require Canadians to accept one of three alternatives. The first would require a lower rate of unemployment and a higher rate of price level increase. The second would require the sacrifice of current consumption for greater future consumption, or the sacrifice of leisure for more work. The third would require an even greater reliance on foreign saving than in the past. If this last alternative resulted in the transfer of an even greater share of our future output to non-residents and to increased foreign control, this course might be unacceptable to Canadians. Achieving a rate of growth above the present potential full-employment growth rate involves costs, and Canadians should be made aware of just how much this extra growth would cost.

CONCLUSIONS AND RECOMMENDATIONS

CONFLICTS AMONG OBJECTIVES

1. There are unavoidable conflicts between some objectives and, because various people will assign different weights to different objectives, there will always be disputes about policies. But policies are often inefficient, in the sense that one or more objectives could be realized more completely without sacrificing other objectives.
2. Inefficient policies arise from diagnostic errors, erroneous views about the extent to which one objective will have to be forgone in order to realize another more completely, and failure to use all the policy instruments available. To avoid conflicts there have to be as many policy instruments as there are objectives.
3. The tax-expenditure system can provide a whole set of policy instruments. This often makes it possible to resolve conflicts among objectives within the system by adopting compensating policies.

UNEMPLOYMENT AND PRICE STABILITY

4. There is a zone of conflict between unemployment and price stability. When the rate of unemployment is greater than 4 per cent on a seasonably adjusted

basis, policies that reduce unemployment to 4 per cent are unlikely to result in higher rates of price increase. When unemployment is less than 3 per cent, attempts to reduce unemployment are unlikely to be successful and will probably result in rapidly rising prices. We recommend that for the time being a national unemployment rate of 3.5 per cent should be adopted as a target. If aggregate demand is carefully controlled so that this target is approached gradually, if specific measures are adopted to eliminate sectoral bottlenecks, if a strong line is taken against those responsible for cost-push inflation, and if world prices do not rise more rapidly than they have in the recent past, the consumer price index should not increase by more than 1.5 per cent to 2 per cent a year.

5. With a national unemployment rate of 3.5 per cent there will be some regions with substantially higher rates, in particular, the Atlantic Provinces, Quebec, and British Columbia, until structural unemployment is reduced. Increasing aggregate demand to reduce unemployment in these regions to 3.5 per cent would result in rapidly rising prices in Canada. The reduction of structural unemployment requires specific long-term measures; but these measures will be much more effective if there is adequate aggregate demand. The long-term remedies are relocation and rehabilitation. The latter includes provision of social capital, the encouragement of private industry where economies of scale and agglomeration can be achieved, and the provision of adequate finance for new firms and industries.
6. As the problems of structural unemployment and its twin, structural inflation, are resolved, the national target rate of unemployment should be lowered.
7. We recommend that the government should periodically review the tax system and its transfer payment programmes to ensure that those on low, fixed incomes share in the fruits of Canada's economic growth. With a consumer price index that is expected to rise between 1.5 per cent and 2 per cent a year, these people will become progressively worse off unless action is taken. We shall recommend a system of tax credits to offset the tax at the lowest income bracket. These credits should be increased from time to

time to offset the gradual reduction in real income suffered by those with fixed or low incomes as a result of the upward creep of prices. We are strongly opposed, however, to automatic adjustments tied to price indices, for this would impair the power of the tax system to stabilize the economy. Taxes should be levied on current dollar income. Gains in the prices of assets that result from inflation should be taxed in the same way as all other gains.

ECONOMIC GROWTH

8. Estimates of the changes in potential GNP provide the best measure of Canada's economic growth.
9. Actual GNP increased more slowly in the period 1957-64 than in the previous decade. While often described as a period of "slow growth", the basic problem was inadequate demand. There was a substantial gap between actual and potential GNP. Many of the policies adopted were ineffective because of the faulty diagnosis of this problem. Better vocational training and more research are policies that will increase productivity and slowly raise potential GNP; but they are no substitute for fiscal and monetary policies that will increase aggregate demand in the short run.

THE CONFLICT BETWEEN ECONOMIC GROWTH AND FULL EMPLOYMENT

10. The shortfall between actual and potential GNP provides a measure of the enormous costs of unemployment in terms of the output that is forever lost. To these costs should be added the human misery that accompanies widespread and protracted unemployment. Moreover, the GNP gap understates the economic cost; for when the economy is operating below capacity the rate of capital formation is reduced, and the population gain from migration is lower. These changes reduce the rate of increase of potential GNP.
11. We conclude that there is no conflict between the maintenance of full employment and a high growth rate. Indeed, full employment is a necessary precondition for the realization of the latter.

THE CONFLICT BETWEEN ECONOMIC GROWTH AND PRICE STABILITY

12. Because the objectives of full employment and price stability are, to some extent, in conflict, and because the maintenance of full employment is a

precondition for a rapid rate of economic growth, there is a limited conflict between a high rate of growth and price stability. But at a given level of unemployment, increasing economic growth through policies designed to stimulate the supply of factors of production and their productivity will probably reduce the upward pressure on the price level.

THE CONFLICT BETWEEN
ECONOMIC GROWTH AND EQUITY

13. All taxes are likely to reduce economic growth; but many of the government expenditures financed by these taxes make an essential contribution to the growth of the economy. Other methods of financing government expenditures would probably have a more deleterious effect on economic growth.
14. The relevant question is not whether taxes reduce the rate of growth, but rather whether equitable taxes conflict with the growth objective more than inequitable taxes.
15. A tax system designed specifically to achieve the highest rate of growth would probably be considered highly inequitable. However, many inequitable provisions in the present tax system are also inimical to economic growth. These provisions can be eliminated and thereby both objectives can be achieved more completely.
16. If such costless increases in the rate of economic growth are achieved, it is then possible to adopt provisions to improve equity (even though such provisions would tend to reduce the rate of economic growth), without on balance suffering any reduction in the growth rate.
17. Specific provisions that would increase the equity of the tax system, but that would tend to reduce the rate of growth, often can be compensated for by adopting other provisions that would be favourable to growth without affecting the fundamental fairness of the system one way or the other.
18. It is essential, in evaluating the effects of our proposed tax reforms, that they be considered as a package rather than piecemeal. It is their overall impact on the rate of growth that is important.

REFERENCES

- 1/ See G. L. Reuber, The Objectives of Monetary Policy, Working Paper prepared for Royal Commission on Banking and Finance, December 1962, and "The Objectives of Canadian Monetary Policy, 1949-61, Empirical 'Trade-Offs' and the Reaction Function of the Authorities", Journal of Political Economy, Vol. 72, 1964, p. 109, and S. F. Kaliski, "The Relation Between Unemployment and the Rate of Change of Money Wages in Canada", International Economic Review, Vol. 5, 1964, p. 1.
- 2/ See A. Asimakopulos, The Reliability of Selected Price Indexes as Measures of Price Trends, a working paper prepared for the Royal Commission on Banking and Finance, 1962, and "The Canadian Consumer Price Index", Canadian Journal of Economic and Political Science, Volume XXIX, 1963.
- 3/ As we discuss later, if structural problems are resolved, the long-term target rate of unemployment can be reduced. This objective is therefore not necessarily in conflict with the goal for 1970 of 3 per cent unemployment established in Economic Council of Canada, First Annual Review, Ottawa: Queen's Printer, December 1964, p. 38.
- 4/ If the consumer price index rises no faster than 1.5 per cent to 2 per cent a year, the wholesale price index of domestic goods should remain virtually constant, while the general gross national expenditure deflator will probably rise slightly more rapidly than the consumer price index.
- 5/ Joint Economic Committee of the United States Congress, Study of Employment Growth and Price Levels, "The Extent and Nature of Frictional Unemployment", Study Paper No. 6, Washington: United States Government Printing Office, 1959.
- 6/ Frank T. Denton and Sylvia Ostry, An Analysis of Post-War Unemployment, Staff Study No. 3, Economic Council of Canada, Ottawa: Queen's Printer, December 1964.

- 7/ Historically, stock prices have risen more rapidly than consumer prices, as we discuss later in the Report. Probably the attempt to hedge against inflation by buying common stocks has, among other factors, helped to generate a gain in share prices that has more than offset the general rise in prices.
- 8/ The adjustment for unemployed resources in the potential growth concept does not take into account the effect of this year's unemployment on next year's supply of resources. For example, if some part of the nation's capital equipment stood idle in a particular year, firms would probably refrain from adding new equipment; and they might not even replace equipment worn out during the year. As a result, the level of potential output in subsequent years would be reduced relative to what it would have been if capital formation had not been retarded. The potential output measure treats bygones as bygones. Had the economy not departed from full-capacity utilization throughout the period, the potential growth path would be higher.
- 9/ We would have preferred to have used net rather than gross national product because we are unwilling to consider a situation in which the capital stock is being run down as one where welfare is increasing. The precariousness of the available capital consumption measures forced us to settle for GNP.
- 10/ A capsule summary of the effects of several different policies is as follows:
1. Policies to stimulate domestic investment without affecting the relative importance of foreign savings in the financing of that investment will raise the growth rate of both measures.
 2. Policies that stimulate foreign investment and represent a net addition to total investment will raise both growth rates, but will raise the gross domestic product growth rate by more than the GNP growth rate.
 3. Policies that replace foreign savings with national savings, while holding domestic investment constant, will stimulate the growth of GNP without affecting the growth of gross domestic product. An example of such a set of policies would be a devaluation of the exchange rate coupled with a tax increase to raise the national savings rate.

- 11/ The extent to which potential GNP exceeded actual GNP during the recent past depended on (a) the quantity and quality of unemployed labour and capital, (b) whether the unemployed inputs would have been absorbed into industries with below average or higher than average productivity, (c) the changes in relative factor costs and product prices that would probably occur with a closing of the gap, and (d) the re-allocation of resources induced in all sectors of the economy by cost price changes. See Michael E. Levy, Fiscal Policy, Cycles and Growth, New York: The National Industrial Conference Board, 1963, p. 60.
- 12/ The derivation of the measure of potential GNP is explained in detail in, T. A. Wilson and N. H. Lithwick, The Sources of Economic Growth, a study published by the Commission. As discussed in the study, the estimates of potential output are based on a technique that differs from that used by the Economic Council of Canada as reported in B. J. Drabble, Potential Output 1946 to 1970, Staff Study No. 2, Economic Council of Canada, Ottawa: Queen's Printer, 1964.
- 13/ We wish to make it clear that the potential output we measure is not the maximum output which the economy is capable of producing. Like the individual firm, the economy as a whole can and has produced, for short periods of time at a rate higher than can be sustained over longer periods. The individual firm can operate at more than 100 per cent of its capacity by incurring sharply increasing unit costs. Similarly, the economy as a whole can operate beyond its "capacity" through the use of overtime work, by reducing unemployment below the target level, by drawing in marginal members of the labour force, and by insufficient provision for the maintenance of equipment. During such periods there will be inflationary increases in prices.
- 14/ See T. A. Wilson and N. H. Lithwick, The Sources of Economic Growth, *op. cit.*

CHAPTER 3

FISCAL POLICY FOR STABILITY

Changes in the tax-expenditure system including government transfer payments can be used at the discretion of the government to offset excesses or deficiencies of private demand. In addition, the tax-expenditure system automatically reduces the impact on output of fluctuations in private demand. The purpose of this chapter is to consider whether the tax-expenditure system, when used in conjunction with other policy tools, can make a greater contribution to the achievement of full employment and price stability.

In Chapter 2 we defined full employment to exist when the unemployment rate is 3.5 per cent. We also said that with good management we expect the consumer price index to increase at an annual rate of between 1.5 per cent and 2.0 per cent and domestic wholesale prices to be virtually constant if this unemployment rate is maintained, unless the structure of the economy is changed or the rate of change of foreign prices differs from that of the past. For purposes of this discussion we shall define this 1.5 per cent to 2.0 per cent per annum rate of price increase as relative price stability.

Because the objectives of price stability and full employment will be in conflict when the unemployment rate is between 3 per cent and 4 per cent, our choice of targets may not be universally accepted. Some might prefer a higher unemployment rate if it meant a lower rate of price increase; others would accept a higher rate of price increase if it meant less unemployment. However, the precise target selected is not particularly important for the present discussion; what is important is that there are heavy social and economic costs with no offsetting advantages if the unemployment rate is outside the 3 per cent to 4 per cent range. The level of aggregate demand must be controlled so that the unemployment rate does not move outside this range. In addition, having selected a target unemployment rate within the range, aggregate demand must be controlled so that even within the range the deviations from the target are both small and of short duration.

THE EXISTING FISCAL POLICY WEAPONS

The most important federal tax weapons for countering economic instability are the personal income tax and the corporate income tax 1/. The most important transfer payment programme for stabilization purposes is the unemployment insurance system, although the existence of other transfer programmes and subsidies increases the inherent stability of the system. All these measures, together with the general expenditure programmes of the government, are important for stabilization policy; some are most effective as automatic stabilizers, others are useful for discretionary policy as well.

Built-in Stability

The characteristics of the tax-expenditure system tend to reduce the impact on the economic system of fluctuations in demand. This reaction of the system to changes in the demand for output is known as built-in stability. When autonomous demand declines, incomes will decline 2/. This income decline in turn will lead to declines in consumer purchases and the accumulation of inventories that further lower income. A chain of income declines is therefore set in process by the initial decline in demand. Each successive decline will diminish in strength, however, because some portion of the decline in income results in a decline in saving, in reduced tax payments, or in reduced imports rather than in reduced demand for domestic goods. These three leakages limit the process, which is known as a multiplier process. The response of incomes to an initial increase in demand will be subject to a similar multiplier process. The extent to which an initial change in autonomous demand is multiplied through its effects on consumption and income will depend on these leakages. If the leakages are large, the multiplier will be low and the economic system will have a great deal of resistance to changes in demand; that is, the built-in stability of the economy will be high. If the leakages are low, the multiplier will be high, because a given change in income will lead to a larger change in consumer expenditures on domestic output.

The Canadian economy has a high degree of built-in stability for three reasons: 3/

1. Because imports are important to both consumers and business, changes in income and expenditure lead to a relatively large change in imports. For a one-dollar change in consumer expenditure the import leakage accounts for about \$0.20. For a one-dollar change in fixed capital formation of businesses the import leakage accounts for about \$0.30.
2. Because corporations tend to maintain stable dividend payments, swings in corporate income affect corporate retained earnings (net business savings) rather than dividends. Because corporate income is more volatile than other forms of income, this saving leakage is particularly important. It is estimated that at least \$0.10 of a one-dollar change in gross national product (GNP) is absorbed by changes in after-tax corporate retained earnings.
3. The tax-expenditure system absorbs a large portion of income changes. This is due to the overwhelming importance of those taxes that vary with changes in income and expenditure, and the relative unimportance of other taxes. In addition, the unemployment insurance system automatically increases government disbursements and reduces government receipts if the income reduction leads to the unemployment of workers. As indicated below, it is estimated that \$0.31 of a one-dollar change in GNP is absorbed by the tax-expenditure system.

Changes in government expenditures can, of course, initiate the multiplier process; changes in tax rates, by changing private expenditures, will also do so.

As a result of these leakages the multiplier is relatively low for Canada, the precise value depending upon the particular type of tax or expenditure change that initiates the process and also the time period over which the impact is considered.

Two estimates of the effects of tax cuts and expenditure increases upon GNP and the federal deficit were made. The first, shown in Panel A of Table 3-1 is based on the assumption that only consumer expenditure and imports respond to the fiscal stimulus; no allowance is made for any change in investment or in provincial and municipal government expenditures. These estimates must therefore be regarded as being on the conservative side.

The second estimate, shown in Panel B of Table 3-1, allows for a moderate investment response; net investment is held constant but replacement investment is assumed to expand in proportion to GNP. In addition, provincial and municipal expenditures are assumed to increase with any increase in their revenues, that is, the provincial-municipal deficit is held constant, whereas in Panel A of Table 3-1 their expenditures were held constant.

TABLE 3-1

**ESTIMATED SHORT-RUN EFFECTS OF TAX-EXPENDITURE
CHANGES ON GNP, FEDERAL GOVERNMENT REVENUES AND THE DEFICIT**

<u>Initial Increase in Deficit</u>	<u>Minimum Induced Change in GNP</u> \$	<u>Induced Change in Government Re- venues as Result of Change in GNP</u> \$	<u>Net Change in Deficit</u> \$
<u>Panel A. Allowance for Change in Consumer Expenditure and Imports Only</u>			
Personal Income Tax Cut of \$1.00	1.21	0.31	0.69
Government Expenditure Increase of \$1.00	1.44	0.37	0.63
<u>Panel B. Allowance for Change in Consumer Expenditure, Imports, Replacement Investment, and Provincial and Municipal Government Expenditure</u>			
Personal Income Tax Cut of \$1.00	1.59	0.40	0.60
Government Expenditure Increase of \$1.00	1.91	0.48	0.52

Source: Appendix D to this Volume, Table D-2.

It can be seen that changes in government expenditures are estimated to provide a more powerful short-run stimulus than personal income tax cuts. This is because the tax change is subject both to initial saving and import leakages while the change in government expenditures will be subject only to a relatively small initial import leakage. The change in government revenue resulting from the change in GNP induced by a one-dollar tax cut is about \$0.31, so that the initial change in the surplus or deficit of \$1.00 is reduced to \$0.69 after the multiplier process has worked itself out. Because a change in government expenditure induces a bigger change in GNP the resulting change in government revenue is even larger, \$0.37, so that the net effect on the surplus or deficit is only \$0.63 per dollar of change in expenditures.

Not all taxes and transfers make an equal contribution to the built-in stability of the economy. The effectiveness of any tax as a built-in stabilizer depends on the proportion of any change in GNP absorbed by the tax (a leakage). This proportion in turn depends on the size of the revenues raised by a particular tax and the elasticity of its response to changes in GNP ^{4/}. Table 3-2 presents estimates of the fraction of GNP changes absorbed by different taxes and transfers. What stands out is the overwhelming importance of the personal and corporate income taxes. Although the latter is virtually a flat tax on income, the great sensitivity of corporate income to changes in GNP leads to a substantial change in tax revenues as GNP changes. The large personal income tax response, on the other hand, is due to the large elasticity of the tax revenues to changes in personal income, even though personal income responds sluggishly to GNP changes. While the contribution of indirect taxes generally is somewhat less, they still absorb a substantial fraction of a change in GNP. Taken as a whole, the existing federal tax system makes a substantial contribution to built-in stability.

TABLE 3-2
ESTIMATED PROPORTION OF A CHANGE IN GNP
ABSORBED BY THE TAX-EXPENDITURE SYSTEM, 1963 ^{a/}

<u>Leakage</u>	<u>Fraction of Change In GNP Absorbed</u>
1. Federal Unemployment Insurance (Contributions and Benefits)	0.045
2. Federal Tax System	
Personal Income Taxes	0.059
Corporate Income Taxes	0.079
Indirect Taxes	<u>0.048</u>
Total Federal Tax-Expenditure System	0.231
3. Provincial and Municipal Revenues	<u>0.075</u>
Total Government Taxes and Expenditures	<u>0.306</u>

^{a/} Import leakage is excluded. It is assumed that capital consumption allowances are fixed in the short run.

Source: Appendix D to this Volume, Table D-1.

The expenditure system makes a much smaller direct contribution to built-in stability because unemployment insurance payments are the only major transfer payments that are sensitive to changes in GNP. The contribution of the unemployment insurance system to the built-in stability of the system as a whole is somewhat lower than that of any of the major taxes, although increasing the contributions, benefits and coverage of the unemployment insurance system would undoubtedly increase its contribution to built-in stability.

The automatic fiscal stabilizers effectively reduce fluctuations in the economy; but they are not an unmixed blessing. They have the following important characteristics:

1. They will cushion, but they cannot by themselves reverse, a deviation. Once the economy has deviated in either direction from full employment,

discretionary changes in taxes or expenditures are required to return to full employment unless there is an offsetting change in private demand.

2. The more effective the automatic stabilizers, the less effective discretionary policies will be. The automatic stabilizers do not discriminate between income changes that are destabilizing and those that are the result of stabilization policy. Discretionary policies must therefore be stronger the greater the built-in stability of the system.
3. Most of the built-in stabilizers tend to stabilize income at a fixed level rather than around the rising trend of full-employment output that is characteristic of a growing economy ^{5/}. This means that they tend to reduce the rate of increase of money income that accompanies a rapidly rising price level when the economy has excess demand; they are therefore a bulwark against inflation. However, the more effective the automatic stabilizers are in preventing increases in income, the more difficult it will be for the output of the economy to grow. Here too, the stabilizers act as an indiscriminate brake on the increasing income, whether the increase in income is the result of increasing prices that should be suppressed or of increasing output that should be encouraged.
4. Unless offset by discretionary tax changes, the built-in stabilizers will tend to produce larger and larger revenues at full employment. This characteristic of a tax system is termed revenue drag. Unless government expenditures rise to match these additional revenues, or taxes are cut, aggregate demand will be reduced by the tax system. Unless the contribution of other sectors to aggregate demand is growing at a rate sufficiently above the rate of growth of potential output, the resulting revenue drag will repress the growth of actual output below that of potential output, with under-employment and under-utilization of capacity as a result.

Therefore, there is clearly a need for discretionary changes in the fiscal system to supplement and offset the built-in behaviour of the tax structure. What instruments are best suited for this purpose?

Discretionary Policy

After weighing the evidence and assessing the political as well as the economic problems involved in the use of stabilizing fiscal policy, we have reached the conclusion that changes in personal income tax rates or credits are beyond question the most effective single tool for discretionary stabilization policy. This does not mean that the other tools can be discarded; in some situations the imposition of taxes on capital expenditures, changes in the capital cost allowance rates, and changes in sales or excise taxes might be useful. But, by and large, situations of deficient or excess demand that threaten to move the economy toward extreme unemployment or excessive rates of price increase should be countered primarily by changes in the personal income tax. We discuss below alternative discretionary tax changes and the reasons why the personal income tax is superior as a general instrument of fiscal policy.

Changes in Sales and Excise Taxes. Frequent use of changes in sales or excise taxes will lead to speculative anticipation of such actions. For example, if people expect sales taxes to be cut during a recession, they may postpone purchases of durable goods in order to wait for the lower prices resulting from the tax cut. Needless to say, this postponement will contribute to any recessionary tendencies. The reverse situation of anticipating a tax increase would contribute to any inflationary tendencies. In addition, the use of increases in these taxes to fight inflation exerts two opposite effects on the price level. On the one hand, the increase in taxes reduces demand, and hence helps to eliminate inflationary pressure. On the other hand, the increase in taxes exerts an upward cost pressure on prices.

Changes in Corporate Income Tax. Changes in corporate income taxes are likely to have a delayed impact on the investment spending of corporations

and the lag is probably highly variable. The following factors also must be taken into account:

1. A tax rate change that is known to be temporary will not affect significantly the expected rate of return on planned capital-intensive projects.
2. During a period of rising unemployment when corporations have excess capacity, it will be difficult to induce them to make additions to capacity by reducing the rate of corporate income tax, especially in the short run. The only sure way of inducing them to expand capacity is by increasing the demand for their output.
3. For corporations that have already accumulated the funds to finance an addition to capacity, and whose directors are convinced that they will be unable to meet future demand unless steps are taken immediately to put additional capacity in place, raising corporate taxes on a temporary basis is unlikely to deter the expenditure.
4. Many capital-intensive projects have a long gestation period so that, once begun, they are difficult to turn off, regardless of what is done to the rate of corporate income tax.
5. A substantial proportion of Canadian dividends flows to non-resident direct investors who obtain credit for Canadian corporate taxes and withholding taxes against their domestic tax liabilities. Reducing Canadian corporate taxes in these cases will not change the after-tax position of the parent company but will only increase the revenues of foreign governments.

The corporate income tax modifications introduced in the 1966 Budget, deferred depreciation, and the temporary refundable tax on cash flow, represent imaginative attempts to use the corporate income tax for the stabilization of investment. However, we believe a temporary tax on investment spending would be a simpler and more effective way of achieving this end.

Changes in Personal Income Tax. The impact of a change in personal income tax upon the take-home pay of workers is quick. There are, moreover, no serious technical obstacles to the rapid translation of changes in personal tax rates into new rates of withholding tax. However, the full response of consumer expenditures to a tax change will take some time, both because consumers do not immediately adjust their expenditures fully to a change in income, and because changes in consumer expenditures themselves affect income with some delay, that is, the working out of the multiplier process itself takes some time. The evidence indicates that consumers make a fairly substantial adjustment to a change in disposable income within one quarter—with 60 per cent of the ultimate response being achieved. A substantial fraction of the initial response represents durable goods purchases, which is in accord with a priori expectations. Furthermore, the evidence indicates that the reaction of consumers to tax-induced changes in income is similar to their reaction to other changes in income.

The precise speed of reaction of production to a change in final demand is more difficult to measure. For the service industries, the lag is obviously zero, since production and consumption are synchronous events. For purchases of goods, there is likely to be some lag, because producers can sell goods out of inventories. The lag in production is probably longer for most durable goods than for most non-durable goods. Evidence in the United States indicates that even for durable goods the response is reasonably rapid—with 60 per cent of the response of production to a given change in sales taking place within one quarter, and over 80 per cent after two quarters have elapsed 6/.

However, a portion of the eventual change in value added is produced in industries one or more steps removed from the ultimate consumer (for example, auto firms will order steel). Consequently, the lags may be longer than suggested above. On the other hand, to the extent that producers anticipate expected changes in sales in their order-placing and inventory-stocking behaviour, the lags will be reduced.

We have estimated the time pattern of GNP responses to a given tax change on the reasonably conservative assumptions that the production response lagged one quarter behind the change in final demand, that is, that any change in demand is reflected in inventories in the first quarter, and that producers expand production the following quarter to match the increase in sales. The pattern we obtained indicated that 40 per cent of the GNP response was achieved by the end of two quarters, and 66 per cent within the year. If some allowance is made for inventory responses, 70 per cent of the adjustment is achieved within one year.

This result, which suggests that the response of the system to changes in tax rates is reasonably rapid, is confirmed by an analysis of the recent United States tax cut, and by the evidence provided by a quarterly econometric model in the United States 7/.

Finally, personal tax changes can be designed to affect all income groups, or primarily those at particular income levels, depending upon the desired impact on expenditures. A greater impact would result if the tax change were directed solely toward those in the lower income groups; this follows because those with low incomes tend to spend nearly all of a change in income. The tax change would therefore be almost completely reflected in the change in consumer expenditures. But while it would be easy to lower the taxes of those with low income when a stimulus was required, it would be difficult to place the full burden of tax increases upon this group when it became necessary to reduce excess demand. If the change is to be reversible we believe an equal percentage change in the tax burden of all taxpayers is probably the most politically feasible technique 8/.

Changes in Government Expenditures. In the past, the time required to plan and institute new expenditure programmes has reduced their usefulness for stabilization purposes. Plans conceived and executed in haste are likely to be of a non-productive or vote-buying nature. Such expenditures tend to discredit stabilization policy.

The institution of special expenditure programmes to help cure recessions under the existing budgetary process should be avoided unless the recession is particularly severe. For the present, therefore, we recommend that accelerating or slowing down expenditure increases on existing programmes only be used for stabilization purposes.

The development of longer term budgeting, particularly for capital expenditures, would permit much more effective use of government expenditures for stabilization purposes. However, the exploration of these possibilities would lead us far beyond our terms of reference.

General Versus Specific Policies

We have recommended that discretionary fiscal policy should place heavy reliance upon changes in the personal income tax. Across-the-board cuts or increases in this tax are an excellent example of a general stabilization weapon. By affecting the disposable income of consumers in all income groups in every region of the country, such changes will have very widespread effects upon consumer demand for goods and services. Furthermore, the variations in consumer demand will, through their impact upon sales and capacity utilization, affect producers' investment plans.

This is not to argue that each region or each industry will be equally affected by the change in tax. The short-run response of consumers' spending on durable goods is greater than that of their spending on services; the demand for food is unlikely to be affected as much as the demand for automobiles.

This uneven, but general, impact is quite desirable, however. Those industries and regions that will reap the greatest benefit from a tax cut, for example, will also be those most affected by the recession; auto workers are frequently laid off in recessions, farm workers usually are not. Similarly, the locus of inflation has typically been in those sectors with the greatest cyclical responses to increases in incomes. These are

precisely the sectors that would feel the bite of an anti-inflationary tax increase. In addition to the discretionary use of the personal income tax as a stabilizer, specific temporary excise taxes should be levied in those instances where severe bottlenecks are creating inflationary pressure in the durable goods and construction sectors of the economy.

Are other specific policies necessary? Are policies which seek to regularize volatile expenditures, notably investment expenditures, useful? Included among the specific levies we have considered are the following: an investment tax on fixed capital expenditures of businesses, variable depreciation allowances, and an investment reserve modelled along Swedish lines.

We have reached the conclusion that the first two would be useful in containing an investment boom in which serious inflationary pressure within the capital goods industries was being generated by the pressure of demand. In such a situation, a tax on capital expenditures can be levied in order to lower the demand for capital goods. As part of our proposed system of corporate income taxation we have indicated how a system of investment taxes could be instituted for this purpose. Because an investment tax directly increases the cost of the investment, it has a major and direct effect on the expected rate of return and a minor effect on cash flow. Accelerated capital cost allowances could be temporarily instituted or rescinded, or normal rates reduced, to achieve a similar effect on the rate of return, but in this case the effect is indirect by changing the cash flow and the need of the business to use external sources of financing. Although changes in capital cost allowances can therefore have a relatively greater effect on the cash position of the business, we think an investment tax would usually be preferable because of its more direct impact on the cost of investment.

We do not believe it desirable or necessary for either of these policies to be used routinely as a part of stabilization policy. Unless bottlenecks in the capital goods industries exist, more general means of controlling demand are usually in order. The state of the foreign exchange reserves

permitting, a tight monetary policy may be effective by itself in reducing capital expenditures when bottlenecks exist.

We carefully examined the Swedish investment reserve scheme, and agree with the views of its critics 9/. While this plan may help to level out fluctuations in capital expenditures, it provides a subsidy to capital investment that is geared to past income rather than future prospects. It discriminates against new and growing firms. We therefore believe it to be inefficient. We feel that if a subsidy to investment is desired it should be designed as part of a policy for economic growth, and should not be a side effect of a stabilization scheme. As we have indicated above, when there is excess productive capacity generally, what is needed is an increase in final demand. Subsidies to create more capacity are probably not a sensible means to this end.

An investment reserve without the subsidy features of the Swedish plan could be designed, although it would be difficult to design one that would have a neutral impact on firms in different circumstances. We feel, however, that until the existing kit of tools has been properly tried and found wanting there is no need to implement a scheme for smoothing capital expenditures. Changes in personal income taxes, specific excise taxes when bottlenecks in the durable goods sector arise, an investment tax to curtail investment when the capital goods sector is generating inflation, and the speeding up or slowing down of the growth of government expenditures should be adequate for the task of stabilization.

Finally, we must deal with the question of whether, when there is general unemployment, stabilization policy should be deliberately geared for maximum impact in those regions or industries where demand is weakest. It is our view that the disadvantages of gearing short-run expansionary policy to specific regions and industries far outweigh the advantages. As we have stated earlier, persistent structural problems are best given consistent and long-term remedies. Temporary or mild regional and industrial difficulties do not warrant interference with the market processes that

adjust particular demands to available supplies through changes in relative prices. Any attempt to interfere with this mechanism through stabilization policy is likely to have a differential impact on different regions and industries over time, and to lead to a distorted allocation of resources. Furthermore, the operation of such a complicated policy is likely to increase the time lags involved in reaching decisions, and to lead to increased pressure by special interest groups upon the framers of stabilization policy. Stabilization policy should be insulated from such pressures; one should not seek to adopt an approach that will increase them. Our basic approach is that to reduce unemployment, general expansionary techniques should be adopted. If inflationary pressures develop in broad sectors of the economy, the brakes should be applied to those sectors if the national full-employment target has not been attained. We are opposed to short-term regional or industrial pump priming.

EVALUATION OF FEDERAL FISCAL POLICY 1953-63

We have now briefly described the policy tools available to the federal government for maintaining the stability of the economy. The purpose of this section is to analyze briefly how well discretionary policy has been applied in the past in order to discover what might be done to improve future performance.

When government revenues exceed expenditures, a surplus is created 10/. The surplus means that the reduction in private demand brought about by taxes has not been offset by public demand. Conversely, when the government runs a deficit, the government is adding to aggregate demand. Changes in the surplus over time therefore usually indicate the direction of impact of the tax-expenditure system on aggregate demand.

In this chapter we are looking only at the effects on demand brought about by changes in disposable income as a result of changes in taxes and expenditures. There will also be liquidity and interest rate effects, depending upon the methods used to finance the deficit, the way in which

the surplus funds are applied by the government, changes in monetary policy, and the changes in government loans and loan guarantee programmes. A more refined analysis would take these other effects into account. However, it is the impact of the tax-expenditure system that is of major concern and therefore the balance of this chapter will deal only with it.

However, an examination of changes in the actual surplus or deficit is not very helpful in the evaluation of discretionary fiscal policy because the changes in the actual surplus are the net result of the changes in revenues and expenditures brought about both by the built-in stability of the system and by discretionary policy. One method of isolating the effects of discretionary policy is to abstract from the automatic changes in revenues and expenditures by reconstructing the government accounts on the assumption that full employment was continuously maintained. Changes in the estimated surplus at full employment show whether the discretionary fiscal policy was expansionary or contractionary. Revenues will expand each year as GNP grows at the full-employment rate. Discretionary policies are neutral if these increases in revenues are exactly matched by tax cuts or offset by increased expenditures. Discretionary policies are contractionary if these revenues are not offset by tax cuts or by higher expenditures. An expansionary policy would require either tax cuts, or expenditure increases, or a combination of the two, larger than the normal revenue increase. An examination of the changes in the full-employment surplus over time thus focuses attention on the crucial fact that, because of the strong income elasticity of the tax system, failure to reduce taxes or raise expenditures year after year will mean that the tax-expenditure system imposes an increasing drag on the expansion of GNP.

With inadequate data and imperfect forecasts it is much more difficult to decide what needs to be done at the time than it is to say what should have been done after the event. Nevertheless, by taking into account the outlook at the time, and by concentrating our attention on large and persistent problems, we try to avoid some of the pitfalls. We want to

emphasize that our purpose is to discover what can be done to improve future performance, not to cast reflections on either the intelligence or the good will of those who had the difficult task of making policy.

The Full-Employment Surplus Estimates

Basically, we want to estimate the net impact of the government's fiscal policy at the full-employment level of income. This is the full-employment surplus. The difference between the full-employment surplus and the actual surplus reflects the operation of automatic fiscal policy or built-in stability.

Year-to-year changes in the surplus reflect both discretionary changes in taxes, tax abatements to the provinces 11/ and expenditures and the revenue drag resulting from the growth of potential GNP with an income-sensitive tax system.

This analysis abstracts from two important aspects of fiscal policy. First, all taxes and expenditures are treated alike, though with reversed signs; however, some taxes may exert a more powerful impact on GNP than others, and it is generally believed that expenditures exert a greater impact than taxes. The refinement of the full-employment surplus to take these differences into account leads to measures of fiscal leverage 12/.

Second, the analysis abstracts from the monetary implication of changes in fiscal policy. In an economy as open as Canada's, the way the deficit is financed can have important effects on the balance of payments under a fixed exchange rate or on the exchange rate itself under a floating rate system.

In order to neutralize the effects of an increase in the deficit on the balance of payments, the increase in the deficit must be financed in such a way as to raise interest rates just enough to attract sufficient capital to maintain equilibrium in the balance of payments.

The required rise in interest rates may offset some of the expansionary effects of the increase in the deficit. However, the evidence assessed by the Royal Commission on Banking and Finance suggests that the short-run response of domestic spending to interest rates and credit conditions is quite weak.

Of course, in any period the financing of the deficit may depart from neutrality. Such departures from neutrality in the financing of the deficit are equivalent to changes in monetary or debt management policy and the reader is referred for information on these questions to the studies and report of the Royal Commission on Banking and Finance. The liquidity effects of government loan and guarantee programmes are not taken into account in this analysis.

To summarize the discussion, it is our view that changes in the full-employment surplus reflect changes in discretionary fiscal policy 13/. To the extent that departures from neutrality in the financing of the deficit occur, these are properly regarded as part of discretionary monetary and debt management policy.

The method used to estimate the full-employment surplus can be described briefly.

1. Estimates were made of the additional revenues that would have been forthcoming from each source had the gap between actual and potential GNP been closed. This involved adjusting the revenue from each source by the percentage gap plus an adjustment for the elasticity of revenues from that source to changes in GNP.
2. Only one adjustment was made to actual expenditures to estimate what they would have been had full employment been maintained. Actual expenditures were adjusted to take into account the fact that with full employment, unemployment insurance benefits would have been less. None of the other federal expenditures seemed sufficiently sensitive to the level of unemployment to warrant adjustment.

3. The difference between 1 and 2 is defined as the full-employment surplus.

The results are provided in Table 3-3, together with estimates of the difference between the actual and full-employment surpluses and the year-to-year changes in both.

The estimates clearly show that, had there been full employment, only the years 1953 and 1958 would have shown a deficit rather than the seven years when deficits actually occurred. The differences would have been very large. In 1961, for example, there was an actual deficit of \$455 million. With full employment and the existing tax-expenditure system, the estimates show that a surplus of \$574 million would have prevailed, a difference of \$1,029 million.

The year-to-year changes in the actual surplus reflect both the changes in the level of GNP and changes in discretionary policy. Because the full-employment surplus estimates abstract from most of the fluctuations in the rate of increase of GNP, they are less variable than the changes in the actual surplus.

In Table 3-4 estimates of the discretionary fiscal policy changes are shown, together with the revenue drag. The revenue drag should be looked upon as the increase in revenues produced by the growth of potential GNP in the absence of any discretionary tax and abatement changes. The discretionary changes in taxes, abatements and expenditures are then either added to or offset against the drag to give the estimated change in the full-employment surplus.

Had full employment been maintained in 1957 and 1958, to use these years as an example, it is estimated that in the absence of any discretionary fiscal policies revenues would have risen by \$377 million. The tax system would have reduced aggregate demand to that extent. In fact, however, the government adopted four discretionary measures that more than offset this automatic tightening. The provinces received tax abatements of \$52 million.

TABLE 3-3
 ACTUAL AND FULL-EMPLOYMENT SURPLUS
 1953-63
 (millions of dollars)

Revenues				Expenditures			Surplus			Change in Surplus from Previous Year	
Year	Actual	Adjustment a/ for Full Employment	Full- Employment Estimate	Actual	Adjustment for Full Employment	Full- Employment Estimate	Actual	Full- Employment Estimate	Difference Between Actual and Full- Employment Surplus	Actual	Full- Employment Surplus
1953	4,726	-146	4,580	4,584	13	4,597	142	-17	159	-111	-125
1954	4,528	73	4,601	4,628	-70	4,558	-100	43	143	-242	60
1955	4,937	11	4,948	4,761	-57	4,704	176	244	68	276	201
1956	5,578	-83	5,495	5,034	-05	5,029	544	466	78	368	222
1957	5,588	98	5,686	5,339	-83	5,256	249	430	181	-295	-36
1958	5,334	388	5,722	6,091	-255	5,836	-757	-114	643	-1,006	-544
1959	6,043	486	6,529	6,370	-175	6,195	-327	334	661	430	448
1960	6,411	713	7,124	6,662	-245	6,417	-251	707	958	76	373
1961	6,668	771	7,439	7,123	-258	6,865	-455	574	1,029	-204	-133
1962	6,851	595	7,446	7,395	-171	7,224	-544	222	766	-89	-352
1963	7,163	648	7,811	7,455	-147	7,308	-292	503	795	252	281

a/ Negative adjustments are made in years when unemployment was less than 3.5 per cent.

Source: Appendix C to this Volume, Table C-1.

TABLE 3-4

THE IMPACT OF DISCRETIONARY FISCAL POLICY ON THE
FULL-EMPLOYMENT SURPLUS

1954-63

(millions of dollars)

Year-to- Year Changes	Revenue <u>b/</u> Drag	Discretionary Fiscal Policy <u>a/</u>				Change in the Full-Employ- ment Surplus <u>c/</u>
		Tax Policy		Expenditure Policy		
		Abatements to Provinces	Rate and Base Changes	Change in Transfers to Provinces	Change in Other Federal Expenditures	
	(1)	(2)	(3)	(4)	(5)	(6)
1953-54	241	-13	-129	-19	-20	60
1954-55	506	-14	-145	-15	-131	201
1955-56	629	0	-82	-33	-292	222
1956-57	355	-125	-39	-29	-198	-36
1957-58	377	-52	-288	-135	-446	-544
1958-59	571	0	+235	-216	-142	448
1959-60	497	0	+98	-106	-116	373
1960-61	424	0	-109	-133	-315	-133
1961-62	351	-333	-11	+5	-364	-352
1962-63	532	-44	-123	-27	-57	281

a/ Minus signs indicate policy changes that reduced the surplus.

b/ Changes in revenues, had full-employment GNP been maintained each year, if there had been no changes in tax rates, tax bases or abatements. Fiscal drag varies from year to year as a direct result of variations in the growth of potential GNP. These variations are primarily the result of fluctuations in the growth of the labour force and fluctuations in agricultural output.

c/ The change in full-employment surplus is equal to Column (1) plus the sum of Columns (2) to (5).

Note: The estimates of fiscal drag provided in this table are obtained residually, i.e., by subtracting the estimates of discretionary changes in revenue from the estimated changes in full-employment revenues. The revenue drag estimates therefore contain the estimation errors in both these series—in particular, changes in minor taxes are wholly allocated to the drag, whereas a portion of changes in these taxes may in fact be due to discretionary rate changes. An alternative estimate is provided in the supporting appendix.

Source: Appendix C to this Volume, Table C-2.

Tax rates or bases were changed so that tax revenue was reduced by \$288 million, and the federal government increased its transfers to the provinces by \$135 million. The federal government itself increased its expenditures by \$446 million. All of these discretionary measures more than offset the revenue drag, and the net addition to demand amounted to about \$550 million.

In the following year, just the opposite occurred. The estimated revenue drag was large; and it was increased by a large increase in tax rates or tax bases. The additional revenue from the tax increase just about offset the increased transfer to the provinces. On balance, the tax-expenditure system depressed aggregate demand, for the full-employment surplus rose by an estimated \$448 million.

Whether the policy changes were "appropriate" or not, depends of course, on the extent to which the full-employment, price stability and external stability goals were being met in each year. Several measures of these objectives are given in Table 3-5. We have categorized discretionary fiscal policies as neutral if they offset the revenue drag, restrictive if they did not offset the drag, and expansionary if they more than offset the drag so that year-to-year reductions in the full-employment surplus occurred.

The record may be briefly summarized on a year-by-year basis: 14/
1954. The unemployment rate rose to 4.6 per cent. This would have justified an expansionary budget. The mildly contractionary fiscal policy adopted probably was not particularly harmful. Certainly the inflationary boom that followed provided some justification, in retrospect, for the restraint shown in 1954.
1955-56. The unemployment rate in 1956 fell to 3.4 per cent, approximately our target level. Consumer prices rose sharply in 1956 because of the speed with which the gap was closed. The price level in Canada rose slightly more rapidly than in the United States. In 1955 and 1956 tax rates were cut, and there was a larger increase in government expenditures in the

TABLE 3-5

COMPARISON OF CHANGES IN DISCRETIONARY FISCAL POLICY
WITH CHANGES IN THE UNEMPLOYMENT RATE AND
CHANGES IN THE RATE OF INCREASE OF PRICES

1954-63

Year	Change in Discretionary Fiscal Policy	Unemployment Rate		Percentage Change in Consumer Prices a/ (per cent)
		Average Rate for the Year (per cent)	Change from Previous Year (per cent)	
1954	Mildly restrictive	4.6	1.6	0.7
1955	Restrictive	4.4	-0.2	0.3
1956	Neutral b/	3.4	-1.0	3.0
1957	Mildly Expansionary	4.6	1.2	2.2
1958	Strongly Expansionary	7.0	2.4	2.5
1959	Strongly Restrictive	6.0	-1.0	1.3
1960	Strongly Restrictive	7.0	1.0	1.3
1961	Mildly Expansionary	7.1	0.1	0.2
1962	Expansionary	5.9	-1.2	1.6
1963	Restrictive	5.5	-0.4	1.7

a/ December-to-December changes in the Consumer Price Index.

b/ Although there was an increase in the full-employment surplus in 1956 and only a small deficit in 1957, these were largely attributable to the extremely rapid increase in revenues as a result of inflation, rather than because of restrictive discretionary changes.

Source: Unemployment rates are from Bank of Canada, Statistical Summary, 1964 Supplement, p. 121;
Price indexes are from Canadian Statistical Review, Annual Supplement, 1964, p. S-10-6.

latter year. On balance, the discretionary policies were neutral, when the impact of inflation on revenues is taken into account. The unprecedented investment boom that was approaching its peak in 1956 should have been restrained by restrictive discretionary policies. The outlook at the time was for continued expansion, and there was no conflict between the full-employment and price stability objectives. The restrictive discretionary policies in 1955 were about right; 1956 was a year of policy failure because much more restrictive fiscal measures should have been adopted.

1957. Unemployment increased markedly and Canadian prices continued to rise, but at a slower rate than they had in the previous year. It was therefore a year when there was conflict between the unemployment and price stability objectives. Forecasts at the time did not reflect the severity or persistence of the decline in employment. With the information available at the time, the optimum policy probably would have been one of neutrality or mild restraint, depending upon the relative importance attached to the inflation and unemployment objectives. In retrospect, a policy of fiscal ease would have been optimum. The basic problem with fiscal policy in 1957 was the faulty diagnosis on which it was based.

1958. The 1958 discretionary changes were strongly expansionary. Given the sharp increase in unemployment and the sharp decline in the rate of increase of prices, this was clearly the appropriate policy to adopt. There was a large cut in taxes, a large increase in expenditures, and there were large transfers to the provinces. Had there not been a diagnostic error because the persistence of the unemployment problem had not been recognized, the policy probably would have been even more expansionary than it was.

1959. In retrospect, fiscal policy in 1959 can only be described as completely inappropriate. Although for the three months prior to the budget, unemployment had averaged about 6.8 per cent on a seasonally adjusted basis, most analysts at the time expected a much more dramatic expansion of GNP than in fact occurred. This forecast error partly explains the quick "about face" in discretionary fiscal policy that included a substantial increase

in taxes virtually offsetting the tax cut of the previous year, and a drastic reduction in the rate of increase of government expenditures. Although forecasting errors were important, an exaggerated fear of inflation was also responsible for the policy failure of 1959. This fear arose because of the persistent increase in prices after the 1956 boom came to an end and the large increases in the money supply that had accompanied the conversion loan in 1958. The only expansionary policy was the much higher transfers to the provinces; but these were not undertaken as a stimulus to the economy. There were diagnostic errors and too great an emphasis on the price stability goal, but the policies adopted were too extreme even if allowance is made for these extenuating circumstances.

1960. Fiscal policy was even less appropriate in 1960. At budget time, the employment outlook was bleak, and the unemployment rate was already about 6.3 per cent. Consumer prices had risen much less rapidly in 1959 than they had in the two preceding years. Despite the strong indications that an expansionary budget would be appropriate, taxes were raised and the rate of increase of government expenditures reduced even further. The only expansionary change was the increase in the transfers to the provinces. With a flexible exchange rate, the balance of payments did not impose any limitation on the budget in 1960. The restraint imposed in 1960 was probably the result of the mistaken view that the economy had to be kept under restraint to reduce the capital inflow which was largely induced by high interest rates. The policy failure in 1960 can therefore be attributed partly to the lack of emphasis placed on the full-employment objective and partly to diagnostic errors.

1961. After two years of fiscal restraint despite substantial unemployment, the policy adopted in 1961 was appropriate in direction if not in magnitude. Taxes were cut and federal expenditures increased, as were the abatements and transfers to the provinces. Prices had been remarkably stable, and the rate of unemployment was extremely high. It was in June of that year that the government both advocated and promised a substantial devaluation of the Canadian dollar. This led to the adoption of the fixed exchange rate a

year later. The exchange rate problem was transformed from one of trying to push the value of the Canadian dollar down to a problem of trying to maintain its value. In the last half of 1961, the government may have wanted to curtail aggregate demand in order to maintain the value of the Canadian dollar, but the rate was not fixed and there was no need for the government to attempt to hold it. With unemployment at 7.1 per cent, there was clearly no need to be concerned about excess demand. The inadequate stimulus of the 1961 budget may be accounted for by exchange rate considerations but, if so, they were not necessary considerations.

1962. Fiscal policy in 1962 was more expansionary mainly because of the larger federal tax abatement to the provinces and the substantial increase in other federal expenditures. The informal adoption of a fixed exchange rate in the first half of the year and its formal adoption in the second half may have explained the relatively modest expansionary fiscal policies adopted, for prices had been virtually stable in 1961 and unemployment was still high. The devaluation was itself a major stimulus to the economy. The aftermath of the exchange rate crisis, which was of Canada's own making, probably forced a more restrictive domestic policy than otherwise would have been necessary.

1963. A restrictive fiscal policy was adopted again in 1963. Tax rates were raised and the rate of increase of government expenditures was cut 15/. Because of the delayed impact of a number of the changes, the effect of tax-expenditure policy in 1963 was to reduce the full-employment surplus, but by a much smaller amount than the increase resulting from revenue drag. Thus, the net effect was restrictive. Although unemployment had been dropping, it was still well above the full-employment level and prices had risen only modestly. The premature return to fiscal restraint may have been attributable to the mistaken idea that a balanced budget was desirable for its own sake; or it may have been thought necessary to restore confidence following the exchange crisis. One might question that foreign confidence was the main reason because, before the Budget in June 1963, the Bank of Canada had

been able to abandon its tight money policy, which it had been forced to introduce right after the fixed exchange rate was adopted in the previous year. On the other hand, the budgetary measures may have been a necessary prerequisite for the latter measure. Unless one puts great weight on this external stability objective, it is difficult to justify the fiscal restrictiveness of the Budget brought down in 1963.

Our assessment of the fiscal policy record may be briefly summarized as follows:

<u>Year</u>	<u>Tone of Discretionary Fiscal Policy Actually Adopted</u>	<u>Recommended Tone in Retrospect</u>
1954	neutral	mildly expansionary
1955	mildly restrictive	neutral
1956	neutral	restrictive
1957	mildly expansionary	as adopted
1958	strongly expansionary	as adopted
1959	strongly restrictive	strongly expansionary
1960	strongly restrictive	strongly expansionary
1961	mildly expansionary	strongly expansionary
1962	expansionary	strongly expansionary
1963	restrictive	expansionary

In our view, fiscal policy was approximately in the right direction and of the right magnitude about half the time. In three of the ten years, 1959, 1960 and 1963, we would judge discretionary fiscal policy to be perverse, and especially so in 1959 and 1960.

Looked at in broad terms, fiscal policy in the period under consideration was too expansionary in 1956 and too restrictive thereafter. In very few years was there a real problem of choosing between conflicting objectives, although faulty forecasts and other errors of diagnosis led policy makers to think and act as though they were faced with such conflicts. From 1959 to 1961, we believe the price stability objective was given inordinate

weight; in 1962 and 1963 the external stability objective may have been over-emphasized. But most of the time the problem was not that there was undue emphasis on one objective relative to others, but rather that policy was inefficient in the sense that frequently it would have been possible to realize one or more objectives to a greater degree without sacrificing others. We could have had less unemployment without more rapid increases in prices or more unstable international economic relations.

In Chapter 2 we listed some of the reasons why policies may be inefficient, and all of them came into play to a greater or lesser extent in the period under consideration. There were errors in interpreting the current economic situation. Forecasting errors and incorrect assessments of the effects of policy changes were made; conflicts were thought to exist among objectives when they did not exist; policy instruments were ignored that might have been used. All these factors contributed to the policy failures of the past. In particular, there seems to have been a lack of awareness that the tax system imposes an increasing drag on an expanding economy. This drag can be used to depress the rate of expansion when required to prevent inflation, but it must be offset to maintain full employment, and more than offset when there is under-utilization of capacity. Thus, the very nature of our tax system ensures that increasing levels of income will produce an annual increase in tax revenues that will act as a restraint on the rate of expansion unless eliminated by tax reductions or offset by expenditure increases. Measures to stimulate or restrain the economy must therefore take this revenue drag into consideration in order to be effective. In particular, expansionary measures must be sufficient in magnitude to more than offset the inherent growth in revenues.

As we have shown, there were three years in the period 1957-63 when the fiscal brakes were applied despite substantial unemployment throughout the period; and with the exception of the year 1958, the discretionary fiscal changes in the other years did little more than offset the revenue drag. Had it not been for the tax abatements and transfers to the provinces, the depressing effects of the tax system would have been much greater than they

were. Because the abatements and transfers were not made for the purpose of stimulating the economy, it is difficult to escape the impression that this was a case of the right thing being done for the wrong reasons. It is not at all certain that, had the federal government not been required to take these expansionary steps, other discretionary changes with the same stabilization effect would have been implemented.

The purpose of this brief review of past fiscal policy has been to show both the need for improvement and some of the reasons why errors were made, so that profit may be derived from experience. In particular, we have tried to show the importance of revenue drag upon the expansion of the economy. We now turn to a discussion of the implications of these findings for future policy.

The Need for Federal Budgetary Flexibility 16/

A period of time must necessarily elapse between the emergence of a need for discretionary policy measures and the full impact of those measures upon the level of economic activity. Four distinct causes of this overall lag can be distinguished:

1. The recognition of the need for a change in policy: a period of time usually will elapse between the need for a policy change, in terms of the objectives of policy, and the recognition of the need. The time lag involved depends upon both the speed with which relevant current statistics are compiled and the state of the art of economic forecasting.
2. The achievement of a consensus among policy makers on what needs to be done: this lag may be long if current statistics and forecasts diverge. The time involved in this process may reflect differences of opinion among policy makers about the relative importance of the different objectives. A clear definition of targets would help to reduce this source of delay.

3. The execution of the policy decided upon: this time lag may be long if the policy makers attempt to act within the constraints of the annual budget process. In addition, personal income tax changes enacted in the past have usually been delayed to permit preparation of new withholding schedules.

The above three constitute what are called the "inside lags" of fiscal policy.

4. The delay in the impact of a policy change upon the spending behaviour of households and firms: this is the so-called "outside lag" of fiscal policy which, because it is rooted in the behavioural responses of individuals, cannot be readily reduced by changes in government procedures.

A reduction in the overall policy lag would greatly increase the power of fiscal policy. Infrequent but timely moves would forestall or abort recessions and inflations, and effective stabilization policies would increase public confidence in them. This would itself tend to stabilize private spending decisions. Let us now examine what can be done. We will consider the outside lag first.

The full impact of changes in personal income taxes upon private spending is felt only after several months have elapsed. However, as we have shown earlier, there is a substantial impact upon consumer spending, particularly for durable goods, in the quarter following the change. Moreover, to the extent that producers anticipate the ultimate response of consumer demand in placing their orders and in their inventory-stocking behaviour, the lag between tax changes and output and employment changes will be reduced. As Canada's performance on the stabilization front is improved, we are confident that such anticipatory behaviour will become more prevalent and that the outside lag will decline.

We also believe that some of the inside lags can be reduced and that high priority should be given to measures that will shorten them. The following recommendations, if adopted, should be effective:

1. The economic statistics available to policy makers should be improved. Additional data are urgently required in the following fields: quarterly intentions data for consumers and business, money flows data, capacity utilization data, and data on new orders and contracts let. Substantial reductions in the time required to collect, compile and circulate information on the current economic situation would be possible if additional resources were devoted to the task.

Analogous recommendations have been made repeatedly by other Royal Commissions. We shall simply state that the situation cries out for improvement. The data collection and processing agencies must be given more resources in order that they may meet their expanding responsibilities. Modern technology makes possible dramatic improvements in both data collection and processing. The costs of obtaining this information are minor in comparison with the costs of policy failures that result from a lack of complete, consistent and current economic data.

2. A method must be found that makes it easier for the government to make changes in tax-expenditure policy promptly for stabilization purposes. Furthermore, we require a method that makes it difficult for governments to procrastinate. We have examined a number of methods of speeding up the making of changes and rejected all of them except one, that would require the government to make policy statements of its intentions whenever there was firm evidence that economic goals were not being met.

A suggestion that has been made in the past is for what is called "formula flexibility", which involves linking changes in fiscal policy to measures of performance in relation to the objectives of policy. For example, a cut in personal income taxes could be automatically put into effect if the national unemployment rate exceeded 4.5 per cent for three months in a row, and an additional cut could be automatic if the national unemployment rate exceeded 5 per cent for three months. Conversely, if both the wholesale price index and the consumer price index rose at an annual rate in excess of 3 per cent a year for three months in a row, a tax increase would automatically go into effect.

Formula flexibility per se has three disadvantages. First, because the indicators occasionally move erratically, and because the appropriateness of policy in any case cannot be determined by one or two indicators alone, the formula may trigger policy moves that are either inadequate or destabilizing. Second, no formula can be designed to handle effectively situations where the goals of stabilization policy are in conflict. Third, formula flexibility, like built-in stability, is an adjunct to, not a substitute for, discretionary fiscal policy. If the tax cuts affected by the formula are rescinded by the formula as the economy responds to them, the removal of the stimulus may lead to an aborted recovery.

In view of these disadvantages, we believe formula flexibility by itself is undesirable. The main advantage of a formula is that it commits the government to timely action; but this advantage can be obtained without the disadvantages if a modified scheme is adopted.

Therefore, we recommend that the government of the day should be required to make a policy statement as to what it was doing or planned to do about unemployment or inflation when statistical measures, such as the ones we have already described, indicate that the economic objectives were not being met. These policy statements could be used as an occasion for the government to announce changes in fiscal policy outside the regular annual budget. Parliament would be given an opportunity to debate the government's policy statement. This procedure would focus attention on the stability policy objectives, would help to prevent government procrastination, and would avoid the timing rigidities of the annual budget as "the" appropriate time to announce fiscal policy changes 17/.

3. When the statistical measures reveal that the economy has failed to meet the objectives, the government should have the power to change specific tax rates within specified limits subject to subsequent approval by Parliament.

Annual budgeting is an important part of the democratic process; but it can place limitations on the use of tax changes for economic stabilization. Although tax changes have been introduced outside the annual budget, for example, in September 1950 and December 1960, the infrequency with which this has been done in the past suggests that the need must reach crisis proportions before the step is taken.

4. The lag that elapses between the announcement of a tax change, whether in the annual budget or not, and the time at which new tax rates or allowances result in lower or higher tax collections should be reduced. This time lag, which is long in the case of some taxes, is important because taxpayers as spenders are affected at the time higher or lower taxes come into effect, rather than at the time a tax change is announced or a change in tax liability is incurred.

For the personal income tax, at least, we believe that a flexible fiscal policy requires that tax collections respond quickly to a change in rates and allowances. With planning, this lag could be reduced substantially. For example, all withholding tables could specify a number of alternatives so that a change in personal tax rates could be made effective almost immediately by simply announcing which of the general tables in the hands of those withholding tax should be applied in the future. Alternatively, across-the-board percentage tax cuts can be quickly implemented using the existing tables.

PROBLEMS POSED BY PERSISTENT SURPLUSES OR DEFICITS

We have already said that the action of the built-in stabilizer is to cause a larger proportionate change in government tax revenues and transfer payments than the underlying change in national income and output. Thus, when the rate of increase of demand by the private sector falls, and output and employment are reduced, government revenues will fall and transfer payments will rise proportionally more than the change in GNP. However, because the built-in stabilizers cannot restore the economy to full employment, unless

there is a reversal in the direction of private spending, the surplus or deficit will persist unless the government makes discretionary policy changes.

The counsel of perfection calls for the government to take immediate and decisive action to compensate for the change in private expenditures as soon as it appears. Assuming that the economy is fully employed, that the price level is relatively steady, and that the government's revenues and expenditures are in balance when the destabilizing change in private expenditures occurs, a cut in taxes or a higher rate of increase in government expenditure, implemented as soon as private spending weakens (and the reverse when private spending rises too rapidly), will create a deficit (or a surplus). As we have shown earlier in this chapter, the deficit or surplus will be reduced as a result of the change in GNP induced by discretionary changes in policy. However, unless a subsequent change in private expenditures offsets the original change in these expenditures, the deficit or surplus may continue for a substantial period of time that will be determined by the rate of increase of GNP, the elasticity of the tax system and the rate of increase of government expenditures.

In retrospect, it is relatively easy to say when changes in discretionary policy should have been implemented; but to suggest that policy errors will not recur is unrealistic because forecasting tools are still weak. To some extent, policy will always be too little and too late. What is cause for concern is that, once mistakes have been made, the attitude of the public, and hence of the government, toward persistent surpluses and deficits can lead to a compounding of the error. It is exceedingly difficult for governments to prevent inflation or avoid persistent unemployment; because of the popular notion that balanced budgets are the mark of good government while deficits and surpluses are a reflection of profligacy or cupidity. We should like to consider briefly what can happen when a persistent surplus or deficit appears for the reasons we have just outlined. We look first at the case of the persistent surplus.

A persistent government surplus suggests to many that the government does not know what to do with its money. "Why can't they spend more on such and such?" "Why can't they cut taxes?" "If they can't think what to do with the money why don't they give us a chance?" The longer the surplus persists, the greater the political pressure for more spending and for tax cuts. When the economy is pushing against the limits of its productive capacity and prices are rising too rapidly, these are precisely the wrong policies to adopt in the circumstances. If inflation is going to be contained, the public must be made conscious of the fact that a surplus is an instrument and not an object of policy; without public understanding many essential policies may fail for lack of general acceptance.

Persistent deficits pose the opposite problem. The danger is that when there is inadequate demand and a persistent deficit the government will be afraid to cut taxes further because of the expected effects on business confidence and will be persuaded to reduce the rate of increase in expenditures in an attempt to reduce or eliminate the deficit. The "soundness" of a policy cannot be assessed in terms of whether or not a deficit has been eliminated. Such a cutback in government expenditures, if instituted before private spending has started to recover, can bring about further reductions in private spending and thereby widen the gap between actual and potential output. If instituted only when private spending has begun to recover, the attempt to reduce the deficit by holding down the increase in expenditures relative to the increase in revenues will put a brake on the expansion. By waiting until the deficit has been eliminated before increasing expenditures, the expansion of GNP is much slower, and unemployment will persist longer. The attempt to reduce the deficit by cutting expenditures will reduce income and employment without reducing the deficit very much. More pressure for belt tightening develops as the deficit continues.

As we indicated in the previous chapter, the price level can rise even when the unemployment rate is substantially above the target. If it is incorrectly assumed that the persistent deficit has "caused" the price increase, the pressure for reduced government spending or higher taxes will be intensified.

The old rule that governments should pay as they go and maintain a balanced budget was thought to serve a useful purpose because it supposedly imposed a degree of discipline on governments; insisting on a balanced budget was a way of ensuring that governments behaved responsibly. However, in a growing economy with elastic tax sources, the old rule of thumb is not meaningful: over time government revenues rise more rapidly than GNP so that it is possible for a government to increase its expenditures more rapidly than GNP without facing the "discipline" of raising tax rates. Those who are concerned with the rate of increase of government expenditures require a new gauge. We would suggest that the main consideration is not the actual budget, whether it be the government's annual administrative budget or the government's budget in national accounts terms: the crucial question is how the government would dispose each year of the additional revenues that would be generated by the tax system with the expansion of potential GNP, assuming no changes in tax rates. In order to maintain full employment, assuming it has been achieved, this revenue drag must be offset either by tax reductions or by expenditure increases unless the private economy is particularly buoyant. If the public can be persuaded to examine the methods by which the government offsets the fiscal drag as closely as changes in the actual surplus or deficit have been examined in the past, responsible government action can be ensured, and the barrier to effective stabilization policy created by the fetish of a balanced budget will be reduced.

We are well aware that the check we are proposing is more complex than is the balanced budget. We would urge, however, that each year in its budget the government present estimates of its full-employment revenues and expenditures on a national accounts basis, including estimates of the revenue drag and estimates of the extent to which its individual tax and expenditure proposals are expected to add to or offset the drag. This should be accompanied by analysis of why these changes are required in the light of prevailing economic conditions. The analysis should include forecasts of the behaviour of income, employment and price levels in the absence

of discretionary policy changes, and forecasts of the effects of the policy proposals upon these target variables. When this information is available on a continuing basis, it is to be hoped that the interest in the balanced budget as an objective of policy will disappear and that attention will be focused instead on the appropriateness of the government's stabilization policy, and on the allocation of resources between public and private uses at full employment.

It is important, too, that leaders of opinion should not cater to prejudice by interjecting the balanced budget thesis when it suits their short-run advantage. They must be made to realize that by doing so they bind their own hands, for they will be restrained from recommending or implementing the policies needed to solve pressing unemployment and inflation problems if they have committed themselves to the pursuit of irrelevant goals.

OFFSETS TO REVENUE DRAG

It must be recognized that revenue drag at the federal level can be eliminated by discretionary policies in one or all of the following ways:

1. By increasing federal expenditures on:
 - a) goods and services;
 - b) transfer payments to persons;
 - c) transfer payments to provinces.
2. By reducing federal taxes 18/.

The decision as to how revenue drag should be eliminated is a real and vital one and should not be made inadvertently by repeatedly solving the short-run stability problem without regard to the long-run implications. It should be made deliberately by the federal and provincial governments. The alternative selected ought to depend on an evaluation of the desirability and importance of the following considerations:

1. The degree of redistribution of income at full employment to be effected by the tax-expenditure systems: this will affect decisions about which taxes ought to be cut, whether the progressiveness of the personal income tax ought to be altered, and whether federal transfer programmes to persons need to be changed. We are of the opinion that the desirable after-tax distribution of income is not independent of the absolute level of per capita income. In other words, the wealthier the economy, the more it can afford to share some of the fruits of progress with the poor, so that increased redistribution through sales tax reductions, increased federal transfer programmes, or increased credits against personal income tax ought to be considered as alternatives.
2. The allocation of private output between consumption on the one hand and investment on the other: personal income tax reductions stimulate consumption directly and investment indirectly, whereas other policies, such as investment credits for business, may stimulate investment both directly and indirectly. Whether the fraction of GNP invested ought to be raised or lowered essentially involves the choice made between present and future consumption, and ought to be considered in the framing of the long-term direction of fiscal policy.
3. The desirable allocation of full-employment output, both between public and private uses and between different levels of government within the public sector: this points toward a re-examination of federal and provincial expenditure programmes and the elasticity of the tax sources of each level of government. It is important that there be full public debate as to what extent the growing government revenues are to be reduced by tax cuts or allocated to new expenditure programmes.

Should government expenditures at all levels of government continue to rise more rapidly than GNP, there would be little or no room for general tax cuts over the long run. In the short run there may, however, be periods when reversible changes are required in order to prevent unemployment or

inflation. Without the government's consciously wishing to do so, the increases could be predominantly applied to sales and excise taxes, while the reductions could be predominantly applied to the personal income tax. This could happen if reductions in personal income tax were thought to be more popular, while increases in sales taxes, for example, were thought to be less unpopular or more readily implemented. As we discuss later in this Volume of the Report, we do not believe that changing the tax mix in order to put more weight on taxes other than income taxes would have a significant positive effect on our rate of economic growth or our competitive position. To be more precise, if there are negative effects in increasing the weight of income taxes, we believe they could be compensated for. We are convinced, however, that to reduce the weight of income taxes in the mix would reduce the equity of the tax system by reducing the degree of redistribution achieved. It would be most unfortunate if each tax change made for stabilization purposes were not considered in the light of the long-run effects on the tax mix. What is needed, therefore, is a long-run policy that would specify how the revenue drag should be offset over time so that short-run stabilization policies can be implemented within this wider context.

FISCAL POLICY IN A FEDERAL STATE

With exclusive jurisdiction over monetary policy and foreign economic policy, with the lion's share of the personal and corporate income taxes, and with massive federal expenditures, there can be little doubt that in the past the federal government has had all the power needed to stabilize the economy. Whether that power was always effectively used is another matter. There have been some important changes in recent years, however.

Whether we consider the period beginning in 1926, or the period beginning in 1949, the general trend of government expenditures (all governments and all expenditures except inter-governmental transfers) has risen more rapidly than national output. However, in the recent past there was a deviation from this trend. Government expenditures grew slightly less rapidly than GNP. This was the net result of a sharp decline in the rate

of increase of federal expenditures and a sharp increase in the rate of increase of provincial and municipal expenditures. In 1952, federal expenditures constituted about 16.5 per cent of GNP while provincial-municipal expenditures were less than 10 per cent of GNP. By 1964, federal expenditures accounted for only about 14 per cent of GNP in that year and provincial-municipal expenditures had risen to 17.6 per cent.

The rapid growth in provincial and municipal expenditures raises several issues for stabilization policy.

1. Does the behaviour of provincial and municipal governments contribute to the instability of the economy? That is, will the built-in stability of the economy be lessened by the growth of the provincial and municipal sector?
2. Is the power of federal discretionary stabilization policy weakened, either because of offsetting provincial actions, or because the will to act is hampered by inter-governmental financial arrangements, or eroded because of real or imagined conflicts between the federal and provincial governments?
3. To what extent and by what means should the provinces actively participate in stabilization policy?

We shall address ourselves to each of these issues in turn, and shall make proposals bearing on each. Our recommendations are designed to enhance the effectiveness of stabilization policy rather than simply to prevent its erosion. For we find no inherent barrier to a strong federal stabilization policy resulting from the growth of provincial and municipal expenditures. We believe, however, that there are measures that could be taken to improve stabilization policy. These would be directed to three main purposes: achieving stability in provincial revenues and expenditures; maintaining federal personal income tax as an effective discretionary policy instrument; and gradually enlisting provincial participation in direct stabilization actions in co-operation with the federal government.

The Growing Provincial-Municipal Sector
and Built-in Stability

As was mentioned above, provincial expenditures as a percentage of GNP increased by 7.6 percentage points from 1952 to 1964, while federal expenditures as a percentage of GNP declined by about 2.8 percentage points over the same period. Slightly less than half of the increase in the proportion of provincial-municipal expenditures to GNP came about at the "expense" of the federal government, and slightly more than half at the "expense" of the private sector of the economy.

Data limitations preclude categorical statements, but the analyses made for us show that provincial-municipal expenditures, at least from the end of World War II until about 1961, 19/ did not exert a destabilizing influence on the economy. This is contrary to the widely held view that provincial and municipal expenditures are cyclically perverse, rising rapidly in periods of inflation and declining rapidly when there is excess productive capacity. If our finding is valid, and if it continues to hold, the growing importance of provincial and municipal expenditures probably has not reduced and possibly has increased the built-in stability of the economy. The changes in provincial and municipal expenditures are as cyclically stable or more stable than the combined private and federal government expenditures they have replaced. There are, however, some grounds for concern.

In the past the provinces and municipalities relied very heavily on revenues from indirect taxes. These revenues were relatively insensitive to short-run fluctuations in the level of economic activity. In recent years, particularly as the result of the adoption in 1961 of the procedure whereby the federal government abates federal income taxes and thus provides income tax room for the provinces, there has been a significant increase in the importance of cyclically sensitive direct tax revenues in the provincial tax mix. In 1952 direct taxes constituted a little less than 9.0 per cent of provincial-municipal revenues (excluding transfers from the provinces to the municipalities). By 1964, direct taxes constituted over 17 per cent of their revenues. This trend has continued.

If the provinces were to allow their expenditures to fluctuate with changes in these revenues, and if these cyclically sensitive revenues constitute a growing share of their total revenues, provincial and municipal expenditures could become perverse from an economic stability point of view. If provincial-municipal expenditures were to become as destabilizing as private expenditures, and more and more displaced stabilizing federal expenditures as a proportion of GNP, the built-in stability of the economy would be weakened. If this were to happen, the federal government would have to adopt more and more drastic discretionary policies to stabilize the economy. Federal revenues and expenditures would have to be raised and lowered by larger and larger amounts to offset the fluctuations in economic activity. The more extreme the discretionary policy changes required by the federal government for stabilization purposes the greater the danger that too little will be done and too late.

We have no way of knowing whether the proportion of GNP accounted for by the federal government will continue to fall or whether the proportion of provincial-municipal expenditures to GNP will continue to rise. With little information available about the cyclical fluctuations of provincial expenditures in the past, and given the fact that the large increases in cyclically sensitive revenues came about only recently, we cannot determine the extent to which provincial-municipal expenditures will become more destabilizing as their revenues become increasingly sensitive to fluctuations in the level of general economic activity. We must frankly admit that we simply do not know the dimensions of the problem. However, the greater the decline in federal expenditures relative to GNP and the greater the relative importance of direct taxes in the provincial-municipal revenue mix, the greater the risk that the built-in stability of the system will deteriorate. We think it possible to reduce this risk without sacrificing other objectives.

Stabilizing Provincial Tax Revenues

We recommend that the federal government agree to maintain the rate of increase of provincial revenues from personal and corporate income taxes and

retail sales taxes in periods when the economy is suffering from unemployment. This would provide the provinces with the revenue necessary to implement expenditure plans (presumably formulated on the basis of a full-employment assumption), without having to raise taxes. Already the principle of such a form of underwriting is embodied in the guarantee that equalization payments will at least not fall below the level of previous years. Our proposal is for a broader extension and a more realistic application of this principle.

Without going into details, we suggest that the following approach might be adopted:

1. Each year estimates should be made of the tax yields from personal and corporate income taxes and retail sales taxes at full-employment output levels.
2. The federal government should agree to make up to the provinces discrepancies between the full-employment yield and the actual yield on these taxes.

We do not think that the implementation of such a procedure would have to await the development of sophisticated estimates of full-employment output. Rough estimates of the income elasticity of each tax, together with some simple formulae 20/ for linking the output gap to the unemployment rate could be used at the outset. As experience is gained more refined techniques should be introduced.

Ideally these payments to the provinces should be made on a quarterly basis, but data limitations probably preclude this for the time being. Certainly a system using annual data, with interim provisional transfers at mid-year based upon output forecasts, would be feasible.

Stabilization of Provincial Expenditures

It is equally important to prevent the accelerated growth of provincial expenditures in response to rapid increases in revenues as the result of inflation. Although the federal government can unilaterally make grants to help the provinces maintain their expenditures in depressed periods,

obviously the federal government cannot unilaterally reduce provincial revenues under inflationary conditions. But we recommend that the federal government offer an inducement to the provinces to contain the rate of increase of their expenditures under this circumstance. One possible method would be for the federal government to agree to pay a bonus to those provinces that met the following conditions :

1. They deposited with the federal government some or all of the revenues from provincial personal and corporate income taxes and possibly retail sales taxes in excess of the yields that would be realized at full employment without inflation.
2. They did not offset these deposits by additional borrowing, or by running down their cash, or by selling financial assets.

The deposits of the provinces would be withdrawn and the federal bonus would be paid when the inflationary danger had passed. The bonus would take the form of a high rate of interest on such deposits. The periods during which such a bonus would be in effect would be determined by the federal government on the basis of its assessment of the inflationary problem. We recommend that the federal government should offer an incentive along these lines that would encourage the provinces to contain increases in their expenditures during inflationary periods.

The implementation of these proposals would largely eliminate the sensitivity of provincial revenues to departures from full employment and price stability, and hence would eliminate a potential cause of destabilizing changes in provincial and municipal expenditures.

Maintaining the Federal Share of Personal Income Tax Revenues

If the fluctuations in the revenues and expenditures of provincial and municipal governments can be eliminated through the adoption of the proposals just made, the increasing relative importance of provincial and municipal revenues and expenditures should, if anything, increase the

built-in stability of the economy. However, if the provinces and municipalities become relatively more important at the "expense" of the federal government, it could become increasingly difficult for the federal government to adopt adequate discretionary policies. As a hypothetical case, one can conceive of a federal government, with no permanent taxes and no continuing expenditures, acting to stabilize the economy through the imposition of temporary taxes during inflationary periods to reduce aggregate demand and temporary negative taxes (subsidies) during periods of inadequate demand, financed by an expansion of the money supply. But in terms of the political realities such a possibility is completely artificial. It is obvious that, if discretionary stabilization policy required the federal government to take such extreme action, there would be a danger of delay and timidity. No government wants to impose a "new" tax, or provide a transfer payment or other subsidy that has to be withdrawn in a year or two. Furthermore, as a practical matter it would be impossible to keep a complex tax administrative machine poised ready for action under these conditions.

Several implications can be drawn. We have emphasized earlier in this chapter that changes in the personal income tax probably provide the most effective discretionary policy instrument available to the federal government. The lower the federal rates of personal income tax the larger will have to be the relative changes in those rates to achieve a given change in aggregate demand. The larger the relative changes required, the greater the political barriers to quick and decisive action by the federal government. This suggests that in attempting to offset the revenue drag the federal government should avoid repeated reductions in federal personal income taxes either through lower rates or increased abatements for provincial personal income taxes. The latter poses the more immediate danger.

The federal abatement of personal income tax has increased dramatically in the past few years. At the present time the federal abatement for residents of Quebec is 47 per cent. In 1962 it was 16 per cent. There is no fixed and certain number beyond which an increase in the abatement would

jeopardize effective federal policy. Although the political barriers to decisive federal action rise as the federal share of the personal income tax diminishes, the threshold of disaster is not clearly marked. Despite this lack of clarity, and perhaps even more so because of the doubts regarding it, we are satisfied that, at least in the near term, the federal government should maintain its present share of the personal income tax. Further increases in the provincial abatement should be strongly resisted.

The price of weakening the federal government's control over the personal income tax would be to resort to less effective alternative measures. In addition to the extreme alternative dismissed above, it would be possible to accomplish the requisite discretionary changes in aggregate demand by one or all of the following ways:

1. Changing other federal taxes.
2. Relying on changes in expenditures rather than taxes.
3. Inducing the provinces to undertake changes in their personal income tax rates to complement federal changes.

These may be viable alternatives at some point in the future, but we are convinced that without experience in their use and readily available machinery to carry out these kinds of discretionary policies it would be a serious handicap if these were the only practical alternatives available to the federal government in the years immediately ahead. Changes in other federal taxes could never substitute completely for the ability to change personal income tax rates. To have to forgo changes in the personal income tax rates would be to lose one of the best fiscal instruments for stability.

It may well be possible to find ways and means of accelerating and decelerating government expenditure changes for stabilization purposes. But this has not been a successful instrument in the past, and it would be unfortunate if the federal government were forced to place greater reliance on it until it was substantially improved as a discretionary policy instrument. We believe that it would be desirable to work gradually toward the day when the provinces could take an active role in stabilization policy

and, as discussed later, we think that the first steps should be taken by initiating joint consultation and planning on stabilization policy. To expect the provinces to play an active stabilization role in the years immediately ahead, except perhaps under extreme conditions, would, we feel certain, be a serious mistake. Prompt and decisive joint action would be almost impossible to achieve without a great deal more sophistication and planning on both sides.

Our recommendation that the federal government should resist further increases in the personal income tax abatement should not be taken as a recommendation about the extent to which the federal government should make tax room available in total to the provinces. This question is outside our terms of reference and we have no intention of expressing a view on it. What we do recommend is that, if it is federal government policy to make additional tax room available to the provinces, some method other than larger abatements of federal personal income taxes should be found for doing so at least until satisfactory alternative devices have been developed.

Federal-Provincial Conflict as a Barrier to Stabilization Policies

It is one of the facts of life that governments like to increase expenditures or reduce taxes; tax increases are anathema. Governments are thus constantly alert to the possibilities of obtaining additional revenues in the most unobtrusive manner. Having borne the political costs of raising taxes, they are reluctant to lower taxes if they are subsequently going to have to raise them. If taxes have to be increased, it is important to shift the "blame"; if taxes can be reduced, it is vital to get the credit. These attitudes of government are found everywhere in the world; in a federal state there is a danger that the pursuit of these political advantages will create conflicts between the levels of government that may hinder effective stabilization policies. This danger is particularly severe when, as at present, provincial governments are under extreme pressure from their voters to provide greatly increased public goods and services.

It is important to recognize that, when there is a conflict between the federal and provincial governments about tax revenues, the stabilization problem is essentially political rather than technical. On technical grounds there is relatively little to fear from provincial tax changes offsetting federal tax changes made for stabilization purposes. A federal tax cut to stimulate the economy will not be frustrated by an equivalent provincial tax increase, if the federal government maintains its expenditures and provincial governments promptly increase their expenditures by the full amount of their additional revenues. Indeed, if the provinces do not delay spending the additional tax revenue, and do not make an offsetting reduction in their borrowing, the tax increase by the provinces will have an expansionary effect. Total spending will be increased by the amount of the federal tax cut that would have been saved by the private sector but instead is spent by the provincial government sector 21/.

Similarly, a federal tax increase designed to hold back aggregate demand will not be offset by an equivalent provincial tax reduction if the federal government does not spend the additional revenues and provinces reduce their expenditures by the full amount of their tax reduction. Here, too, the provincial action will complement rather than offset the federal action. Part of the provincial tax cut will be saved by the private sector.

Conceivably the provinces would not increase their expenditures by the full amount of the additional revenues from a tax increase, or reduce their expenditures by the full amount of a tax cut. However, while time lags may occur, these "perverse" actions are unlikely to be either frequent or extensive.

We do not wish to suggest that it is of no importance what the provinces do with respect to their tax changes. If the federal government, faced with a serious recession, cut taxes and increased its expenditures, the provinces could assist in restoring aggregate demand by increasing their expenditures without increasing their taxes. In a period of severe inflation the provinces could support a federal tax increase by increasing their taxes, or by delaying tax reductions, while reducing their expenditures. The provinces

could thus make a contribution toward stabilizing the economy when there were severe unemployment or inflationary problems. The point is, that while provincial governments could help the federal government stabilize the economy, a lack of federal-provincial co-ordination and co-operation with respect to tax changes does not make the federal task technically impossible. It could, however, make the task more difficult politically.

It is possible that the federal government might not undertake or would delay taking the appropriate fiscal policy, not because it was convinced that its measures would be offset by the provinces, but rather because of the anticipated political cost. There are three rather obvious situations that could arise where the political costs of tax changes might look menacingly high to a federal government :

1. The federal government might be reluctant to raise taxes to reduce aggregate demand if it expected that it would almost immediately have to transfer the additional tax room to the provinces, and would not be able to gain political support by spending the additional revenue or recoup some public favour by subsequently reducing taxes when the inflationary pressure had passed.
2. The federal government might be reluctant to reduce taxes to stimulate demand if it expected that the provinces would take this as a sign of federal affluence, and would therefore put more pressure on the federal government for more tax room.
3. The federal government might be reluctant to reduce taxes to stimulate demand if it expected that the provinces would use this as an opportunity for making a painless increase in their taxes in the wake of the federal cut. A provincial increase would put the federal government in the position of having to raise taxes on top of the higher provincial rates if the federal cut had to be subsequently reversed.

The question is not whether these fears are justifiable or groundless but whether these considerations are likely to deter federal action. On

the basis of the personal income tax changes made in the last two budgets we are satisfied that these political considerations do not preclude federal tax changes for stabilization purposes.

The Role of the Provinces in Discretionary Stabilization Policies

In our view, the provinces should not attempt to pursue independent stabilization policies.

Provincial or regional economies are more "open" or interrelated than national economies, with the result that a large part of the stimulus provided by a provincially implemented stabilization policy will be felt outside the province. These leakages are even greater for municipalities. The local benefit from provincial and municipal stabilization policies is therefore generally too small to ensure that vigorous action will be taken.

Unless each province took into account what all the other provinces and the federal government were doing, and were going to do, the individual provincial efforts could be offsetting, too extreme, or ill-timed.

Although it has not been an important limitation in recent years, the fact that the provinces do not control the money supply (and we do not believe they should), could make it difficult for them, under extreme conditions, to finance stabilizing increases in expenditures without raising taxes during periods of high unemployment. The Bank of Canada would, of course, ease credit conditions (assuming that it was not constrained by the state of the country's balance of payments); but the traditional debt limitations imposed by the capital market could create barriers to sharp increases in provincial and municipal deficits in periods of unemployment 22/.

There has been confusion at both the federal and provincial levels between the problems of general unemployment and the problems of structural unemployment. In our view, the provinces should take an active role in the resolution of the long-term structural difficulties, and we shall speak of this matter again in the next chapter.

As we have said, when extreme deviations from full employment and price stability occur, the provinces and municipalities could make a useful contribution to economic stability if they agreed to change their revenues and expenditures in order to substitute provincial expenditures for reductions in private demand, or to make resources available to satisfy private demand. However, it would be exceedingly dangerous for the federal government to rely on this support unless there were an agreed stabilization strategy. Even then, determining when active provincial stabilization policies were necessary, the extent to which they were necessary, and the form they should take would require an over-view of the whole economy that can only be possessed by the federal government.

Federal-Provincial Co-operation for Stabilization

If the recommendations we have made in this chapter were adopted, the immediate need for federal-provincial co-operation on stabilization policy would be lessened. With the rate of increase of provincial expenditures insulated from deviation of actual GNP from potential GNP, the economy should not become inherently more unstable. With a large part of personal income tax revenues in federal hands, prompt and adequate discretionary tax changes should be feasible for the federal government. With the power to make expenditure changes, to impose taxes on (or grant incentives for) investment expenditures, and to apply special excises in those circumstances where the demand for particular goods has to be depressed, the federal government should have all the discretionary fiscal tools necessary to stabilize the economy.

Although we are sceptical that much should be expected in the near term, it would be prudent to work gradually toward a system in which the provinces could play an active stabilization role in co-ordination with federal stabilization policy and under the guidance of the federal government. This could serve the following functions:

1. Reduce the likelihood that provincial tax changes would in whole or in part offset federal tax changes made for stabilization purposes.

2. Reduce the likelihood that political advantages would be taken of such federal tax changes.
3. Reduce the need for federal insistence on a major share of personal income tax revenues.
4. Provide a more powerful weapon to combat severe stabilization problems should they arise.

Our specific recommendation is outlined briefly below.

Federal-Provincial Consultation

1. The federal government should try to institute a regular and extensive system of continuing federal-provincial consultation on stabilization policies.
2. After experience has been gained, there should be a gradual move from consultation to the development of binding commitments and agreements.
3. As a starting point the federal and provincial governments should attempt to reconcile their future projected revenues and expenditures with one another and with forecasts of the growth of potential GNP. Within this long-run time horizon a mutually acceptable short-run stabilization strategy should be devised.
4. This strategy should take into account such questions as the following:
 - a) Should the revenue drag be offset by tax cuts or expenditure increases?
 - b) Could changes in federal-provincial fiscal relations already planned be accelerated or decelerated as stabilization devices?

It would be naive to expect that, if these steps were followed, governments would be precluded from jockeying for position. But if this jockeying takes place well in advance within a context that forces each government to consider the impact of its actions on the nation as a whole, and thus on

itself, the possibility of destructive conflict would be minimized. With mutual trust and respect among the federal and provincial governments, there is no inherent reason why effective stabilization policies cannot be achieved.

The system we propose would not constitute a radical departure from the past. The Tax Structure Committee that is now preparing for the negotiations on federal-provincial tax-sharing arrangements for 1967 has, in effect, begun the joint fiscal planning process. If this Committee is as successful as we hope it will be, we would recommend that the federal government seek to persuade the provinces to continue this kind of group on a permanent basis with terms of reference that would allow the evolution of a continuing system of fiscal co-ordination and planning. Having taken this step, the development of a basic strategy for stabilization, and a method of revising this strategy as changing circumstances warrant, should readily emerge.

It seems reasonable to expect that over time the federal government and the provinces should be able to agree on a stabilization strategy. Avoiding unemployment and inflation is in the interest of all Canadians. As we discuss in the next chapter, maintaining the stability of the economy will contribute to a more rapid rate of growth. The interest of the provinces in increased economic growth should thus re-enforce their desire to co-operate in maintaining economic stability.

We want to emphasize that, even if a mutually acceptable stabilization strategy can be devised, the federal government should retain the prime responsibility for instituting stabilization changes within the agreed upon strategy (both as to the timing and magnitude of the changes). But through the regular consultation required to adjust the strategy to meet changing conditions, the provinces would be fully informed as to the probable course of events and would have ample opportunity to make their views known.

CONCLUSIONS AND RECOMMENDATIONS

THE REVENUE DRAG

1. The policy failures of recent years arose partly because of a misconception of the stabilization problem in a growing economy. This misconception took two forms. First, stabilization policy did not give adequate recognition to the fact that the growth of the economy automatically created a revenue drag over time, and that the much vaunted built-in stabilizers could also build in stagnation unless offset by discretionary moves. A stationary policy in a dynamic economy stifles expansion. Second, the unemployment that resulted from the divergence of actual GNP from potential GNP, because it did not fit into the standard picture of cyclical unemployment, was regarded largely as a symptom of a structural weakness rather than of stagnant demand. Unemployment was attributed to such factors as technological change, rather than to the failure of demand to keep up with the greater output that rapid technical advance made possible.
2. In addition, in some years the fear of inflation probably precluded effective action when the basic problem was inadequate, not excessive, demand.
3. This diagnosis points toward the recommendations we make. Because the stabilization problem is typically one of excessive or deficient aggregate demand, general policies can be relied upon. Tax policies as a method of stabilization to affect specific private expenditures, such as capital expenditures, should be reserved to deal with inflationary bottlenecks, if they arise.
4. The operation of a successful stabilization policy requires the power to act quickly within the framework of a longer term plan to eliminate the revenue drag. Prompt fiscal moves can check incipient fluctuations at their birth.

5. Our present federal tax system automatically offsets a part of changes in demand. This built-in stability is important, and we have carefully reviewed our tax reform recommendations to make certain that it is not eroded. However, built-in stability, while useful, is not sufficient. Speedy discretionary moves are essential.
6. Without a longer term plan for the elimination of the revenue drag, the vigorous use of stabilization policy would tend to alter the tax mix and the allocation of resources between public and private uses and within the public sector in ways that may not be desirable. Therefore, we recommend the development of a long-term fiscal policy that is cognizant of the needs for public expenditures at different levels of government, the importance of at least preserving (and preferably increasing) the primacy of income taxes in the tax mix, the desirability of sharing the fruits of economic growth with low income persons and families through increased progressiveness of the tax-transfer system, as well as the utility of general tax cuts. The selection of alternative ways of eliminating revenue drag ought to depend on the careful evaluation of these alternatives. It should not be the outcome of a series of short-term stabilization policy decisions.
7. It is not our assignment to design a long-term fiscal policy for Canada. Such a policy depends upon the priorities attached to different goals and must be decided upon by Parliament and the provincial governments.

STABILIZATION TOOLS

8. Across-the-board changes in personal income tax rates provide the most effective single tax instrument for changing aggregate demand to achieve full employment and price stability. Changes in corporate income tax rates and in sales tax rates are much less useful for the reasons we have specified.

9. When bottlenecks occur that could lead to inflation before the target rate of employment is achieved, it may be necessary to reduce the rate of capital spending. For this purpose we recommend the use of a system of taxes on capital expenditures or changes in capital cost allowances.
10. Short-term measures to stimulate employment in specific industries or regions are not recommended.

DATA REQUIREMENTS

11. Additional economic data and more effective organization and presentation of existing data are urgently required if stabilization policies are to be improved. The Dominion Bureau of Statistics should be given the resources necessary to develop this information.

BUDGETARY FLEXIBILITY

12. Procrastination is a great enemy of successful stabilization policies. To draw the widest attention to the need for prompt and effective action, we recommend that when the rate of unemployment or of price increase exceeds stipulated limits a full-scale debate in the House of Commons should be mandatory. By focusing attention on the problem a mandatory debate would encourage early and decisive action.
13. The government should be empowered to change specific taxes within specified limits, subject to subsequent approval by Parliament, when the statistical indications reveal that significant deviations from unemployment and price stability targets have occurred.

BALANCED BUDGET

14. The public's demand for a balanced budget is misguided. Because the rate of increase in tax revenues is greater than the rate of increase of the GNP, government expenditures can increase as a proportion of GNP without tax rate increases and without running a deficit. Attempts by government to maintain a balanced budget are a severe handicap to stabilization policy. If the public

and governments would concentrate on how the revenue drag of the system was being offset, they could debate real issues. To encourage this emphasis, the federal government should, as part of the budget, present estimates of its full-employment surplus (or deficit) and should indicate how it proposes to offset the revenue drag of the tax system.

**STABILIZING THE RATE OF INCREASE
OF PROVINCIAL EXPENDITURES**

15. At least in the postwar period, provincial and municipal governments probably have not made the Canadian economy more unstable. The increasing relative importance of the expenditures by these two governments, and their increasing reliance on cyclically sensitive direct taxes, warrants concern, however.
16. The built-in stability of the economy could be maintained, and possibly increased, despite the growing relative importance of provincial-municipal expenditures if the rate of increase of provincial expenditures was not affected by changes in the level of unemployment or changes in the rate of increase of prices. Two steps should be taken to realize this result:
 - a) The federal government should make up to the provinces any reductions in personal and corporate income tax and retail sales tax revenues resulting from deviations of actual GNP from potential GNP.
 - b) When required to reduce aggregate demand, the federal government should offer a bonus to the provinces to induce them to deposit with the federal government the additional personal and corporate income tax and retail sales tax revenues resulting from rapid increases in the general level of prices. Conditions would have to be established to ensure that the provinces did not offset the deposits by additional borrowing or by the reduction of other assets.

17. If provincial-municipal revenues and expenditures grow at the expense of the federal government, in order to offset a given deviation of actual from potential GNP more dramatic discretionary policy changes would be required. While there may be no insurmountable technical obstacles to temporary changes in income tax rates and temporary changes in transfer payments, as a practical matter the greater the relative changes in policy instruments required the greater the danger that prompt and decisive action will not be taken.

**MAINTAINING FEDERAL PERSONAL
INCOME TAX REVENUES**

18. Because of its advantages as a stabilization tool, and the political barriers that would arise to the vigorous use of personal income tax rate changes if large relative changes were required, we recommend that the federal government should resist permanent reductions in federal personal income taxes. Repeated personal income tax cuts should not be made to offset the revenue drag. Further increases in the federal personal income tax abatement would also be undesirable, at least in the near term.
19. If federal personal income tax revenues were further reduced on a permanent basis, a particularly valuable stabilization tool would be blunted. Increased reliance on changes in other taxes or in federal expenditures are unlikely to compensate for this loss, at least in the near future. Eventually the provinces could perhaps play an active stabilization role, but this does not seem a viable alternative now.
20. Because provincial governments are likely to change their expenditures by the full amount of any provincial tax change, although possibly with a lag, there is little danger that provincial tax changes would negate federal changes designed to stabilize the economy. But the federal government might be reluctant to act for fear of the political

costs of subsequent provincial tax changes or provincial demands. Recent experience suggests that this is not a serious problem.

21. We believe it would be prudent to prepare the way for joint federal-provincial stabilization policies should severe stability problems arise, or should the federal share of revenues and expenditures decline substantially in the future.
22. We recommend that the following steps should be taken:
 - a) Adoption of a continuing and intensive system of federal-provincial consultation on stabilization policies.
 - b) Gradual movement from consultation to binding federal-provincial agreements on stabilization policy.
 - c) As a starting point it would be desirable that the federal and provincial governments develop a stabilization strategy within the context of a mutually acceptable long-run policy for offsetting the revenue drag.
23. If the federal government and the provinces reach an understanding about the long-run questions, it should be possible to develop a stabilization strategy well in advance of immediate stabilization problems. This should preclude debate and hence delay when action is required.
24. The federal government should maintain the initiative in stabilization policy within the agreed upon strategy.

REFERENCES

- 1/ Special excise taxes have been used in the past for stabilization purposes but for reasons given below their use should be restricted to more severe circumstances than are normally encountered.
- 2/ Autonomous changes in demand are those that are not themselves induced by changes in incomes or relative prices within the Canadian economy itself. A change in the foreign demand for Canadian exports is an excellent example of a change in autonomous demand.
- 3/ See Appendix D to this Volume, Table D-2, for the derivation of these estimates.
- 4/ Elasticity is a term used to describe the extent to which the revenues from a tax are sensitive to a relative change in the rates or of the base. Elastic taxes are sensitive to such changes; inelastic taxes are not. See Appendix C to this Volume for the elasticities of specific taxes and transfers.
- 5/ The exception is the unemployment insurance system, which acts to stabilize income near its full-employment trend.
- 6/ Albert Ando and E. Cary Brown, "Lags in Fiscal Policy", in Commission on Money and Credit, Stabilization Policies, Englewood Cliffs, N.J.: Prentice-Hall, 1963, pp. 141-142.
- 7/ See J. Duesenberry, O. Eckstein and G. Fromm, "A Simulation of the United States Economy in Recession", Econometrica, October 1960, pp. 749-809. See also A. M. Okun, "Measuring the Impact of the 1964 Tax Reduction", a paper presented to the American Statistical Association, September 1965 (mimeo).

- 8/ We explain later that the top marginal personal income tax rate should be tied closely to the corporate income tax rate. Across-the-board tax rate changes therefore should not be made applicable to the top marginal personal tax rate except by changing the lower limit of the top income bracket, unless the changes are relatively small or are reversible within a short period of time.
- 9/ Lars G. Sandberg, "A New Look at the Investment Reserves", Economisk Tidskrift, March 1964, pp. 32-38.
- 10/ In this section all data are on a national accounts basis and references are to calendar years.
- 11/ It is assumed that the provincial propensity to spend tax abatements is at least as great as the private propensity to spend from an equivalent tax reduction.
- 12/ Ideally, the differential impact of different taxes and expenditures upon private expenditure decisions should be taken into account. If each tax, expenditure and transfer is weighted by its direct or indirect effects upon GNP, the sum of these is a measure of the leverage exerted by the fiscal system as a whole. See R.A. Musgrave, "On Measuring Fiscal Performance", The Review of Economics and Statistics, Vol. 46, 1964, pp. 213-220. We have not constructed an estimate of fiscal leverage because:
- a) Estimates of the effects of some taxes on private expenditures are not particularly reliable, for example, corporate income taxes.
 - b) The long-run and short-run effects are likely to be different in any case, for example, the short-run stimulation provided by a corporate income tax cut is virtually near zero. The long-run effects may be substantial.
- The full-employment surplus is therefore a descriptive tool that may need qualification if divergent changes in the various full-employment revenues and expenditures occur.

13/ Of course, a large portion of federal expenditures in any year is effectively committed and hence is not discretionary in any real sense. For example, old age security and family allowance payments cannot be eliminated and continue to grow as population grows.

Similarly, specific tax changes may have been committed prior to the year in question. Examples include changes in tax abatements made under prior agreements with the provinces, and the commitment made in the 1966 Budget to remove the remaining sales tax on production equipment.

Finally the impact of discretionary policy, as we have defined it, in any year reflects not only the tax changes enacted in the budget for that year, but also the continuing effect of tax changes adopted in the preceding or perhaps earlier budgets.

However, these considerations do not vitiate the analytical framework we have adopted. Essentially we are separating the changes in the full-employment budget that reflect the growth of income under existing tax rates from those which reflect changes in tax rates, abatements and expenditures. While a particular expenditure may have been committed prior to the year, the aggregate of expenditure increases, abatement increases, and tax rate changes is surely open to discretionary action. Expenditure increases in committed programmes, for example, can be offset by discretionary expenditure reductions in other programmes or by tax rate increases.

Tax rates for both the personal income tax and the corporate income tax, which together raise well over half of federal revenues are fully subject to discretionary changes.

14/ For a detailed discussion of the changes in fiscal policy over the period, the reader is referred to R.M. Will, Fiscal Policy Since 1946, a study published by the Commission.

- 15/ The adoption of the Municipal Loan Fund and a loan to the Atlantic Development Fund resulted in commitments to future expenditures but had little impact in 1963. Similarly, increases in sales taxes were enacted; but these did not affect revenues substantially in 1963. Only the effects occurring in 1963 are taken into account in the surplus for that year.
- 16/ See R.M. Will, The Budget as an Economic Document, a study published by the Commission.
- 17/ See Appendix E to this Volume for a more detailed discussion of the proposal.
- 18/ These discretionary policy actions could be offset in the unlikely event that provincial governments ran a surplus that exceeded the federal expenditure increase or tax reduction.
- 19/ We cannot speak of the more recent period for there were virtually no cyclical fluctuations. This is a serious limitation because in recent years the provincial dependence on cyclically sensitive revenues greatly increased, as we will discuss.
- 20/ Such as "Okun's Law" used in the United States.
- 21/ The effect being defined here is the immediate impact of government fiscal policy. As with any fiscal policy change, the total effect upon GNP depends not only upon the initial impact but also upon the multiplier, as discussed earlier in this chapter.
- 22/ We are speaking here of increases in expenditures, over and above those that could be financed at provincial levels, that grow at the full-employment rate as a result of federal grants in periods of unemployment.

FISCAL POLICY FOR GROWTH

The phrase "economic growth" has become increasingly popular in recent years although the issues involved—how to increase national output over time—has been the subject of analysis and debate for centuries. Primarily as the result of the depression of the 1930's, World War II and the reconstruction period, technical and public discussion of unemployment and inflation predominated for about twenty-five years. The increased concern with economic growth relative to the problems of economic stability represents a return to normal rather than a departure from tradition.

But the phrase is new if the subject matter is not; and, like many phrases that are quickly and widely accepted, "economic growth" is often ill-defined and frequently misapplied. As we suggested in Chapter 2, there are many alternative concepts of economic growth, and when they are used indiscriminately confusion is inevitable. In particular, the term is often used to describe increases in actual gross national product (GNP). This tends to result in confusion because it does not distinguish between the changes in GNP brought about by changes in the utilization of the capacity to produce on the one hand, and changes in the capacity to produce on the other. Controlling the degree of utilization is the problem of economic stability which we have just considered. Changing the capacity (potential) to produce is the subject matter of this chapter.

Earlier we defined an increase in potential GNP as economic growth. Potential GNP measures the capacity to produce in a given year if all resources were employed in that year. Because the supply of labour and capital will be increased if full employment is continuously maintained, the growth of potential GNP depends in part upon the success or failure of stabilization policy in the past.

In this chapter we briefly consider the relative importance of the major determinants of the rate of growth: the quantity and quality of

labour and capital, and a group of factors we have called "technical change". We then discuss what can be done through the tax system to increase the rate of growth by influencing each of the determinants of growth. This is followed by a section that considers alternative methods by which saving and investment at full employment could be increased. In a final section the prospects for Canadian economic growth are presented, based on different assumptions with respect to the rates of unemployment and investment. This is done to illustrate the great importance of the full utilization of capacity for Canada's future growth rate relative to other policies that would increase the investment rate, but only at the cost of reduced consumption, reduced leisure, or increased foreign borrowing.

The basic point of view developed in this chapter can be briefly presented:

1. All tax systems have a number of anti-growth biases.
2. Capital markets work imperfectly in some areas and thereby create anti-growth biases.
3. The taxation of income, comprehensively defined, at relatively low marginal rates, will distort the allocation of resources less, and hence reduce the rate of growth less, than a narrow tax base taxed at higher rates.
4. Some of the anti-growth biases can be compensated for within the tax system without forgoing a basically equitable system.
5. Reforming the tax base and rate structure should therefore not reduce the rate of growth and may increase it.
6. Maintaining full employment will increase the growth rate significantly.
7. If a higher growth rate is desired this will necessarily involve some sacrifice of present consumption, or leisure, or an increased reliance on foreign saving. Tax measures designed to provide additional stimulus

to saving and investment may be adopted as part of growth policy, but these will involve some reduction in the overall equity of the system.

THE RELATIVE IMPORTANCE OF DIFFERENT FACTORS IN GROWTH

From the statistical model that was developed by our research staff to estimate potential GNP it is possible to estimate the relative importance of the various determinants of the growth of actual and potential output 1/. Although there is some dispute among economists about the reliability of estimates derived in this way, arising largely from the problems involved in measuring the growth of capital, the estimates are, we believe, sufficiently valid to warrant consideration. They help to give a badly needed perspective to the relative importance of the determinants of growth.

Because of the limited data available, estimates were made for the private non-farm sector of the economy only. The analysis was carried out for two long periods, 1926-63 and 1926-56, and the following subperiods: 1926-37, 1937-47, 1947-56 and 1956-63. Because the two long periods gave very similar results we shall refer only to the results of the 1926-63 period.

Without discussing the method of deriving the estimates in detail, the high lights can be briefly described.

1. Statistical estimates were made of the relationships between private non-farm output and the following factors of production: the capital stock, full-employment man-hours, a time trend representing "technical change", 2/ and the ratio of actual man-hours to full-employment man-hours to represent the phase of the business cycle.
2. Potential private non-farm output was estimated from this relationship by computing what output would have been had full employment been achieved.
3. The growth rate of potential private non-farm output is equal to the sum of the growth rate of technical change plus the growth rates of

the capital stock and of labour hours, each weighted by the marginal contributions to output of changes in capital and labour.

4. The relative importance of technical change, capital and labour is then found by dividing the product of its own growth rate and its marginal contribution to output by the growth rate of potential private non-farm output.

The results for the period 1926-63 are shown in Table 4-1.

TABLE 4-1
THE ESTIMATED SOURCES OF ECONOMIC GROWTH, 1926-63

	Actual GNP (constant dollars)	Potential Private Non-Farm Output	Potential Man-Hours	Capital Stock	Technical Change
Actual Growth Rates - Per Cent A Year	3.7	4.2	1.9	3.0	1.9
Contribution to Growth Rate of Potential Private Non- Farm Output ^{a/}	-	100	31.3	22.7	45.9

^{a/} The percentage point contributions to the estimated growth rate of potential private non-farm output of 4.2 per cent a year are estimated to be: potential man-hours, 1.3 percentage points; capital stock, 1.0 percentage points; technical change, 1.9 percentage points.

Source: T.A. Wilson and N.H. Lithwick, Sources of Economic Growth, a study published by the Commission.

Over this period private non-farm output grew more rapidly than GNP (measured in constant dollars) largely because of the movement of labour from agriculture to industry, and partly because potential output was higher than actual output in 1963. As can be seen from Table 4-1, potential private non-farm output grew at an average rate in excess of 4 per cent a year over the period. The estimates show that 46 per cent of this growth was the result of technical change, 31 per cent resulted from the increase in the input of labour, and 23 per cent arose from the increase in the input of capital.

Although data limitations made it impossible to estimate the contributions of these factors to total output, as distinct from private non-farm output, on the same basis, crude estimates suggest that if the government and agriculture sectors were taken into account, the importance of technical change and capital would be greater, and that of labour considerably smaller.

The subperiods that were analyzed differ markedly with respect to average utilization, the growth rates of labour and capital, and the importance of shifts in labour among the sectors of the economy. A comparison of the rates of growth of actual and potential private non-farm output and the supplies of capital and labour are shown in Table 4-2, together with estimates of the contributions made by the three factors we have distinguished, for four periods within the period 1926-63.

TABLE 4-2

GROWTH RATES OF POTENTIAL AND ACTUAL PRIVATE
NON-FARM OUTPUT AND INPUTS FOR SELECTED PERIODS

(Annual Average Percentage Changes)

<u>Period</u>	<u>Potential Private Non-Farm Output</u>	<u>Actual Private Non-Farm Output</u>	<u>Potential Man-Hours</u>	<u>Actual Gross Capital Stock</u>	<u>Technical Change</u>
1926-37	3.9	1.5	2.2	1.5	1.9
1937-47	2.8	6.7	0.7	1.2	1.9
1947-56	5.4	4.7	2.5	5.4	1.9
1956-63	5.1	3.3	2.4	5.1	1.9

Source: T.A. Wilson and N.H. Lithwick, Sources of Economic Growth, a study published by the Commission.

What emerges in striking fashion from these findings is the influence of demand upon the growth of capital and labour. In the 1930's the growth of the capital stock was very low, as was the rate of increase in the private non-farm labour force as the Great Depression delayed the outward movement of labour from agriculture and dried up immigration. During World War II

the growth of capital and labour continued to languish, largely as a result of wartime restrictions on capital formation and immigration. In the postwar periods both the capital and labour supplies increased very rapidly, particularly in the first period when demand was very strong.

As we explained earlier, potential GNP would be greater if there were no departures from full employment of resources because without periodic unemployment the capital stock and potential supply of labour will increase more rapidly. The statistical model developed by our staff yields the estimate that labour productivity as measured by output per man-hour in the private non-farm sector would increase at an annual rate of about 2.8 per cent a year if full employment were maintained. From this estimate it is possible to determine the potential growth rate with continuous full employment on the conservative assumption that the available supply of labour hours and the rate of technical advance would not have changed. Using these assumptions it is estimated that potential output of the private non-farm sector of the economy would have increased from 4.2 per cent to 4.5 per cent a year and that the growth rate of the economy as a whole would have increased from 3.7 per cent to 4.0 per cent a year. An increase of 0.3 percentage points in a growth rate may seem small, but it would have had a significant impact when compounded over the period from 1926-63. In fact, had the annual growth rate been 4.0 per cent over the period, potential GNP would have been approximately 6 per cent greater in 1963 than it was, a gain of about three billion current dollars.

We now report the results of various investigations made of the determinants of potential GNP. We then proceed to discuss the extent to which stabilization policy, changes in the tax mix, and changes in the tax structure may affect these determinants.

THE SUPPLY OF LABOUR

The examination of the record of Canadian growth indicated that about 30 per cent of the private non-farm growth rate has been the result of the

growth of labour input. Our research staff made an investigation of the determinants of the growth of labour input, and in this section we present the findings on the critical variables together with a discussion of the importance of taxes for them.

The growth of labour input depends on two basic processes: demographic change and the choices made by the population with respect to work and leisure.

Demographic Factors

Among the demographic factors we may distinguish natural increase and net migration. It was found that economic variables, and in particular tax variables, do not play a significant role in the determination of natural increase. While there is a specific tax exemption for dependent children in Canada, together with a system of family allowances, these provisions have not had any observed effect on the birth rate and therefore on natural increase.

Turning to migration, it was found that since the 1920's net migration has contributed about 13 per cent of the total increase in the Canadian population; since World War II the contribution has been twice this amount. Furthermore, these proportions understate the share of migration in total population increase because they omit the children born to immigrants in Canada.

The past record of immigration into Canada shows that the volume of immigration expands and contracts as the Canadian economy achieves or falls short of full employment. This reflects both the direct demand-pull on immigrants and the fact that barriers against persons wanting to come to Canada are raised and lowered according to the government's estimation of labour requirements which is itself strongly influenced by the tightness of the labour market. The investigation revealed that taxes probably do not affect the pattern of immigrant flows. The fact that the Canadian standard

of living is substantially above the standards in the home countries of most immigrants probably means that taxes have little influence.

Net migration is also determined by the outflow of population from Canada. The United States is the most important destination of emigrants from Canada, and attention was concentrated on the flow to that country. The findings revealed that once again the extent to which resources are unemployed in Canada is apparently the most important determinant of this outflow. The underlying process appears to be one where the higher standard of living in the United States continually attracts Canadians. As long as the Canadian economy successfully maintains full employment there is sufficient resistance to this magnetism. During periods of rising unemployment, falling income will loosen the ties that keep workers here, and emigration to the United States will speed up. It was found that changes in the Canadian personal income tax rates apparently had relatively little effect on total emigration of Canadians to the United States, but may have had some effect on the emigration of Canadian skilled workers to that country.

An examination was made of the occupations of Canadian emigrants to the United States. It was found that the proportion of skilled persons among emigrants to the United States from Canada was higher than the proportion of the same skills in the Canadian labour force. This suggests that there has been a concentration of skilled workers among Canadian emigrants, the group for whom the United States-Canadian income tax differentials are least favourable to Canada.

Higher wages and salaries for comparable work, better research facilities, a greater diversity of employment opportunities for professionals, and the interconnection between firms in the two countries have probably exerted a much greater influence than tax differentials. Nevertheless, it would be desirable to reduce these differentials so that the tax system would not provide an additional impetus to emigration from Canada to the United States.

There is another side of the story, and that is the quality of the immigrant flow into Canada. The data show that the proportion of professional persons among immigrants to Canada is higher than the proportion of such persons in the Canadian labour force $\frac{3}{4}$. Thus, while the United States benefits from a "brain drain" out of Canada, Canada in turn benefits from a "brain drain" largely from Europe. It is difficult to assess the net result of these two processes, but there can be no doubt that Canada would gain on both counts if full employment could be maintained in this country: it would serve not only to step up immigration but also to retard emigration. The net effect would be not only a faster rate of labour force growth, but a large improvement in the proportion of skilled workers in the population.

The Decision to Work

The second major process in the growth of labour input is the willingness of the population to work. This includes both their decisions to participate in the labour force and the number of hours a year they are prepared to work.

Since 1921 between 53 per cent and 55 per cent of the population has been in the labour force. However, the constancy of this overall participation rate conceals a number of significant developments. As would be expected, the participation rate for males aged 20 to 64 years, the group forming the bulk of the labour force, has been very high and steady over time. It is in the other groups, the aged, the young, and the females that there have been significant changes.

The participation rates for both males and females over 65 years of age have declined. In the case of males the decline has been substantial and steady; for females it has been less marked. These movements have been the result of a sharp decline in the proportion of the labour force in agriculture that has traditionally provided employment for the aged, the extension of compulsory retirement, the growth of private and public pension plans, and forms of assistance to the elderly. It is possible that the tax

system has affected the willingness of the elderly to work by reducing their incentives when they are presumably already low. However, given the low income brackets of the majority of the aged, we believe that taxes have played a negligible role.

The participation rate for males under the age of 19 has declined. Although it has increased for females in this age group, it is still less than the rate for males. The overriding factor here has been the extension of school-leaving age. Males are staying in school longer; and while females are to some extent doing likewise, they are also finding that there are more opportunities for gainful employment. It is clear that it is school and not taxes that explains the overall reduction in labour force participation by the young.

The participation rate for females between the ages of 20 and 64 has also increased. There are many factors that can be adduced to account for the change. On the supply side, mechanization in the home has meant more spare time for housewives; the average size of families has decreased; more people are living in urban areas close to employment opportunities; increasing education has made women better suited to employment, and the decline of employment in agriculture has released females from an activity that used to absorb, although generally as unpaid family workers, substantial numbers of women. On the demand side, the growth of the service industries and the increased relative importance of non-production workers in manufacturing have opened opportunities for women that did not exist before.

If United States experience is an indication of what can be expected in Canada, these trends should continue. It is reasonable to expect that changes in the personal tax burden would have an effect upon the participation rate of females. When the personal tax burden is increased, the family can maintain its previous level of disposable income if the wife takes a job. On the other hand, an increase in taxes would mean that her earnings would be taxed more heavily. The evidence put before us suggests that there may be a

negative relationship between changes in personal tax rates and changes in female participation rates.

While there is, of course, a point where equity is violated by lower taxes on the incomes of working wives (we expressly mean wives and not all women), we have considered in our recommendations provisions that would remove some of the tax disincentives to working wives. We recommend a tax credit for working women with young children. Unfortunately, because it is impossible to tax the imputed family income of housewives, and because in equity we believe that a couple should pay higher taxes than two single individuals each having half the income of the couple, we have not been able to go as far as we would have liked on economic grounds to remove income tax barriers to the participation of married women in the labour force.

It is worth adding here that the participation rate of the foreign born is greater than that of the native born. This is a reflection of the fact that a larger proportion of immigrants are males in the working age groups than is the case of the population generally. Nevertheless, even age-sex specific participation rates are higher for immigrants than for native Canadians. This probably reflects a combination of stronger work motivations and greater income requirements for immigrants who wish to establish themselves in a new country.

Turning to the question of how many hours the labour force is prepared to work, we observe that over the years, Canada, along with all other industrial economies, has witnessed a substantial reduction in the work-week. The major sources of the downward trend are shifts from industries, such as agriculture, that have always required a much longer work-week, and a general decline within all industries. The latter development is complicated because it is not clear what proportion of the decline in hours has been due to the voluntary pursuit of more leisure by workers. On the contrary, leisure may

be imposed on them through a reduced demand for labour, either from technical change which substitutes capital for labour, or through periods of involuntary unemployment which similarly lead to a non-reversible reduction in the hours worked per man as a way of sharing the work. While it is likely that these developments are highly interdependent, the evidence suggests that periods of rising unemployment have been associated with rapid reductions in hours worked. In addition, it appears that these declines in hours are rarely fully reversed in periods of expansion. This would account for the observed decline in hours over a long period. The evidence did not indicate that taxes have had a significant effect on average hours worked.

It has been argued that this decline in hours has been partially offset by the increase in the amount of labour expended per hour. Even for wage and salary workers, who form the majority of the labour force and who work a given number of hours per week, there is room for variation in effort, depending on motivation and managerial ability. Studies of professional workers in the United States who have the opportunity to vary their effort indicate that their efforts have not been substantially reduced during the recent period of high taxation ^{4/}. This is due in part to the tax-free benefits of their occupations, together with a number of social pressures. It is dangerous, however, to infer from the behaviour of this unique group the effect of taxes on the labour effort of all wage and salary workers.

Although we have no evidence to support our contention, we are convinced that high marginal personal rates of tax do have a negative effect on labour, managerial and professional effort. In arriving at our recommendations we have therefore proposed rate schedules in which they are reduced.

TECHNICAL CHANGE

Technical change is defined to include changes in the quality of labour and capital, and changes in the inter-industry distribution of inputs and outputs.

The finding that technical change accounted for almost one half the growth of private non-farm output, and somewhat more for the total economy, agrees with a number of studies made in Canada, in the United States, and in other countries which indicate that the most important source of growth in a modern economy is this residual component. Our research staff sought to investigate this variable in greater detail to appraise some of its determinants and the effects of taxes on these determinants.

It is not possible to explain the whole of technical change for many of its determinants are unknown, while others, such as the importance of the scale of operation and the size of the market, are particularly difficult to measure. We shall concentrate on three components only: structural change, research and development, and improvements in the quality of the factors of production.

Structural Change:
Industrial and Regional Mix

The above analysis of the supply of labour has already revealed the importance of changes in industrial composition upon the observed trends in participation rates and upon the decline in average hours worked. Because these changes in the relative importance of industries, such as agriculture, are highly specific as to duration and direction, they cannot be seen as a long-run, continuing source of growth, as can the growth of the population, for example. Thus, our appraisal of the nation's growth possibilities must

take cognizance of the specific contribution of these shifts to avoid inclusion of what is really a transitory source of growth.

In this section we are concerned with the effects of changes in the relative importance of different industries and regions on growth; for when factors of production move from industries where their productivity is low to those where it is greater, average output per employee for the whole economy is increased. Similarly, if these factors migrate from regions where their productivity is low to regions where it is higher, once again average labour productivity will increase. An analysis made by our research staff attempted to measure the effects of both the inter-sectoral and inter-regional changes upon the growth rate in Canada.

It was found that about one tenth of the growth in GNP per man could be attributed to the movement of labour between the private non-farm sector and the agriculture and government sectors in the period 1926-63. These shifts had their major impact over the war years, when the estimates show that one fifth of the growth in output per man could be attributed to this process. It is also worth noting that in the two periods of prolonged unemployment, 1926-37 and 1956-63, this process was retarded so that the contribution to growth from the movement of labour among sectors was almost nil.

Changes in the relative growth of industries within the manufacturing sector were also examined. It was found that these changes had a very minor effect, reflecting the great similarity in the productivity of factors in different industries within the manufacturing sector. This similarity is probably the result of much greater mobility of factors within manufacturing, in contrast to the real barriers against the mobility of agricultural resources in the past.

While these changes in the relative importance of the different sectors of the economy explain a substantial part of technical advance in the

past, they are unlikely to have as great a role in the future. This is because the future movement from agriculture, which has been the most important source of this aspect of productivity advance in the past, cannot be substantial. The agricultural labour force has already been reduced to a relatively small proportion of the total labour force, and the differential in output per man between agriculture and other industries has also been reduced as a result of rapid productivity gains in Canadian agriculture.

Movements of factors between regions may also have an effect on productivity gains. These inter-industry and inter-regional effects are not necessarily independent, however, for it may be that workers changing industries are also changing their residences. This possibility was investigated and it was found that movements between industries within the major regions accounted for almost all the economy-wide inter-industry effects. Thus, the usual stress on the importance of factor mobility between the major regions of Canada as a source of growth in the past was not substantiated by our research staff.

However, if differences in earnings among regions can be taken as an indication of differences in labour productivity among regions, there are potential gains to be realized from inter-regional mobility of labour in Canada. It is to be expected that resistance to such mobility will continue so that the impact of inter-regional labour movements on the growth rate is not likely to be substantial except over the long run. One way of speeding up the process would be to subsidize the movement of resources among regions. This can be done in two ways: by shifting labour from low to high productivity regions, or by raising productivity in low productivity regions by shifting capital to those regions. The social costs of moving people are so high that the first alternative probably cannot be used exclusively; the cost of maximizing the nation's output may be the virtual depopulation of low productivity areas. On the other hand, if the return to capital is higher in high productivity areas (which is the presumption), policies that shift capital from high to low productivity areas will reduce

national growth. There is, however, the possibility that the presumption is false, and that the returns from relatively small additions to the capital stock in low productivity regions, if allocated strategically, would be very large because there could be great economies of scale or of agglomeration to be realized, or because the returns on capital invested in such things as roads, education and power could be very high. The answer is probably to proceed by encouraging both labour and capital mobility simultaneously. As we said in Chapter 3 these adjustments will be made more rapidly and with less social cost if the economy is fully employed. Fortunately, too, it is possible to have substantial population adjustments among regions without producing absolute reductions in the population of any region.

The tax structure has had little if any effect on the shift of labour from agriculture to industry. If anything, it probably delayed the shift because farmers have been generously treated under the Income Tax Act. The tax structure has not been neutral between industries and regions, but until recently there was no explicit attempt to use the tax system to alter the allocation of resources among either industries or regions. Whatever the intention, in our view the tax system probably has affected the allocation of resources among industries and regions to a significant extent. In order to make the discussion more concrete, the following two important provisions are considered briefly here:

1. The incentives to the oil and mining industries provided by the depletion allowances and the three-year exemption for new mines.
2. The exemption of services from federal (and provincial) sales taxes.

The incentives to the two resource industries can be presumed to have increased investment in these industries relative to what it otherwise would have been. Because both industries are highly specific geographically, there

is a presumption that the income tax system shifted factors of production to the regions where the basic resources were located. The exemption of services from sales taxes presumably increased the growth of the service industries relative to other industries; because the industry is not geographically specific, the exemption has probably not had any effect on regional allocation.

The effects of these and similar features of the tax system on the output of the economy depends essentially upon the answers to four questions:

1. Did the tax system change the allocation of resources to the industry relative to a neutral tax system?
2. If so, in what direction and to what extent?
3. Would the market have efficiently allocated resources among industries and regions had the tax system been reasonably neutral?
4. If not, did the tax system compensate for the market imperfection or compound the imperfection?

If the market would have worked well in the absence of the special tax provision for an industry, and if that provision had an effect on the allocation of resources, the tax provision must have brought about a misallocation of resources. If the market would not have worked well, and if the provision had an effect that compounded rather than compensated for the imperfection, the provision must have brought about a misallocation of resources. Only if the tax provision had no effect, or had an effect that compensated for a market imperfection, can the provision be given a clean bill of health from an efficiency point of view. It may, of course, still be unacceptable from an equity point of view. On the other hand, changes that have undesirable economic effects may still be justified if the improvement in equity was thought to be overriding.

To be more specific, if all product and capital markets worked perfectly, and if there were no other interferences with the allocation of the market,

the Canadian tax treatment of oil, mining and service industries would distort the allocation of resources. This would come about because the tax treatment would induce more resources to flow to these industries relative to other industries. The value of the additional output in the favoured industries would be less than the value of the forgone output in other industries.

Unfortunately there is no method of determining in a completely objective, and hence incontrovertible, way how well product and factor markets work or the precise impact of particular features of the tax system on the allocation of resources. Even if we knew the marginal value productivities of each resource, that is, the value of the output produced by the last additional unit of the resource used in each industry (and we do not), these data would be difficult to interpret because of the possible imperfections in the market. For example, if those in command of some industries are able to control output and prices to some extent, the marginal value productivities of resources used in such industries is likely to be high relative to other industries that do not have the same degree of market control. But tax incentives are unlikely to increase the flow of resources into these industries, and thus bring the marginal value productivities of labour and capital in these industries into line with those in other industries. The tax incentives will only raise the profits of the firms in the industry or the return to those who supply the factors of production.

A large part of the service industry is characterized by a multitude of highly labour-intensive and competitive small firms. There is no reason to believe that the market discriminates against the service industry. The marginal value productivity of labour in this industry is relatively low. This leads us to the conclusion that the failure to tax services in the past has probably distorted the allocation of resources. We have no hesitation, therefore, in recommending that services should be taxed to remove the discrimination against goods.

The situation with respect to the oil and mining industries is more complicated. As we discuss in Chapter 23, the available evidence suggests to us that the market may, to a limited extent, discriminate against investment in the resource industries because of the risks involved in some aspects of those activities. Some tax incentives therefore seem justified; but we have concluded that the present incentives are too liberal in relation to the imperfection they are intended to offset and extremely inefficient. They bonus investments that would have taken place in the absence of the tax concessions. We are of the opinion that they induce too much investment in this sector relative to other sectors. Furthermore, the present incentives do nothing to meet the greatest risk of all, loss of the original capital put into a risky venture. We intend to meet this problem, to the extent that a tax system can legitimately do so, through our proposed treatment of losses. We shall therefore recommend that depletion allowances and the three-year exemption for new mines should be removed. However, we will also discuss a number of means of providing more efficient incentives to these industries where this is warranted.

In addition to section 71A and the accelerated depreciation provisions for investment in designated areas added to the Income Tax Act in 1963, 5/ the government introduced in 1965 the Area Development Incentives Act 6/. Under the latter Act the Minister of Industry is empowered to make subsidies to firms establishing new facilities or expanding existing facilities in designated areas. The subsidies are established by a formula based on the approved capital cost of the facility 7/. A subsidy under this Act is not taxable to the firm.

We commend this change from tax concessions to subsidies. We believe that investment credits (subsidies) are at least as efficient as accelerated depreciation and, per dollar of revenue forgone, more efficient than the three-year exemption of income for new businesses. The fact that the costs of the subsidy can be readily determined is also a desirable feature, for it encourages the comparison of costs and benefits. Because the present tax incentives allow a business to postpone the deduction of any capital cost

allowances until after the three-year exempt period has expired, they provide a much larger concession than is immediately apparent. It is not possible to say how great the resulting tax concession may be. We do not think this feature of the present measure is desirable 8/.

We do not feel that we can take a position on the probable effectiveness of the area development incentives. We believe, as we have already said, that there may be grounds for subsidizing the movement of capital to depressed areas. We are doubtful whether subsidies that do not take into account the specific needs of specific areas will lead to an efficient allocation of capital among the areas; but we are aware of the other efforts that are being made to provide funds for depressed areas through provincial and federal regional development bodies. To the extent that the latter can help to develop both the infrastructure of these depressed areas, through better education, roads and cheaper power, and geographic focal points for development that can help to realize economies of scale, the unselective character of the area development incentives may be compensated for to some extent. We are also aware that highly selective subsidies involve a risk of serious error, unless those who allocate the funds are extremely knowledgeable. The state of knowledge about regional development is still so fragmentary that heavy reliance on government planning for industrial development within regions is perhaps premature. Selective subsidies to industry also have the disadvantage, at least to many people, that they require a high degree of government intervention in business decision making. We strongly recommend that a full-scale research programme on the problems of regional economic development be undertaken with all speed. The problem is of great importance and complexity. Every effort should be made at an early date to assess the effectiveness of the new programmes.

Although we cannot be certain how effective the area development incentives will prove to be, we are reasonably certain that they will be more efficient than the present tax incentives. Because the former will be more useful, and because our recommendation for accelerated capital cost allowances for new

businesses, regardless of location, should assist in meeting the financing problems of such businesses, there seems no reason to keep the depressed area tax incentives; we believe they would be redundant. It is our recommendation that they be removed from the Act, but, of course, not in such a manner as to remove the incentive to those businesses now availing themselves of the provisions.

Research and Development

Recent findings on the importance of technical change for economic growth have brought about increasing enthusiasm for research and development. This enthusiasm is reflected in the spate of speeches and articles on the subject and in the introduction of new government programmes to encourage research. The federal government now has four subsidy-type programmes and a tax incentive designed to encourage research by business. The four expenditure programmes are: the Industrial Research Assistance Program administered by the National Research Council; the Defence Industrial Research Program administered by the Defence Research Board; and the Defence Development Assistance Program and the Program for the Advancement of Industrial Technology, both administered by the Department of Industry. The National Research Council programme, and the Program for the Advancement of Industrial Technology which was enacted in June 1965, are the most important. The former pays the cost of personnel engaged in scientific research; the latter pays 50 per cent of the non-capital costs of the development of products or processes that involve new applications of existing technology or the development of new technology with industrial applications. The emphasis in the National Research Council programme is on research, apparently without much regard to its commercial application; the Department of Industry programme is concerned only with research that has direct commercial applications.

The combined effect of sections 72 and 72A of the Income Tax Act is to grant not only an immediate write-off of current and capital expenditures but also an extra deduction from income of 50 per cent of the increase in

these expenditures over those in the year ended prior to April 11, 1962. Scientific research includes expenses incurred in the development of a prototype.

In the 1965 Budget the Minister announced his intention to modify the present incentive when it expires in 1966. These proposed modifications include: (a) a cash grant or credit against tax liabilities of 25 per cent of research expenditures that will provide an equal incentive to all businesses regardless of their tax position; (b) application of the incentive to all capital expenditures and to current research expenditures in excess of the preceding three-year average; (c) administration by the Department of Industry; and (d) review by that Department of expenditures of over \$50,000 a year to ensure that the expenditures would be likely to benefit Canada.

The new system proposed by the Minister would remedy many of the defects in the existing provisions. The suggested use of grants rather than tax concessions is to be commended; the extension of the base period from one to three years would make the scheme less capricious; the allowance of all capital expenditures seems sensible (presumably capital expenditures are additions) the insistence that the Department of Industry approve large expenditures will ensure that the Department responsible for justifying the expenditures to Parliament will also be responsible for approving them. The basic question in our minds is whether or not this scheme is necessary at all given the National Research Council programme and the Program for the Advancement of Industrial Technology.

What is urgently needed is an appraisal of the returns that are likely to result from different kinds of research and development expenditures. We recognize that this appraisal will be exceedingly difficult to make because, by their very nature, the returns to research are most uncertain. The indirect returns may well exceed the direct returns. Nevertheless, unless some view is taken of the returns to "basic" research versus "development" research, and of research undertaken by institutions relative to private industrial

research, there can be substantial waste and confusion. The establishment of a Secretariat within the Privy Council Office to co-ordinate federal research programmes is obviously a move in the right direction, although it will also be necessary to undertake research on research if the co-ordination is to accomplish more than consistency. Consistent error is no improvement over confusion.

There is no doubt that Canadian expenditures on research and development as a percentage of GNP are substantially below those in most developed countries, and far below those in the United States. Part of the latter disparity is accounted for by the mammoth defence research expenditures in the United States. But many of these defence expenditures have an industrial pay-off. Even if we ignore them, Canadian research expenditures are relatively low.

One of the main reasons for the low proportion of research and development expenditures to GNP in Canada is that many large Canadian corporations are subsidiaries of United States corporations. Canadian subsidiaries obtain the results of the research work of their parents at a relatively low cost or at no cost, although the profits of the subsidiaries will of course be larger if the foreign research is successfully applied in Canada.

It would be a great mistake, we believe, to do anything that would jeopardize this flow of information across the border. Canada has in the past gained, and can continue to gain, a great deal from it. The present tax treatment that allows Canadian businesses to deduct the expenses (other than capital) for research conducted outside Canada is eminently sensible. One problem may arise from our dependence on foreign research, however. It is possible that borrowed United States technology carries with it products and techniques that are not well suited to Canada's markets. This is a question that deserves consideration. Obviously it will be very difficult to assess, but Canada also needs to know whether research conducted here is best for Canada's markets. Even if large foreign companies could be persuaded to conduct a greater part of their research in Canada, it does not necessarily

follow that the research done would be any different from what would be done abroad, if the instructions still come from the foreign company.

This brings us to what we think is the heart of the matter. As was the case with respect to regional development incentives, we doubt whether broad incentives that apply without qualification to something as vague as "research and development" can be effective. Per dollar of revenue forgone or cost incurred, we have little doubt that the National Research Council programme and the new Program for the Advancement of Industrial Technology are a great deal more efficient than general tax incentives. Under the former, the qualifications and work of those engaged in research are under review by persons knowledgeable in the field. Under the latter, applicants for grants have to satisfy the Department of Industry that the projects would constitute a substantial advance having commercial potential, and would not merely be a minor variation of an old theme. Because it is a requirement of the Program for the Advancement of Industrial Technology that successful developments must be exploited in Canada, there is at least some possibility that Canadian market and production conditions will be taken into account. We recommend that consideration should be given to placing more reliance on the National Research Council programme and the Program for the Advancement of Industrial Technology, and to dropping both the tax concession in section 72A of the Income Tax Act for research and development and the proposed general grant programme for research and development announced in the 1965 Budget, unless a careful evaluation of the effectiveness of these general forms of encouragement suggests that they would be relatively more efficient. However, one aspect of the current tax encouragement should be retained as part of an overall, more generous approach to capital expenditures. We recommend that expenditures on research and product development, even if they are of a long-term or capital nature, should be explicitly permitted as a current deduction in determining income.

Some have argued recently that the grant programmes for research are less desirable than tax concessions because they involve a degree of government

control and, to use the words of the critics, "interference". We find this point of view unconvincing. The research grants are available under known conditions for those who want them; those who do not want the "interference" need not apply. The lack of "interference" under a tax concession is simply a reflection of the fact that the rules of eligibility are so wide, and the problems of proving that a taxpayer does not fall within its terms so difficult, that the taxpayer does not have to change his normal behaviour substantially to benefit from the concession. Section 72A of the Income Tax Act has received much support from taxpayers, research and business organizations. It probably has stimulated research expenditures that otherwise would not have occurred. However, we think that the tax revenues forgone may have been disproportionate to the benefits received.

Improved Quality of the Factors of Production

The increased supplies of labour and capital, which were estimated by our research staff to account for over one half the growth rate of private non-farm output, were assumed to be of homogeneous quality over the entire period. It is likely that this assumption is not valid and that the estimates consequently understate the contributions of these factors. The argument that new capital embodies ever-improved quality appears to be eminently reasonable. However, probably because of the inadequacies of the data, this hypothesis has not been substantiated for Canada, although it is reasonable to assume that increases in the constant dollar value of the capital stock understate the real additions to productive capacity.

There are two basic sources of change in the quality of the labour force: changes in its age and sex composition, and changes in the ability of workers as a result of education and on-the-job training. The first source is well known, and many analyses of economic growth take this factor into account by standardizing the labour supply for differentials in age and sex. In Canada there has been a very slight decline in the overall quality of labour force as a result of changes in its age and sex composition.

An attempt was made by our research staff to follow several of the fascinating beginnings that have been made in measuring the impact of changes in the skill of those in the labour force. The one aspect of skill that it has proved feasible to measure is formal education. In contrast to the findings in the United States, the research suggests that in Canada formal education has improved labour's quality only by a very small amount over the past four decades ^{9/}. The disparity between the findings in the two countries is largely explained by the very significant lag in Canada in educating large numbers of its population. Because this lag has only recently been reduced, the impact will no doubt be felt in future decades and will give an added boost to Canada's potential growth rate. Our recommendations have sought to provide a measure of encouragement to the post-secondary education of Canadians to assist in this quality improvement. An evaluation of the role played by other forms of investment in "human capital", such as on-the-job training and health improvements, was not possible, either because of conceptual difficulties or because the data required are not yet available in Canada.

CAPITAL FORMATION

The Rate of Investment

Determining the factors that influence capital formation has been the object of a number of statistical investigations carried out by our research staff.

Two salient findings emerged from this work:

1. Capital requirements, as measured by the relationship of actual to potential output, are key determinants of the level of fixed investment.
2. Gross business saving, defined as the sum of depreciation allowances and retained earnings, has a statistically significant and quantitatively important impact upon fixed investment.

These findings indicate that fiscal policy can influence the level of investment, and hence the rate of growth of potential GNP. Fiscal policy is a major tool available for influencing aggregate demand and will affect investment in two ways: avoidance of excess capacity will provide a direct stimulus to private investment; increased levels of utilization tend to raise business income and hence gross business saving, providing a further stimulus to investment. The maintenance of full employment will therefore yield additional benefits through a more rapid rate of capital formation.

As was demonstrated in the first part of this chapter, the retardation of capital formation caused by the Great Depression and World War II held the annual average growth rate of long-run potential GNP over the 1926-63 period down by about 0.3 percentage points, despite the high rates of capital formation during the postwar years. Milder depressions will, of course, not retard capital formation to the same extent; but, as shown later in this chapter, their effect upon capital formation and growth can be quite substantial. Over the next six years the private non-farm capital stock is expected to grow at a rate of about 5 per cent a year, if there is no gap between actual and potential output. If actual output falls short of potential output by 5 per cent, this capital stock will grow at a rate of about 4 per cent a year.

Once a full-employment path is achieved, further increases in the rate of growth may be obtained by increasing the rate of growth of capital, labour input, or productivity.

The significance of our second statistical finding is now apparent. If capital formation depended solely upon capital requirements, tax structure policy, as distinct from stabilization policy, could not affect the rate of investment and hence the rate of growth. However, because investment is partly determined by gross business saving, changes in the tax structure which change the level of gross business saving at a given level of output will probably affect the level of investment, on the assumption that tax-induced changes in corporate retentions have the same effect as other changes.

The two major statutory provisions within the present tax structure that have a substantial impact upon the level of after-tax corporate income are the schedule of corporate income tax rates and the allowable capital consumption rates. For changes in these tax variables to affect the level of gross business saving at full employment, two conditions must hold:

1. The corporate income tax rate change must not be fully shifted to consumers and wage earners.
2. Changes in after-tax corporate income resulting from the tax rate change must not be offset by changes in dividend payments.

The evidence we have examined suggests that both these conditions hold in Canada.

Shifting. A detailed study was made by our research staff of the behaviour of individual industries in response to the tax increases that occurred in the early 1950's. It was found that firms with market power, that is, those possessing the ability to shift corporate income taxes through price increases, shifted changes in these taxes only partially. When the fact that firms without market power probably cannot shift the tax at all is taken into account, these detailed results indicate that, on the average, manufacturing firms probably shifted about one third of the tax within two to five years 10/. This finding was confirmed by a more aggregative analysis of the shares of GNP going to labour and capital for the postwar period as a whole.

One important limitation of this evidence should be mentioned, however. Over the period studied, effective corporate tax rates in Canada and the United States moved closely together. Indeed, aside from the gradual and modest reduction in the United States effective corporate tax rates in recent years, the two rates have moved in unison virtually from the beginning. This means that an examination of the shifting of corporate taxes in Canada almost certainly overstates the degree to which independent changes in Canadian corporate taxes would be shifted, for a greater portion of corporate

income tax changes would be shifted when the effective rates moved together. Without an instance of Canadian corporate tax rates changing substantially and independently of changes in the United States rates, we can only rely on assumptions and logical deductions from those assumptions to guide us.

Theoretical considerations suggest that, in the case of an independent Canadian corporate tax rate change, little shifting would occur in the following types of industries:

1. Industries producing for export where the Canadian share of world exports is not dominant.
2. Industries facing extensive import competition from either identical or close substitute products from abroad.
3. Protected industries dominated by a few large corporations operating in Canada, where the Canadian price is set just below the port-of-entry import price plus tariff.

Theoretical considerations suggest that extensive shifting is likely to occur in the following industries:

1. Regulated industries where the regulatory standard is the maintenance of some "normal" rate of return on capital.
2. Protected industries dominated by a few large corporations operating in Canada, where the price is set substantially below the port-of-entry price plus tariff, and where the main long-run constraint on the pricing behaviour of the existing major firms is the threat of entry of new firms into the Canadian market by:
 - a) foreign corporations establishing new subsidiaries or branches in Canada; or
 - b) the establishment of new Canadian-owned and -controlled corporations.

Although we have no proof, we believe the "little shifting" group of industries predominate in the Canadian economy. Therefore, an independent change in Canadian corporate income taxes is not likely to be shifted even by as much as the evidence with respect to the corporate income tax rate changes in Canada and the United States during the early 1950's would suggest.

Under the system we propose of fully integrating personal and corporate income taxes for resident shareholders, by giving them full credit against their personal income tax liabilities for the corporate tax paid with respect to corporate income allocated to them, there would be a reduction in taxes on corporate source income for most Canadian shareholders. However, because the credit would be confined to resident shareholders, there would be no change in the tax position of the wholly owned subsidiaries operating in Canada. Therefore, those industries that would be expected to shift a tax reduction through lower prices because of fear of the entry of new subsidiaries of foreign corporations would not be under pressure to do so. Establishing a new wholly owned subsidiary in Canada would be neither more nor less attractive than it was prior to the tax change. Only where there was a fear of entry from new domestically owned firms or of the dramatic expansion of existing firms would there likely be much shifting of the tax reduction. While our tax reforms would stimulate the entry of new Canadian firms and the growth of existing Canadian firms in the sectors of the economy where this kind of competition is important, we have come to the conclusion that relatively little reverse shifting would occur as the result of our integration proposal.

Dividend Behaviour. There is substantial evidence that dividend behaviour is remarkably stable in the United States. Total dividends depend upon current corporate income after tax, and upon the level of dividends in preceding years 11/. Changes in corporate income tax rates do not appear to influence this relationship.

In Canada, the less marked stability of aggregate dividend behaviour reflects the much greater importance in this country of dividends paid to

non-residents. A large portion of these dividends are transfers from subsidiary to parent companies; nevertheless, dividends were found to depend primarily upon corporate income after tax and the previous level of dividends. Neither changes in the corporate tax rate nor changes in the marginal personal tax rate applicable to dividends appear to influence this relationship.

While we are not satisfied that this simple relationship is an adequate explanation of dividend behaviour, the evidence supports the contention that the changes in corporate and personal income tax rates that have occurred did not affect the proportion of after-tax profits paid out. Whether more drastic changes in tax rates would affect the pay-out ratio is uncertain because we have had no experience to fall back on.

With respect to the influence of changes in capital cost allowance rates on dividend pay-outs, the empirical evidence suggests that these changes may have a slightly larger impact upon retention than tax rate changes that have the same impact on taxes paid. This perhaps results because most firms treat accelerated capital cost allowances as a tax deferral which they are reluctant to pay out currently; but the effect of accelerated capital cost allowances on the expected rate of return may also play a role.

To sum up, the evidence on dividend behaviour indicates that changes in corporate and personal income tax rates have not affected the proportion of after-tax profits paid out. This means that taxation has affected dividend payments only through its effect upon after-tax profits, and, in so far as after-tax profits are affected, dividends have borne a proportionate share of the tax burden. Therefore, changes in capital cost allowance provisions will probably have a larger impact upon gross business saving than changes in tax rates, that is, a tax reduction through liberalizing capital cost allowances will tend to increase gross business saving more than a tax rate reduction of equivalent value.

Under our proposal for integration of corporate and personal income tax, resident shareholders would receive full credit for corporate taxes on all

corporate income allocated to them whether the allocations took the form of cash dividends, stock dividends, or other capitalization of surplus. Because we suggest a top personal income tax rate of 50 per cent and a flat corporate income tax rate of 50 per cent, most shareholders will receive a credit for or a rebate of corporate income taxes with respect to corporate income allocated to them. This means that the corporation would be able to reduce its cash distribution without reducing the cash flow to shareholders, for the tax credit or rebate would augment the lower cash dividend. It is our expectation that this change in the tax system would, on balance, increase gross business saving, although as we discuss subsequently there would be no tax advantages to be gained from corporate retentions.

The Rate of Return and the Cost of Capital. Economic theory would suggest that increases in the marginal rate of return will stimulate investment, whereas increases in the cost of capital, which is often associated with reduced availability of funds, should reduce it. Unfortunately, it is difficult to obtain quantitative estimates of the significance of these effects. The expected marginal rate of return is difficult to measure, and the average realized rate of return is probably an inadequate substitute for it. Even if measures of the expected rate of return were available, it would be extremely difficult to assess the impact upon it of tax changes in the past. Drawing inferences about the impact of future tax changes upon the expected rate of return is hazardous. Nevertheless, we accept the view that tax changes that increase the expected after-tax rate of return on investments will increase the demand for new securities and reduce the cost of funds, thereby stimulating the rate of investment in fixed capital.

Serious statistical problems impede the econometric investigation of the effects of the rate of interest and other monetary variables upon investment 12/. The inability of our research staff and that of the Royal Commission on Banking and Finance to detect a significant and stable impact does not necessarily mean that the monetary variables in fact have little influence. The Royal Commission on Banking and Finance also conducted an

intensive interview and questionnaire study of the effect of interest rates upon business investment. The study found that the high interest rates of 1959 and early 1960 had little influence upon investment 13/.

In view of the ambiguity of the econometric results, both here and abroad, and in the light of the negative findings of their intensive survey, we concur with the findings of the Royal Commission on Banking and Finance that the short-run impact of monetary policy on fixed investment is probably weak. However, for growth policy, the important issue is whether the long-run effect of monetary policy on investment is significant. In the absence of reliable empirical evidence on this question, we must give weight to a priori reasoning which suggests that these effects are of some importance.

We therefore conclude that measures which have one or more of the following effects will stimulate the propensity to invest:

1. A rise in the utilization rate, that is, the ratio of actual to potential GNP.
2. An increase in the level of gross business saving (depreciation plus retained earnings).
3. A reduction in the cost, or an increase in the availability, of funds.
4. A rise in the expected after-tax rate of return on new investment.

So far we have considered only the propensity to invest. In an under-employed economy, it is the propensity to invest that will usually determine the rate of capital formation. If the economy is at full employment, however, stimulating investment without stimulating domestic saving must either create inflationary pressures or lead to an increased use of foreign saving.

The Rate of Saving

There are a variety of fiscal means available for increasing the rate of domestic saving. The most important and perhaps the most effective way

is for the government to achieve a surplus of revenues over expenditures. Positive net saving by the government will permit an excess of total investment over private saving without creating inflationary pressures. Such a policy has the virtue that it can generate a large increase in domestic saving, if that is required, and that the increase can be achieved without harmful side effects upon the goals of horizontal and vertical equity.

Some policy recommendations that have achieved currency do not share this virtue. We refer in particular to proposals to change the tax mix by increasing the burden of sales and excise taxes and reducing the burden of income taxes, and to proposals to reduce or eliminate progression in the personal income tax rates. The adoption of such measures would increase the tax burden upon those with low incomes and hence would conflict with the goal of vertical equity.

The increase in personal saving that would result from a reduction in the progressiveness of the income tax would likely be quite moderate. If those with incomes over \$8,000 save 25 per cent of their after-tax income, and the remaining taxpayers save 5 per cent of their after-tax income, the elimination of any progressiveness in the rates on taxable income, while preserving the same total personal tax burden, would yield an annual increase in personal saving of about \$40 million 14/. This would involve shifting some \$350 million of tax burden from the upper income to the low and middle income groups. Because the same amount of aggregate domestic saving could be achieved by an across-the-board tax increase of \$80 to \$90 million, we conclude that reducing progression is an inefficient means of stimulating saving.

Changing the tax mix by increasing sales taxes and by an across-the-board reduction in personal income taxes may affect personal saving in two ways. First, such a change would reduce the overall progressiveness of the tax system. However, the above illustration leads us to doubt whether such a reduction in progressiveness would increase saving significantly. Second,

because sales taxes fall on consumption today, and on saving only some time in the future (when the assets are liquidated and spent), a switch to sales taxes reduces the tax burden on the saved portion of current income 15/. Presumably, if the effect of the greater emphasis on sales taxes were important, a combination of increased sales taxes, reduced average personal income tax burden, and increased progression of the personal income tax rate structure to maintain the overall progressiveness of the system might be a package that would stimulate saving without reducing progressiveness. However, the stimulus to saving so provided would not be great. Moving from personal income taxes to sales taxes is equivalent, from the standpoint of the typical saver, to a rise in the rate of interest earned on his saving. Because the available evidence suggests that personal saving is quite unresponsive to changes in interest rates, it follows that the rate of saving is unlikely to respond dramatically to changes in the tax mix.

If a substantial reduction of the tax burden on saving were desired, it could be achieved most effectively by allowing taxpayers to deduct from their income for tax purposes some or all of their saving; the revenue could be maintained through higher taxes on income. Under the present system taxpayers may deduct certain contributions to pension plans and registered retirement savings plans in determining their taxable incomes. We will propose a system that deals with all contractual saving in a roughly similar manner. By raising or lowering the limits to the allowable deductions for registered retirement saving, and giving more or less generous tax treatment to the current earnings on the assets acquired, it might be possible to change the level of private saving. However, the extent to which increases in contractual saving would be offset by reductions in other forms of saving is uncertain.

We should also point out that the above comparison referred to a change in emphasis from taxes on income to taxes on consumer expenditure. If a sales tax falls on capital goods as well, as is now the case with respect to the manufacturer's sales tax, the change will reduce rather than stimulate real saving. The removal of the sales tax from capital goods, which is

desirable on grounds of allocative efficiency, would also be a desirable change in the tax mix from the growth standpoint because the capital goods purchasing power of each dollar saved would be increased. If the revenue now raised by the sales tax on capital goods were raised instead through the personal income tax, vertical equity as well as saving and investment would be enhanced because, in the long run, a significant share of the burden of the sales tax on capital goods, like that of all sales taxes, is likely to be shifted forward to consumers.

These findings that changes in the tax mix within a given overall tax yield would do little to stimulate personal saving are neither surprising nor disheartening. Personal saving accounts for only a small share of total saving, being overwhelmed by gross business saving. In addition, a large portion of personal saving finances increases in residential housing rather than increases in business fixed capital. Year-to-year changes in personal saving are even less important. In contrast to business, foreign, and government saving, which fluctuate greatly from year to year, personal saving is remarkably stable. Despite the large changes in both the tax burden and the relative importance of different taxes, personal saving today bears about the same relationship to personal disposable income as it did in the 1920's.

The remarkable stability of the relationship between personal saving and disposable income, together with the stability of the relationship between dividends and net profits, suggest that reductions in the effective corporate income tax rate, offset by increases in either personal income taxes or indirect taxes, could be used to increase private saving. We have already stated that the available evidence does not suggest that changes in corporate income tax rates are fully shifted. Therefore, a reduction in Canadian corporate income tax rates would probably lead to increases in after-tax corporate income. Because corporations save (retain) about one half of their after-tax income, while individuals save only 5 per cent to 10 per cent on average, about one half of a corporate income tax cut would be saved, but an equivalent increase in personal income taxes would reduce personal saving by only about 10 per cent

of the additional tax. Such an increase in saving could be achieved without reducing vertical equity if the offsetting increase in the personal income tax were concentrated in the higher income groups. For while this group saves more than 10 per cent of its after-tax income, it is unlikely to save as much as corporations. The existence of a differential rate of saving between corporations and upper income individuals means that an increase in saving could be achieved by moving taxes from corporations to upper income individuals.

Our proposal for integrating personal and corporate taxes would, however, achieve an increase in saving without some of the unfortunate side effects of the switch from corporate to personal income taxes we have just discussed.

Under our proposal, reductions in corporate income tax rates relative to personal income tax rates would not change the rate of return on dividends paid to resident shareholders and, to the extent that foreign shareholders obtained credit for Canadian corporate taxes, would not affect the rate of return to non-residents either. While Canadian corporate tax reductions would increase the cash flow of corporations, it would also transfer funds from the Canadian treasury to foreign treasuries and make it possible for high income shareholders to postpone payment of portions of their personal income taxes if they do not realize their share gains (assuming that share gains are not taxed on an accrual basis). However, if corporate income were not allocated, in an attempt to postpone personal income tax, share prices would presumably rise with the increase in unallocated corporate income; shareholders who realized gains on shares would be taxed at full personal rates on such gains even though the retained corporate income had borne a substantial tax at the corporate level.

As we have said in the previous chapter, there are, however, two methods that can be used to increase corporate saving without reducing the corporate income tax rate: investment credits and accelerated capital cost allowances.

Investment credits involve providing the corporation with a tax reduction equal to a percentage of its capital expenditures during a specified period in excess of a prescribed capital expenditure base. In effect, if the corporation increased its capital expenditures, it would be given credit for having paid taxes that it had not paid. This would reduce the net tax liabilities of the corporation and, under our integration proposal, would put greater tax rebates or credits in the hands of resident shareholders when earnings were allocated to them. Investment credits would improve the cash position of corporations, increase the rate of return on capital-intensive projects, and directly increase rates of return to resident shareholders.

With accelerated capital cost allowances, the corporation receives the equivalent of an interest-free loan from the government because corporate income tax is postponed. Because the corporate income tax is postponed and not forgiven, as in the case of a credit, this procedure is less expensive to the revenue. Accelerated capital cost allowances also improve the cash flow of the corporation, increase the rate of return on capital-intensive investment projects, and increase the rate of return to resident shareholders through the reduction in the cost of capital to the corporation. Later in this chapter and in Chapter 22 the overall impact of the capital cost allowance system is discussed further; but it should be emphasized here that the use of rates of capital cost allowance in excess of rates based upon a corporation's estimate of an asset's useful life has greatly increased corporate cash flows, and therefore has been a stimulus to capital expenditure. Thus, a general increase in such rates would provide a strong additional incentive to corporate saving.

The Allocation of Saving

In addition to stimulating the aggregate amount of saving and investment, measures may be taken to improve the efficiency with which available saving is allocated to alternative investment uses. The most efficient allocation of saving is achieved when the expected marginal social rate of return is equal in each alternative investment use 16/.

There are reasons why the most efficient allocation of resources would not be achieved even in the absence of taxation or with a completely neutral tax system. First, the expected social rate of return may differ from the rate of return that can be attained by private investors. This will be particularly important for those capital expenditures that are related to the development of new technology. New techniques often have application outside the area of their original development and it is unlikely that the developer can succeed in realizing all the benefits that result from his innovation without restricting the use of the new technology, which would be undesirable. In addition, certain large, lumpy capital expenditures influence significantly the profitability of related industries and activities. The private investor cannot be expected to take these yields into account in making his decision. Second, expected private rates of return will not be equated at the margin because private investors probably prefer safe to risky ventures, and attach liquidity premiums to readily marketable assets. In addition, access to the capital markets is more readily achieved by the large and the established firms than by the small and the new. Risky ventures tend to be further discriminated against because most institutional lenders have an aversion to financing them. Third, the present tax system itself has a number of features which tend to distort the allocation of saving. The more important of these are discussed in the following pages.

Treatment of Losses. The present tax system severely restricts the deduction of losses from other income. Because capital gains are not taxed, capital losses are not deductible. Business losses cannot be transferred except under very special circumstances, and they cannot be used to offset other income except in the year in which they occur. They can be carried back only one year and forward for five years against business income. The limitations on the deductibility of losses increase the after-tax return that would have to be expected on a risky venture before it becomes comparable to the after-tax return expected on a venture with low risk. This harmful feature reinforces the discrimination against risky ventures that would occur in any case.

We have concluded that this bias created by restrictions on the deductibility of business losses under the present system should be removed. Also, we have framed our recommendations so as to avoid creating a bias through taxing capital gains without adequate provision for capital losses. To this end we recommend later that capital losses should be fully deductible against other income in any year with but very few restrictions. We also recommend later that the carry-back and carry-forward periods for business losses should be extended and that business losses should be deductible from other income in any year. However, we have not gone so far as to recommend refunds of tax with respect to losses, or the unlimited transferability of business losses.

Risky Ventures. At least with the present state of knowledge, economic markets are a more efficient means of allocating resources than direct governmental planning and direction. This is not to say that there is no need for government intervention to achieve socially desirable ends, or that there is no need for government regulation to impose some constraints on the freedom of action of individual entrepreneurs, for such is of course one of the purposes of government. But the aims of government can for the most part be achieved most efficiently by subsidies, specific expenditure programmes, and other types of direct action. Where possible they should be achieved in this fashion rather than indirectly and inefficiently through manipulation of the tax system.

The incorporation of special incentives into the tax system consequently requires justification. We believe that there are several considerations which justify the inclusion of special tax incentives to encourage investment in risky ventures. First, the capital markets are by no means "perfect" in the efficiency of their allocation of resources to highly risky ventures, particularly because such ventures are generally new, small enterprises. Second, while there is need for direct governmental action in assisting new firms to obtain financing, we have concluded that incentives built into the tax system can provide an efficient means both of making risky investments more profitable and of reducing their need for external funds.

Our general approach is in favour of a treatment which is not an exemption from tax but rather a postponement of the payment of taxes ordinarily due, the postponement being realized by permitting immediate full write-off of the cost of depreciable assets acquired. The postponement is in effect an interest-free loan repayable to the government out of income subsequently earned. It therefore does not reduce the long-term tax liability, but it does decrease the amount of funds required to finance the investment and, in so doing, increases the investment's profitability. We believe that this is the approach that is most consistent with equity and with the nature of the risks that deserve to be recognized in a tax system.

One of the principal problems is that it is often difficult to diversify investments in risky ventures although such diversification would reduce the element of risk. Most investors will invest in highly speculative ventures only after substantial evaluation of the investment opportunity. The need for such evaluation puts significant constraints on the number of ventures that most investors can feasibly contemplate. The resultant limitations on the ability of investors to diversify their investments in high risk ventures apply, to some extent, even to large firms with sizeable analytic staffs, for such firms are limited as to the number of different areas in which their knowledge and resources permit them to invest.

Moreover, even for an investor who is sufficiently knowledgeable about the nature of a firm and its market to be able to evaluate the firm as an investment, it is often difficult to find many such firms in which he can invest. The greater the extent to which a firm is investing in a new (and hence risky) venture, the fewer the number of potential investors in a position to evaluate whether the firm is likely to succeed. As a consequence, a given investment is less risky to the firm, or to the investor in the firm, when it is undertaken by a large firm than when undertaken by a small one. This results not because the project is itself any less risky, but merely because the small firm's investments usually cannot be greatly diversified either by the company or by the public investor through buying shares in other small firms.

Thus, there is a good case for the proposition that the capital market does not provide a very efficient means of allocating capital to new firms introducing risky innovations. The increased risk resulting from the difficulty of diversifying risky investments results in a substantially higher cost of funds for new firms than for established, diversified firms investing in similar projects.

The higher cost of capital (and decreased availability of funds) is increased still further for small firms by the effect of the relatively fixed cost of evaluating investments. The costs of analyzing a firm are relatively stable, whereas the return to be gained by a financial intermediary from finding investors for a firm will inevitably vary with the size of the firm. It is worth while for an agent working on a commission basis to invest resources in analyzing and marketing the securities of a firm seeking a large volume of funds. For a small firm, it will be more difficult to find investors because of the firm's riskiness, and more difficult to analyze the firm because of its inevitably more specialized nature. For many small firms it is consequently difficult to obtain needed funds.

The Dual Corporate Tax Rate. We have already cited our finding that in the short run about two thirds of corporate income tax changes are not quickly passed on in the form of higher prices even when Canadian and United States corporate income tax changes are made simultaneously. Independent Canadian changes would probably be shifted to an even lesser degree. This means that shareholders, and perhaps owners of capital generally, in the short run bear most of the effects of tax changes through lower or higher after-tax profits. In the long run, the rate of return to capital is presumably restored by a change in the rate of capital formation, with the change in the rate of increase in output for the economy as a whole that this entails. By integrating the corporate and personal income tax this disincentive to capital formation would be reduced. The full taxation of share gains would tend to work in the opposite direction.

Another problem that exists under the present system is the discriminatory treatment of income earned through the corporate form compared with other forms of organization, and the discrimination between corporations with large and small profits. These differences in tax treatment mean that projects with the same expected before-tax rate of return have different expected after-tax rates of return depending on the organization which undertakes the project. This leads to an inefficient allocation of resources, for all kinds of projects cannot be undertaken by all forms of organization.

The lower rate of corporate income tax on income below \$35,000 is one of the features of the present system which contributes most to this result. The low income company is not necessarily a small company in terms of assets nor is it necessarily owned by low income shareholders. The lower corporate rate is therefore a most inefficient method of compensating for the riskiness of new, small businesses. The dual corporate rate can create gross inequities because high income shareholders can pay low rates of corporate tax and arrange that the company retain the earnings. These undistributed earnings have in the past frequently been realized by the shareholder by a variety of techniques that encountered little or no personal income tax. Because the integration plan we recommend later involves taxing corporate profits at the personal rates of resident shareholders, low income shareholders would not require the lower rate of corporate tax. Those with low personal rates would pay at those rates. Our recommendation that the new, small company be allowed rapid write-off of capital costs would compensate for the high cost and limited availability of capital.

Therefore, we recommend later that the dual rate of corporate tax be abolished in the interest of improving the allocation of resources and of increasing equity.

Capital Gains. The absence of a tax on capital gains has undoubtedly had the effect of encouraging an inefficient allocation of resources. Two ventures with the same expected before-tax rate of return will have very different

expected after-tax rates of return if one return is taxable and the other is not. Under the present system, so-called capital gains have been taxable if the recipient is "in the business" of making them, and not taxable when the gain was in some sense incidental or unintended, and the effect has been to raise the after-tax rates of return to amateurs and reduce them for the trader. It has made buying and selling financial assets more attractive than investing in assets that will produce goods and services, particularly when the income stream from the latter cannot be readily capitalized (as it cannot be for a closely held corporation without disposing of the corporation). It has also encouraged the retention of profits by corporations.

The effects are not, of course, all negative. In particular, by raising the rate of return on corporate stocks the exemption of capital gains has no doubt compensated to some extent for the extra heavy taxation of the corporate stream of income.

The taxation of capital gains can be considered only in the light of the treatment of capital and other losses, the integration of personal and corporate income taxes, the averaging provisions that we propose, and our proposed marginal rates of personal income tax. A more comprehensive discussion is provided later. However, we can conclude here that the exclusion of capital gains has the effect of distorting the allocation of saving. It has also created great uncertainty and placed a high premium on the form rather than the substance of transactions. For these reasons, and because the exclusion is grossly inequitable, we recommend in Chapter 15 the inclusion of these gains in income and the deduction of capital losses from income with further compensating charges in other features of the system that would, we are convinced, compensate for the negative effects on investment and saving of taxing capital gains.

Capital Cost Allowances. If it is reasonable to assume that in most cases the depreciation charged by businesses on their financial statements reflects management's best estimate of the "true" rate of depreciation, the present

capital cost allowance provisions are exceedingly generous in the earlier years of the life of the asset. Based on a survey of large corporations conducted by our research staff it is estimated that Canadian corporations had, in the eight-year period ending in 1962, deferred their taxable incomes by over \$2 billion, relative to their incomes as reported in their financial statements, as a result of the high capital cost allowance rates. The tax deferred on these incomes would therefore be about \$1 billion.

The ideal method, that is, one that is neutral with respect to investment in assets with different lives or expected rates of return, would allow the firm to deduct the reduction in the estimated market value of the asset that occurs during the year. Under this method "the amount written off the book value of the machine in each year is the difference between the capitalized value of all future quasi-rents at the beginning of the year and the capitalized value of all future quasi-rents at the end of the year" 17/. Needless to say, this method would be administratively impractical, because well-functioning markets do not exist for many types of used assets.

The preference of business firms for the straight-line method for their own internal planning is some indication that, among the feasible accounting methods available, this one is accepted as a more satisfactory approximation to the ideal than other alternatives.

The generosity of the present capital cost allowance system results from the following four features:

1. The diminishing balance method allowed for tax purposes permits an acceleration of write-offs relative to the straight-line method used by most companies.
2. The rates are probably generous.
3. Allowances are permitted for assets not in use.

4. Allowances do not have to be claimed, so that when there is no taxable income the taxpayer can defer the deduction. This makes incentives that exempt income much more generous than they appear to be: in effect the system extends the loss carry-forward period for capital-intensive businesses, and makes it possible to transfer business losses to other taxpayers in the form of unclaimed capital cost allowances.

Under the present capital cost allowance system the larger tax deferment will occur in the more capital-intensive businesses, and hence gives an advantage to the proprietors or shareholders of such businesses relative to a neutral capital cost allowance system. It will increase investment in capital-intensive projects because it will increase the after-tax return on the former relative to labour-intensive projects. If capital markets worked perfectly, the generosity of the present scheme would distort the allocation of saving and would be inequitable between proprietors and shareholders in capital-intensive and labour-intensive businesses. However, because generous capital cost allowances are more important for long-lived assets than for short-lived assets (for the potential tax deferment is obviously greater with respect to the former), because the riskiness of long-lived assets is usually assumed to be greater than that of short-lived assets, and because the market tends to discriminate against risk, the generosity of the present capital cost allowance system could be considered as a method of compensating for an imperfection of the market.

Does the present system inadequately compensate, over-compensate or just compensate for the market bias against long-lived assets? It is probably impossible to arrive at a definitive answer to this question. There is no method of assessing with the data available the extent of the market bias. Faced with this unanswerable question we have concluded that we have no clear evidence to warrant a basic change in the present capital cost allowance system, and therefore we recommend later that it should be continued.

These considerations would suggest that the tax system can help to improve the efficiency with which saving is allocated. Before we discuss our recommendations for this purpose, however, we shall deal directly with the question of the efficiency of capital markets, which is of particular relevance for reforms affecting the corporate tax.

The Retention of Earnings by Corporations and the Capital Market

The present tax system encourages the retention of earnings by corporations. High personal income tax rates, an incomplete dividend tax credit, and the exclusion of capital gains from income, all tend to reduce dividends. This means that a large portion of available saving is allocated by the managers of industrial corporations themselves, rather than by individual shareholders or by financial intermediaries acting on behalf of individual shareholders.

If the capital markets worked perfectly, a case could be made for measures designed to increase the distribution of earnings that are now being retained. However, the available evidence and the logic of economic analysis demonstrate that the capital markets do not and will not work perfectly. As we have said, funds for risky ventures, for investments by new firms, and for investments in assets not readily marketable will not be as readily available as funds for the financing of safe investments by established firms. In addition, the financing of expansion through the capital market is not a costless operation.

We expect that the functioning of the capital markets will improve as the volume of funds channelled through them expands and as new institutions are developed. As the Royal Commission on Banking and Finance has emphasized, the various measures the government could take in revising the Bank Act would be of great importance in this respect. However, we do not anticipate that the bias against the new, the small, and the risky will be eliminated. The United States capital market, with its much larger volume of transactions, greater degree of competition, and greater variety of institutions, functions

much better than any other capital market in the world. Yet informed opinion in the United States is not satisfied that the capital market allocates funds impartially or efficiently.

On the other hand, it is clear that the decisions made by corporate managers about the allocation of corporate saving will not be ideal either. Despite the increased diversification of the modern firm, many potential projects will remain outside the range of vision of the most far-sighted manager. Funds will therefore tend to be reinvested in the firm's own industry. However, because past profits are an imperfect guide to future prospects, the use by firms of past profits as an indicator of prospective profits will not necessarily result in the most efficient use of the funds. While errors in allocating retained earnings among alternative investments are self-correcting, for with enough large errors or repeated small errors there will be no profits and no corporate savings to allocate, the adjustments can take a long time and can be costly to the economy.

In view of these problems, we think that the objective should be the development of a tax system that does not discriminate in either direction with respect to cash retentions. It would be unwise to develop a tax system that forced cash distributions for the result would be to penalize growing firms that were ploughing back earnings. We doubt whether such firms would be adequately served by the capital markets, particularly if they are engaged in ventures of high risk. Favourable tax treatment of cash retentions, on the other hand, constricts the growth and development of capital markets and makes it even more difficult for new firms, which have no past income to draw on, to obtain funds.

The recommendations we make with respect to the integration of corporate and personal income taxes would put pressure on corporations to allocate their profits to shareholders, but would be neutral with respect to the form of distribution: cash dividends, stock dividends, or other capitalization of corporate surplus would have the same status for tax purposes. Because the

overall tax burden on income flowing through corporations would be reduced, however, corporations would be able to increase both their cash retentions and the cash put in the hands of the shareholders. For reasons already discussed, we also recommend the continuation of the present liberal capital cost allowance provisions, which we expect will continue to provide the major source of funds for business investment. If the internal funds available to firms were still deemed to be inadequate, we would recommend either more generous capital cost allowances, or the adoption of investment tax credits, both of which link the provision of funds to capital expenditure, rather than a return to the discriminatory treatment of dividends relative to the retention of earnings.

INCREASING THE INVESTMENT AND SAVINGS RATE AT FULL EMPLOYMENT

In the preceding pages we have laid the foundations for a tax system which we believe would meet the needs for future Canadian economic growth. We come now to consider what we regard as extraordinary policies and measures that could be adopted to increase the propensity to invest and the propensity to save once full employment is achieved. In discussing these possibilities, we emphasize that we are not advocating that such measures should be adopted. Rather, we are attempting to lay out reasonable ways of increasing the growth rate through increased capital formation, if the full-employment growth rate after the enactment of our recommended tax reforms was deemed to be inadequate. As we stated earlier, it is not clear that such an increase will necessarily be desired by the Canadian people once the rate of growth at full employment is achieved and the costs of increasing that growth rate are made apparent.

One method, which has received widespread attention abroad and which is clearly consistent with the maintenance of horizontal and vertical equity, is the use of a combination of tight fiscal policy and easy monetary policy to raise the full-employment investment rate without inflation. Easy money will tend to stimulate investment through low interest rates and increased availability of funds; tightened fiscal policy will generate the saving, in the form of an increased budget surplus, to finance the investment.

This policy has much to recommend it, but it is both limited in its effectiveness and constrained in its execution by the importance for Canada of international capital flows. The accessibility of the United States capital market limits the extent to which monetary policy, even when supplemented by debt management policy, can be used to stimulate domestic investment without reducing the capital inflow and generating balance-of-payments deficits. A devaluation of the Canadian dollar would, of course, correct the payments deficit and, because we are discussing long-run policies, ought not to be ruled out. To the extent that this policy of government surpluses is pushed to the point where devaluation is necessary, it essentially involves replacing foreign saving with domestic saving, rather than stimulating total investment, and would consequently have a somewhat limited effect upon the growth of GNP.

Despite the limitations of these policies, we would urge that the federal government, before embarking on any of the additional tax changes discussed below, explore thoroughly the extent to which they could be used to stimulate saving and investment. Fiscal, monetary and debt management policies are accepted tools to be used for the achievement of the government's general economic policy. Policy makers have had a great deal of experience in the use of these tools, and while the gearing of them to stimulate growth would make a difficult task more difficult, it would not involve radical departures from the past.

Various changes in the tax structure will tend to stimulate saving or investment, or both, and can be used in conjunction with fiscal and monetary policies to achieve a higher rate of capital formation at full employment. One of our recommendations is for a continuation of the limited deduction of contractual saving. This should continue to stimulate the rate of saving of low and middle income groups. Given the limits that we have established, and the fact that some portion of any increase in contractual saving is likely to be partially offset by a reduction in other forms of saving, we doubt whether the aggregate increase in saving so generated will be very large 18/.

However, the existence of a provision in the income tax structure permitting the deduction of specified forms and amounts of saving from gross income, provides the government with a ready tool for further stimulating saving. The limits can be raised, and the tax treatment of the earnings on these special forms of assets can be liberalized. This liberalization could be increased until virtually all saving and all returns on specified assets were bearing no income tax. That is to say, the income tax could be converted into an expenditure tax. However, it should be emphasized that this may be a relatively inefficient procedure because some of the apparent increase in saving will in effect only represent a change of form, with saving being switched from non-deductible to deductible forms.

The rich save more than the poor, and a complete saving credit would reduce vertical equity as we have defined it, because it would allow the rich to postpone their taxes more than the poor. It would also shift the life pattern of tax burdens in an unfortunate manner. To some extent this can be corrected by making the tax rate schedule more progressive; but if the tax base for the highest income groups virtually disappears, the correction will require extremely high tax rates on expenditures.

Because gross business saving is one of the determinants of investment, stimulating business saving, unlike stimulating personal saving, partly eliminates the need for additional measures to increase investment. In addition, most of the measures that stimulate business saving have a more direct impact upon investment by increasing the expected rate of return.

Accelerating the rate at which assets may be depreciated for tax purposes has both effects. The after-tax cash flow of the typical firm is increased, and the expected rate of return on new investment projects subject to the accelerated rates is raised.

Some type of subsidy to investment through the tax system might also be considered. Investment tax credits of the type adopted in the United States can be used. The integration of the corporate and personal taxes

that we recommend would not create a barrier to this type of incentive. Because investment credits can be treated in several ways they provide a fairly flexible instrument.

Finally, if the corporate and personal taxes were not integrated, reduction in the corporate tax rate, offset by increases in other taxes, would stimulate business saving and investment.

These, then, are the major tools at the government's disposal. We have not mentioned special tax incentives, such as those for growing industries and tax incentives based on the growth of sales. We reject the use of such incentives because the efficient allocation of funds involves allocation on the basis of expected rates of return, not upon past rates of return, nor upon past rates of growth of sales, nor even upon future rates of growth of sales.

The various tax measures to stimulate capital formation and business saving that we favour have the twin merits of providing for an increase in cash flow generally and of increasing the expected after-tax rate of return. They will not be perfectly neutral as between firms in different industries, because they will in general favour growth industries and firms, and may involve a too favourable treatment of long-lived projects. However, these are unfortunate side effects of the alternatives we have presented, whereas in the case of the special incentives mentioned immediately above they are an integral part of their design.

FUTURE PROSPECTS

We have examined the role played by the different sources of economic growth in the past. It would be unwise to conclude the discussion without examining the growth prospects of the Canadian economy over the next five or ten years. This procedure will shed additional light in two ways on the issue of policy for economic growth.

First, the degree of concern over given increases in the growth rate will probably be less when the growth rate is high rather than low, and consequently ought to be taken into account when tax reforms inimical to growth but desirable on grounds of horizontal or vertical equity are being evaluated.

Second, we want to provide rough estimates of the effects of different policies upon the rate of growth of potential GNP. We have selected two particularly important kinds of policies for this analysis: (a) improved stabilization policy, and (b) a successful policy for raising the investment and saving rate at full employment.

An examination of the growth gain from improved stabilization alone will be a useful supplement to findings presented above, for it makes it possible to take into account the effects of a reduction in unemployment on the growth of potential labour supply, as well as upon capital formation. In addition, the procedure is designed to show the effects of relatively small changes in the average degree of utilization of the factors of production upon medium-term growth, starting from the observed value of actual output, and the estimated value of potential output in 1963. By way of contrast, the estimate of the effects of poor utilization of the factors of production upon capital formation and growth presented earlier was based on a comparison of the estimated growth of potential output with the rate that would have been achieved had capital formation been maintained at full-employment levels.

Estimating the growth effect of raising the average investment rate to a level only slightly below that achieved in 1957 (the year of highest investment in the postwar period), would provide some guide to the possible growth impact of tax reform measures that favour saving and investment. Because Canada already invests a substantial portion of its GNP in business fixed investment, these estimates indicate the maximum growth impact to be expected from a tax programme designed to stimulate saving and investment 19/.

Before discussing the results of the projections, it would be useful to outline the underlying method used, and to distinguish it from those used by others. Our research staff made three projections, A, B, and C.

The "A" projection involved estimating the growth rate that would be realized if the economy achieved full employment and if the investment rate were similar to that achieved in full-employment years in the past. The labour force projection is that made by the Economic Council of Canada, and is based upon full-employment assumptions. Average weekly hours are assumed to decline somewhat more slowly than they did in the past. Finally, it is assumed that full employment was achieved in 1964 and maintained every year thereafter. On the basis of these assumptions, we developed estimates of the capital stock and total output for each year in succession.

The "B", or unemployment projection assumed that output would rise to 95 per cent of potential in 1964 and would remain in that relationship to potential thereafter. An investment rate typical of that achieved in the post-1957 period is assumed. Immigration is projected at somewhat lower levels than in the first projection, and average weekly hours are assumed to decline slightly more rapidly.

Finally, the "C" projection used the assumptions made in the first projection, that is, the full-employment assumption, except that the future investment rate was assumed to reach 16 per cent of GNP, a rate surpassed in only two years in the 1926-63 period 20/.

Before presenting the findings, two provisos are in order. First, the projections are not forecasts; rather, they provide a rough comparison of future prospects with the past and make it possible to measure the effects of alternative policies on the growth rate. Second, it must be borne in mind that these projections ignore several questions of importance. Because technical change within the private sector of the economy is projected at the historical rate, the effects of increased education and of strengthened demand upon technical advance have not been taken into account. The

projections assume investment rates but not saving rates, so that they cannot provide an estimate of how much of the saving would be supplied from abroad 21/.

So much for the provisos. The results of the projections are summarized in Table 4-3.

TABLE 4-3

PROJECTIONS OF THE GROWTH RATES OF POTENTIAL GNP, POTENTIAL EMPLOYMENT, AVERAGE HOURS WORKED, AND CAPITAL STOCK, UNDER ALTERNATIVE ASSUMPTIONS
(Annual Percentage Rates of Change)

Period	Projection	Potential GNP	Potential Employment	Potential Average Hours Worked <u>a/</u>	Capital <u>a/</u> Stock
1926-63	Observed	3.8	1.6	- 0.5	3.0
1963-70	A	5.0	2.6	- 0.4	5.2
	B	4.6	2.5	- 0.5	4.0
	C	5.2	2.6	- 0.4	5.8
1970-75	A	5.0	2.5	- 0.4	5.4
	B	4.5	2.4	- 0.5	4.2
	C	5.2	2.5	- 0.4	6.0

a/ Private non-farm sector.

The alternative assumptions used in preparing Table 4-3 are presented below.

Assumptions	Ratio of Actual to Potential GNP	Immigration	Business Fixed Investment as a Per Cent of GNP (in constant dollars)
A Projection	1.00	E.C.C. <u>b/</u>	14.5
B Projection	0.95	25,000 less than E.C.C. <u>b/</u>	12.5
C Projection	1.00	E.C.C. <u>b/</u>	16.0

b/ Economic Council of Canada, First Annual Review, Ottawa: Queen's

Printer, 1964.

As these estimates show, the growth prospects of the Canadian economy are more buoyant than a crude extrapolation of the past record would indicate. Even if the sluggish performance of the 1957-63 period is repeated ("B" projection), potential output growth over the next five to ten years will probably exceed that achieved in the past. This is partly a result of the rapid growth of the labour force, but will largely be due to the effects of increased investment rates resulting from the assumed avoidance of serious depressions and major wars. These two favourable effects are slightly offset by the reduction in the contribution to economic growth of the movement of the labour force from low to high productivity sectors that occurred in the past.

As we cited earlier in this Report, achieving and maintaining full employment will have a substantial impact on the growth of aggregate potential GNP. Under full-employment conditions potential GNP will rise by at least 0.5 percentage points a year more than under conditions of mild but persistent under-employment ("A" projection compared to "B" projection).

Increasing the investment rate to 16 per cent of GNP from 14.5 per cent will add another 0.2 percentage points to the growth rate ("C" projection compared to "A" projection). This indicates that the growth gain from improved stabilization policy is somewhat greater than the growth gain that might be expected from measures to increase the full-employment investment rate to the levels attained in peak years in the past.

Lest the reader think that fractions of percentage points in the growth rate are trivial, it should be pointed out that maintaining full employment would increase GNP in 1970 by over \$1.7 billion in today's dollars, while increasing the investment rate to 16.0 per cent would add a further \$1.1 billion.

These estimates emphasize the conclusions we have drawn. The impact of stabilization policy upon economic growth is sufficiently large to warrant our underlining the recommendations made in the previous chapter. In addition, they show that whatever the impact on saving and investment of tax reform measures, Canada will probably achieve a substantially faster rate of economic

growth in the future than it has in the past especially if full employment is maintained. Our lowest projected growth rate of 4.5 per cent is 0.7 percentage points above the growth rate of total potential GNP observed in the past.

While these projections are comforting, they do not warrant ignoring the impact of tax reform measures upon growth. We repeat that any tax system is likely to have a bias against growth, and we have consequently given serious attention to the growth aspects of our major tax reform recommendations. We believe that, on balance, our proposed reforms would encourage economic growth.

CONCLUSIONS AND RECOMMENDATIONS

SOURCES OF GROWTH

1. Technical change (defined to include improvements in the quality of capital and labour, the discovery and development of natural resources, changes in the regional and industrial mix, as well as changes in technology) has made the greatest contribution, 46 per cent, to the growth of potential private non-farm output in the past. Increases in the supply of labour hours and of the stock of capital were considerably less important. Changes in these factors explained about 31 per cent and 23 per cent respectively of the growth of potential private non-farm output. Although these estimates may overstate the importance of technical change, there is little doubt that improvements in the quality of factors of production, the regional and industrial allocation of resources, and technological developments are of vital significance to economic growth.
2. In the past, unemployment in Canada has reduced the rate of capital formation and immigration and has increased emigration. This in turn has reduced potential GNP. Had full employment been maintained continuously after 1926 our estimates show that GNP in 1963 would have been about 6 per cent greater than it was, a gain of about three billion current dollars.

THE SUPPLY OF LABOUR

3. Changes in the supply of labour hours are determined by changes in the size and age-sex composition of the population, the proportion of each age-sex group that wishes to work, and the hours of work. Here again unemployment has played a role, for when there is unemployment in Canada immigration falls and emigration increases.
4. The tax system does not appear to have had any effect on the growth of population, except probably with respect to emigration. Taxes may explain, in part, the emigration of skilled workers to the United States. Reducing taxes on the middle income groups in Canada might help to reduce emigration of skilled workers. This would increase the rate of growth of output.
5. There have been important changes in labour force participation rates, but these have probably been little affected by the tax system. However, the proportion of married women in the labour force does seem to be dependent, to some extent, on marginal rates of personal income tax. The Canadian growth rate would be increased if the labour force participation rate for married women were raised.
6. There is no evidence that taxes reduce labour effort; but the studies are confined to particular groups in particular circumstances and it is dangerous to generalize from them. Although we have no evidence to support the contention we believe high marginal rates reduce labour, managerial and professional efforts.

TECHNICAL CHANGE

7. The shift of labour from agriculture to other industries has made a large contribution to economic growth in the past. It is unlikely to make such an important contribution in the future.
8. Inter-regional movements of labour, from low to high productivity regions, have not made a major contribution to growth in the past. If differences in regional earnings are a reliable indicator of regional

differences in productivity, there are potential gains still to be realized. The resistance to inter-regional labour mobility is so great that the potential gain probably will only be realized slowly.

9. If the return to capital is low in regions where productivity is low, shifting capital from high to low productivity regions may reduce the national growth rate; but it is possible that relatively small additions to the capital stock in low productivity regions would yield large gains if there are economies of scale and agglomeration to be reaped, and the return on social capital is as high as we expect it to be. Policies designed to both increase labour mobility from and increase the capital flow to low productivity regions are probably desirable; but the latter should be undertaken only in the context of a strategy of regional development where the likelihood of large pay-offs are high.

10. Provisions granting a three-year tax-exempt period for new manufacturing and processing businesses locating in designated areas, and accelerated capital cost allowance rates for such businesses, were introduced in 1963. In 1965 the government introduced the Area Development Incentives Act under which subsidies could be paid to firms establishing new facilities or expanding existing facilities in designated areas. We welcome this change in emphasis because we are convinced that for this purpose subsidies are much more likely to be efficient than tax concessions. We recommend that the subsidy programme be expanded and the regional development tax incentives withdrawn. We cannot be sure that the subsidies will be effective, but they should be more effective than the tax incentives per dollar of revenue forgone or expenditure incurred. Because the cost of subsidies can be more readily measured, they are more likely to be assessed in relation to the benefits reaped.

11. We strongly recommend that a full-scale research programme on the problems of regional economic development be undertaken as soon as possible. Until we know much more about the process of regional growth, government programmes can be little more than shots in the dark that indicate good intentions.

RESEARCH AND DEVELOPMENT

12. In the 1965 Budget, the government announced its intention to abandon the special tax incentive approach to research adopted in 1962 and replace it with a system of cash grants and tax credits in 1966. We believe that such a change in approach is highly desirable. However, we think the government should consider expanding the National Research Council programme and the Program for the Advancement of Industrial Technology, instead of introducing a general research subsidy programme. The full write-off of research expenditures as incurred should be continued. Here too, so little is known about the kinds of research that are required, and who should do it, that it is dangerous to take a firm stand. Canada desperately needs some research on research.
13. We are sceptical that inducing foreign corporations to undertake more research in their Canadian subsidiaries will provide substantial benefits. As long as the foreign parent determines the research programme, as we would expect it usually does, it is unlikely to result in research specifically related to the Canadian market or Canadian resources. Shifting research to Canada will, of course, increase the number of research workers in Canada. This is desirable but is unlikely to confer dramatic benefits.
14. While Canada would gain from more research directed toward specifically Canadian subjects, the information acquired in this way should be added to the information obtained from abroad, not substituted for it.

IMPROVED QUALITY OF THE
FACTORS OF PRODUCTION

15. The argument that new capital embodies ever-improved quality appears to us to be sound. However, because of the limitations of the Canadian data we have no evidence to support this contention. Nevertheless, we accept the view that a higher rate of gross capital formation will improve the quality of our capital stock.
16. We have found that the rate of formal education of Canadians lags behind that of citizens of the United States. The rate of growth of output in Canada could be increased by closing this gap. While the most effective way to do so probably would be through increased government expenditures, we later recommend tax provisions to encourage more Canadians to take more post-secondary education and training. The approach we propose would be more equitable and more effective than the present provisions.

CAPITAL FORMATION

17. We have concluded that the demand for fixed capital can be increased by:
- a) a rise in the utilization rate, that is, the ratio of actual to potential GNP;
 - b) an increase in the level of gross business saving (depreciation reserves plus retained earnings);
 - c) a reduction in the cost of or an increase in the availability of funds; and
 - d) a rise in the expected after-tax rate of return on new investment.
18. Fiscal instruments clearly affect all of these factors. Successful stabilization policies can increase the utilization rate. The tax structure can affect (b), (c) and (d). Because Canadian corporate income tax changes are not fully and quickly shifted through price changes, and

because pay-out ratios do not change to offset changes in after-tax corporate profits, changes in corporate income tax rates, changes in capital cost allowance provisions and the adoption of investment credits can be used to change business saving. Changes in corporate income tax rates are probably the least effective of the three instruments.

19. By increasing the expected after-tax rate of return on financial assets, changes in the tax system can reduce the cost of funds to business and thereby increase the demand for fixed assets.

THE RATE OF SAVING

20. One of the most effective methods of increasing the domestic saving rate is to adopt a restrictive fiscal policy that produces a surplus of government revenues over expenditures. This makes it possible to increase the rate of capital formation by more than the increase in private saving without inflation and without adopting inequitable tax-expenditure provisions.
21. Reducing the progressiveness of the personal income tax would only bring about a modest increase in saving with a substantial loss in equity.
22. Increasing the weight of sales taxes while reducing the weight of income taxes would increase saving by:
 - a) reducing the overall progressiveness of the system, with the result mentioned above; and
 - b) reducing the tax burden on saving.

The latter effect would be similar to the effect on saving of increasing the interest rate earned. The available evidence suggests that the volume of personal saving is not sensitive to changes in interest rates. We conclude that increasing the weight of sales taxes in the mix would be unlikely to have a dramatic effect on the rate of saving and would reduce the redistributive effects of the system with a consequent reduction in its equity.

23. The tax burden on saving can be reduced most effectively through allowing a deduction of specific forms of saving from gross income in determining taxable income, and through reducing the tax borne by the income generated by the assets acquired by such saving. By restricting the volume of saving that can be deducted, the benefit to the upper income groups can be limited. Such an approach converts the income tax system into a partial expenditure tax system. The present tax system has such a deduction for some forms of contractual saving, and we later recommend that this system be modified to make it more generous to those in the lower income groups and to remove the features that distort the forms of assets that can be purchased with such savings. The system we recommend could be modified to encourage more contractual saving. It is unclear, however, to what extent this would result in a net addition to saving or to a substitution of one form of saving for other forms.
24. Another way to increase saving through the use of the tax structure, without reducing the vertical equity of the system, would be to adopt a policy of accelerated capital cost allowances or investment credits, and to recoup the revenue through higher personal income tax rates on the upper income groups. These groups would have their saving reduced if their personal taxes were higher; but the increase in gross business saving would more than offset the reduction in personal saving.
25. The latter approach probably would be more effective than a reduction in corporate tax rates in Canada because:
- a) a substantial part of Canadian corporate taxes are paid by non-residents and are offset by foreign tax credits;
 - b) business saving is likely to increase less per dollar of revenue forgone with a corporate income tax rate reduction than would occur with accelerated capital cost allowance or investment credits;

c) under our integration proposal the after-tax rate of return on dividends to resident shareholders would not be affected by a corporate tax cut.

26. A corporate income tax rate that was below the top personal income tax rate would create avenues for tax postponement through the non-allocation of corporate income for shareholders who are taxable at the top rate. Another result could be the overtaxation of other shareholders who realized gains on shares resulting from retained earnings that had not been allocated to them.

THE ALLOCATION OF SAVINGS GENERALLY

27. The rate of economic growth can be increased by a more efficient allocation of saving. The market will not provide the most efficient allocation of resources when social rates of return differ from private rates of return. The individual and institutional investors' aversion to risk and their demand for liquidity probably result in under-investment in risky enterprises and in assets that are not readily marketable. The present tax system compounds rather than compensates for the misallocation of saving that is produced by the market.

THE DUAL CORPORATE RATE

28. The dual corporate rate is an inefficient and inequitable incentive and we later recommend that the lower rate of corporate tax be withdrawn. Under the proposed integration plan the dual rate would have little significance in any event.

CAPITAL GAINS

29. The failure to tax capital gains and allow the deduction of capital losses in the past has distorted the allocation of saving. With regard to share gains, this has partly compensated for the heavy taxes borne by corporate income. But the compensation has been very haphazard,

grossly overcompensating in some cases, and adding to the heavy burden rather than compensating for it in others. Fully taxing asset gains and allowing losses would remove the distortion; and the negative economic effects could be offset by the complete integration of corporate and personal income taxes, the more liberal treatment of business losses, the incentive for new, small businesses, and our other recommended reforms.

CAPITAL COST ALLOWANCES

30. The present system of capital cost allowances is probably more generous than a neutral system, but we think this generosity is justified because it compensates for the market bias against long-lived fixed assets and because it has increased business saving.

RETENTION OF EARNINGS

31. Forcing the distribution in cash of corporate earnings would probably reduce the rate of capital formation and, given the imperfections of the capital market, would not necessarily improve allocation. However, the present tax system is biased in favour of the retention of corporate earnings and this has undesirable features. We have concluded that the tax system should be neutral with respect to the allocation of corporate earnings. The taxation of capital gains and the integration of corporate and personal income taxes, with full credit given to resident shareholders against their personal income taxes for corporate income taxes on earnings allocated to them through cash dividends, stock dividends or the capitalization of surplus, should accomplish this end.

FUTURE PROSPECTS

32. A substantial increase in the growth rate of potential GNP would be realized if full employment were maintained.

33. Increasing the rate of business fixed investment to the highest levels attained in the past would further increase the growth rate, but not by as much as the maintenance of full employment. The former increase in growth would not be without cost in terms of reduced current consumption, reduced leisure, or greater dependence on foreign saving.

34. Even if Canada has persistent but modest rates of unemployment and the rate of capital formation is correspondingly low, the rate of growth of potential GNP will be higher in the future than in the past if major wars and depressions do not occur. This suggests that Canadians could "afford" a more equitable tax system even if this were to reduce the rate of growth of output, for people could be treated more fairly and the increases in the nation's standard of living could still be maintained. We are confident, however, that if our reforms were adopted, they would improve the equity of the system without any reduction in the growth rate. Indeed, we are convinced our proposed reforms would make a positive contribution to growth.

REFERENCES

- 1/ T.A. Wilson and N.H. Lithwick, Sources of Economic Growth, a study published by the Commission.
- 2/ Because it was not possible to measure satisfactorily changes in the quality of labour and capital, the amounts of other inputs such as land, and the inter-industry distributions of inputs and outputs, the time trend reflects all of these changes as well as the effects of changes in technology.
- 3/ See, for example, Canada, Department of Labour, The Migration of Professional Workers Into and Out of Canada, 1946-60, Professional Manpower Bulletin No. 11, Ottawa: Queen's Printer, October 1961, Table 7, p. 21, and Economic Council of Canada, First Annual Review, Ottawa: Queen's Printer, 1964, p. 167.
- 4/ See Robin Barlow, The Effects of Income Taxation on Work Choices, a study published by the Commission.
- 5/ These provisions gave: (a) a three-year tax-exempt period for new manufacturing and processing businesses in designated surplus manpower areas, and (b) accelerated capital cost allowances for such businesses, respectively.
- 6/ S.C. 1965, Chapter 12.
- 7/ The formula provides a grant toward the approved capital cost of new facilities equal to one third of the first \$250,000, plus one quarter of the next \$750,000, plus one fifth of the amount in excess of \$1,000,000—up to a maximum subsidy of \$5,000,000.
- 8/ In the Budget of March 29, 1966 it was announced that the expiration of section 71A at March 31, 1967 would be extended to 1968, but only for facilities begun prior to March 29, 1966 that could not be brought into commercial production by the 1967 expiration date.

- 9/ This finding is much more modest than that of the Economic Council of Canada, Second Annual Review, Ottawa: Queen's Printer, 1965, p. 92. This is largely a result of the fact that our research staff measured the educational level of the population in terms of the average number of years of formal education, while the Economic Council of Canada measured it by the average number of days of formal education. While the use of years is admittedly a crude approximation, it does not seem likely that adjusting for the average number of days in the school year will improve the estimates. See also M. Abramovitz, "Economic Growth in the United States", American Economic Review, Vol. 52, 1962, pp. 762-782.
- 10/ R. Levesque, Shifting of the Corporate Income Tax, a study published by the Commission.
- 11/ A pay-out ratio will fluctuate from year to year but is relatively stable in the long run. See J. Lintner, "Distribution of Incomes of Corporations among Dividends, Retained Earnings, and Taxes", American Economic Review, Vol. 46, 1956, pp. 97-113, and J.A. Brittain, "The Tax Structure and Corporate Dividend Policy", American Economic Review, Vol. 54, 1964, p. 272.
- 12/ These technical difficulties arise from two aspects of the monetary variables: (a) they are themselves influenced by changes in investment; (b) since they are subject to control by the monetary authorities, these variables will, as part of countercyclical policy, usually be deliberately manipulated to offset the effects of swings in investment demand.
- 13/ J.H. Young and J.F. Helliwell, The Effects of Monetary Policy on Corporations, Royal Commission on Banking and Finance, Appendix Volume, Ottawa: Queen's Printer, 1964, and J.F. Helliwell, Taxation and Investment: A Study of Capital Expenditure Decisions in Large Corporations, a study published by the Commission.

- 14/ See Appendix F to this Volume.
- 15/ See Appendix F to this Volume.
- 16/ The marginal social rate of return for a project is the rate of discount which equates the present value of the stream of social benefits with the present value of the stream of social costs. It differs from the ordinary private rate of return by including benefits in addition to those received by the investing firm, and costs in addition to those incurred by the firm.
- 17/ F. Lutz and V. Lutz, The Theory of Investment of the Firm, Princeton, N.J.: Princeton University Press, 1951, p. 225.
- 18/ The growth of pension funds in the United States has not been offset by reductions in other forms of personal saving. P. Cagan, Effects of Pension Plans or Aggregate Saving, Occasional Paper No. 95, New York: National Bureau of Economic Research, 1965. However, it is not clear that making retirement saving more attractive would have the same effect.
- 19/ Note, however, that these projections abstract from the problem of national as opposed to domestic output. Some further increased growth in GNP relative to gross domestic product might be achieved by replacing foreign savings with domestic savings.
- 20/ These projections differ from those made by the Economic Council of Canada and others in two respects. First, the projections presented here focus attention upon the growth of potential output itself, whereas the growth rate required for the achievement of full employment in 1970 projected by the Council is the growth of actual output which involves a combination of the growth of potential and the closing of the gap between actual and potential output. Second, the capital stock estimates used in making the projections presented here are derived

from the assumption about the degree of utilization of the factors of production and the investment rate, and are not projected independently.

21/ The greater the share of savings supplied from abroad, the slower will GNP grow relative to gross domestic product.