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NAME OF SUPERVISOR/NOM DU DIRECTEUR DE THÈSE Professor Conrad J. Winn

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PUBLIC FINANCE FOR POLITICAL PROFIT:
THE POLITICS OF SOCIAL SECURITY IN CANADA
1941-1977

by

C

BRUCE D. MACNAUGHTON, M.A.

A thesis submitted to the Faculty of Graduate
Studies and Research in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

Carleton University
Ottawa, Ontario

June 16, 1980

*The undersigned recommend to the
Faculty of Graduate Studies and Research
acceptance of the thesis*

*PUBLIC FINANCE FOR POLITICAL PROFIT:
THE POLITICS OF SOCIAL SECURITY IN CANADA*

1941-1977

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the degree of Doctor of Philosophy*

C. W. W.
.....
Thesis Supervisor

Robert J. Jackson
.....
Chairman, Department of Political Science

Carleton University

Abstract

The purpose of this dissertation is to investigate the political, economic and social determinants of the federal "welfare state" in Canada since 1941. The dissertation presents a quantitative time-series analysis of variations in the level of federal government expenditures in three major policy areas: income maintenance for the aged, aid to dependent children, and unemployment insurance.

These three policy areas encompass five major federal government programs. Income maintenance for the aged includes Old Age Security (OAS) and the Guaranteed Income Supplement (GIS) (1951-1977). Aid to dependent children includes the Family Allowance (FA) program and the Youth Allowance (YA) program (1945-1977), and unemployment insurance (1941-1977) is self-explanatory. The total budgetary expenditures allocated to each of these policy areas per fiscal year constitute the dependent variables. They are tested against several independent variables in a series of causal models. The focus of the dissertation is the allocation of scarce resources to these programs by political elites in the face of such demands as calls for reduced taxes or greater allocations of funds.

The dissertation attempts to provide an explanation at the macro level for intra-temporal variations in the level of social security expenditures.

Three relatively distinct but interrelated theories of the determinants of social security expenditures are examined and tested. They are respectively the socio-economic, organizational, and political theories of the determinants of social security expenditures. According to the first, the growth of social security expenditures largely reflects environmental change in society such as economic development and change in the size and demographic composition of the population. The organizational theory of the growth of public expenditure stresses the fact that decision-makers inherit a legacy of past decisions and statutory commitments and thus large departures from previous practice are the exception. This is the theory of budgetary incrementalism. The political explanation emphasizes the relative autonomy of decision-makers and looks to pressures generated within the political system as determinants of expenditure patterns. The impact of such factors as pressure groups demands, and the electoral strength of social democratic parties, are thus thought to be key determinants of public expenditure levels.

The results of the data analysis for each policy area were remarkably similar in several respects. Organizational factors were important in all three policy areas and exerted the predominant influence on expenditures on unemployment insurance and old age pensions. Socio-economic variables were found to be the most important determinants of expenditures on family and youth allowances. Political variables, particularly support for the CCF/NDP, the presence of minority governments and elections and the level of electoral competition were found to have an independent effect in each policy area, although the exact variables differed. Overall, these findings suggest that socio-economic and organizational variables restrict the discretion of policy-makers, but that, within this area of discretion, political variables enter into the decision-making process. This finding stands in contrast with most previous cross-sectional research studies which have tended to conclude that political variables exert little or no influence on spending patterns.

The dissertation did not uncover any mode of explanation capable of accounting for the overall pattern of social security expenditure. Rather, the dissertation suggested that each explanatory mode, whether socio-economic, organizational, or political, focuses on a different aspect of reality. It is the interaction among the three that

determines expenditure outcomes. The basic question to be resolved, then, is not which is the single most useful explanation but rather how and in what manner these approaches can complement one another.

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Many people have assisted me during my research and during the long period of analysis and writing. I am indebted to my supervisor, Conrad Winn, who sparked my interest in the subject matter and who first taught me some of the methodological skills which made this research possible. I would also like to thank Professors Michael Whittington and Maureen Molot, both of whom provided careful and extensive comments on numerous drafts.

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CHAPTER ONE

PUBLIC EXPENDITURES

AND

THEORY CONSTRUCTION

CHAPTER ONE

INTRODUCTION

The purpose of this dissertation is to investigate the political, economic and social determinants of the federal "welfare state" in Canada since 1941. The dissertation will present a quantitative time-series analysis of variations in the level of federal government expenditures in three major policy areas: income maintenance for the aged, aid to dependent children, and unemployment insurance.

These three policy areas encompass five major federal government programs. Income maintenance for the aged includes Old Age Security (OAS) and the Guaranteed Income Supplement (GIS) (1951-1977). Aid to dependent children includes the Family Allowance (FA) program and the Youth Allowance (YA) program (1945-1977), and unemployment insurance (1941-1977) is self-explanatory. The total budgetary expenditures allocated to each of these policy areas per fiscal year constitute the dependent variables. They are tested against several independent variables in a series of causal models. The focus of the dissertation is the allocation of scarce resources to these programs by political elites in the face of such demands as calls for reduced taxes or greater allocations of funds.

The primary focus of the dissertation is on policy outputs; in this case budgetary allocations of funds to each of the three policy areas. The dissertation attempts to provide an explanation, at the macro level, for inter-temporal variations in the level of social policy expenditures.

Although the distributive effects of these programs are of secondary interest, they must be examined because, as Theodore Lowi has argued:

...a political relationship is determined by the type of policy at stake, so that for every type of policy there is likely to be a distinctive type of political relationship.¹

Lowi was referring, of course, to his familiar distinction among distributive, redistributive and regulatory policies. Since Lowi argues that different types of policies lead to different types of political relationships, it is necessary to determine whether these social security programs can be described as distributive or redistributive. In order to explain variations in the level of social security expenditures, an understanding of who is indulged and who is deprived by these programs is required. This information may be employed to identify key opponents and supporters of these programs and thereby suggest independent variables for examination. A knowledge of the distribution of program benefits and sanctions among the population may thus facilitate an understanding of variations in the level of expenditures.

The dissertation falls within the sub-field of public policy analysis. Public policy has been defined in various ways and there is little agreement among political scientists as to its precise meaning. Since this research focuses on federal government policy in Canada, a definition suggested by the Treasury Board Secretariat was employed. According to a Treasury Board manual:

A policy is the Government's statement of a principle or set of principles it wishes to see followed, in pursuit of particular objectives, which may be stated in such a way as to suggest possible courses of action (programs) and as to indicate how success of the policy may be measured (criteria).²

Logically, policy should also include government inaction. In addition, it is necessary to compare stated government intentions with actual policy performance and to investigate unstated as well as stated intentions. For example, policy proposals are justified frequently on the basis of technical criteria, when in fact electoral or ideological considerations are paramount in the minds of policy makers.

Policy refers to the substance of what government does, and is to be distinguished from the processes by which decisions are made.³ Public policies are the output of the governmental process. They are general in scope and can be differentiated from decisions by the requirement that they limit the range of future decisions. It is patterns of behaviour rather than separate, discrete acts which constitute

public policy.⁴ By way of contrast, a program refers to

...a course of action or instrument to implement a Government policy (or policies), sometimes involving legislative mandates and usually public expenditures. (A program also has objectives, which will in general be more operational than those of a policy, and be suggestive of possible criteria against which accomplishments of the objectives may be measured.)⁵

THEORETICAL RATIONALE

The need for an examination of the factors which may explain budgetary decisions (including revenues and expenditures) by political elites has become increasingly apparent in recent years, since more than one-third of the resources of the Canadian economy are now allocated primarily through political rather than market mechanisms. As Kenneth Boulding observes in *The Parameters of Politics*:

A budget seems to me the prime expression of political decision. It may be arrived at, of course, by all sorts of bargaining and horse-trading among people and organizations who are affected, but the essence of the political process in any organization seems to me to reach a decision on a budget, and to make this decision effective. The budget, therefore, is the typical institution of politics as the market is of economics, and indeed the politization of a society can be measured by the extent to which the allocation of its resources is determined through budgets rather than through markets.⁶

It seems clear that an improved understanding of the factors that explain non-market decision-making is required, if a positive theory of public expenditure is to be achieved.

This study examines the growth of social security expenditures in Canada. The justification for an analysis of social security expenditures, as opposed to total expenditures or spending on some other functional area is four-fold. First, in absolute terms, federal allocations of funds on unemployment insurance, old age pensions, and family and youth allowances represent a significant outlay of public funds. In the 1977-78 fiscal year, federal expenditures on these programs amounted to a total of 11.1 billion dollars.⁷ This figure represents approximately one-quarter of the entire federal budget, and accounts for some seventy-three percent of all federal expenditures in the social welfare field.⁸ In addition, total expenditures on these three programs were approximately equal to the total expenditures of the government of the Province of Ontario, the largest Canadian province.⁹

Second, there has been a persistent and rapid rise in government expenditures on social security programs in recent years. Table 1 presents data on the overall growth rate of government expenditures and statistics for the three policy areas in question.

TABLE I

Regression Estimates of Growth Rates of
Expenditure Categories by Fiscal Years
(current dollars)

Category	Estimation Period	Growth Rate %	$\bar{R}^2$
Unemployment Insurance	1941-1977	17.0	.81
Total Budgetary Expenditures	1941-1977	6.6	.79
Family Allowances	1945-1977	5.8	.84
Total Budgetary Expenditures	1945-1977	7.9	.93
Old Age Pensions	1951-1977	12.2	.95
Total Budgetary Expenditures	1951-1977	8.7	.92

The $\bar{R}^2$ are presented as summary measures of the "goodness of fit" of the equations. In general, a high $\bar{R}^2$ suggests that the time series has followed closely a smooth exponential growth over the estimation period. The table indicates that both old age pensions and unemployment insurance have grown at a faster rate than total budgetary expenditures, while family allowances have grown at a somewhat slower rate.¹⁰

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Third, social security expenditures appear to have been the major focus of much of the public protest concerning rising taxes and public expenditures in recent years. Harold Wilensky, James O'Connor and others have described the growth of a middle class "welfare backlash" in the United States and other western liberal democracies.¹¹ A case in point is the recent passage of Proposition 13 in California which amended the state constitution to limit property tax rates. Recent efforts to amend the American constitution in order to require a balanced federal budget are apparently based on the same antipathy toward high taxes. By February 1979 twenty-six American states had passed resolutions requesting a constitutional amendment which would ban deficit spending.¹²

Kenneth Bryden has described a somewhat similar phenomenon in Canada with respect to old age pensions. Bryden argues that the "market ethos" of economic individualism was influential in slowing the growth of old age pensions and in shaping the manner in which they were financed.¹³

Finally, although governments may provide benefits or sanctions to the population through public expenditures, taxation or regulation, an examination of public expenditures is important in its own right. Other authors are encouraged to take up the task of studying other policy instruments which directly influence citizens' incomes.

The Dependent Variables: A Disaggregated Approach
to the Analysis of Public Expenditures

A number of problems surround the choice of the level of aggregation for the public expenditure categories selected for analysis. Richard Musgrave and other students of public finance have rejected the notion that the growth of public expenditures as a whole can be explained by a common set of generalizations.¹⁴ On the other hand, many writers in the area of comparative public policy have failed largely to define categories of policies. Most writers have tended to aggregate a variety of disparate government programs into a single undifferentiated category.

For example, the dependent variable in Wilensky's study includes total expenditures on "compulsory social insurance, certain voluntary social insurance schemes, family allowance schemes, special schemes for public employees, public health services, public assistance, and benefits granted to war victims."¹⁵ Since no evidence which would indicate that all of these programs covary in the same direction is presented, these results are likely to be misleading. This practice is likely to mask relationships within the various policy processes and prevents scholars from assessing the impact of specific variables on single policy fields, a problem which is evident among even the best studies by Harold Wilensky, Frederic Pryor and others.¹⁶

A number of publications have concluded that particular political variables do not influence public policy outputs, but they overlook the possibility that political variables which shape certain kinds of policies may have little or no effect on other policies. As Herbert Jacob and Michael Lipsky have noted:

Researchers generally posit a single political system which operates in the same fashion in the educational, welfare transportation, recreation, public health and regulatory areas... (P)olicy arenas have quite separate sets of decision-makers associated with them. It is probably quite erroneous to expect that input and process variables are associated in the same way to each policy output.¹⁷

In order to circumvent these difficulties, the approach employed here is a hybrid of the quantitative public policy school, which has emphasized aggregate policy outputs, and the case study approach which has examined single policy fields. Doern and Wilson have argued that an examination of single policy fields is required as aggregate policy fields are not merely the summation of individual policy fields or outputs.¹⁸ The existence of several policy processes and arenas has been indicated by numerous case studies and is evident in much of the community power literature.¹⁹ In reviewing the expenditure studies from a Canadian perspective, Bird came to a similar conclusion to that of Doern and Wilson concerning the need to study disaggregated policy fields.

Bird writes:

At this stage of our knowledge what seems to be most needed is a set of critical studies of particular expenditure patterns in particular governmental units, preferably time-series studies based on formal and explicit models on the one hand and knowledge of the relevant policy variables on the other.²⁰

This research then will be based on a quantitative analysis of three distinct programs at one level of government over time. This is in contrast with previous studies which have tended to sum a disparate group of policies into a single category, under the assumption that the same independent variables would have similar effects on all of the policy measures subsumed under a single heading. In addition, no assumption is made that all of these programs covary in the same direction. For example, it is quite possible that increases in expenditures on universal old age pensions might be associated with decreases in expenditures on family allowances.

The Research Design: Strategy

Recent reviews of the literature in public policy research have outlined the merits of studies based on a systematic, comparative analysis of inter-temporal variations in the level of social policy expenditures. Studies of this type require a rigorous approach to research design, including a sufficiently large number of cases to permit statistical analysis. In addition, the hypotheses must be stated explicitly and the variables contained within the hypotheses must be measured in

such a way so as to allow empirical tests of the hypotheses put forward.²¹ Previous studies of Canadian public policy which have proceeded in this manner include works by Falcone and Whittington, Poel, Winn and McMenemy, and Chandler.²²

At the theoretical level, this dissertation attempts to provide a reasonably complete and explicit causal explanation, at the macro level, for the growth of social security expenditures over time. Such an explanation requires an evaluation of the importance of a number of political, economic, and social factors that are involved in the growth of social security expenditures. The literature in political science, economics, sociology, and social work provides a number of perspectives and hypotheses of potential use in a study of this kind.

However, the literature does not contain concrete, well-developed theories which specify particular patterns of causal mechanisms and relationships. Most of the literature has not been concerned with theory construction in any specific or explicit manner. The literature consists mainly of empirical generalizations, tends to concentrate on simple bi-variate relationships, and often implies questionable *ceteris paribus* assumptions. The correct specification of a theory of the growth of social policy expenditures is a necessary prerequisite to hypothesis testing, or the estimation of population parameters. Consequently, the research strategy adopted here

is the specification of a middle range theory of the growth of social security expenditures over time. In brief, the research strategy consists of beginning with a simple model, and then proceeding to build on that structure in a cumulative manner in subsequent chapters. The process is not only cumulative but also sequential so that later chapters incorporate the findings of earlier chapters, and specify the expected relationships between the dependent and the independent variables.

Theories of Public Expenditure Growth

The literature in the determinants of the growth of public expenditures can be divided into three main explanatory modes. They are in order of declining generality: socio-economic, organizational and political.²³ Socio-economic explanations stress the importance of economic development and demographic change as key factors in the growth of public expenditures. According to this explanation, changes in public expenditures largely reflect environmental changes in society. From this perspective the discretion of policymakers is limited severely by environmental constraints. Indeed, the evidence from both American and cross-national studies suggests that socio-economic factors are perhaps the predominant influence on public expenditure levels.

Organizational explanations emphasize the organizational setting of government within which public expenditure decisions

are made. It is argued that increases in public expenditures are due, in large part, to pressure from within the bureaucracy. This is because bureaucracies measure their success by their own expansion and this expansion requires increases in public expenditures. The theory of budgetary incrementalism posits that governments inherit a long legacy of past decisions and thus only gradual policy modifications are possible in the short run. Wildavsky has described the incrementalist approach as follows:

Budgets are almost never actively reviewed as a whole in the sense of considering at once the value of all existing programs as compared to all possible alternatives. Instead, this year's budget is based on last year's budget, with special attention given to a narrow range of increase or decrease.²⁴

While the organizational explanation has not been investigated as extensively as the socio-economic explanation, the available evidence in support of this thesis is again very strong.

Finally, the political explanation treats the political system as an autonomous sector acting within certain constraints. Emphasis is placed on pressures generated within the political system. In this vein, various authors have studied the impact of party competition, elite ideology, and pressure group demands as determinants of public expenditures. The empirical evidence regarding the validity of the political explanation is rather mixed. However, most authors have found that political factors are of secondary importance to socio-economic and organizational ones. For this reason, the data based chapters

begin with a simple model in Chapter four based on socio-economic and/or organizational factors. After the constraints imposed by socio-economic and organizational factors have been considered, the dissertation proceeds to examine the influence of political factors in succeeding chapters. The following pages provide a brief overview of the contents of each chapter.

Chapter two describes major concepts used in the analysis of social security. The chapter discusses the origins and historical development of the three policy areas. Trends in the growth of social security expenditures are described, and particular attention is paid to the effect of inflation on the real value of expenditures.

Chapter three provides an assessment of the effects of the five social security programs on the distribution of income in Canada. The meaning of redistributive policy is explained, with particular emphasis on its objectives in relation to material welfare. The chapter reviews the Canadian literature on the redistributive effects of social security expenditures with emphasis on vertical as opposed to horizontal redistribution. The chapter outlines the limitations of these studies and discusses the tentative nature of their conclusions. The chapter concludes that old age pensions are the most redistributive of the three policies and family and youth allowances are the least redistributive, but argues that the magnitude of redistribution resulting from each policy cannot be assessed precisely beyond a simple ordinal ranking.

Chapter four assesses the relationship between socio-economic and organizational factors and the level of social security expenditures. Most previous studies have concluded that the level of economic development and organizational factors are the best predictors of the level of public expenditures over time. In spite of this fact, these concepts have been ill-defined and several alternate measures of these concepts have been proposed. The chapter reviews the theoretical literature with a view to overcoming these theoretical difficulties. While there is general agreement in the literature that the main explanation for the development of the welfare state lies with socio-economic and organizational factors, there is considerable uncertainty regarding the relative weights to be assigned to other factors, particularly political ones. For this reason, Chapter four serves as a basis of departure for later chapters which examine political factors.

Chapter five examines the relationship between changes in support for the CCF/NDP, changes in the proportion of the labour force belonging to trade unions and strike activity with social security expenditures. While the previous chapters de-emphasized ideology as an explanation for changes in social policy expenditures, this chapter examines the role of organizations whose primary goals are thought to be the restructuring of the reward structure of society in favour

of the less wealthy. Many scholars have asserted that parties of the democratic left and trade unions have had a marked effect in reducing social inequalities.²⁵ Robert Alford writes that, where the relative power of left-wing parties is greater:

...lower income groups are able to secure more of the national product than where the left has less power.²⁶

In Canada, arguments have been advanced which suggest that the growth of the CCF/NDP and increases in trade union strength have led the Conservative and Liberal parties to devote more resources to social security than they would have otherwise. This is held to be even more evident during minority parliaments.²⁷

Chapter six reviews the literature on several "self-interest" theories of government decision-making and relates these theories to the growth of social security expenditures. The authors of these theories seek to explain collective decisions in terms of the self-seeking behaviour of rational individuals. Individual voters are hypothesized to rationally maximize their "utility income" from government activity.²⁸ On the other hand, government behaviour in a democracy is thought to be best understood as an effort to maximize the prospects of electoral success. The probability of this is dependent, at least in part, on the policies that are implemented by the governing party. The work of several scholars

is discussed in the chapter, but particular attention is paid to the theories of Anthony Downs.²⁹ The chapter concludes with an analysis of several related theories of the "political business cycle," and "fiscal illusion" as outlined by Nordhaus, Hibbs, Ames, Tufte and others.³⁰ In brief, these theories argue that governments seek to provide visible benefits to the electorate in the time period just prior to elections, and seek to levy taxes to pay for the cost of these programs in the first few years after elections.

Chapter seven provides a summary of the results of the hypotheses examined in the earlier chapters.³² The major substantive conclusions of the dissertation are recapitulated and an attempt is made to place them in a more general context. The implications of the study for future research and the qualifications to which it is subject are discussed. Finally, the contribution of the study to theories of public expenditures and theory construction in general is assessed.

The Research Design: A Longitudinal Analysis

Policy processes occur in time and within particular political jurisdictions. All public policies have a history and are in large part determined by that history.³¹ This point is particularly relevant when government expenditure patterns are being examined. As was noted previously, most studies of budgeting at the national and sub-national level have demonstrated that budget decisions revolve around whether

to increase or decrease last year's base.³² Richard Rose has argued in this regard that:

Dynamic properties are of crucial importance, because policies are not advocated, adopted, implemented and evaluated at one cross-sectional moment in time... Established policy areas of the welfare state are best suited for dynamic analysis.³³

In spite of this fact, most of the previous studies of comparative public policy have been cross-sectional in design. The units of analysis have been particular governmental units at a single point in time, although a few studies have used repeated cross-sections. Moreover, even the studies purporting to be longitudinal have been largely cross-sectional analyses of change as opposed to true longitudinal designs.³⁴

From these static analyses some authors have been tempted to draw conclusions as to how policies have changed over time.³⁵ As Chandler, Chandler and Vagler have argued, most attempts to provide a comparative description of policies either by cross-state or developmental comparison have relied upon implicit theories of policy change. Thus the cross-sectional quantitative studies of public policy outputs have been based upon some ideas of policy change, whether articulated or not.³⁶ This inference problem, which Alker has labelled the "cross-sectional fallacy," has been ignored largely by students of public policy. The problem is that cross-sectional comparisons

at one point in time do not necessarily indicate how certain variables have been related historically. Alker has used the covariance theorem to demonstrate that there is no mathematical reason to expect the total correlation, the cross-sectional correlation and the time-series correlation to be equal.³⁷

Time series and cross-sectional analysis are each governed by a distinct logic of inference. In cross-sectional analysis, regression coefficients are estimated from data on all states in a single year. States are assumed to be similar or different to the extent that they conform or deviate from the cross-state pattern. However, in time-series analysis, the regression coefficients are estimated from each state and are defined in terms of differences through time for a single state. States are assumed to be similar to the extent that the same processes operate in each of them individually, and different with respect to the parameters that govern the operation of the processes in each state.³⁸

In order for cross-section estimates to have a valid time-series interpretation, two conditions must hold. First, the equations must include all pure section variables (those varying across governments but not time.) If any important variables are excluded, the estimates of the individual variables will be biased. Second, the coefficient estimates must be stable over time, and be unrelated to pure time

variables (those varying over time but constant across governments), which cannot be included in the cross-section estimates.³⁹ As James Coleman has argued, cross-sectional analysis assumes implicitly or explicitly that the causal process has resulted in an equilibrium state, so that the same relationship would hold at different time periods.⁴⁰ Since almost all of the previous studies have been based on one or more cross-sections, it is impossible to ascertain the reliability of the parameter estimates in a time-series context. It is similarly impossible to determine the relative importance of excluded variables when only a single cross-section is presented.⁴¹

Several empirical studies of the policy process in different governmental jurisdictions have demonstrated that variables which explain levels of expenditures do not explain changes in the level of expenditures.⁴² A study comparing cross-sectional with time-series estimates of policy outputs in the American states by Virginia Gray demonstrated empirically that, in eight of eighteen instances, reasoning from cross-sectional data alone would have been fallacious.⁴³ There are also numerous examples in the economics literature of relationships between variables which varied both in strength and direction when tested cross-sectionally and over time. For example, the relationship between suicide rates and income levels has been found to be negative over time, but positive in cross-sectional analysis.⁴⁴ There is also some evidence

of discrepancies in results from repeated cross-sections in the public policy literature.⁴⁵ In an article reviewing this debate, Edwin Kuh concluded with this note of caution:

What should be stressed... is that cross-sections cannot be used to make time series predictions unless a systematic relationship between the cross-section and the time series estimates has been firmly established. Only when joint information is available and empirical relations are established between the two types of information will it be possible to make inferences from one type of data to the other...⁴⁶

Peters, Bruner and Liepelt, Rose and others have argued on theoretical grounds that policy-making is a process.⁴⁷ It occurs within a governmental system; it does not occur across states or nations; hence cross-sectional analysis may not reflect the process from which the data were generated. While it is possible to ascertain the location of a single nation relative to other nations at one point in time with a cross-sectional analysis, this provides us with no information about the pattern of development which produced the observed distribution. Information about change over time is potentially valuable for the development of long range theories of policy formation.⁴⁸ Thus a longitudinal analysis may be more appropriate to this theoretical focus, explaining change over time.

Time-series analysis also has another advantage over cross-sectional analysis in that it can provide us with valuable information about the temporal sequence of crucial variables, and thus assertions about causality can be made

with a greater degree of confidence. While causality can never be demonstrated empirically, it can be eliminated as a possibility if the independent variable does not precede the dependent variable.⁴⁹ Propositions regarding the impact of society upon the polity or the reverse usually assume a lapse of time between the independent and dependent variables. Few relationships between variables are simultaneous in nature.⁵⁰ One of the assumptions of a causal relationship is that changes in the assumed dependent variable are preceded by changes in the assumed independent variable. This type of assumption cannot be tested directly in a cross-sectional analysis. However, in the time-series case relationships can be examined directly.

In addition to these questions regarding the validity of making time-series inferences from cross-sectional data, there are also methodological problems associated with the cross-sectional studies. Most of the studies of the relationship between political and economic variables and policy outputs have assumed that the relationship between these variables can be measured adequately by measuring policy outputs at one point in time and relating that measure to a long-term average of the independent variables. The problem is that if the independent variables vary greatly over time, then it is of great significance when the policy measure is taken. A long-term average of one or more of the independent variables might bear little relation to the level of these

variables actually prevailing at the time the policies in question were adopted. In addition, a policy measurement at some time removed from that date might hide an important lag in the relationship being tested.⁵¹ For example, a study by Edward Carmines employed dependent variables measured in 1969 and independent variables measured in 1963-64 in a correlation analysis, without providing any theoretical justification for the use of a fixed five-year lag.⁵² These problems suggest that a longitudinal design might be preferable to a cross-sectional design on both theoretical and methodological grounds.

SUMMARY AND CONCLUSIONS

Chapter one provided a brief outline of the major questions to be addressed by the dissertation. The need for an examination of the factors which may explain budgetary decisions by political elites was discussed and the rationale for an analysis of social security expenditures was described. The importance of a disaggregated approach to the analysis of public expenditures was stressed. The research strategy of beginning with a simple model and then proceeding to build on that structure in a cumulative and sequential manner was outlined. Thus the research process is to be sequential with later chapters incorporating the findings of earlier chapters.

The chapter presented an overview of the proposed contents of each chapter and described how they will be linked. It was argued that a longitudinal research design is most appropriate

for this research and both a theoretical and a methodological rationale was given for this assertion. The chapter concluded that some previous studies have attempted to make time-series inferences from cross-sectional data and some of the difficulties associated with making inferences of this kind were discussed.

The second chapter presents a description of the historical development of the welfare state in Canada, introduces some of the terminology employed in the study of social policy and outlines trends in the growth of expenditures over time.

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CHAPTER TWO

THE CANADIAN WELFARE STATE:
THE HISTORICAL BACKGROUND

CHAPTER TWO

THE MEANING OF SOCIAL POLICY AND THE WELFARE STATE

The purpose of this chapter is to define some of the terminology employed in the remainder of the dissertation. After this task has been accomplished, the chapter discusses the origins and historical development of the welfare state in general and the three policy areas in particular. Different approaches to the measurement of the welfare state, social policy, social security and income security, can lead to a different type of analyses and conclusions. In this chapter several restrictions are placed on the way in which these concepts are employed in the dissertation. This is necessary because various authors employ different terms to denote similar concepts. Yet, the indicators which are employed to operationally define these concepts are often identical.

~~The terms social policy, social security, income security~~ and the 'welfare state' are used almost interchangeably in the literature with the result that there is some confusion about what is being studied. Part of this confusion is attributable to the fact that different terms are employed in different nations. For example, social policy is often referred to as social administration in the British literature. The

term social security is American in origin, while Canadian studies frequently discuss income security. Although the terminology employed varies across nation-states, all of these concepts appear to have a common referent. According to T.H. Marshall, social policy

...is not a precise technical term with an exact meaning. It... refers to policies of governments with regard to actions having a direct impact on the welfare of citizens, by providing them with services or income. Its... central core consists of social insurance, health and welfare services and housing policy.¹

The American term 'social security' has been described by J. Henry Richardson in the following manner:

The essential purpose of social security is to ensure 'freedom from want' by collective or community provision for those people, who, because of misfortune, are temporarily or permanently without sufficient resources for their subsistence and essential health services.²

Canadian studies have distinguished between social services and income security. The latter refers to cash transfers to citizens according to some criteria (usually age), while the former includes the provision of services in kind, such as medicare or legal aid. Since this dissertation is concerned exclusively with cash transfers, social services will not be discussed further. According to a recent federal government White Paper:

...income security may be thought of as a combination of measures designed to protect the standard of living of individuals and families by augmenting their income when it is insufficient to provide the necessities regarded by society as being basic, or by replacing their income when it has been lost due to such contingencies as unemployment, accident, sickness, disability, or the loss of the breadwinner.³

Social policy, social security and income security fall under the more general heading of what has been labelled the 'welfare state'. According to Wilensky and Lebeaux, the welfare state denotes:

...government protected minimum standards of income, nutrition, health, housing and education for every citizen, assured to him as a political right, not as charity.⁴

In order to clarify the meaning of the terms employed in this dissertation, it can be said that governments pursue social policies such as income security and social services in order to fulfill the obligation of a social minimum implied by their acceptance of the welfare state.

There is general agreement in the literature that the distinguishing character of social policy is its character as a unilateral transfer by government as opposed to the bilateral exchange of the market. Social policy is characterized by state intervention designed to offset the free play of market forces in the interests of the citizen's welfare.⁵ Social policies modify the market in three ways. First, individuals and families are guaranteed a minimum income irrespective of

the market value of their work or property. Second, economic insecurity is reduced by replacing the incomes of individuals and families during social contingencies such as unemployment, old age, sickness and disability. Third, all citizens are provided with a certain agreed bundle of social services (medical insurance, hospital care).⁶

The measures designed to ensure a minimum income fall into two broad categories: Under public insurance schemes, employed persons insure themselves against loss of income whether by reason of unemployment, sickness or disability. In social insurance, the state employs or enforces via another body the market principle of contributions to guarantee benefits. Need is not recognized as a criterion for receipt of benefits. Under these schemes the employees and/or the employer on their behalf, contribute a proportion of their income to an insurance fund which replaces their income when they are ill, injured, unemployed or retired. Social insurance differs from private insurance in a number of important respects. Social insurance is compulsory rather than being based on a free contract. The lack of 'group-experience ratings' in government insurance plans and the typical averaging of all risks means that premiums are not related to the probability of becoming a beneficiary. Finally, the subsidy element in most government insurance schemes means that they are not actuarially sound.⁷ Unemployment insurance and the Canada Pension Plan are the best examples of Canadian schemes in operation.

Second, income support measures support the incomes of everyone who meets certain criteria. For example, payments may be made to all persons who are past a certain age, to all persons with children, or to all persons whose incomes are inadequate to support themselves or their dependents. These payments may be means-tested, such as the Guaranteed Income Supplement for the aged, or they may take the form of demogrants. A demogrant is a cash payment to an individual or family based solely upon their demographic characteristics. No recognition is given of differential need.⁸ Family allowances and universal old age pensions are perhaps the best known examples of income support programs in Canada.⁹

THE HISTORICAL BACKGROUND

The Canadian welfare state developed later than its equivalent in most other Western liberal democracies. The federal government moved to assume responsibility for the aged and destitute which had previously been borne by the provinces, municipalities and charitable institutions just prior to the onset of the depression. The development of Canadian social policy programs has been a twentieth century phenomenon and indeed, until very recently, Canada was deemed one of the 'welfare laggards' of the western democracies.¹⁰ During the period from 1940-1968 the foundations of the modern structure of Canadian social welfare institutions were established. This period saw the adoption of unemployment

insurance, family allowances, universal old age pensions, guaranteed income supplements, medical and hospital insurance, the Canadian Assistance Plan and the Canada Pension Plan.

It is noteworthy that, for the most part, the federal government has taken the initiative in enacting these new programs. This is despite the fact that most of the responsibility for social legislation falls under the constitutional jurisdiction of the provinces. While social policy is not discussed explicitly in the British North America Act (BNA), the provinces were assigned responsibility for hospitals, asylums, charities and eleemosynary institutions other than marine hospitals {92(7)}, municipal institutions {92(8)}, property and civil rights in the province {92(13)}, and all matters of a local or private nature {92(16)}. The federal claim to responsibility for social policy is based on its jurisdiction over quarantine and marine hospitals {91(11)}, Indians {91(24)}, and federal territories and penitentiaries {91(29)}. Because of the broad interpretation given to the property and civil rights clause {92(13)} by the courts, and the narrow interpretation given to the federal residuary powers implied in the peace, order and good government clause of section 91, it would appear that almost all social welfare powers not specifically enumerated under section 91 now fall under provincial jurisdiction, except during a national emergency.¹¹

While the federal government does not have any direct power to legislate social policies, given the judicial interpretation of the constitution, a number of devices have been used by the federal government to provide social programs. In the first place, they have used their power to raise revenues (by any mode or system of taxation {91(3)}). Second, they have used conditional grants to induce the provinces to develop certain programs. Finally, they have sought and obtained constitutional amendments to provide such programs as old age pensions and supplementary benefits {94(A)} and unemployment insurance {91(2A)}. The former power is held concurrently with the provinces with provincial paramouncy while the latter is an exclusive federal responsibility.

Perhaps the major reason for these repeated federal forays in the social policy field has been the chronic imbalance between legislative responsibilities and revenue sources in Canadian federalism and the associated regional disparities in wealth. The federal government has generally had less difficulty in raising revenue than the provinces due to its power to raise money by any mode or system of taxation, {91(3)}. In addition, it is well known that the cost of many provincial responsibilities (education, highways) has risen much more rapidly than was envisioned by the Fathers of Confederation, while certain federal responsibilities (defence) have become less expensive (in relative terms) over time. In summary, the provinces often lacked the financial resources

to act in the social policy field, while the federal government did not have the constitutional authority to do so.

There are a number of reasons why the provinces were reluctant to adopt social policy programs such as Unemployment Insurance. First, a province which introduced a social policy program would place itself at a commercial disadvantage with the other provinces, thus creating a situation whereby individual provinces were reluctant to introduce their own schemes. Second, economic recessions generally had more adverse effects on some areas of the country rather than others. Social insurance schemes, in particular, required a strong financial base to pay the ensuing claims. It was precisely the areas of the country with the highest rates of unemployment which had the weakest revenue base. Finally, there was a nationalistic feeling that citizens of Canada should be treated equally when facing economic adversity arising from a national or international problem.¹²

Explanations for the origins and growth of the Canadian welfare state are many and varied. In fact, each question is worthy of a separate and lengthy investigation. While the focus of this dissertation is on the growth of social security expenditures over time, it is nevertheless essential to provide a brief overview of the origins and historical development of the Canadian system, with particular reference to unemployment insurance, family and youth allowances and old age pensions.

The discussion of the historical development of the Canadian welfare state commences with the end of World War I. This is not to say that social legislation had not been proposed previously but rather that the legislative output of such policies had been meagre. A long series of government commissions, both federal and provincial, had recommended the enactment of social policies for some thirty years. The 1889 report of the Royal Commission on the Relations of Labour and Capital described with approval the thirty-eight-year old French scheme of life annuities for elderly workmen and widows.¹³ The British Old Age Pension Act of 1908 and the social insurance programs contained in the Lloyd George budget of 1908 had received widespread favourable comment in Canada. In the same year, the Trades and Labour Congress of Canada had recommended the implementation of workmen's compensation and old age pension legislation.¹⁴ In 1916 the Ontario Royal Commission on Unemployment had proposed the creation of a system of provincial unemployment insurance. Three years later in 1919, the federal Royal Commission on Industrial Relations had advocated a similar federal plan. The following year the Trades and Labour Congress of Canada urged the federal government to adopt a scheme similar in principle to that proposed by the Royal Commission of 1919.¹⁵ At about the same time, MacKenzie King's well-known polemic *Industry and Humanity* had endorsed a number of social security programs including family allowances, old age pensions and unemployment insurance.¹⁶

The period following the cessation of hostilities in 1918 was one of very high, and rising, unemployment. There was a rapid rise in the provincial debt and the cost of public welfare increased dramatically between 1918 and 1921.¹⁷ During the period from 1921-1930 the biggest increases in public expenditures were on public welfare and highways. Since these areas were the responsibility of the provinces, federal debts and expenditures fell, while the municipal debt increased by 20% and the provincial debt grew by over 70%.¹⁸ New social legislation was held up by the poor financial position of the provincial governments and by the fact that each was reluctant to put itself at a financial disadvantage with its neighbours by instituting major increases in taxation.¹⁹ The only new social policy program introduced at the federal level during this period was a shared-cost program of means-tested old age pensions in 1927. The federal government was reluctant to embark on any new social policies. At the same time, some three-quarters of the increased outlays for public welfare was borne by the provinces.²⁰ In 1929 the Select Standing Committee of the House of Commons on Industrial and International Relations recommended a system of insurance against unemployment, sickness and invalidity. The Committee endorsed the principle of a scheme based on contributions from the government, employers and employees and recalled the similar proposals of the Royal Commission on Industrial Relations of 1919.²¹

The onset of the depression meant that municipal and provincial revenues became less and less adequate to finance the cost of relief (payments to the employable unemployed). The municipalities were experiencing particular financial difficulties because the initial financial burden of the depression fell most heavily on them. They appealed to the provinces for financial assistance but were rebuffed initially on the grounds that "poor relief" was a municipal responsibility. However, the provinces eventually relented as many municipalities were near bankruptcy.²²

When the depression did not end as quickly as had been expected or hoped, it became apparent that the federal government was the only government which could effectively meet the large fluctuating expenditures arising from unemployment.²³ The Bennett government increased financial assistance to the provinces in the early 1930's, and finally, as the situation became increasingly desperate, the 'New Deal' was introduced in 1935. The 'New Deal' included the Employment and Social Insurance Act of 1935 which provided for a system of unemployment insurance for the employable unemployed.

The Conservative government was defeated later in the same year and the newly elected Liberal government asked the courts to give a ruling on the constitutionality of the Employment and Social Insurance Act.²⁴ The Act was ruled *ultra vires* of the federal government because it was judged

to deal with property and civil rights in the provinces. The court decided that the 'peace, order and good government' clause of section 91 was not applicable except during an emergency²⁵ which must be declared by the federal government. This decision effectively destroyed Canada's 'New Deal' and left the country with the problem of unemployment unsolved. It was agreed widely that compulsory social insurance remained the best solution, but the provinces could not afford insurance schemes individually.²⁶ In 1938, the Report of the National Employment Commission advocated a national system of unemployment insurance, unemployment assistance and a government employment service.²⁷ In the following year the long awaited Report of the Dominion-Provincial Relations concluded:

The experience of the past decade is conclusive evidence that unemployment relief should be a Dominion function. By unemployment relief we mean relief or aid for unemployed employables. Provincial responsibility for other welfare services should continue, and the provinces should be enabled financially to perform these services adequately. Provincial responsibility for social welfare should be deemed basic and general: Dominion responsibility, on the other hand, should be deemed an exception to the general rule, and as such should be strictly defined.²⁸

UNEMPLOYMENT INSURANCE

After the Judicial Committee of the Privy Council ruled that the Bennett government's Employment and Social Insurance Act of 1935 was *ultra vires*, the federal government asked the provinces to waive their rights in the unemployment insurance field. By June 1940 all of the provinces had done so and the British North America Act (BNA) was amended by adding section 91, subsection 2A to the document, thus giving exclusive legislative authority for unemployment insurance to the federal government. On August 1, 1940, the Unemployment Insurance Act became law. Contributions became payable on July 1, 1941, and by February 1942 claimants were receiving benefits. The plan was limited to a strict insurance concept and was not to include other types of social assistance. The Canadian plan was patterned after the British model of social insurance with tripartite contributions from employers, employees and the national government. The Unemployment Insurance Act had been at the planning stage for some years before its eventual implementation in 1941 but MacKenzie King had refused to press ahead because of objections from New Brunswick, Alberta and Quebec about the loss of provincial powers to the federal government. However, the newly-elected (1939) Liberal provincial government in Quebec reversed the Union Nationale's position on this question and eventually the other provinces were persuaded to accept a constitutional amendment.

In Canada, as in many other liberal democracies, the demand for adequate provision for soldiers' dependents during the war and for veterans and their families after demobilization led to the first major federal forays in the social security field.²⁹ During the war, social security measures were proposed as a means of maintaining citizen morale for the duration of the conflict. Promises by politicians of a new social order after the war, and the ringing declarations of the Atlantic Charter, meant that policy makers were almost forced to provide legislative substance to their wartime rhetoric after hostilities had ceased. Wartime promises had the effect of increasing expectations among the citizenry. Leonard Marsh has argued in this vein that social security became accepted as one of the issues for which the soldiers were fighting in World War II.³⁰ A similar view was expressed by Sir William Beveridge in a report to the British Government at about the same time. Beveridge believed that individual citizens would be more likely to concentrate on the war effort if they believed that the government was preparing for a better world after the war.³¹

Unemployment remained a very serious problem in the first few years of the war in Canada with 11.4% unemployment in 1939 and 9% in 1940.³² Thus post-war reconstruction posed the problem of how to find adequate employment opportunities for returning soldiers, as well as employees of war related

industries. According to several observers, high levels of unemployment at the beginning of the war and the prospects of massive unemployment after the war were a major concern of policy makers at the time. Policy makers were also determined to avoid the pattern of events which had followed World War I. The First World War had been followed by an unprecedented wave of strike activity and labour unrest which had culminated in the Winnipeg General Strike of 1919. It was believed that the introduction of social legislation would help dampen unrest, cushion the shock of the peace, maintain the free enterprise economy and protect the major parties against electoral threats from the left.³³

The advent of the Keynesian revolution and the apparent success of Keynesian remedies in wartime provided policy makers with a tool which could be used to forestall the feared economic recession after the war. The social goals of government initiatives in the income security field became more acceptable with the advent of Keynesian economics. Social policies were promoted among the public as welfare measures, however, policy makers appeared to be less concerned with alleviating poverty than with maintaining purchasing power after the war.³⁴ According to Finkel, the aim of unemployment insurance was to enforce workers saving for future unemployment rather than to increase their relative incomes.³⁵ Social insurance was thought to be less likely than public welfare

to undermine thrift and individual initiative, as social insurance conformed to the market principle of fee for service.³⁶

The Keynesian revolution also brought with it a recognition that unemployment may be caused or prevented by government action. Economists and policy makers had previously accepted the view that the economic marketplace was self-regulating and that government intervention would inevitably worsen the economic situation. Unemployment insurance was viewed in Keynesian terms as compensation to the unemployed for an economic situation for which the government was partly responsible.³⁷

Unemployment insurance was created to alleviate hardship experienced by workers during periods of unemployment. The plan did this by paying cash benefits to the insured unemployed and providing them with a substitute income for earnings lost due to a termination or interruption of employment. Unemployment insurance was a form of social insurance whereby the risk or contingency (wage loss due to unemployment) against which workers were being protected would in most cases be too great for individuals to bear alone. However, that contingency was not likely to occur so frequently as to make the cost too onerous when spread over most of the labour force. In order to ensure a broad financial base for the effective pooling of costs, payments were mandatory. Benefits were considered to be a matter of right established by fulfillment of

qualifying conditions, as contrasted with payments made on the basis of need.³⁸

Unemployment insurance was directed originally to members of the labour force who tended to work regularly and full-time and who experienced temporary involuntary unemployment for short periods of time.³⁹ However, since the inception of the program, the emphasis has shifted progressively from insurance principles to those of income support, culminating in the 1971 Unemployment Insurance legislation with its combination of universal coverage, greater generosity of benefit entitlement and federally financed extended benefits.⁴⁰

While there have been many significant changes in the Unemployment Insurance Act since its inception in 1941, the historical development of the legislation can be divided into roughly three time periods: 1941-1955, 1955-1971, and 1971-1977.

Basic Philosophy

(1) 1940-1955

The original legislation applied strict insurance principles to the risk of unemployment. An individual's entitlement to benefit was determined on the basis of his previous claim history. A National Employment Service was created as an adjunct to the insurance plan in order to provide an information service for employers and employees and to hasten an individual's return to employment. The plan was funded

primarily by employees and employers with a minimal government subsidy. The basic aim was one of economic stabilization with emphasis being placed on the need to maintain aggregate demand in the economy.

(2) 1955-1971

The waiting period for receipt of benefits was reduced and employee experience ratings were abolished during this period. The job placement function and the insurance function were separated formally in 1966. Coverage was increasingly extended to some occupations not considered suitable under strict insurance principles. The newly covered occupations included seasonal and part-time employment.

(3) 1971-1977

During this period, increased emphasis was placed on the redistributive effects of the program as reflected in increased federal government contributions. The program became more transfer-oriented as employer and employee contributions became less important as a source of revenue for the unemployment insurance fund. In addition, the use of the program as an economic stabilizer was directed to high unemployment areas of the country.⁴¹

Coverage

(1) 1940-1955

The initial coverage consisted mainly of the industrial and business sector, but was later expanded to include water

and air transportation, stevedoring, logging and nursing. Eligibility was based on 180 days contributions in the last two years (or since the previous claim) plus a requirement for recentness of attachment to employment. Benefit rates were established at 40% of average insured earnings, with a rate of 50% of average insured earnings for recipients with dependents. The maximum amount of benefits payable was established by legislation and varied periodically. Unemployment insurance benefits were non-taxable and payments could not be deducted from income tax.

(2) 1955-1971

Coverage was further extended to include police, fishermen and agricultural workers during this period. Eligibility was decided on a weekly basis, and required thirty insured weeks in the last 104 weeks with a stipulation that favoured recent labour force attachment. Benefit rates remained unchanged, but the maximum payments established by legislation were altered from time to time. Benefits remained non-taxable.

(3) 1971-1977

Virtually universal coverage was enacted in the revised Unemployment Insurance Act of 1971. Eligibility for benefits required at least eight weeks of insurable employment during the previous year or since the previous claim, whichever was shorter. The number of weeks of insured employment was later increased, and varied with regional levels of unemployment:

Benefits were increased to 66 2/3% of average insurable earnings, and a rate of 75% prevailed for claimants during the extended benefit period and to low wage earners through the entire claim. Maximum insurable earnings and therefore benefits were indexed to the cost of living. For the first time, benefits became taxable and contributions deductible from income tax.⁴²

Eligibility, Duration and Funding

(1) 1940-1955

Entitlement to benefits was based on a type of banking or credit system in which the insured built up entitlement credits which could be withdrawn during unemployment. The number of days of entitlement was equal to one-fifth of daily contributions during the previous five years minus one-third of the days of benefit received in the previous three years. Both employers and employees contributed approximately 1% of insurable earning to the fund. In addition, the federal government contributed one-fifth of total employer and employee contributions as well as paying the total administrative costs of the plan.

(2) 1955-1971

The funding formula remained in place with substantially the same provisions from 1955-1971. However, the duration of entitlement was expressed in dollars as a multiple of the weekly benefit rate. This multiple increased from 36 to 52 during the period.

(3) 1971-1977

The duration of benefits was determined from the number of weeks of insurable employment and the prevailing regional and national levels of unemployment to a maximum to 51 weeks of benefits. The funding formula was also changed in 1971. The regular initial benefits, special sickness, maternity, retirement benefits and administrative costs were paid by the private sector if the unemployment rate did not exceed a specified level (initially 4%). Extended benefits and regular initial benefit costs attributable to an unemployment rate exceeding the specified level and special fishing and agricultural benefits were paid by the federal government from the Consolidated Revenue Fund.⁴³

Long Term Trends

As was mentioned earlier from 1940 onwards, unemployment insurance coverage was extended increasingly to persons who were not suitable under strict insurance principles. In addition, increased emphasis was placed on the redistributive effects of the program as the federal government absorbed a larger and larger share of the cost of the program from general revenues. This trend became particularly apparent with the passage of the 1971 unemployment insurance legislation. The program became more transfer-oriented as a result of increased coverage and easier eligibility, changes in the funding arrangements, and the extension of the duration of funding related to regional and national unemployment rates.⁴⁴

Table 2 presents data on the percentage of total unemployment insurance account revenue represented by contributions from the federal government as opposed to employer and employee contributions. The table indicates that for most of the period from 1942 to 1977, the federal share represented some 15 to 16% of total unemployment insurance revenues. However, from 1974 onwards, the federal share has increased dramatically; averaging over 35% of total revenues, an increase of over 100% from the earlier period. This change appears to reflect record levels of unemployment in the early 1970's and the increased benefit levels which were passed in Parliament in 1971. Data on the total benefits paid under the Unemployment Insurance Act since the inception of the program are contained in Table 3. This table suggests that advances in current dollars have outnumbered declines by a ratio of about three to one, while advances have outnumbered declines by about two to one in constant dollars. The biggest percentage increases in total expenditures came in the first years due to the small initial base figures. Thus, while in the aggregate the growth rate of unemployment insurance expenditures has been about 17% per year with an increasing trend, the year to year fluctuations vary widely.

TABLE 2

Federal Government Share of
Total Unemployment Insurance
Account Revenue
(\$ millions)

	Federal Government	Total Revenue	Proportion
1942	\$ 7.3	\$ 44.0	16.6%
1943	11.5	70.7	16.3
1944	12.3	78.0	15.8
1945	12.7	83.1	15.3
1946	12.5	84.0	15.9
1947	15.2	98.7	15.4
1948	18.0	118.1	15.2
1949	19.7	130.5	15.1
1950	20.9	139.6	15.0
1951	26.1	174.2	15.0
1952	29.9	198.6	15.1
1953	31.1	209.8	14.9
1954	31.8	217.1	14.7
1955	31.7	216.4	14.7
1956	33.9	228.4	14.9
1957	37.4	250.3	15.0
1958	37.8	250.8	15.1
1959	37.1	234.2	15.9
1960	45.7	282.8	16.2
1961	55.1	333.1	16.5
1962	55.2	337.6	16.3
1963	57.3	346.3	16.6
1964	59.3	357.1	16.6
1965	62.1	374.8	16.6
1966	65.7	398.8	16.5
1967	68.8	423.7	16.2
1968	69.5	432.8	16.1
1969	86.6	537.7	16.1
1970	98.4	623.0	15.8
1971	99.0	629.6	15.7
1972	92.1	678.5	13.6
1973	-	930.8	-
1974	856.1	2121.9	40.4
1975	897.1	2520.5	35.6
1976	852.4	3442.3	24.8
1977	1683.0	4222.0	39.9

Source: Canadian Tax Foundation, The National Finances 1977-78
(Toronto: Canadian Tax Foundation, 1978).

TABLE 3

Unemployment Insurance Expenditures from Inception
of Program to 1977 (Fiscal Years)
(\$ millions)

	Expenditures	Prices ¹ (1971 = 100)	Deflated Expenditures
1942	.7	23.7	3.0
1943	1.7	24.6	6.9
1944	4.9	25.8	19.0
1945	21.0	26.7	78.7
1946	43.1	26.5	162.6
1947	35.2	29.4	119.7
1948	49.9	33.2	150.3
1949	86.0	34.8	247.1
1950	89.6	36.6	244.8
1951	90.5	40.9	221.3
1952	135.3	42.2	320.6
1953	186.9	43.4	430.6
1954	257.6	45.1	571.2
1955	215.2	46.8	459.8
1956	231.3	50.2	460.8
1957	385.1	52.5	733.5
1958	478.6	53.9	887.9
1959	415.2	55.8	744.1
1960	513.9	57.8	889.1
1961	424.7	59.6	712.6
1962	403.2	61.0	661.0
1963	365.7	63.7	574.1
1964	335.0	65.9	508.3
1965	297.8	69.4	429.1
1966	307.0	73.8	416.0
1967	388.6	79.0	491.9
1968	459.1	83.6	549.2
1969	542.1	90.5	599.0
1970	758.1	95.4	794.7
1971	1176.4	101.9	1154.5
1972	2281.4	109.2	2089.2
1973	2160.0	117.4	1839.9
1974	2560.2	132.6	1930.8
1975	3509.1	149.7	2344.1
1976	3631.0	182.2	1992.9
1977	4151.0	196.5	2112.5

¹Calculated from the quarterly data on the implicit price index for government expenditures on goods and services in the National Income and Expenditure Accounts for the period from 1947 to 1977. Quarterly data are not available prior to 1947. The figures for years prior to 1947 were calculated by combining one quarter of the price index for each year with three quarters of the price index of the preceding year and dividing by four.

Sources: Canadian Tax Foundation, The National Finances 1977-78 (Toronto: Canadian Tax Foundation, 1978); Dept. of Finance Canada, Economic Review, 1978 (Ottawa: Ministry of Supply & Services, 1978); Statistics Canada, National Income and Expenditure Accounts, Vol. 2 (Ottawa: Information Canada, 1976).

Table 4 presents data on the maximum rates of weekly unemployment insurance benefits since the inception of the program. The table indicates a gradually increasing trend in current dollars with the largest increases in maximum weekly benefits occurring in 1968 and 1971.

TABLE 4

Maximum Rates of Weekly Benefit Under
Unemployment Insurance Legislation

Date Effective	Prices 1961 = 100	Person Without Dependent	Deflated* Benefit	Person With Dependent	Deflated Benefit
Jan. 1, 1941	53.9	\$ 12.24	\$ 22.71	\$ 14.40	\$ 26.72
Oct. 1, 1946	60.0	12.30	20.50	14.40	24.00
Oct. 4, 1948	75.1	14.40	19.17	18.30	24.37
July 1, 1950	79.6	16.20	20.35	21.00	26.38
July 14, 1952	90.2	17.10	18.96	24.00	26.61
Oct. 2, 1955	90.1	23.00	25.53	30.00	33.30
Sept. 27, 1959	97.9	27.00	27.58	36.00	36.77
July 30, 1968	120.1	42.00	34.97	53.00	44.13
Mar. 1, 1971	133.4	46.00	34.50	58.00	43.51
Aug. 28, 1971	133.4	100.00	74.96	100.00	74.96
Jan. 1, 1973	150.4	107.00	71.14	107.00	71.14
Jan. 1, 1974	166.8	113.00	67.75	113.00	67.75
Jan. 1, 1975	184.8	123.00	66.56	123.00	66.56
Jan. 1, 1976	198.7	133.00	66.94	133.00	66.94
Jan. 1, 1977	214.2	147.00	68.63	147.00	68.63
Jan. 1, 1978	-	160.00	-	160.00	-

*(Prices 1961 = 100) Consumer Price Index

Sources: Canadian Tax Foundation, The National Finances 1977-78 (Toronto: Canadian Tax Foundation, 1978); Statistics Canada, Canadian Statistical Review, Historical Summary 1970 (Ottawa: Information Canada, 1972).

The trend in constant dollars is somewhat different. The value of maximum unemployment insurance benefits has been allowed to decline over long periods of time. For example, maximum benefits declined continuously from 1941 to 1955 and again from 1972 onwards. The largest increase in maximum benefits occurred in 1971 but because of record levels of inflation, the real value of those benefits deteriorated rapidly from 1971 onwards.

The growth of unemployment insurance expenditures since the inception of the program appears to reflect four general trends. First, the program increasingly moved away from strict insurance principles over the years. The inclusion of part-time workers, workers with seasonal employment and generally those workers with a very high risk of becoming unemployed was a departure from insurance principles and a move toward an income support plan. Second, the unemployment insurance program changed from a plan which covered only a small proportion of the labour force to one which included virtually the entire labour force. Third, benefit levels increased dramatically over the years. The increase in benefit levels was due to increases in labour incomes and to increases in the percentage of employee earnings which were paid to recipients. Finally, record levels of unemployment in the 1970's combined with higher benefit levels and relaxed eligibility conditions resulted in higher expenditures and necessitated the transfer of general government revenues.

to the Unemployment Insurance Fund in order to make up the shortfall between revenues and expenditures.

FAMILY AND YOUTH ALLOWANCES

The term family allowance refers to a method of aiding children through the provision of cash payments to the mothers, or in some cases the fathers, of these children. The basic purpose of the family allowance is to promote the welfare of children through a redistribution of the national income. A recent federal government White Paper describes the purpose of the Canadian family allowance program as follows:

These allowances are intended to provide for the additional needs of families with children to ensure better opportunities for children. They are also intended to compensate families for the inability of wage rates to take into account the number of dependents a worker has; workers with low wages and several children have insufficient income to raise and educate them. Since unemployment insurance only offers protection for one dependent, family allowances help families, particularly low-income families, when the worker is unemployed. Also, in the case of social assistance, adequate maintenance for a family with a number of children may mean a higher income or assistance than can be obtained through employment. Family allowances are paid whether a person is employed or unemployed and therefore makes it possible to provide more adequate support to these families without reducing the incentive for the breadwinner to return to work. The program was initially intended also to bolster income and employment in the post-war period by providing a steady flow of income security payments into the consumer spending stream.⁴⁵

Family allowances differ from other income security programs in that they support the earnings of those at work rather than maintaining the incomes of those who are either unable to work or whose employment is interrupted. Family needs do not constitute the same kind of risk as death, disability, retirement or unemployment. Wages are primarily a payment for services or productivity, and their relation to family needs, if it exists at all, is indirect.⁴⁶ In contrast to the economic process, it is a fundamental principle of the welfare state that the market value of an individual cannot be the measure of his/her right to welfare.⁴⁷ In this sense, family allowances were established in order to convert an individual wage into a family wage.

Although family allowance legislation was first introduced in the House of Commons in 1944, the idea had won support from Roman Catholics and French Canadians in the 1920's.⁴⁸ Family allowances were first proposed in Canada by the Reverend Leon Lebel, S.J., the Director of l'Union des cultivateurs catholiques, in a pamphlet published in 1927. The pamphlet argued that the introduction of family allowances would assure a steady supply of labour, which in turn would assure the prosperity of the country.⁴⁹ Family allowances were first proposed in the House of Commons two years later, in 1929, by J. Etienne Letellier (Liberal-Compton) and J.S. Woodsworth (Labour-Winnipeg North Centre).⁵⁰ In the same year, the Select Committee of the House of Commons on

Industrial and International Relations held hearings on family allowances. The committee reacted favourably to the idea of family allowances but the committee's final report recommended that no action be taken, at least until the legal jurisdiction for such legislation was ascertained.⁵¹

In 1932 the Quebec Social Insurance Commission studied family allowances but recommended against their implementation at the provincial level because it was thought the scheme would place Quebec manufacturers in a disadvantageous position relative to their counterparts in other provinces.⁵² In its book, *Social Planning for Canada*, the League for Social Reconstruction advocated family allowances as early as 1935.⁵³ As was the case during World War I, the first federal initiative in this area took the form of dependents' allowances for the women and children of servicemen in 1939.⁵⁴

In 1943 the Quebec provincial government provided enabling legislation by amending the Collective Agreement Act so that family allowances might be made part of a collective agreement. Since no employer was willing to add to his costs of production voluntarily by the adoption of a family allowance scheme, this legislation had little substantive effect.⁵⁵ The Trades and Labour Congress of Canada which had opposed family allowances from the beginning on the grounds that they would tend to depress wages, changed its stance in 1944 when it appeared that there was widespread support for the idea.⁵⁶

The first family allowance program was established in Canada with the enactment of the Family Allowances Act of 1944, which came into effect in July 1945. A series of changes were made to the program over the years, and in December 1973 a new Family Allowances Act received Royal Assent. This Act came into effect in January 1974. The age of eligibility was sixteen years and under until the end of 1973. Children on whose behalf allowances were paid had to be not only dependent, but also attending school in accordance with provincial law. Under the 1944 Act, a child not born in Canada had to be resident for three years immediately before registration, or have one parent who lived in the country for three years. In 1949, the qualifying period for a child was reduced to one year.

In September 1964, the Youth Allowance program was established. Allowances of \$10.00 a month were paid to all dependent children 16 and 17 years of age who were attending educational institutions full-time, or were prevented from doing so because of mental or physical disability. Youth allowances were not paid in the province of Quebec, which introduced its own Schooling Allowance program in September 1961. When youth allowances were established in 1964, the federal government compensated Quebec through tax abatements. Youth Allowances and Schooling Allowances were both superseded by the new Family Allowance program of 1973.

Under the 1973 Act, family allowances are payable on behalf of children who are maintained wholly or substantially by a parent or guardian residing in Canada. At least one of the parents or guardians must be a Canadian citizen, or a landed immigrant. From July 1945 to March 1949, allowances to the fifth child were reduced by \$1.00 a month, those to the sixth and seventh child \$2.00 a month, and those to the eighth and subsequent children by \$3.00 a month. Data on the way in which the rate structure has changed over time are presented in Tables 5 and 6. The tables indicate that the real value of family allowances has been allowed to deteriorate significantly over time, so that their value in 1977 was roughly equivalent to that of 1945.

Under the 1944 Act, the same rates prevailed in all provinces. However, a change under the 1973 Act allowed the provincial governments to vary the rates of federal payment in a province, on the basis of the number of children in the family, or their ages, or both. Provincial payments must equal at least 60% of the federal rate and must average the federal rate.

From 1944 to 1973 the rate of payment was revised from time to time through legislative amendments. After 1973 family allowances were increased at the beginning of each year in line with the Consumer Price Index. Indexing was suspended during 1976 as part of the federal government's financial austerity program, but was resumed in 1977.

TABLE 5

Monthly Family Allowance Rates Per Child, by Age
1945-1977 (current dollars)

Year	Age of Child				
	0-5	6-9	10-12	13-15	16-17
1945	\$5	\$6	\$7	\$8	-
1957	6	6	8	8	-
1973	12	12	12	12	-
1974	20	20	20	20	20
1975-76	22.08	22.08	22.08	22.08	22.08
1977	23.89	23.89	23.89	23.89	23.89

TABLE 6

Monthly Family Allowance Rates Per Child, by Age
1945-1977 (constant dollars)

Year	Age of Child				
	0-5	6-9	10-12	13-15	16-17
1945	\$8.62	\$10.34	\$12.07	\$13.97	-
1957	6.36	6.36	8.48	8.48	-
1973	7.98	7.98	7.98	7.98	-
1974	11.99	11.99	11.99	11.99	11.99
1975	11.95	11.95	11.95	11.95	11.95
1976	11.11	11.11	11.11	11.11	11.11
1977	11.15	11.15	11.15	11.15	11.15

Prices (1961 = 100) Consumer Price Index

Sources: Canadian Tax Foundation, The National Finances 1977-78
(Toronto: Canadian Tax Foundation, 1978); Statistics
Canada, Canadian Statistical Review, Historical Summary
1970 (Ottawa: Information Canada, 1972).

Under the original Act, family allowances were not considered as taxable income, but this changed in 1973. Two provinces, Quebec and Prince Edward Island, pay provincial supplements to the new family allowances.⁵⁷

It is important to note that the federal government does not claim that family allowances provide a sufficient amount of income to provide an adequate standard of living, but instead refers to the scheme as a contribution to an adequate standard of living for children when combined with private or family earnings. For example, in 1974 annual family allowance payments per child were \$240. However, the Special Senate Committee on Poverty had estimated three years earlier that the cost of maintaining a child at the poverty line was \$700 a year. The amount of payment appears to be based on what the governing party feels can be afforded without increasing taxes, plus a calculation of the probable political advantage to the governing party of altering the rates. However, historically the real value of family allowances has been allowed to deteriorate over long periods of time before adjustments were made.⁵⁸

Another important reason for the implementation of the family allowance was that the federal government found it difficult to refuse to do for the employed what had already been done for the unemployed in 1940. Otherwise, the federal government risked the possibility that the latter would be better off financially than the former. The problem

was that earnings related benefits for the unemployed failed to maintain everyone above an officially designated poverty line, unless either a minimum benefit was awarded or the award was related to family circumstances. The best way of overcoming the problem of paying some people more when they are unemployed than when they are working was thought to be the adoption of a universal family allowance program.⁵⁹

To this point, the social goals of the program have been stressed. However, it is apparent that the federal government's motives in introducing the plan were economic and social in that order, although the importance of the program as a welfare measure was emphasized by the government. The adoption of the family allowance program was a clear demonstration of the influence of Keynesian economics upon public policy during this period.⁶⁰ According to Lord Keynes and his followers, the central problem of the unplanned market economy was its failure to generate a sufficient, steady demand for its products. Employment depended on the maintenance of a high level of aggregate demand and required spending, either public or private. There are two kinds of spending, consumption and savings. Consumption contributes to employment directly, however, savings only generate employment if it is invested. According to Keynesian theory, a more equal distribution of income would result in greater consumption. Social security expenditures serve to expand

and maintain private outlay because the marginal propensity to consume is highest among low wage earners.⁶¹

The original family allowance program was introduced largely for economic reasons. Family allowances were viewed as a socially desirable means of distributing resources for war purposes in a way that might stimulate the purchase of available consumer goods when other forms of semi-durable and durable goods were in short supply, and when the release of tax resources to other groups in the community might have led to inflation.⁶² These ideas were popularized widely by the Marsh report in Canada and the Beveridge report in Britain. The government hoped to maintain purchasing power, to maintain ceilings on wages as an adjunct to price control, to redistribute income and to provide more equality of opportunity for children from families in all walks of life.⁶³ Family allowances had the advantage that they would increase the purchasing power of those most in need and thus, they were thought to be less inflationary than a general increase in wages.⁶⁴ The Report of the National War Labour Board, tabled in the House of Commons on January 28, 1944, recommended that either a scheme of Family Allowances be implemented or wage restrictions on workers earning up to 50¢ an hour be lifted.⁶⁵ It is interesting to note that this proposal was almost identical to that suggested by Keynes in his book *How to Pay for the War*, published in Britain in 1940.⁶⁶

In Britain, as in Canada, the objectives of the family allowance policy were not the same before and after they were implemented. As the objectives changed, so did the character and extent of support for the policy. In the early days, family allowances were seen by socialists and feminists as reducing inequalities between the rich and poor and between men and women. Later, however, the Liberals and Conservatives in both countries supported family allowances when they were linked to other problems such as a declining birth rate, poverty and malnutrition among children, the maintenance of work incentives and the curbing of inflation. Family allowances gained priority when they became relevant as a tool of government economic policy to maintain purchasing power and promote economic stability.⁶⁷

Expenditure Trends

Table 7 presents data on the growth of expenditures on family and youth allowances over time. The figures are presented in both current and constant dollars. Overall expenditures have increased at a rate of about 5.8% per year in current dollars. The largest increase occurred in 1974 with the implementation of the new Family Allowances Act. During the period from 1945 to 1973 expenditures on family and youth allowances actually declined in constant dollars. In fact, the largest expenditures were experienced in the second year of the program and they did not regain the same level until 1974 with the introduction of the new Family Allowances Act.

TABLE 7

Expenditures on Family Allowances and Youth Allowances
from Inception of Program to 1977 (Fiscal Years)
(\$ millions)

Year	Expenditures		Prices ¹ (1971=100)	Total FA/YA	Total Deflated Expenditures FA/YA
	FA	YA			
1945	172.6		26.7		646.4
1946	245.1		26.5		924.9
1947	263.2		29.4		895.2
1948	270.9		33.2		815.9
1949	297.5		34.8		854.9
1950	309.5		36.6		845.6
1951	320.5		40.9		783.6
1952	334.2		42.2		791.9
1953	350.1		43.4		806.7
1954	366.5		45.1		812.6
1955	382.5		46.8		817.3
1956	397.5		50.2		791.8
1957	437.9		52.5		834.1
1958	474.8		53.9		880.9
1959	491.2		55.8		880.3
1960	506.2		57.8		875.8
1961	520.8		59.6		873.8
1962	531.6		61.0		871.5
1963	538.3		63.7		845.1
1964	545.8	23.9	65.9	569.7	828.2
1965	551.8	46.4	69.4	598.2	862.0
1966	555.8	47.4	73.8	603.2	817.3
1967	558.8	49.4	79.0	608.2	769.9
1968	560.2	52.4	83.6	612.6	732.8
1969	560.0	55.1	90.5	615.1	679.7
1970	557.9	58.0	95.4	615.9	645.6
1971	554.4	59.7	101.9	614.1	602.6
1972	548.6	59.0	109.2	607.6	556.4
1973	946.2	47.1	117.4	993.3	846.1
1974	1824.0		132.6		1375.6
1975	1957.5		149.7		1307.6
1976	1979.8		182.2		1086.6
1977	2104.0		196.5		1071.2

¹Calculated from the quarterly data on the implicit price index for government expenditures on goods and services in the National Income and Expenditure Accounts for the period from 1947 to 1977. Quarterly data are not available prior to 1947. The figures for years prior to 1947 were calculated by combining one quarter of the price index for each year with three quarters of the price index of the preceding year and dividing by four.

Sources: Canadian Tax Foundation, The National Finances 1977-78 (Toronto: Canadian Tax Foundation, 1978); Canada, Statistics Canada, National Income and Expenditure Accounts, Vol. 2 (Ottawa: Information Canada, 1976).

OLD AGE PENSIONS

Canada has three major forms of income maintenance for the aged:

- (1) universal flat-rate pensions:
Old Age Security (OAS);
- (2) income-tested supplements:
Guaranteed Income Supplement (GIS);
and
- (3) contributory earnings related pensions:
Canada Pension Plan, Quebec Pension Plan.

Old Age Security (OAS) pensions take the form of demogrants, while the Canada and Quebec Pension Plans are social insurance schemes. Persons who receive an OAS pension and have modest amounts of income from other sources are eligible for means-tested additional benefits under the Guaranteed Income Supplement Plan (GIS). The maximum supplement is reduced when additional income is received from sources other than OAS/GIS, or provincial payments designed to supplement the OAS/GIS pension.⁶⁸

Old age pensions were first mentioned in the House of Commons in 1912, and in 1913 a Committee of the House was appointed to study existing schemes in other countries.⁶⁹ In 1919, the Royal Commission on Industrial Relations proposed a state social insurance system including unemployment, sickness, invalidity, and old age.⁷⁰ Throughout the 1920's, the Trades and Labour Congress pressed unsuccessfully for these benefits.⁷¹

The first national program of old age pensions was a joint federal-provincial assistance program enacted in 1927. Under this plan, the federal government made grants to the provinces to cover part of their expenditures on old age assistance. However, the terms of assistance, the rates and the administration of the program remained the sole responsibility of the provincial governments.⁷²

After the joint federal-provincial scheme was in operation there were numerous complaints about geographic inequities in the plan. Since it was a conditional grant program, not all provinces chose to join as many could not afford the 50% provincial share. This meant that all Canadians were paying federal taxes to support a program which was not operative in all provinces. By 1931 the five western provinces had joined. After the federal contribution was increased to 75% in 1931, the four remaining provinces joined.⁷³

The growing inadequacy and unpopularity of the means-tested joint federal-provincial plan, in spite of recurrent increases in benefit levels, led to repeated calls for a federal plan. In 1929, the House of Commons Committee on Industrial and International Relations proposed a federal scheme of old age insurance.⁷⁴ A decade later the Rowell-Sirois Commission expressed the view that old age insurance should be under federal jurisdiction. It therefore recommended that the federal government be given the authority to institute a system of compulsory old age and survivors insurance.⁷⁵

The federal government's proposals for post-war reconstruction in 1945, which fell by the wayside because of a lack of provincial agreement, would have provided old age security payments of \$30 a month without a means test to all citizens over seventy years of age. It appears likely that the federal government would have legislated old age pensions during the Second World War if they had felt that they had the constitutional authority to do so.⁷⁶ In 1950, a Joint Committee of the Senate and the House of Commons conducted a full inquiry into old age pensions. After studying pension plans in other countries, the Committee recommended and the government subsequently enacted, a national universal old age pension program in 1951. At the same time, legislation was enacted providing for a means-tested joint federal-provincial program of old age assistance for those from sixty-five to seventy years of age.

Universal old age security pensions were first introduced in Canada in January 1952. The federal scheme was only possible after a new section was added to the British North America Act in 1951 conferring authority (but not exclusive authority) to Parliament to make laws in relation to old age pensions. In 1964, the British North America Act was further amended to expand this section (94A) to cover supplementary benefits, including survivors and disability benefits irrespective of age.⁷⁷

Payments of \$40 a month were initially made to all persons over 70 years of age who had satisfied a twenty-year residency

requirement. In 1957, the residency requirement was cut in half to the immediately preceding ten years with the same provision as before to permit the offsetting of absence from the country in all but the last year preceding receipt of payment. The age of eligibility was reduced one year at a time from 1966 to 1970 so that by 1970 pensions were payable at age sixty-five.⁷⁸

From 1968 onwards, pensions were adjusted in accordance with a pension index linked to the Consumer Price Index. However, this adjustment was limited to 2% per annum. In 1971 the basic pension was raised to \$80 per month and the adjustment for price changes was abolished.⁷⁹ The following year the upward adjustment of universal pensions was reinstated with a full adjustment for the cost of living as opposed to the previous 2% ceiling.⁸⁰

A special levy, called the 'old age security tax', was enacted to cover the costs of the plan. The old age security tax consisted of three components with a 2-2-2 formula and was based on 2% levy on each of the manufacturer's sales tax, the corporate income tax and the individual income tax. In 1959 the formula was changed to 3-3-3 with the maximum personal income tax component being raised to \$90 from the previous \$65. The old age security tax was abolished in January 1972. Receipts were paid into an 'old age security fund' which was kept as a separate account in the Consolidated Revenue Fund. All benefits were paid out of this fund. The Minister of Finance

was empowered to make temporary loans to the fund if receipts did not equal expenditures. It should be noted that the Old Age Security Fund was merely a nod to the contributory principle and this was essentially a use of general tax revenues. Benefits were not actuarially related to contributions.⁸¹

The Guaranteed Income Supplement (GIS) was introduced through an amendment to the Old Age Security Act in 1966 and came into effect in January 1967. The program was intended to assist pensioners with no income other than the Old Age Security pension. When the program began in January 1967, the maximum supplement was set at \$30 a month, and until March 1971 it was kept at 40% of the Old Age Security pension. Effective April 1, 1971, the monthly rate for full supplementation was raised to \$55 for single pensioners and \$47.50 each for married couples who were both pensioners. At the same time, it was decided that the rate would be escalated using the Consumer Price Index, subject to a 2% ceiling.

Effective January 1972, the monthly rate of full supplementation was raised to \$67.12 for single pensioners and \$59.62 each for married pensioners both of whom were receiving supplements. As of April 1973, the supplement was increased annually by the full increase in the Consumer Price Index. Effective April 1973, the maximum amount of supplementation was raised to \$70.14 a month for single pensioners and to \$126.60 for married couples, both of whom were pensioners. Since October 1973, the supplement has been increased quarterly in line with the Consumer Price Index.

The Minister of National Health and Welfare described the objectives of government retirement income programs in 1975 as follows:

...we have looked upon the OAS/GIS and CPP programs as the first two tiers of a three-tier system that are (sic) geared to ensuring basic adequacy of income for the retired. As for private pensions and savings, we have regarded them as the third tier which is concerned with ensuring whatever supplementary margin of comfort individual Canadians might desire.⁸²

Old age security pensions are similar to permanent disability pensions as no future return to the labour force is expected. Old age is only a problem because of increasing inability to perform useful work. The total cost of old age pensions has increased because the aged have come to represent a larger and larger proportion of the population over time.⁸³ As Beveridge and others have argued, there was a general belief that all persons, even if not gainfully employed through their working years, should have certainty of a subsistence income when they were too old to work. Old age is probably the greatest cause of poverty because earnings stop at retirement.⁸⁴

Expenditure Trends

Data on the growth of expenditure on old age security pensions and the guaranteed income supplement (in both current and constant dollars) are presented in Table 8. The table indicates that total expenditures in current dollars

have increased each year since the inception of the program. The trend is one of smooth exponential growth with few large year to year increases. When this pattern is examined in constant dollars, it is substantially different. Expenditures actually declined from the previous year on eight of twenty-seven occasions, although the pattern remains one of gradually increasing expenditures over time. The data on the maximum monthly OAS pensions since the inception of the program are contained in Table 9. Table 9 suggests that while the maximum rate of monthly benefit has increased steadily in current dollars, the real value of old age pensions in constant dollars has declined over long periods of time. For example, the value of old age pensions reached a maximum of \$72.82 in 1963 and has declined since that time. This is in spite of periodic changes in the level of benefits during this period. Increases in benefit rates have been much lower than the real increase in the cost-of-living during this period.

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TABLE 8

Old Age Security and Guaranteed Income Supplement Expenditures
from Inception of Program to 1977 (Fiscal Years)
(\$ millions)

Year	Expenditures		Prices ¹ (1971 = 100)	Total OAS/GIS	Total Deflated Expenditures OAS/GIS	
	OAS	GIS				
1951	76.1		40.9		186.1	
1952	323.1		42.2		765.6	
1953	338.9		43.4		780.9	
1954	353.2		45.1		783.1	
1955	366.2		46.8		782.5	
1956	379.1		50.2		755.2	
1957	473.9		52.5		902.7	
1958	559.3		53.9		1037.7	
1959	574.9		55.8		1030.3	
1960	592.4		57.8		1024.9	
1961	652.1		59.6		1048.8	
1962	734.4		61.0		1203.9	
1963	808.4		63.7		1269.1	
1964	885.3		65.9		1343.4	
1965	927.3		69.4		1336.2	
1966	1033.4	39.6	73.8	1073.0	1400.3	1453.9
1967	1153.3	234.8	79.0	1388.1	1459.9	1757.1
1968	1296.8	244.5	83.6	1541.3	1551.2	1843.7
1969	1467.0	263.5	90.5	1730.5	1621.0	1912.2
1970	1634.2	273.0	95.4	1907.2	1713.0	1999.2
1971	1679.2	526.1	101.9	2205.3	1647.9	2164.2
1972	1786.4	737.9	109.2	2524.3	1635.9	2311.6
1973	2274.4	760.1	117.4	3034.5	1937.3	2584.8
1974	2606.8	837.7	132.6	3444.5	1965.9	2597.7
1975	2975.8	922.3	149.7	3898.1	1987.8	2601.7
1976	3318.9	1017.1	182.2	4336.0	1821.6	2371.8
1977	3662.2	1077.6	196.5	4739.8	1863.7	2412.1

¹Calculated from the quarterly data on the implicit price index for government expenditures on goods and services in the National Income and Expenditure Accounts for the period from 1947 to 1977. Quarterly data are not available prior to 1947. The figures for the years prior to 1947 were calculated by combining one-quarter of the price index for the first quarter of each year with three-quarters of the price index of the preceding year and dividing by four.

Sources: Canadian Tax Foundation, The National Finances 1977-78, (Toronto: Canadian Tax Foundation, 1978); Statistics Canada, National Income and Expenditure Accounts, Vol. 2 (Ottawa: Information Canada, 1976).

TABLE 9

Maximum Monthly Pension Under the Old Age Security Act.
from Inception of Program to 1977

Effective Date	Prices ¹ (1961 = 100)	Amount	Deflated Amount
Jan. 1, 1952	90.2	\$ 40.00	\$ 44.35
July 1, 1957	94.3	46.00	48.78
Nov. 1, 1957	94.3	55.00	58.32
Feb. 1, 1962	101.2	65.00	64.23
Oct. 1, 1963	103.0	75.00	72.82
Jan. 1, 1968	120.1	76.50*	63.70
Jan. 1, 1969	125.5	78.00*	62.15
Jan. 1, 1970	129.7	79.58*	61.36
April 1, 1971	133.4	80.00	59.97
Jan. 1, 1972	139.8	82.88*	59.28
April 1, 1973	150.4	100.00	66.49
Oct. 1, 1973	150.4	105.30	70.01
Jan. 1, 1974	166.8	108.14*	64.83
Jan. 1, 1975	184.8	120.06*	64.97
Jan. 1, 1976	198.7	132.90*	66.88
Jan. 1, 1977	214.2	141.34*	65.99
April 1, 1977	214.2	143.46*	66.97
July 1, 1977	214.2	147.05*	68.65
Oct. 1, 1977	214.2	150.43*	70.23
Jan. 1, 1978		153.44*	

¹Prices (1961 = 100) Consumer Price Index
*Reflects cost of living adjustment

SOURCES: Canadian Tax Foundation, The National Finances 1977-78 (Toronto: Canadian Tax Foundation, 1978); Statistics Canada, Canadian Statistical Review, Historical Summary 1972 (Ottawa: Information Canada, 1972); Department of Finance Canada, Economic Review 1978 (Ottawa: Minister of Supply and Services, 1978).

SUMMARY AND CONCLUSIONS

Chapter two provided an overview of the historical development of the welfare state in Canada, with particular reference to the primary concerns of this thesis: unemployment insurance, universal old age pensions, family allowances and youth allowances. It was argued that the imbalance between legislative responsibilities and revenue sources in Canadian federalism was heightened by the economic depression and that this led to federal initiatives in the social policy field despite provincial jurisdiction in this area. Emphasis was placed on the economic rather than the social factors which gave rise to social policy legislation and the influence of Keynesian economics in policy matters was stressed. The chapter outlined over time trends in the level of public expenditures allocated to these programs, and indicated that increases in the cost of living have resulted in a decline in the real value of benefits provided to individuals. It was noted that the expenditure trends in current and constant dollars differ substantially. The trend in current dollars was one of more or less smooth exponential growth, while the trend in constant dollars provided evidence of advances as well as declines.

Chapter three examines the effects of the programs on the distribution of income in Canada. It builds on the introductory information provided in Chapter two and evaluates the effect of the three programs on the incidence of poverty and income inequality in Canada.

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CHAPTER THREE
INCOME REDISTRIBUTION THROUGH
THE BUDGET

CHAPTER THREE

INTRODUCTION

Most previous quantitative studies of public policy in political science have focused on the determinants of patterns of public expenditure and taxation. The question of the effect of public expenditures and taxation on the population has, until recently, received scant attention by political scientists. The reason for this situation is evident; the effects of government policies on the population are not generally convertible into the visible and accepted common denominator of dollars. While the Public Accounts record all government revenues and expenditures, there is no public listing of the effects of government expenditures or taxation on the population. The government budget provides no information about whether government policy goals are in fact being achieved, or whether public policies have unintended side effects. Critics of the policy outputs studies have argued that government spending is only one dimension of policy since it provides little information about the actual content or social impact of what is being done.¹ The dimension of public policy which most critics believe has been missing from the literature is the redistributive dimension.²

This chapter begins with an assessment of whether studies of the redistributive effects of government expenditures and taxation constitute a viable alternative or supplement to previous studies of the pattern of government expenditure and taxation. The chapter examines the publicly stated objectives of unemployment insurance, family and youth allowances and old age pensions and discusses the problems which multiple, and often conflicting, objectives pose for the researcher. The discussion of the objectives of these three policy areas is followed by an examination of the economics literature on the redistributive effects of unemployment insurance, family and youth allowances and old age pensions. Having outlined the evidence from the economics literature regarding the effects of these policies on the distribution of income, the chapter describes the limitations and shortcomings of these studies.

The chapter concludes that most of the studies of the effects of government expenditures and taxation on the distribution of income do not yield reliable quantitative estimates of income redistribution of a kind which could be employed in a statistical analysis. This conclusion arises from the fact that the estimates derived from these studies represent qualitative or perhaps ordinal measures of income redistribution. It can, however, be said with some confidence that old age pensions are the most redistributive of the three policies under consideration and family and youth

allowances are the least redistributive. What this implies is that while a stress on the redistributive effects of policies may be desirable theoretically, the state of the art is such that reasonably valid interval level measures of the redistributive effects of these three policies are not yet available. In light of this conclusion, the remainder of the dissertation examines variations in the level of public expenditures. Data on the redistributive effects of these policies are employed to identify independent variables which might contribute to an explanation of the level of expenditures on each policy area over time.

THE REDISTRIBUTIVE EFFECTS OF PUBLIC POLICY

There are three major reasons for the recent stress in the literature on the need to shift the focus of research from public expenditures and taxation to the effects of public policy on the distribution of income. The first reason is that most previous research has tended to conclude that economic rather than political variables exert the predominant influence of levels of public expenditure and taxation. Indeed, many studies reported that political variables had no independent effect whatever on levels of public expenditure. Many political scientists apparently believed that these research findings brought into question one of the key assumptions of the discipline, namely that politics has some influence on public policy. As a consequence, many writers

concluded that while political variables did not appear to be as important as economic variables in explaining levels of government spending, the results obtained in analyzing the redistributive effects of policy might be different.³ Fry and Winter's quantitative study of the politics of redistribution in the American states was the first and perhaps best known effort of this type to switch the focus of policy analysis from levels of expenditure to the allocation of expenditure. The authors hypothesized that while socio-economic variables may determine levels of expenditure, political variables would determine allocations.⁴ Their research results supported this view and, although their conclusions have since been challenged on methodological grounds, their work is illustrative of a new focus in public policy research.⁵ Moreover, to the surprise and approval of many political scientists, the authors concluded that:

...our data not only support the assertion that politics makes a difference, they suggest that politics plays a dominant role in the allocation of the burdens and benefits of public policies.⁶

Second, it has often been assumed, without sufficient evidence, that the amount of money spent in a political jurisdiction is a valid indication of the nature of the services provided by that jurisdiction. For example, teachers' organizations often argue that lowering the pupil-teacher-ratio, by hiring additional teachers, will increase student learning. However, recent studies by Sharkansky,

Peters, Coleman and others have increasingly brought this and similar assumptions into question.⁷ A study by Sharkansky of the relationship between public expenditures and services in the American states found little systematic relationship between service levels and expenditures. Sharkansky correlated measures of health expenditures with the infant mortality rate, education expenditures with measures of student performance on standardized tests and similar measures of service levels and expenditures to provide evidence for his study.⁸ A study of public expenditures and service levels in Sweden, by Guy Peters, reported results similar to those obtained by Sharkansky, but only in some policy areas. Peters concluded that the relationship between public expenditures and service levels may be functionally specific, that is dependent upon the policy area in question. Peters also argues that the direction of causality between expenditure levels and services is open to question. Policy makers may respond to a deterioration of service levels (e.g., pupil performance on standardized tests) by allocating greater expenditures to these areas. Whatever the reason for the weak relationship between public expenditures and service levels, these findings led many political scientists to conclude that the analysis of public expenditures, while important, left many questions unexplored.⁹

A third reason for the changed emphasis in public policy research was a normative concern with the distributive effects of public policies. The question of the effect of public

expenditures and taxation on the distribution of income was notably absent from the early policy output studies. There are few, if any, public goods which provide equal net benefits to all. Most goods distributed by government confer differential benefits. Some individuals are net contributors, while others are net beneficiaries from government activity. Thus, Richard Simeon has argued that:

The most important question to be examined in policy analysis in political science is Lasswell's who get what, when and how.¹⁰

After reviewing the American policy output studies, Jacob and Lipsky came to a similar conclusion:

The distribution of benefits and sanctions is perhaps the most significant output dimension for political scientists, since much of the conflict preceding the adoption of a program is not about whether it should be embarked upon but of who will pay and who will benefit... measures of redistribution are, unfortunately, rarely available in political records (an interesting political fact in itself).¹¹

Since this dissertation focuses on the determinants of public expenditures rather than the redistributive effects of public policy, the case in support of the latter type of research will be examined in some detail as it appears to have attracted a significant following. Studies of the redistributive effects of public policy pose some difficult problems for political scientists. The most important of these is the need to define those areas in which political scientists have a special competence or expertise. Political

scientists are amateur analysts when it comes to such areas as the incidence of public expenditures and taxation. Since most of the research into the redistributive effects of government policies has been conducted by economists, informed borrowing from the economics literature is required. The following section begins with a description of the publicly stated goals of social security in general and then proceeds to examine the objectives of unemployment insurance, family and youth allowances and old age pensions. The discussion of the objectives of each policy is followed by a review of the economics literature on the redistributive effects of that policy.

THE GOALS OF SOCIAL SECURITY

Government expenditures on health, education and welfare have grown more rapidly than government expenditures as a whole since the Second World War.¹² While it is difficult to document, there appears to be a growing resentment towards increases in taxation and public expenditures, particularly with respect to the perceived role of the state as redistributor of resources towards the poor. Protests over alleged abuses of social insurance schemes and the perceived side effects of social policies on work incentives and the rate of inflation have received increasing attention in recent years.¹³

Given the rapid increases in financial resources devoted to social security programs, it might be expected that government policy objectives in the social policy area would be clear and unambiguous. Unfortunately, this appears not to be the case. Statements by policy makers about what policy goals they are seeking to achieve in the social policy area prove to be remarkably uninformative in this regard. The alleviation of poverty, the reduction in income inequality and economic stabilization goals are mentioned frequently, but not discussed in detail.

In Canada, there is no clear consensus on the primary objectives of family allowances, old age security pensions and unemployment insurance. Each program has multiple objectives, some of which may be in conflict with one another. For example, some critics of the unemployment insurance scheme have argued that its effectiveness as a social insurance scheme has been reduced because of the inclusion of income maintenance objectives in the plan. Other critics of the plan assert equally vehemently that the plan should be more redistributive and that the social insurance aspects of the plan interfere with this objective.¹⁴ Early Canadian proponents of the welfare state, such as Leonard Marsh, argued that the welfare state was designed primarily to provide a social minimum, and this minimum was specified in monetary terms.¹⁵ This suggests that the alleviation of poverty rather than the reduction of income

inequality was the primary objective of the welfare state. The Beveridge Report in Britain and the Burns Report in the United States both appear to have been written with the goal of the alleviation of poverty in mind. Income redistribution *per se* has not been widely accepted as a goal of the welfare state in capitalist democracies.¹⁶ Finkel has argued that in the Canadian case, the welfare state was intended to place a floor under the standard of living of the working class but it was probably not intended to reduce economic inequality.¹⁷ The difficulty created for the researcher by the presence of multiple and poorly delineated program objectives has been summarized by Richard Bird in the following terms:

There is nothing necessarily wrong with trying to do two things at once--for example redistribute income while claiming to run an insurance program... what is wrong with insufficient clarity of purpose is that (a) no objective is likely attained very effectively or efficiently and (b) over time changes are made, often almost inadvertently, which lose sight of the major objective of the program.¹⁸

While Bird was referring specifically to the unemployment insurance program, his analysis is applicable to many other government programs.

Government social policies are generally aimed at achieving one of three principal objectives:

- (1) the alleviation of poverty;
- (2) the pursuit of equality; or
- (3) the maximization of welfare through an achievable optimum rather than a minimum.¹⁹

According to a recent government White Paper, income security has two basic goals: the prevention of poverty through the protection of income, and the alleviation of poverty by supplementing people's incomes when they are inadequate.²⁰

One of the functions of the government budget is income redistribution. The main instrument of expenditure policy used by the government to achieve this goal, according to the government and most of its critics, is the social security system including old age pensions, family allowances and unemployment insurance. Income redistribution through the budget may occur in one of three ways:

- (1) redistribution by contingency groups (e.g., from the employed to the unemployed, from the childless to those with children);
- (2) redistribution over the lifespan (e.g., from workers to children and the retired); and
- (3) redistribution by income class, from those with high incomes to those with low incomes.²¹

This chapter examines the third type of redistribution: redistribution by income class, although it is recognized that the three types of redistribution are not mutually exclusive. In many cases, income redistribution according to the socio-economic characteristics of the recipient may

result in redistribution by income class. However, since many of the groups to whom income is redistributed are concentrated in the low-income brackets, redistribution by socio-economic characteristics becomes effective redistribution by income class.²²

INCOME REDISTRIBUTION THROUGH THE BUDGET

This section reviews the literature on the effects of unemployment insurance, family and youth allowances, and old age pensions on the distribution of income in Canada. There have been a large number of such studies over the years and, although their quality has improved greatly, they still cannot provide precise estimates of the magnitude of redistribution which results from these programs. These studies can, however, provide an ordinal ranking of the amount of redistribution involved in the several programs described here. The following pages review the literature on the redistributive effects of the three policies and assess the reliability and validity of this body of research. The family and youth allowance program is considered first.

Family and Youth Allowances

The government's justification for family allowances from a social point of view rests largely on the fact that children increase the economic burden of the family without providing compensatory income by which the burden can be offset.²³ At the time of the introduction of the family allowance

program, one of its proponents endorsed the scheme as an anti-poverty measure:

Children's allowances are a clear part of a national minimum--of a direct attack on poverty where it is bound up with the strain imposed by a large family on a small income.²⁴

Yet, a government report written some thirty-five years later (1969) argued that while family allowances provided equality of treatment for all, they tended to be weak as an anti-poverty measure. This was due to the fact that it was impossible to finance benefits high enough to meet the needs of the poor and still give the same amount of benefit to well-off people.²⁵ Four years later, in 1973, Marc Lalonde, then Minister of National Health and Welfare, described the purpose of family allowance in somewhat different terms. According to Mr. Lalonde:

The objective of the new family allowance program is to provide a supplement to the income of Canadian families in such a way that those with the greatest need will receive the greatest benefit.

By taxing family allowances we will bring about a substantial degree of selectivity in the amount of the benefit, because a large part of the allowance will remain in the hands of those who need it most--the lower income families who do not earn sufficient income to pay taxes or who earn just enough to be taxed at the lowest marginal tax rate. On the other hand, families in the higher income bracket will receive a benefit that progressively reduces as income rises.²⁶

In addition to these social welfare objectives, family allowances had a number of economic objectives. They were initially thought to be less inflationary than a general rise in wages. They were also seen as a stimulant to consumption and thus employment, since the marginal propensity to consume increases with income. Family allowances were thought to constitute a "built-in economic stabilizer" in the economy, through their effect on the maintenance of a high level of aggregate demand.²⁷

Family allowances also helped resolve the conflict in social insurance and social assistance in arriving at a rate which met the needs of wage-earners, but which was not too high in relation to wages to result in work disincentives. Family allowances provided a solution to this problem through the provision of benefits to both the employed and the unemployed. In this way, it was always possible to earn more by working than by not working.²⁸

It is evident that family allowances served several policy objectives. While these objectives were not necessarily in conflict, it was never clear which objective was paramount in the minds of policy makers. In addition, the objectives which were stressed appear to be related to the circumstances at the time. Thus, greater emphasis was placed on the economic objective of the program when a post-war recession was feared, while the equity objective tended to be stressed in times of prosperity.

There have been several studies of the effect of family and youth allowances payments on the distribution of income. The most important of these studies are considered here. However, because of the large volume of information, all statistical tables have been placed in the Appendix. Interested readers may consult these tables if more detailed information is desired.

The first publicly available study of the redistributive impact of the family allowance program was published in 1954 by Joseph Willard, an official of the Department of National Health and Welfare and later Deputy Minister of the Department. Willard attempts to document his assertion that family allowance payments redistribute income by size brackets but most of his data serves only to demonstrate that a large proportion of the payments were spent in low income regions and provinces. However, Willard does provide some data on redistribution by income class for the fiscal year 1948. Willard's data indicate that family allowance payments fall as a percentage of disposable income as income increases. Average income tax payments were less than the value of family allowances for income groups below \$3500.²⁹

There are a number of difficulties inherent in the approach to the measurement of income redistribution adopted by Willard. First, he ignores income units not in receipt of family allowances and thus he cannot possibly offer any information on the overall redistribution of income.³⁰

Second, only income tax payments are considered to influence net income. Thus, all other taxes, including the portion of the corporate profits tax which is passed on to consumers, the federal sales tax and other indirect taxes are not discussed. This is a significant omission for two reasons.

First, the federal income tax represented only 32% of total federal revenues in 1948, the year of Willard's study.³¹

Second, the personal income tax is the most progressive federal tax and the omission of other federal taxes which are either proportional or regressive is likely to seriously understate the amount of taxes actually paid by families in the low income brackets.

A second attempt to measure the redistributive impact of the family allowance program was published three years later by the same author and reached conclusions similar to those reported in the earlier study. A similar study by James Vadakin in 1968 employed Willard's data and methodology and arrived at the same conclusions as Willard.³²

The third major study of the income redistributive effect of family allowances was completed by Anta Deutsch in 1968. According to the author, there are two basic steps in measuring the redistributive effect of family allowances. First, it is necessary to identify the recipients of income transfers and to calculate the tax burden by income class. Second, the tax burden is subtracted from the transfer

receipts to arrive at a measure of income redistribution.³³ Basic data on the distribution of family allowance payments by income class are presented in Table 10.³⁴

Deutsch found that income groups below \$2999 received only approximately 20% of family allowance payments, yet they constituted some one-third of all family units. Income units between \$3000-4999 collected 33% of all family allowance payments but represented only 28% of all income units. It is also important to note that family allowance payments were not taxable in 1961. However, no conclusion about the redistributive effect of family allowances is possible without an examination of the tax burden imposed on family units in the various income brackets.³⁵

In order to assess the redistributive effect of the family allowance program, it is necessary to compare the distribution of income before and after the existence of the program. This comparison can be accomplished if some assumptions are made concerning what would be done with the money allocated to the program if it were cancelled. Deutsch examines three such possibilities. The first possibility is a reduction in income taxes collected for the scheme by the extension of a uniform tax exemption to each income unit. It is important to note, however, that only those income units which actually paid taxes could take advantage of such an exemption. The second possibility is a uniform tax cut or proportionate reduction in the individual income tax. The two preceding

alternatives are based on the assumption that only those who pay taxes shoulder the burden of family allowance payments. A third possibility is that the cost of the program is borne by all those who cannot receive the same money in another transfer scheme. In this case, all income units who paid income taxes would receive a uniform tax reduction and those taxpayers whose incomes were too low to benefit from a tax reduction would receive a cash payment in lieu of a tax reduction.³⁶ Table 11 presents data on the tax burden of family allowance payments under each of the three alternate assumptions.

The table indicates that there were wide variations in the allocation of the burden of family allowance payments depending upon the assumption employed. According to the estimate based upon a uniform tax reduction, the income group below \$2999 paid for only 1.4% of family allowances, whereas, if the same figures given a negative poll are consulted, the same income group paid 34.4% of the cost. The assumption of a uniform tax reduction results in the \$5000 to \$9999 income group paying one-half of the cost, while if the uniform negative poll tax is applied they pay less than one-third of the cost. These differences are a function of the diverse definitions of burden underlying each assumption. Table 12 contains Deutsch's estimates of the net burden of the family allowance program under each of the three alternate assumptions. The table suggests

that, even given the most optimistic view, no more than one-half of the total amount collected is paid out to income units in different income classes from the ones in which the funds were raised (line 2). Overall, the table suggests that the amount of income redistribution between income classes is small, when compared to the overall value of the payments. Most of the redistribution in the family allowance program is among units of the same income class, to those with large families from those with smaller ones.³⁷ An overall rich-to-poor pattern of income redistribution emerges only under the assumption that the funds used to pay family allowances would be left in the hands of those who pay the requisite taxes. If it is assumed that the amount involved is collected from taxpayers in any case, and becomes available for any transfer program, then the family allowance program does not constitute the most progressive income redistribution possible.³⁸

Deutsch's data led him to the following conclusion with respect to the redistributive effect of the family allowance program:

...the main function of the family allowance program is to subsidize those who currently raise more eligible children at the expense of other citizens in the same income brackets who currently raise fewer.³⁹

Although Deutsch's study is more comprehensive than those discussed thus far, the major deficiency of the study is the assumption that family allowances are financed exclusively through the personal income tax. The question to ask is:

if family allowances were cancelled tomorrow, which taxes would be reduced? Since this is unknown and because the personal income tax is more progressive than other federal taxes, Deutsch may have overestimated the amount of redistribution actually involved. The finding that giving all family units a cash payment is more redistributive than giving payments only to families with children reflects the fact that families with children are not concentrated in the lowest income brackets.

The first major work which purported to examine the redistributive effect of the entire public sector was completed by Gillespie in 1964 for the Royal Commission on Taxation.⁴⁰ Gillespie's study is important because he departed from the methodology employed in earlier studies. His work is an improvement over previous studies because he examined the incidence of all federal taxes instead of concentrating exclusively on the federal income tax. Unfortunately, Gillespie did not calculate the net effect of individual programs (expenditure benefits minus tax costs), but instead measured the net redistributive effect of the entire budget at the federal and provincial levels. However, he did provide data which can be used to calculate the total costs and benefits of individual programs. Table 13 presents data on the total benefits and total costs of the family allowance program in 1961. The total costs column reflects the percentage of total federal taxes paid by each income

group under Gillespie's standard shifting assumptions. The total benefits column measures the percentage of all family allowances paid to each income group. The net benefits column reflects the difference between expenditures received by income class and taxes paid. The tables indicate that family allowances provided net benefits to all income classes below \$7000, and net costs to all families with income higher than \$7000. However, it is noteworthy that the income class below \$2000 received the smallest net benefit of all income classes who were net beneficiaries from the program, while the \$4000-4999 income class received the largest net benefits. The income class over \$10000 was the largest net contributor to the family allowance program. Overall, the table suggests that over 80% of all families received net benefits from the family allowance program, although the net benefits received were not large in magnitude.

Gillespie replicated his 1961 study with substantially the same methodology for the calendar year 1969 in an article published in 1976.⁴¹ Table 14 contains data on total benefits, total costs and total net benefits for the family allowance program in 1969. The table indicates that all income classes below \$10000 received net benefits from family allowances in 1969. Again, the net benefits received by the lowest income class were less than those of all other income classes who received net benefits, while the \$7000-9999 income class

received the largest net benefit. The greatest net contributors to the program were the over \$15000 income class. Overall, approximately three-quarters of all families received net benefits from the family allowance scheme.

The next published study of the redistributive effect of the family allowance program was published by Lawrence Kelly in 1971.⁴² The author employs data for the calendar year 1961. Kelly's main contribution to the debate is his observation that the family allowance program is only meaningful when it is studied in relationship to the tax system. For families with low incomes, family allowances raise income only to the extent that they exceed taxes paid on that income. The tax system ultimately determines how much a family allowance program will do for many families because tax deductions or exemptions serve the same function as family allowance.⁴³

Tax exemptions allow taxpayers to deduct a specified amount from their incomes in respect of each child before computing taxable income. Since taxes rise with income under a progressive personal tax system, the value of exemptions will be greater the higher the taxpayer's income.⁴⁴

Since 1945 there have been few increases in family allowances, but the exemption for dependent children has been raised on a number of occasions. What began as a system of family allowances supplemented by tax exemptions has become for many taxpayers a system of tax exemptions

supplemented by family allowances. Table 15 presents data on the value of family allowances and the \$300 tax exemption for dependent children which prevailed in 1970. The table indicates that the value of the tax exemption rises rapidly as income increases, so that the family allowance payments are clearly more pro-poor than are the tax exemptions. A similar study was published in 1976 by the National Council of Welfare. The Council argued that family allowances and tax exemptions for children work at cross-purposes. While the effect of the family allowance is to provide after tax benefits that decrease as income rises, the effect of the tax exemption for children is to produce a tax saving which increases with income. The net result of the combined measure is thus to produce a benefit that increases with income.⁴⁵ Table 16 shows the combined benefit in 1976 for families at various income levels, each having a child aged 10 and a child aged 16.

The next study to be considered, by Dodge, is noteworthy because it was written at the request of the federal Department of Finance which was anxious to assess the redistributive effect of both taxes and public expenditures at all levels of government.⁴⁶ Dodge's study, published in 1975, examined the incidence of total government taxes, transfers and public expenditures in 1970. The author also estimated the change in incidence that would have resulted if recent changes in federal tax legislation and increased

levels of transfer payments had been implemented in 1970. In particular, Dodge studied what the effects of the 1973 changes in the family allowance program would have been if they had been in effect in 1970.⁴⁷

Tables 17 and 18 present data on the distribution of the total costs, total benefits and total net benefits of the family allowance program as it existed in 1970 and a simulation of the 1973 family allowance changes on the 1970 distribution of income. A comparison of the net benefits accruing to each income group is presented in Table 19. The table indicates that net benefits increased with income up to an income of \$13000 and became net costs thereafter. The income class below \$3000 received approximately the same net benefits as the \$10000-11000 income class.

The seventh study of the redistributive impact of the family allowance program was written by Cloutier for the Economic Council of Canada in 1978.⁴⁸ Cloutier examined the before-tax benefits of family allowances by income quintiles as well as the tax burden resulting from this expenditure for the family allowance program in 1971, 1973, 1974 and 1975. These data are contained in Table 20. The table indicates that family allowance benefits before tax were distributed regressively (pro-poor) in all years and were most regressive in the last two years after the new Act was in place (1974, 1975). Total costs were distributed progressively in all years: however, in 1974 and 1975 the costs borne by the

middle income quintiles increased and those borne by the lower and upper income quintiles decreased, resulting in a less progressive tax incidence in 1974 and 1975 than earlier.⁴⁹ The effect of this trend toward increasing regressivity of benefit paid and decreasing progressivity of costs has resulted in a change in the pattern of net benefits of the program. In 1971, net benefits were mildly regressive, in 1973 mildly progressive, and in 1974 and 1975 clearly progressive.⁵⁰ However, according to Cloutier, the overall redistributive impact of the Family and Youth Allowances programs and the income tax exemption for dependent children taken together was regressive.⁵¹

The final study of the redistributive impact of family allowances to be considered here was published by Gillespie in 1978. The question Gillespie addresses is: "If budget X had been introduced during 1969, what would have been the impact on the distribution of income?" It was necessary to focus the comparison on 1969, since it was the last year for which comprehensive estimates on the redistribution of income via the public sector were available.

Table 21 contains Gillespie's data on the total benefits and total costs of family allowance changes between 1970-1977 on the distribution of income as it existed in 1969. The total costs measure is based on the tax changes which took place between 1970-1977. Overall, the table suggests that there was little change from the 1969 pattern. The lowest

income group (under \$2000) received the smallest net benefits, while the \$7000-9999 income group received the largest net benefits. In brief, the 1973 family allowance changes and the 1971 tax reform legislation had little effect on the overall redistributive effect of family allowances. The pattern was one of remarkable stability.

In summary, the several studies of the redistributive effect of the family allowance program indicate that while the program was somewhat progressive, the greatest benefits did not accrue to low income families. This situation reflects the fact that the recipients of family allowance payments are not concentrated at the bottom of the income distribution. Several authors noted, however, that tax deductions for dependent children provide the largest benefits to high income families. For this reason, family allowance payments and tax deductions work at cross-purposes. The effect of allowing tax deductions for dependent children is to reduce the overall progressivity of the program as a whole. Since family allowance payments were only slightly progressive in any event, the combined effect of tax deductions and family allowances was at best only slightly progressive or even proportional. In brief, the family allowance program provided only small benefits to the poorest families.

Old Age Pensions: Old Age Security/
Guaranteed Income Supplement

Unlike the family allowance program there was basic agreement among policy makers as to the objectives of old age pensions. Old age pensions were intended to provide basic adequacy of income for the retired. Pensions were thought to be necessary because earning stopped at retirement. Old age was probably the greatest cause of poverty. However, poverty among the aged only became more apparent to policy makers about the middle of the twentieth century. Growing urbanization and industrialization led to the break-up of the extended family over time. As fewer of the aged continued to live with relatives and the nuclear family became the norm, the aged were less able to support themselves financially. This economic insecurity was exacerbated with the advent of involuntary retirement at age sixty-five. The labour force participation rates of males and females over sixty-five have declined rapidly throughout this century.⁵² It is thus not surprising that the aged are concentrated in the lowest income groups in the population.⁵³ Moreover, the size of the aged population has increased both in absolute terms and in relation to the population.

Studies of the effect of old age pensions on income redistribution are not nearly as numerous as are the studies of the family allowance program. This may be because the

effects of the program are more intuitively obvious than those of the family allowance program. Alternatively, it may be that the effect of the program on vertical income distribution is obscured by the perception that only an intergenerational transfer is involved. One might speculate that old age pensions are more popular and thus less open to public scrutiny because everyone expects to grow old, while only some expect to have children.

The first major study of the redistributive impact of old age pensions was published in 1966 by Gillespie.⁵⁴ Gillespie's data on the total benefits, total costs and total net benefits of old age security pensions are contained in Table 22. The table indicates that all income groups below \$3000 were net beneficiaries of the program and all income classes above \$3000 were net contributors. The roughly one-third of all families below \$3000 received over 50% of the net benefits from old age security. Overall, the table suggests that the aged are concentrated in the lower income brackets and that the old age security program provides significant net benefits to this group.

The second major study of the redistributive effect of old age security pensions was published in 1968 by Deutsch.⁵⁵ Since his basic methodology was discussed in detail in the section on family allowances, it need not be discussed further. Table 23 contains data on the distribution of old age security payments by income class for the calendar year

1961. The table indicates that the income class below \$2999 received some 64% of total old age security pensions, yet represented only one-third of all families. In order to assess the tax burden by income class, Deutsch posits three alternative uses of the tax money which would be saved if the old age security pension program were eliminated. The three possibilities examined include:

- (1) the legal burden from the Old Age Security fund;
- (2) a uniform tax reduction; and
- (3) a uniform negative poll tax or direct cash payments to all income units.

These three alternate assumptions result in widely varying estimates of the tax burden of the program as indicated by Table 24. According to the legal allocation of the burden, the income group below \$2999 paid about 7% of the burden, while under the negative poll tax assumption they paid about 34% of the total. The author's estimates of vertical redistribution resulting from old age security pensions are presented in Table 25.

Table 25 presents widely divergent estimates of the total amount of Old Age Security benefits which were redistributed vertically by income class; however, the direction of vertical redistribution is clearly progressive.⁵⁶ All three estimates agree that over 90% of the total amount redistributed accrued to the lowest income group. The author estimates that each of the three options results in

a decrease in the degree of income inequality, as measured by a Gini index, which would have existed in the absence of the program.⁵⁷

The third major study of the redistributive effect of old age security pensions was conducted for the federal Department of Finance in 1975 by David Dodge.⁵⁸ Unfortunately, the author does not distinguish between the universal Old Age Security pension and the means tested Guaranteed Income Supplement (GIS). For this reason, his study is likely to lead to an overstatement of the redistributive effect of old age security and an understatement of the effect of the GIS. Dodge examines the total costs and total benefits of OAS/GIS in 1970 and also performs a simulation of the effects of the increased benefit level under these programs in the early 1970's and federal tax reform legislation on the distribution of income in 1970. Table 26 presents data on the total costs of OAS/GIS brackets in 1970. The total costs column is based on Dodge's standard assumptions concerning the degree of tax shifting associated with various taxes. The table indicates that family units with incomes less than \$4000 were the largest net beneficiaries of the program, while all families with incomes in excess of \$7000 were net contributors.

Data on the total costs and benefits associated with the increased OAS/GIS payments and tax reform legislation are presented in Table 27. The results of this table are similar to those contained in Table 26. The major difference is that

the lowest group (under \$7000) received slightly larger benefits, while the highest income group (over \$15000) paid a slightly higher proportion of the total costs.

The fourth and fifth studies of the redistributive effect of old age security payments were published by Gillespie in 1976 and 1978.⁵⁹ Gillespie presents data on the distribution of the total costs and total benefits of OAS in 1969 and also simulates the effect of the 1971 federal tax reform legislation and the increases in OAS/GIS which were implemented from 1970-1977. Unfortunately, the simulation combines OAS and GIS so the separate effects of each program cannot be ascertained. Data on the total benefits and total costs of OAS in 1969 are contained in Table 29. The table indicates that lower income families received the largest net benefit from the program, while all families with incomes over \$6000 were net contributors. Table 30 presents data on the total costs and benefits associated with the rate increases of the 1970's and of the federal tax reform legislation of 1971. A comparison of tables 29 and 30 suggests that the distribution of costs and benefits were nearly identical. The impact of the rate increases and federal tax reform legislation were negligible.

The final study to be examined was undertaken by Cloutier for the Economic Council of Canada in 1978.⁶⁰ Cloutier examined the distribution of total costs and total benefits

associated with OAS for the years 1971, 1973, 1974 and 1975. Cloutier's data are contained in Table 31. The table suggests that the OAS program was progressive in all years both in benefits and costs, and was becoming more so over time. The lowest quintile has received an increasing percentage of the benefits and paid a declining percentage of the costs, while the reverse situation prevailed for the highest increase quintile.^{6.1} The author notes, however, that the present system of age exemptions for the elderly tends to favour high income families relative to lower income families, and taken by itself is regressive.^{6.2}

There has only been one published study of the distribution of benefits and costs of the Guaranteed Income Supplement (GIS) program. This situation is probably due to the fact that the program has only been in existence since 1967. GIS differs from OAS in two significant respects. First, unlike OAS, GIS benefits are non-taxable. Second, GIS is applicable only to those below a certain income level, while OAS is a universal program. In determining if a pensioner qualifies for GIS benefits, the government considers the income of both pensioner and spouse. Data on the distribution of the total costs and total benefits of GIS compiled by Cloutier are contained in Table 32. The table indicates that the distribution of benefits was progressive in all years, as might be expected in an income tested program. Similarly, the distribution of costs was progressive in all years. It is

noteworthy that GIS was more progressively redistributive than OAS in terms of both costs and benefits.⁶³

In contrast with the family and youth allowances program, Old Age Security and the Guaranteed Income Supplement were found to be clearly progressive by all studies. The large majority of net benefits accrued to the lowest income groups. These results appear to reflect the fact that the aged in Canada are over-represented in the lowest income groups. It is noteworthy that tax deductions for the aged provide the largest benefits to higher income groups, so again tax deductions and cash benefits work at cross-purposes.

Unemployment Insurance

Unemployment insurance is perhaps the most controversial of the three programs examined in this study. The major source of this controversy is the conflict between those who believe that unemployment insurance is or ought to be solely a social insurance scheme and those who believe that it is or ought to be an income maintenance program. High levels of unemployment in recent years have resulted in a short fall in the unemployment insurance fund and thus the insurance principle has increasingly been called into question as a large proportion of the funds now come from the general revenues of the federal government. At the same time, allegations of unemployment insurance "rip-offs" have become commonplace.⁶⁴

This controversy over whether unemployment insurance is an insurance scheme or an income maintenance program has not been resolved within the government. In 1962, the Report of the Committee of Inquiry into the Unemployment Insurance Act argued that unemployment insurance was becoming an income maintenance scheme and that this contravened the purpose of the constitutional amendment of 1940.⁶⁵ According to a well-known academic critic of the plan:

Unemployment insurance in Canada is an object lesson in the extension of a perfectly sound instrument of social policy to situations where it is not designed to apply....

Unemployment insurance is only valid if used where the risks and benefits can be directly related to those regularly employed in industry.⁶⁶

Yet a government report on unemployment insurance, written at the same time, proclaims:

This country believes... in a more equitable distribution of wealth and the fulfillment of the expectations and the potential of our people.

The Unemployment Insurance Act "provides financial assistance to lower income workers during periods of temporary unemployment."⁶⁷

According to commentators who share the latter view, the principal defect of unemployment insurance is that earnings related benefits for the unemployed fail to keep everyone above the poverty line unless either a minimum benefit is awarded or the amount of payment is related to family circumstances.⁶⁸ The greatest departure from the egalitarian

principle is the use of the current earnings differential as a basis for unemployment insurance contributions and benefits.⁶⁹ However, unemployment insurance does treat the entire population uniformly and thus provides insurance to high-risk low income earners who would otherwise be uninsurable or who would be charged prohibitive premiums.⁷⁰

According to the 1971 Unemployment Insurance Act, unemployment insurance has two broad objectives:

- (1) to act as an automatic stabilizer in the economy; and
- (2) to provide for and ensure vertical equity amongst the interpersonal and inter-regional case.⁷¹

Within these broad objectives at least four sub-objectives can be discerned:

- (1) stabilization of income and employment;
- (2) manpower and labour market policy;
- (3) income maintenance and welfare; and
- (4) insurance against loss of labour income.

Much of the criticism of unemployment insurance has been directed at the alleged side-effects of the program. In particular, it has been argued that the higher the level of unemployment insurance benefits relative to wages, the greater is the work disincentive.⁷² For example, the policy of insuring seasonal workers when seasonal unemployment is a predictable certainty is income maintenance, not social insurance. The failure to implement a risk related system

means that seasonal industries, such as fishing, are larger than they would be without unemployment insurance.⁷³

In economic terms, the provision of unemployment insurance lowers the relative "price" of unemployment and increases the quantity of unemployment time acceptable to workers.⁷⁴

In its 1976 report, *People and Jobs*, the Economic Council of Canada described three major consequences of the unemployment insurance program. They are as follows:

- (1) more voluntary resignations, layoffs and job switching because of the reduction in the cost to individuals of periodic bouts of unemployment and an easing of the responsibility of employers for layoffs, sickness and maternity benefits;
- (2) less incentive for some of the unemployed to search vigorously for work until the end of the benefit period;
- (3) an inducement for others outside the labour market to seek work in the knowledge that they would thereby qualify for generous benefits.

The Economic Council found that unemployment insurance induced unemployment was greatest among women between 25 and 45 years of age.⁷⁵ Recent estimates of the level of unemployment insurance induced unemployment suggest that it varies greatly by province but ranges from something less than 1% to just under 1.5% of the labour force.⁷⁶ Kapsalis suggests that the work disincentive effects are more pronounced among secondary family earners. Secondary earners have a higher than expected probability of receiving unemployment insurance benefits, even after controlling for such other attributes as age, occupation and wage rate.⁷⁷

Unemployment insurance is one of the few social security programs which relies on payroll taxes collected from both the employer and the employee in order to pay for the scheme, as well as to reinforce the view that the scheme is analogous to private insurance. Unemployment insurance premiums are based largely on the commercial principle that it is only fair to pay for what you receive. The idea was to heighten taxpayer awareness of the use of funds and to thereby control expenditures by making the taxpayer aware of the high cost of the program.⁷⁸ The most important reason for charging for unemployment insurance and other public services was to restrict demand rather than to permit expansion of the supply.⁷⁹

Unemployment insurance is financed, in part, through a payroll tax. In 1978, the tax rate was 1.5% of earnings with a ceiling of \$240 a week.⁸⁰ Employees are allowed to deduct unemployment insurance premiums in calculating income tax.

Since premiums are assessed at a constant proportion of earnings and have a rather low maximum ceiling, they tend to be regressive. In addition, since premiums are tax deductible and the value of deductions varies directly with a taxpayer's marginal tax rate, another element of regressivity is introduced into the scheme. Data on unemployment insurance premiums, the value of deductions and unemployment insurance entitlement by income class is presented in Table 33. A comparison of the net unemployment insurance contribution by income class suggests that the contribution of those earning \$6000 a year is almost identical to the contribution of those earning \$50000.

There appears to be general agreement among economists that the employee contribution to unemployment insurance is not shifted to others. There is some disagreement over the question of who ultimately bears the employer's contributions, although the controversy surrounds the question of whether the burden of the tax is passed on to consumers or to employees. The generally accepted view would appear to be that the employer's contribution is ultimately reflected in lower wages and is therefore borne by the employee even though it is collected from the employer.⁸¹ Other economists argue that consumers bear part of the burden of the tax, but almost no one appears to believe that the tax is borne by the employer.⁸²

There were very few studies of the effect of unemployment insurance on the distribution of income in the earlier period, but in recent years the number of studies of this question have multiplied as public criticism of the plan has become more prevalent. The first published study of the effect of unemployment insurance on the distribution of income was written by David Dodge at the request of the federal Department of Finance.⁸³ Dodge estimated the incidence of unemployment insurance in 1970 and provided measures of the change in incidence that would have resulted if the 1971 unemployment insurance changes had taken place in that year. In order to estimate the total costs associated with the unemployment insurance program it is necessary to calculate the distribution of unemployment insurance premiums of employers and employees

by income class. This is required because, unlike other programs, unemployment insurance is not funded exclusively from general revenues. Unfortunately, Dodge does not provide sufficient information to calculate these figures. Consequently, only the distribution of payments by income class can be calculated. Data on the distribution of unemployment insurance payments by income class in 1970 and a simulation of the effects of the 1971 unemployment insurance changes on the 1970 distribution of income are presented in Table 34. The table indicates that the 9.9% of all families in the lowest income class received only 6.4% of all unemployment insurance benefits in 1970, while all other income classes received benefits roughly in proportion to their percentage of all families. The most significant feature of the table is the fact that, in terms of total benefits, all income classes below \$6000 were net contributors as a result of the 1971 legislative changes, while all income classes above \$6000 were net beneficiaries.

The second study, authored by Gillespie, examined the distribution of unemployment insurance benefits by income class in 1969 and simulated the effect of the legislative changes in the Unemployment Insurance Act from 1971-1977 on the 1969 distribution of income.⁸⁴ Data on the distribution of unemployment insurance payments by income class in 1969 are contained in Table 35. The table indicates that the approximately 20% of all families with incomes below \$3000 received only about 10% of total unemployment insurance payments.

Table 36 contains Gillespie's estimates of the effect of changes in the unemployment insurance legislation from 1969-1977 on the distribution of income. The table suggests that the unemployment insurance revisions provided miniscule fiscal benefits to the lowest income groups, although they did redistribute fiscal benefits from the highest income families to those in the \$3000-5999 income range.⁸⁵

The third study, by Maslove, was based on data for the calendar year 1973. Table 37 presents Maslove's estimates of the distribution of unemployment insurance payments by income class and average benefits as a proportion of total income. The table evinces that average benefits as a proportion of income rose as income fell. However, it is evident that the lower income groups received less than a proportionate share of total benefits.⁸⁶ The system remains redistributive however as unemployment benefits were distributed more in favour of low income groups than was income in general.

The next study to be discussed was prepared for the Economic Council of Canada by Cloutier in 1978.⁸⁷ Cloutier presents data on the distribution of the total benefits and the total costs of unemployment insurance across economic families for 1971, 1973, 1974 and 1975. This information is contained in Table 38. The distribution of total benefits across economic families was regressive in all years with 1973 and 1975 being the most regressive. The total cost

was progressive in all years.⁸⁸ The author points out, however, that a significant and growing percentage of the total benefits have been paid to low income earners in high income families. In 1975, for example, over 45% of the net unemployment insurance benefits paid went to earners other than the heads of families in the higher income brackets. (See Table 39.)⁸⁹ Thus, while the unemployment insurance scheme did redistribute net benefits from families and family heads earning over \$8000 to those earning less than \$8000, income earners other than family heads in high income families received large net benefits from the plan.

Cloutier's conclusions regarding the distribution of unemployment insurance benefits by income class and family members were reinforced by a second study prepared for the Economic Council of Canada by Kapsalis in 1978.⁹⁰ Kapsalis' approach differs somewhat from earlier studies. He employed data from the 1974 Survey of Consumer Finance on the 1973 recipients of unemployment insurance benefits. Kapsalis employed regression analysis to predict the probability that an income recipient would receive unemployment insurance benefits. His dependent variable was thus dichotomous (received unemployment insurance benefits/not). His independent variables included measures of the ratio of average unemployment insurance benefits received by a group of employees to their average insurable earnings, income, sex, region, education and several other variables.⁹¹ The author's data

indicate that married women have the highest relative cost ratio and probability of becoming unemployment insurance recipients. However, since their husbands have a much lower than average cost ratio, families with working wives, as a group, are not under-contributing towards the cost of unemployment insurance, but over-contributing.⁹² There is also some indication that the work disincentive effects are more pronounced among secondary family earners. Secondary family earners have a higher than expected probability of receiving unemployment insurance benefits, even after controlling for the effect of other attributes such as occupation, age, and wage rate.⁹³

Kapsalis also reports that the relative cost ratio and the relative probability of receiving unemployment insurance benefits are highest among lower income employees. This relationship holds among all employees, irrespective of the number of weeks worked.⁹⁴ In almost all cases, higher cost ratios and probabilities were associated with lower family incomes.⁹⁵

The several studies of the redistributive effects of the unemployment insurance program indicate that the overall effect of the program was progressive, although the lowest income group did not receive benefits proportionate to its share of the population. It was also noted that a significant proportion of total unemployment insurance benefits were paid to low income individuals in high income families. Finally,

the practice of allowing tax deductions for unemployment insurance premiums was found to be regressive. The economics literature indicated that the employer's unemployment insurance contribution was passed on to employees in the form of lower wages and is therefore borne by the employee even though it is collected from the employer.

STUDIES OF INCOME REDISTRIBUTION
THROUGH THE BUDGET: AN EVALUATION

The following pages examine the reliability and validity of three recent studies of the effect of the large expenditure budget on income redistribution. The studies by Dodge (1975), Gillespie (1966, 1976) and Reynolds and Smolensky (1974) are the most recent and comprehensive in the literature and earlier studies are much less reliable than these studies.⁹⁶ The authors examine the effect of the entire public sector, including all levels of government, on the distribution of income. Dodge attempts to measure the redistributive impact of the budget in Canada for 1970, and to simulate the changes in fiscal incidence that would have resulted had the recent changes in the federal personal income tax, unemployment insurance, old age security and family allowance programs been in effect in that year. Gillespie compares the budget's redistributive impact for 1961 and 1969, while Reynolds and Smolensky do the same for the United States for 1961 and 1970. The intention here is to outline the major problems with these studies, to describe the views of leading economists

regarding their validity and to underscore how little is known about the effect of the public sector on the distribution of personal income.⁹⁷

The general method employed in these studies consists of two steps. The first is the estimation of personal income distribution according to income size brackets. Hypotheses are formulated concerning the incidence of various taxes and categories of expenditure by broad economic groups (e.g., capital owners, consumers, and users of hospital services). Frequently, a tax which is collected from one person is passed on to others. For example, suppose the government levies a tax on A who pays it to the government. However, if A is able to raise the price of something he sells to B by the amount of the original tax, he may be able to transfer the final liability of the tax to B. If B is unable to alter the price of anything he buys or sells in such a way as to avoid liability for the tax, the incidence of the tax is said to rest with B. The incidence of a tax can fall either on consumers or the factors of production, depending on whether the tax is shifted forward or backward from its point of impact.

The second step is to translate the hypothesized incidence of various taxes and categories of public expenditure into distributional changes by size brackets. For example, it might be hypothesized that the corporate profits tax is paid partly by capital owners and partly by consumers. The total effect of government expenditures and taxation (net fiscal incidence)

is calculated by algebraically summing the tax (negative) and expenditure (positive) incidence estimates for each income bracket. For example, it might be assumed that the typical taxpayer in the \$8000-10000 income bracket pays \$1500 in taxes and receives \$2000 in expenditure benefits. In this case, the net fiscal incidence for this group of taxpayers would be equal to $(-\$1500 + \$2000 = \$500)$. Net fiscal incidence is usually expressed as a percentage of the median income of the category. If the median income was \$9000, net fiscal incidence in our example would equal $(\$500/\$9000 \times 100 = +5.5\%)$. If taxes paid exceeded expenditure benefits received then this figure would be negative.

While writing specifically about the incidence of the property tax, Bird and Slack have described tax incidence studies in a manner which has wider application. The authors observe:

...these quantitative studies are not independent 'empirical' pictures of the incidence of the property tax; instead they simply clothe particular theoretical assumptions in quantitative garb.⁹⁸

In order to estimate the effects of taxes and public expenditures on the distribution of income, it is necessary to ascertain the level and distribution of personal income that would have existed in the absence of the activities of the public sector.⁹⁹ The pre- and post-budget income distribution are then compared and if any income class receives more in allocated benefits than taxes paid then that group is a net beneficiary of government budgetary policies.¹⁰⁰

Gillespie describes the above method as introducing (or removing) the public sector:

One can conceive of introducing a public sector into a purely private economy and measuring the distributive effect of taxes and public expenditures as a percentage of income prior to the introduction; that is, income in the absence of a public sector.

...Alternatively, one can conceive of removing a public sector from an economy that includes it and measuring the distributive effects of taxes and public expenditures as a percentage of income prior to the removal; that is, income in an economy that includes the public sector.¹⁰¹

A comparison is made, therefore, between the income distribution in a state of nature and the income distribution after the relative positions of individuals and households have been altered through the fiscal actions, following the introduction of government.¹⁰² Thus, Gillespie explicitly assumes that the introduction or removal of the public sector does not alter the original distribution of factor incomes by income class. In other words, budget incidence is said to be neutral with respect to the distribution of factor payments.¹⁰³

The idea of introducing the public sector into a purely private economy or removing it from the present economy presents a number of theoretical difficulties. First, what is being proposed is better described as a "zero budget" rather than a "zero government" counterfactual. This is true because some assumption must be made about the non-fiscal policies prevailing in the two situations, implicitly they

are assumed to be the same.¹⁰⁴ Second, it is incorrect to assume that incomes in a zero-budget world can be determined by simply adjusting income by the tax and expenditure incidence estimates. As Reuber has observed, it is not very satisfactory to estimate what the distribution of income would be in the absence of all government, since none of the estimates using historical data could be expected to remain stable in the absence of government. One would be looking at a totally different economy.¹⁰⁵ All product and factor prices could be expected to change; that is, the incomes of individuals before taxes are likely to be altered drastically. The incomes of some individuals might increase while the incomes of others might decline.¹⁰⁶

In addition, the pre- and post-redistribution comparison is not as simple as imagining that goods which are currently provided by the public sector were provided formerly by the private sector. Market failure might prevent goods which are provided currently by the public sector from being provided by the private sector, at least on the same scale. It is quite possible that, in a zero-budget economy, the private sector might increase the rate of its own transfer expenditure.¹⁰⁷ Bird and Slack have summarized these arguments as follows:

...the most devastating problem with all quantitative incidence studies is reflected in Maslove's question cited earlier: "Should income be measured by imposing the effect of government on a situation which would exist without it or by removing the government sector from an existing state?" The short answer is that neither is possible in principle.

All studies of the incidence of broad-based taxes... are thus necessarily based on a fundamentally untrue assumption. As Shoup puts this argument: "The distribution of total burden under any tax system is an invalid concept; it assumes that what is either untrue or meaningless, namely, that the existing distribution of income-before-tax would remain unaltered if the tax system did not exist." Thurow agrees: "The basic problem with tax incidence is that it attempts to undertake a type of analysis that is both empirically difficult and theoretically impossible."¹⁰⁸

Jacob Meerman concurs and writes succinctly:

Estimating budget incidence in terms of an economy with government and the same economy without government or minimum government is impossible.¹⁰⁹

There are two other general problems to consider before discussing the incidence of taxes and public expenditures: the definition of income and the choice of a unit of analysis. In measuring income, it would be desirable to include anything that adds to the earner's power to consume. Income therefore should include money income; income-in-kind, gifts, fringe benefits received as personal income, the unshifted portion of social security taxes, undistributed corporate earnings and capital gains (possibly including appreciation in house values).¹¹⁰ Due to data problems, none of these three studies have included all of these types of income.

Studies in the United Kingdom have demonstrated that these missions can have important effects, notably in regard to capital gains.¹¹¹

A further criticism of this body of research is that no attempt is made to distinguish between redistribution among different individuals and redistribution between different periods of a given individual's life. In order to distinguish between the two it would be necessary to follow the tax returns of particular individuals over time. Due to a lack of data, the relationship between inequality of annual incomes and inequality of lifetime incomes is unknown.¹¹²

A second source of controversy that surrounds these studies is the choice of a unit of analysis. The natural income-receiving unit is that within which incomes are shared, which suggests the nuclear family of adults and children. The question is whether to include other household members, such as the elderly and married children. It is important not to lose sight of the fact that grouped within each income class are families of many different sizes and structures. In neglecting these variables, much information, important in equity considerations, has been lost. For example, it would be valuable to ascertain the difference between the effect of the budget on the working population and the dependent population.¹¹³

Turning next to the question of calculating tax incidence, it is immediately evident that there is still much discussion in the literature about the incidence of certain taxes, especially the corporate profits tax and the property tax. Dodge and Gillespie attempt to allow for this by employing a variety of incidence assumptions, but they vary only one tax at a time. It would be worthwhile to discover whether a set of assumptions which maximized the progressivity of the tax system and another set which minimized it would alter the overall results.¹¹⁴

While controversy surrounds the question of the incidence of various taxes, there is even less agreement about the incidence of public expenditures. One reason for this is that expenditure benefits are valued at input prices (e.g., cost) rather than at output prices. One way to resolve the problem of determining output prices might be to examine the prices paid for similar goods in the private sector. However, the government is the only supplier for many goods. Furthermore, if beneficiaries are asked to evaluate benefits, there is the well-known problem of understatement of preferences.¹¹⁵

Another difficulty is that factors of production may not be purchased at minimum cost since government purchasing policy may be determined partly by other policy goals.¹¹⁶ For example, many Canadian federal government offices are being moved out of Ottawa in support of regional development goals.

This may have important redistributive consequences, especially if there is high unemployment.

A second problem with the expenditure incidence estimates is that none of the studies distinguished between expenditure for current consumption and investment expenditure. Expenditure on consumption may be allocated during the time period it is made, but investment requires a different approach because it generates benefits in future years. Perhaps it is assumed implicitly that benefits from past government expenditure may be estimated by this year's capital expenditure, but this will not do if investment is growing or changing in composition over time.¹¹⁷

Finally, the most difficult dilemma is allocating the benefits from "pure" public goods such as defence, justice, diplomacy and general administration. The consensus is that no acceptable way of apportioning these benefits has yet been found. Allocating the benefits by the number of families (as Reynolds and Smolensky do for half of the benefits) implies that the marginal utility of income is constant as income rises. Recent work suggests that the allocation of public goods benefits depends, explicitly or implicitly, on an assumed utility function.¹¹⁸ For a solution it is necessary to discover how quickly the marginal utility of income declines with income, if indeed it does.¹¹⁹ Unfortunately, the magnitude of the expenditures to which this problem applies is very great, and the overall results could be affected.

Despite all of the problems with these studies as enumerated above, all is not lost. It has been argued that comparisons over time have more validity than single-year studies because biases are likely to be in the same direction, and, over short periods, may also be similar in magnitude. If this is true, estimates of distributive changes by income class (allowing for the effects of taxes and expenditures) may be unbiased even though the bias is large in each year.¹²⁰ Certainly, that sort of analysis has more validity than single-year studies which try to calculate incomes in a zero-budget world. Knowledge of the direction the distribution of income is moving would be relevant for policy-making.

The major problem with such a study, apart from the usual problems of incidence calculation discussed previously, would be determining what has caused the observed change in distribution. It could be the budget, but it could also be private sector changes such as technological change, or it could be the non-fiscal policies of the government such as stabilization policies, wage and price policies, import policies, and industrial legislation. If such a study discovered that there had been little change in distribution over time (which is the Reynolds and Smolensky conclusion), it would be incorrect to infer that the redistributive impact of the budget had remained constant unless no other changes in the economy had taken place over the time period. This is an unsatisfactory state of affairs for the researcher, but that is the state of knowledge at present.

In conclusion, the three studies reviewed, Dodge, Gillespie, and Reynolds and Smolensky, all produce estimates of the redistributive effect of the budget which are open to question. More profitable lines of investigation might be: detailed study of marginal changes in the budget, such as Dodge's study of changes in income tax and social welfare policies; breakdowns of the effect of budgetary measures by variables other than just income, such as family size and age distribution; and comparisons over time of distributive changes by income class which include the effect of the budget but do not analytically separate its effects from the rest of the general equilibrium system.

A number of conclusions can be drawn from this review of the literature. First, unless political scientists can produce an alternative, which seems unlikely, then studies which purport to examine the redistributive effects of government policies will of necessity have to borrow from the work of economists. Second, there is more agreement in the literature regarding the incidence of particular categories of public expenditures and taxes (e.g., the personal income tax, transfer payments) than others (e.g., corporate profits tax, defense). Thus, the incidence of the total tax structure is surrounded by controversy. Third, the estimates of the incidence of taxation and public expenditures produced by these studies are at best approximate. To their credit, the authors of these studies admit this fact. Gillespie argues

that his studies are intended to give policy-makers a set of 'guidelines' within which any redistributive policy might be carried out.¹²¹ Dodge suggests that incidence studies provide a 'yardstick' against which to measure the effect on income distribution of changes in government tax and expenditure policies.¹²² What this implies is that figures produced by these studies should be viewed as reflecting an ordinal level of measurement. In other words, it can be said with some confidence that a particular tax or expenditure is more or less progressive than another, but it cannot be said that one tax is say 10% more progressive than another. Unfortunately, some American studies, notably by Fry and Winters, have ignored this fact. Fry and Winters employed the figures generated by an American study of the incidence of public expenditures and taxation to calculate a 'redistributive ratio' for each of the American states. This 'redistributive ratio' was subsequently employed as the dependent variable in a regression analysis. The authors employed several economic and political variables in an attempt to explain variations in the 'redistributive ratio'.¹²³

A more cautious approach, which is adopted in this dissertation, is to attempt to explain variations in expenditure levels, while being cognizant of the relative redistributive effects of different types of expenditures. A knowledge of the redistributive effects of different categories

of expenditure (albeit in more or less terms) may be helpful in selecting independent variables which bear on this question. For example, if a theory predicts that government expenditures are a function of demand-push by interest groups, then clearly it is important to identify those groups who are likely to be affected by the expenditure categories in question.

SUMMARY AND CONCLUSIONS

The chapter began with a discussion of the role of policy impact research in political science. It was argued that recent interest in this question has been prompted by studies which have found little systematic relationship between expenditure levels and service levels. In addition, the finding that expenditure levels were only weakly associated with political variables led many scholars to the conclusion that the study of policy impacts rather than policy outputs would be a more fruitful line of inquiry. The dimension of policy impact which has received the most attention from political scientists has been the redistributive dimension. It was argued that since political scientists are not particularly well-equipped to study these questions an interdisciplinary perspective is required.

The chapter reviewed the studies of the effects of unemployment insurance, family and youth allowances and old age pensions on the distribution of income in Canada. The conceptual and methodological difficulties to which these

studies are subject were discussed. It was argued that the estimates of the redistributive effects of the three policies in question can only be measured meaningfully in ordinal terms. Old age pensions were found to be the most redistributive of the three policies and family and youth allowances the least redistributive. Perhaps the most interesting finding to come from the review of the literature is the fact that a significant amount of redistribution which does occur is horizontal rather than vertical. A large proportion of the money paid out is collected from and dispersed within the same income class, for example, from childless families to families with children at the same level of income. With the exception of old age pensions, the effect of universality instead of selectivity is evident in the low level of net benefits accruing to any income class. Old Age Security pensions are different in this respect because of the fact that the aged are disproportionately represented in the lower income groups. By contrast, many families who receive family allowance and unemployment insurance are not located in the lowest income brackets.

In summary, the incidence of all three programs was found to be progressive, although only in the case of old age security pensions did the lowest income groups receive large positive net benefits. A careful review of the public finance literature suggests that estimates of the redistributive effects of these programs are only meaningful when stated in

more or less terms. Thus, attempts to employ such figures in a statistical analysis would be ill-advised.

Given this conclusion, chapter four commences with a discussion of the determinants of the level of social security expenditures. The chapter outlines and tests several hypotheses which link the level of economic development, demographic change and budgetary incrementalism to the level of social security expenditures. Succeeding chapters employ the findings of chapter three concerning the redistributive effects of these policies to devise further hypotheses which might explain the level of social security expenditures.

NOTES

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9. Peters, "Relationship Between Public Expenditures and Services," pp.510-517.
10. Simeon, "Studying Public Policy," p.550.
11. Jacob and Lipsky, "Outputs, Structures, and Power," pp.515-516.
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28. Ibid., p. 196.
29. Ibid., pp. 215-228.
30. Antal Deutsch, Income Redistribution Through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation, 1968), p. 12.
31. See Canada, Department of Finance Canada, Economic Review, (April 1978) (Ottawa: Minister of Supply and Services Canada, 1978), p. 178.
32. See James C. Vadakin, Family Allowances: An Analysis of their Development and Implications (Coral Gables, Florida: University of Miami Press, 1968); Willard, "Family Allowances in Canada."
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34. It should be noted that the data on the income characteristics of each cell in Table 10 are expressed in mean values. Thus, all units within a cell are treated as if they were exactly alike. This shortcoming has two consequences. Income redistribution within each cell is ignored, as between two families with identical incomes and differing numbers of children. Second, an income unit may be subject

to a higher or lower marginal tax rate than the mean income unit of the particular cell which results in some distortion.

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93. Ibid., pp.18-19.
94. Ibid., p.22.
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A P P E N D I X

TO

CHAPTER THREE

APPENDIXTABLE 10

The Distribution of Family Allowance Payments
by Family Income Class
1961

Percentage of Benefits Received by Income Class	Relative %	Cumulative %	Percentage of Total Income Units Cumulative %	Percentage of Total Income Units Relative %
below \$2999	20.1	20.1	34.4	34.4
\$3000-4999	32.6	52.7	62.1	27.7
\$5000-9999	41.9	94.6	94.9	32.8
over \$10 000	5.4	5.4	5.1	5.1

Source: Antal Deutsch, Income Redistribution through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation, 1968) p.28.

TABLE 11

Alternative Estimate of the Tax Burden
of Family Allowances
1961

Family Money Income Group	Uniform exemption		Uniform tax reduction		Uniform negative poll tax	
	Relative %	Cumulative %	Relative %	Cumulative %	Relative %	Cumulative %
below \$2999	4.0	4.0	1.4	1.4	34.4	34.4
\$3000-4999	17.9	21.9	11.8	13.2	27.7	62.1
\$5000-9999	63.1	85.0	59.0	63.2	32.8	94.9
above \$10 000	15.0	15.0	36.7	36.7	5.1	5.1

Source: Antal Deutsch, Income Redistribution through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation, 1968), p.51.

TABLE 12

Income Redistribution Through Family Allowances
Under Three Tax Burden Assumptions
1961

Vertical Redistribution	Uniform Tax Exemption	Uniform Tax Reduction	Uniform Negative Poll Tax
1) Amount redistributed \$ million	106.8	219.1	70.8
2) Amount redistributed as a % of total	22.0%	45.2%	14.6%
% of total redistri- buted by income groups:			
below \$2999	73.1	41.3	-98.2
below \$4999	100.0	87.4	-33.5
below \$9999	43.7	69.4	- 2.0
above \$10 000	-44.2	-69.4	1.8

Source: Antal Deutsch, Income Redistribution through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation), p.55.

TABLE 13

Distribution of Total Benefits and Total Costs
of Family Allowances by Income Class
1961

Family Money Income Class*	% All families	% Total Benefits	% Total Costs	% Net Benefits
under \$2000	21.7	6.8	4.3	+ 2.5
\$2000-2999	12.1	11.0	5.0	+ 6.0
\$3000-3999	13.4	14.6	8.8	+ 5.8
\$4000-4999	14.8	18.4	12.3	+ 6.1
\$5000-6000	21.4	29.4	25.7	+ 3.7
\$7000-9999	11.5	14.3	21.1	- 6.8
over \$10 000	5.1	5.5	22.8	-17.3
Total	100.0	100.0	100.0	

*based on the broad income concept (pre-governmental income)

Source: Calculated from W. Irwin Gillespie, The Incidence of Taxes and Public Expenditures in the Canadian Economy, Studies of the Royal Commission on Taxation, No.2 (Ottawa:Queen's Printer, 1966); pp.22, 197, 202.

TABLE 14

Distribution of Total Benefits and Total Costs
of Family Allowances by Income Class
1969

Family Money* Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	12.3	2.9	1.6	+1.3
\$2000-2999	8.0	4.3	1.9	+2.4
\$3000-3999	7.8	5.7	2.9	+2.8
\$4000-4999	7.6	7.0	4.0	+3.0
\$5000-5999	8.0	8.0	5.3	+2.7
\$6000-6999	7.9	9.1	6.6	+2.5
\$7000-7999	22.0	29.3	23.1	+6.2
\$10 000-14 999	18.2	23.4	27.9	-4.5
over \$15 000	8.3	10.7	26.7	-16.0
Total	100.0	100.0	100.0	

*Based on the broad income concept (pre-governmental income)

Sources: Calculated from W. Irwin Gillespie, "On the Redistribution of Income in Canada," Canadian Tax Journal, 24, (July-August 1976), pp.424,444, 441; and W. Irwin Gillespie, In Search of Robin Hood (Montreal:C.D. Howe Research Institute, 1978), p.41.

TABLE 15

Value of Family Allowances and \$300 Tax Exemption
for Families with Two Children
by Level of Income

Gross Earned Income \$	Tax payable by couple with no children \$	Tax payable by couple with two children \$	Value of \$300 exemptions \$	Family Allowances \$	Value of Family Allowances and \$300 exemption \$	Average per child \$
2,100	0	0	0	168	168	84
2,700	88	0	88	168	256	128
3,000	133	44	89	168	257	129
4,000	330	209	121	168	289	145
5,000	562	421	141	168	308	155
7,500	1,242	1,070	172	168	340	170
10,000	1,923	1,762	161	168	329	165
15,000	3,661	3,414	247	168	415	208
20,000	5,870	5,592	278	168	446	223
25,000	8,188	7,910	278	168	446	223

NOTE: Based on 1970 rates of tax and assumes that (1) basic exemptions and deductions amount to \$2,100 plus \$300 exemption per child; (2) provincial tax amounts to 28% of basic federal tax; and (3) family allowances average \$84 a year per child.

Source: L.A. Kelly, Family Allowances and the Tax System (Kingston: Queen's University Industrial Relations Centre, 1971), p.7.

TABLE 16

Value of Family Allowance and Tax Exemption
for Children by Family Income Class
1976

Income Level	Net family allowance	Tax saving from exemption	Total Benefit
\$5,000	\$529.92	\$ 0	\$529.92
6,000	398.51	217.87	616.38
8,000	388.51	293.05	681.56
10,000	384.68	304.47	689.15
12,000	370.84	333.47	704.31
15,000	357.00	362.46	719.46
25,000	302.68	476.33	779.01
50,000	239.51	608.77	848.28

Source: National Council of Welfare, The Hidden Welfare System
(Ottawa: National Council of Welfare, 1976); p.30.

TABLE 17

Distribution of Total Benefits and Total Costs
of Family Allowances by Income Class
1970

Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	9.9	2.5	1.1	+1.4
\$2000-3000	6.5	2.6	1.2	+1.4
\$3000-4000	7.4	4.6	2.5	+2.1
\$4000-5000	6.8	5.5	3.2	+2.3
\$5000-6000	6.7	5.8	4.0	+1.8
\$6000-7000	7.3	7.8	5.3	+2.5
\$7000-8000	6.9	8.3	5.7	+2.6
\$8000-9000	7.6	9.5	7.0	+2.5
\$9000-10000	6.8	9.2	7.2	+2.0
\$10000-11000	5.8	8.3	6.6	+1.7
\$11000-12000	5.3	7.2	6.9	+0.3
\$12000-13000	4.0	5.2	5.7	-0.5
\$13000-14000	3.5	4.5	5.1	-0.6
\$14000-15000	2.8	3.4	4.4	-1.0
over \$15000	12.6	15.4	34.1	-18.7
Total	100.0	100.0	100.0	

Source: Calculated from David A. Dodge, "Impact of Tax, Transfer, and Expenditure Policies of Government on the Distribution of Personal Income in Canada," Review of Income and Wealth, 21, (1975), pp. 25, 26, 29, 32, 33.

TABLE 18

Distribution of Total Benefits and Total Costs
of 1973 Family Allowances by
1970 Family Income Class
(simulation)

Family Money: Income Class	% all families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	9.9	2.3	1.1	+1.2
\$2000-3000	6.5	2.7	1.1	+1.6
\$3000-4000	7.4	4.7	2.3	+2.4
\$4000-5000	6.8	5.6	3.0	+2.6
\$5000-6000	6.7	5.9	3.8	+2.1
\$6000-7000	7.3	8.0	5.1	+2.9
\$7000-8000	6.9	8.5	5.5	+3.0
\$8000-9000	7.6	9.8	6.8	+3.0
\$9000-10000	6.8	9.3	6.8	+3.0
\$10000-11000	5.8	8.4	6.5	+1.9
\$11000-12000	5.3	7.3	6.9	+0.4
\$12000-13000	4.0	5.3	5.7	-0.4
\$13000-14000	3.5	4.3	5.2	-0.9
\$14000-15000	2.8	3.3	4.4	-1.1
over \$15000	12.6	13.4	35.6	-24.6
Total	100.0	100.0	100.0	

Source: Calculated from David A. Dodge, "Impact of Tax, Transfer and Expenditure Policies of Government on the Distribution of Personal Income in Canada," Review of Income and Wealth, 21, (1975), pp. 44, 45, 46, 47.

TABLE 19

Change in Net Benefits from Family Allowances
Resulting from 1971 Tax Legislation
and 1973 Increase in Family Allowance

Income Class	Net Benefits 1973 (%)	Net Benefits 1970 (%)	Change
under \$2000	+1.2	+1.4	+0.2
\$2000-3000	+1.6	+1.4	+0.2
\$3000-4000	+2.4	+2.1	+0.3
\$4000-5000	+2.6	+2.3	+0.3
\$5000-6000	+2.1	+1.8	+0.3
\$6000-7000	+2.9	+2.5	+0.4
\$7000-8000	+3.0	+2.6	+0.4
\$8000-9000	+3.0	+2.5	+0.5
\$9000-10000	+2.3	+2.0	+0.3
\$10000-11000	+1.9	+1.7	+0.2
\$11000-12000	+0.4	+0.3	-0.1
\$12000-13000	-0.4	-0.5	+0.1
\$13000-14000	-0.9	-0.6	-0.3
\$14000-15000	-1.1	-1.0	-0.1
over \$15000	-2.6	-18.7	-5.9

Source: Tables 17 and 18.

TABLE 20

Distribution of Total Before-Tax Benefits and Total Costs of Family and Youth Allowances Across All Economic Families Ordered by Total Income After Tax, by Quintile, Canada

Quintile	1971			1973			1974			1975		
	Total Before-Tax Benefits %	Total Costs \$	Total Before-Tax Benefits %	Total Before-Tax Benefits %	Total Costs %	Total Before-Tax Benefits %	Total Before-Tax Benefits %	Total Costs %	Total Before-Tax Benefits %	Total Before-Tax Benefits %	Total Costs %	Total Before-Tax Benefits %
First	6.8	0.5	5.7	5.5	0.4	5.7	5.7	0.2	5.7	5.7	0.1	5.7
Second	15.0	5.9	14.1	12.0	5.1	12.0	12.6	5.6	12.6	12.6	5.1	12.6
Third	23.7	14.4	23.2	22.1	13.8	22.1	21.9	16.9	21.9	21.9	17.0	21.9
Fourth	26.4	24.0	27.5	28.8	24.8	28.8	27.6	27.2	27.6	27.6	27.6	27.6
Fifth	28.1	55.2	29.4	31.6	55.9	31.6	32.2	50.1	32.2	32.2	50.2	32.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistics Canada (Surveys of Consumer Finances) and estimates by the Economic Council of Canada. Cited in J. E. Cloutier, *The Distribution of Benefits and Costs of Social Security in Canada, 1971-1975*. Discussion Paper No. 108, Economic Council of Canada (Ottawa: Minister of Supply and Services, 1978), p. 27.

TABLE 21

Distribution of Total Benefits and Total Costs
of Family Allowances by Income Group
1970-1977

Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	12.8%	2.9%	1.6%	+1.3%
\$2000-2999	8.0	4.3	1.8	+2.5
\$3000-3999	7.8	5.7	2.9	+2.8
\$4000-4999	7.6	7.0	4.0	+3.0
\$5000-5999	8.0	8.0	5.3	+2.7
\$6000-6999	7.9	9.1	6.6	+2.5
\$7000-7999	22.0	27.3	23.1	+6.2
\$10000-14999	18.2	23.4	27.8	-4.4
\$15000 and over	8.3	10.7	26.7	-16.0
Total	100.0	100.0	100.0	

Source: W. Irwin Gillespie, In Search of Robt. Hood (Montreal: C.D. Howe Research Institute, 1978), pp. 40-41.

TABLE 22

Distribution of Total Benefits and Total Costs
of Old Age Security by Income Class
1961

Family Money Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	21.7%	50.0%	4.3%	+45.7%
\$2000-2999	12.1	14.2	5.0	+ 9.2
\$3000-3999	13.4	8.2	8.8	-0.6
\$4000-4999	14.8	6.8	12.3	-5.5
\$5000-6999	21.4	9.7	25.7	-16.0
\$7000-9999	11.5	7.5	21.1	-13.6
over \$10000	5.1	3.6	22.8	-19.2
Total	100.0	100.0	100.0	

Source: Calculated from W. Irwin Gillespie, The Incidence of Taxes and Public Expenditures in the Canadian Economy. Studies of the Royal Commission on Taxation, No.2 (Ottawa:Queen's Printer, 1966), pp.22, 197, 202.

TABLE 23

Distribution of Old Age Security Pension
by Income Groups
1961

Income Class \$	Absolute %	Cumulative %	Total of Family Units %
below 2999	63.7	63.7	34.4
3000-4999	15.5	79.2	62.1
5000-9999	17.2	96.4	94.9
over 10000	3.6	3.6	5.1

Source: Antal Deutsch, Income Redistribution through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation, 1968), p.28.

TABLE 24

Tax Burden of Old Age Security Pensions
Under Alternate Assumptions
1961

Income Group \$	(1) Legal Allocation		(2) Uniform Tax Reduction		(3) Uniform Negative Poll Tax	
	Absolute %	Cumulative %	Absolute %	Cumulative %	Absolute %	Cumulative %
below 2999	6.7	6.7	1.5	1.5	34.4	34.4
3000-4999	22.3	29.0	12.7	14.2	27.7	62.1
5000-9999	60.1	82.4	53.0	65.7	32.9	95.0
over 10000	17.6	17.6	34.3	34.3	5.1	5.1

Source: Antal Deutsch, Income Redistribution through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation, 1968), p.71.

TABLE 25

Income Redistribution Through Old Age Benefits
Under Alternative Tax Burden Assumptions
1961

Vertical Redistribution	Uniform Tax Exemption	Uniform Tax Reduction	Uniform Negative Poll Tax
Amount redistributed \$ millions	318.7	354.9	169.6
Amount redistributed as % of total	63.8%	71.0%	33.9%
Percentage of Total Redistributed vertically to all income groups:			
below \$2999	97.9	94.2	100.0
below \$4999	89.4	96.4	60.5
below \$9999	38.2	44.7	9.4
above 10000	-20.5	-44.7	-7.5

Source: Antal Deutsch, Income Redistribution through Canadian Federal Family Allowances and Old Age Benefits (Toronto: Canadian Tax Foundation, 1968), p.75.

TABLE 26

Distribution of Total Benefits and Total Costs
of Old Age Security/Guaranteed Income Supplement
by Income Class
1970

Family Money Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	9.9	16.9	1.1	+15.8
\$2000-3000	6.5	12.7	1.2	+11.5
\$3000-4000	7.4	17.4	2.5	+14.9
\$4000-5000	6.8	10.2	3.2	+ 7.0
\$5000-6000	6.7	7.6	4.0	+ 3.6
\$6000-7000	7.3	5.7	5.3	+ 0.4
\$7000-8000	6.9	4.9	5.7	-0.8
\$8000-9000	7.6	3.8	7.0	-3.2
\$9000-10000	6.8	3.6	7.2	-3.6
\$10000-11000	5.8	2.8	6.6	-3.8
\$11000-12000	5.3	2.1	6.9	-4.8
\$12000-13000	4.0	2.2	5.7	-3.5
\$13000-14000	3.5	1.2	5.1	-3.9
\$14000-15000	2.8	2.0	4.4	-2.4
over \$15000	12.6	6.8	34.1	-27.3
Total	100.0	100.0	100.0	

Source: Calculated from David A. Dodge, "Impact of Tax, Transfer, and Expenditure Policies of Government on the Distribution of Personal Income in Canada," Review of Income and Wealth, 21, (1975), pp.25, 26, 29, 32,33.

TABLE 27

Distribution of Total Benefits and Total Costs of
Old Age Security/Guaranteed Income Supplement
by Income Class
1973

Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	9.9%	19.0%	1.1%	+17.9%
\$2000-3000	6.5	12.6	1.1	+11.5
\$3000-4000	7.4	17.9	2.3	+15.6
\$4000-5000	6.8	9.7	3.0	+ 6.7
\$5000-6000	6.7	7.2	3.8	+ 3.4
\$6000-7000	7.3	5.5	5.1	+ 0.4
\$7000-8000	6.9	4.7	5.5	-0.8
\$8000-9000	7.6	3.6	6.8	-3.2
\$9000-10000	6.8	3.5	7.0	-3.5
\$10000-11000	5.8	2.7	6.5	-3.8
\$11000-12000	5.3	2.0	6.9	-4.9
\$12000-13000	4.0	2.1	5.7	-3.6
\$13000-14000	3.5	1.1	5.2	-4.1
\$14000-15000	2.8	1.8	4.4	-2.6
over \$15000	12.6	6.3	35.6	-29.3
Total	100.0	100.0	100.0	

Source: Calculated from David A. Dodge, "Impact of Tax, Transfer and Expenditure Policies of Government on the Distribution of Personal Income in Canada," Review of Income and Wealth, 21, (1975), pp. 44, 45, 46, 47.

TABLE 28

Change in the Distribution of Net Benefits of
OAS/GIS Resulting From Increased Benefit
Levels and Federal Tax Reform
1971

Income Class	% All Families	Net % Benefits 1970	Net Benefits After Change	Difference
under \$2000	9.9%	+15.8%	+17.9	+2.1
\$2000-3000	6.5	+11.5	+11.5	0
\$3000-4000	7.4	+14.9	+15.6	+0.7
\$4000-5000	6.8	+ 7.0	+ 6.7	-0.3
\$5000-6000	6.7	+ 3.6	-3.4	-0.2
\$6000-7000	7.3	+ 0.5	-0.4	-0.1
\$7000-8000	6.9	-0.8	-0.8	0
\$8000-9000	7.6	-3.2	-3.2	0
\$9000-10000	6.8	-3.6	-3.4	-0.2
\$10000-11000	5.8	-3.8	-3.8	0
\$11000-12000	5.3	-4.8	-4.9	+0.1
\$12000-13000	4.0	-3.5	-3.6	-0.1
\$13000-14000	3.5	-3.9	-3.1	+0.8
\$14000-15000	2.8	-2.5	-2.6	-0.1
over \$15000	12.6	-27.3	-29.3	-2.0
Total	100.0			

Sources: Tables 26 and 27.

TABLE 29

Distribution of Total Benefits and Total Costs of
Old Age Security by Income Class
1969

Family Money Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	12.3%	24.6%	1.6%	+23.0
\$2000-2999	8.0	21.9	1.9	+20.0
\$3000-3999	7.8	13.5	2.9	+10.6
\$4000-4999	7.6	8.2	4.0	+ 4.2
\$5000-5999	8.0	6.7	5.3	+ 1.4
\$6000-6999	7.9	5.4	6.6	-1.2
\$7000-9999	22.0	9.2	23.1	-13.9
\$10000-14999	18.2	6.0	27.9	-21.9
over \$15000	8.3	4.5	26.7	-22.2
Total	100.0	100.0	100.0	

Sources: W. Irwin Gillespie, "On The Distribution of Income in Canada," Canadian Tax Journal, 24, (July-August 1976), pp.424,440,444;
and W. Irwin Gillespie, In Search of Robin Hood (Montreal:
C.D. Howe Research Institute), p.41.

TABLE 30

Distribution of Total Benefits and Total Costs of
Old Age Security and Guaranteed Income Supplement by
Income Class
1970-1977

Income Class	% All Families	Total % Benefits	Total % Costs	Net % Benefits
under \$2000	12.3	24.6	1.6	+23.0
\$2000-2999	8.0	21.9	1.8	+20.1
\$3000-3999	7.8	13.5	2.9	+10.6
\$4000-4999	7.6	8.2	4.0	+4.2
\$5000-5999	8.0	6.7	5.3	+1.4
\$6000-6999	7.9	5.4	6.6	+1.2
\$7000-9999	22.0	9.2	23.1	-13.9
\$10000-14999	18.2	6.0	27.8	-21.8
over \$15000	8.3	4.5	26.7	-22.2
Total	100.0	100.0	100.0	

Source: W. Irwin Gillespie, In Search of Robin Hood (Montreal: C.D. Howe Research Institute, 1978), pp.40-41.

TABLE 31

Distribution of Total Before-Tax Benefits and Total Costs of
Old Age Security Pensions Across all Economic Families
Ordered by Total Income After Tax, by Quintile, Canada

Quintile	1971			1973			1974			1975		
	Total Before-Tax Benefits %	Total Costs %	Total	Total Before-Tax Benefits %	Total Costs %	Total	Total Before-Tax Benefits %	Total Costs %	Total	Total Before-Tax Benefits %	Total Costs %	Total
First	34.0	1.6		37.2	0.8		37.6	0.5		38.0	0.2	
Second	32.6	8.7		30.2	7.7		31.7	8.3		31.3	6.2	
Third	12.9	15.3		13.8	15.3		11.8	15.5		13.6	15.5	
Fourth	9.5	23.0		9.0	23.9		9.2	23.2		8.2	24.3	
Fifth	11.0	51.4		9.8	52.3		9.7	52.5		8.9	53.8	
Total	100.0	100.0		100.0	100.0		100.0	100.0		100.0	100.0	

Source: Statistics Canada (Surveys of Consumer Finances) and estimates by the Economic Council of Canada.

Cited in J.E. Cloutier, The Distribution of Benefits and Costs of Social Security in Canada, 1971-1975, Discussion Paper No. 108, Economic Council of Canada (Ottawa: Minister of Supply and Services, 1978), p. 14.

TABLE 32

Distribution of Total Benefits and Total Costs of the
Guaranteed Income Supplement across all Economic
Families Ordered by Total Income after Tax
by Quintile - Canada

Quintile	1971			1973			1974			1975		
	Total Benefits %	Total Costs %	Total	Total Benefits %	Total Costs %	Total	Total Benefits %	Total Costs %	Total	Total Benefits %	Total Costs %	
First	43.6	0.5		46.5	0.4		49.7	0.3		47.4	0.2	
Second	34.4	5.9		31.2	5.1		32.0	5.4		33.1	4.8	
Third	8.2	14.4		8.8	13.8		5.9	14.4		7.1	13.9	
Fourth	6.6	24.0		6.6	24.8		7.4	24.1		5.6	24.8	
Fifth	7.2	55.2		6.9	55.9		5.0	55.8		6.8	56.3	
Total	100.0	100.0		100.0	100.0		100.0	100.0		100.0	100.0	

Source: J.E. Cloutier, The Distribution of Benefits and Costs of Social Security in Canada, 1971-1975,
Economic-Council of Canada. Discussion Paper No. 108 (Ottawa: Minister of Supply and Services
Canada, 1978), p. 23.

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TABLE 33

Net Contributions to Unemployment Insurance
1978

Earned Income	Required U.I. Contribution	Tax Saving from deduction	Net U.I. contribution	Weekly U.I. entitlement
\$6000	\$ 90.00	0	\$ 90.00	\$ 76.92
\$8000	120.00	0	120.00	102.56
\$10000	150.00	38.88	111.12	128.21
\$12000	180.00	49.25	130.75	153.85
\$15000	187.20	56.61	130.59	160.00
\$20000	187.20	67.39	119.81	160.00
\$25000	187.20	75.48	111.72	160.00
\$50000	187.20	97.04	90.16	160.00

Source: National Council of Welfare, Bearing the Burden Sharing the Benefits (Ottawa:National Council of Welfare, 1978), p.11.

TABLE 34

Distribution of Unemployment Insurance Benefits
by Income Class, 1970 and
Simulation of 1971 Legislative Change
- the 1970 Distribution of Income

Family Money Income Class	% All Families	% of U.I. Benefits 1970	% of U.I. Benefits 1971	% Difference
under \$2000	9.9%	6.4%	2.3%	-4.1%
\$2000-3000	6.5	7.0	5.2	-1.8
\$3000-4000	7.4	8.7	4.9	-3.8
\$4000-5000	6.8	7.9	6.3	-1.6
\$5000-6000	6.7	7.0	6.8	-0.2
\$6000-7000	7.3	7.2	7.7	+0.5
\$7000-8000	6.9	7.1	9.1	+2.0
\$8000-9000	7.6	7.2	8.2	+1.0
\$9000-10000	6.8	6.9	7.8	+0.9
\$10000-11000	5.8	6.3	6.9	+0.6
\$11000-12000	5.3	5.5	5.9	+0.4
\$12000-13000	4.0	4.1	4.8	+0.7
\$13000-14000	3.5	3.5	4.2	+0.7
\$14000-15000	2.8	2.9	3.9	+1.0
over \$15000	12.6	12.2	17.9	+5.7
Total	100.0	100.0	100.0	100.0

Source: Calculated from David A. Dodge, "Impact of Tax, Transfer, and Expenditure Policies of Government on the Distribution of Personal Income in Canada," Review of Income and Wealth, 21, (1975), pp.25,26,29,32,33.

TABLE 35

Distribution of Total Benefits of Unemployment
Insurance by Income Class
1969

Family Money Income Class	% All Families	Total % Benefits
under 2000	12.3%	5.8%
\$2000-2999	8.0	4.4
\$3000-3999	7.8	12.1
\$4000-4999	7.6	12.2
\$5000-5999	8.0	12.7
\$6000-6999	7.9	11.7
\$7000-9999	22.0	20.9
\$10000-14999	18.2	14.6
over 15000	8.3	5.4
Total	100.0	100.0

Source: W. Irwin Gillespie, "On the Redistribution of Income in Canada," Canadian Tax Journal, 24, (July-August 1976) pp. 424, 440, 444; and W. Irwin Gillespie, In Search of Robin Hood (Montreal: C.D. Howe Research Institute, 1978), p. 41.

TABLE 36

Effect of Unemployment Insurance Revisions
on the Distribution of Income in Canada
1976-77.

Family Money Income Class	All Families	U.I. Benefits (net of income Tax)	Total Cost	Net U.I. Benefits
under \$2000	12.3%	1.33%	1.24	0.09
\$2000-2999	8.0	2.38	1.37	1.01
\$3000-3999	7.8	2.78	1.31	1.48
\$4000-4999	7.6	3.38	1.90	1.48
\$5000-5999	8.0	3.21	1.81	1.40
\$6000-6999	7.9	2.82	2.33	0.49
\$7000-9999	22.0	2.57	2.44	-0.14
\$10000-14999	18.2	3.15	3.38	-0.23
over \$15000	8.3	2.61	3.74	-1.13
Total	100.0	2.79	2.79	0.00

Source: W. Irwin Gillespie, In Search of Robin Hood (Montreal: C.D. Howe Research Institute, 1978), p.49.

TABLE 37

Distribution of Unemployment Insurance Payment
by Income Class
1973

Income Class	% All Families	% Total Benefits	Average U.I. Benefit/ Average Total Income %
under \$2000	8.2	0.9%	51.8%
\$2000-2999	6.8	2.4	32.9
\$3000-3999	5.1	3.8	27.3
\$4000-4999	6.0	5.6	25.9
\$5000-6999	10.5	12.8	19.7
\$7000-8999	11.1	13.9	15.2
\$9000-11999	15.7	18.9	11.1
over \$12000	36.6	41.6	6.7
Total	100.0	100.0	

Source: Allan M. Maslove, The Distribution of Unemployment Insurance Benefits in Canada (mimeo: Carleton University, 1977), pp.9-10.

TABLE 38

Distribution of Total Before-Tax Benefits and Total Costs of
Unemployment Insurance Across All-Economic Families
Ordered by Total Income After Tax
by Quintile - Canada

Quintile	1971			1973			1974			1975		
	Total Before-Tax Benefits	Total Costs	%	Total Before-Tax Benefits	Total Costs	%	Total Before-Tax Benefits	Total Costs	%	Total Before-Tax Benefits	Total Costs	%
First	9.8	1.6	7.7	8.7	2.0	8.7	8.1	2.5	8.1	2.1	2.1	2.1
Second	24.5	11.3	21.5	24.8	10.7	24.8	22.0	12.6	22.0	11.4	11.4	11.4
Third	27.8	20.3	23.4	22.7	20.0	22.7	25.0	21.0	25.0	20.8	20.8	20.8
Fourth	22.0	26.9	24.7	23.1	26.7	23.1	22.6	26.8	22.6	27.0	27.0	27.0
Fifth	15.9	39.9	22.7	20.9	40.6	20.9	22.3	37.1	22.3	38.7	38.7	38.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistics Canada (Surveys of Consumer Finances) and estimates by the Economic Council of Canada.

Cited in J.E. Cloutier, The Distribution of Benefits and Costs of Social Security in Canada, 1971-1975. Discussion Paper No. 108, Economic Council of Canada (Ottawa: Minister of Supply and Services, 1978), p. 41.

TABLE 39

Net Unemployment Insurance Benefits

FAMILY	1971	1973	1974	1975
Family Income After Tax <\$8,000	166.55	153.87	186.05	145.89
Family Income After Tax >\$8,000	-66.55	-53.87	-86.05	-45.89
Total	100.00	100.00	100.00	100.00
(1) HEAD:				
Family Income After Tax <\$8,000	109.44	99.24	126.92	105.37
Family Income After Tax >\$8,000	-76.21	-95.48	-124.42	-91.58
Total	33.23	3.76	2.50	13.79
(2) WIFE:				
Family Income After Tax <\$8,000	36.75	36.66	38.62	22.96
Family Income After Tax >\$8,000	5.13	31.70	34.34	32.47
Total	41.88	68.36	72.96	55.43
(3) OTHER EARNERS:				
Family Income After Tax <\$8,000	20.36	17.97	20.51	17.56
Family Income After Tax >\$8,000	4.53	9.91	4.03	13.22
Total	24.89	27.88	24.54	30.78

Source: Statistics Canada (Surveys of Consumer Finances) and estimates by the Economic Council of Canada.

Cited in J.E. Cloutier, The Distribution of Benefits and Costs of Social Security in Canada 1971-1975, Economic Council of Canada. Discussion Paper No.108 (Ottawa:Minister of Supply and Services, 1978), p.45.

CHAPTER FOUR.

ORGANIZATIONAL, ECONOMIC AND DEMOGRAPHIC
CONSTRAINTS ON POLITICAL CHOICE

CHAPTER FOUR

INTRODUCTION

Radical changes in the size and/or composition of the government budget are unlikely from one year to the next. This situation arises because government decision-makers operate under a number of constraints. A recognition of these constraints is necessary in order to measure the effects of political, and particularly electoral, variables on spending patterns. This chapter examines three factors which act as constraints on government decision-making: the level of economic development, demographic change in the population and budgetary incrementalism.

The level of economic development may influence the level of public expenditures in at least two ways. First, on the supply side, economic development provides a measure of the economic resources available for distribution by political elites. Second, economic development may lead to the articulation of demands and support for increased public expenditures from the population. Wildavsky has summarized this view as follows:

Wealth comes first. It is after all budgetary processes we are analyzing. Before resources are allocated, there must be resources to allocate.¹

A second factor which may act as a constraint upon decision-makers' behaviour is demographic change. Most of the current year's budget is a product of previous decisions and long-term legislative commitments. For example, once old age pension legislation is enacted, the government is committed to future expenditures as the number of persons over the retirement age increases. To be sure, legislation can always be repealed or revised, but seldom is for such changes may be politically difficult.

A third factor which may act as a constraint on decision-makers' behaviour is budgetary incrementalism. Incrementalism refers to a decision-making process that is characterized by limited planning and analysis and that yields decisions differing only marginally from previous decisions. Most programs are not reconsidered annually, because of limitations of time, cost and intelligence. Instead, decision-makers tend to direct their attention to a narrow range of increases and decreases from the previous year's budget. Thus a major determinant of the current year's budget is the previous year's budget. Budgetary incrementalism is important because most policy output studies have tended to ignore decision-making or process variables.² It is important not to lose sight of the fact that choices are being made. Policy outputs emanating from the proverbial "black box" are not simply the product of environmental factors, but also reflect the process of mutual bargaining and adjustment within the "black box."

The following pages explore each of these constraints in greater detail. The chapter reviews the literature on the relationship between economic development, demographic change, budgetary incrementalism and the level of public expenditures. The statistical techniques to be employed in the data analysis are described and the problems which arise as a result of the use of time series data are discussed. In particular, attention is directed to the dual problems of lagged dependent variables and autocorrelated errors which create some difficulties in analyzing and interpreting the data. A number of hypotheses concerning the determinants of social security expenditures are proposed and tested empirically through the use of a series of estimating equations. In general, most of the hypotheses were confirmed and the amount of variance explained was quite high. Demographic change and budgetary incrementalism were found to be the best predictors of expenditure levels, with the level of economic development being of lesser importance.

ECONOMIC VARIABLES AND THE QUEST FOR THEORY

Most previous studies of the determinants of public expenditures have emphasized the predominant influence of environmental variables, such as economic development and demographic change. This conclusion is supported by numerous studies at the municipal, provincial/state and cross-national levels and appears to hold in both communist and capitalist

nations.³ While there is general agreement in the literature that the main explanation for the development of the welfare state is the level of economic development and its correlates, there is considerable uncertainty regarding the nature of the causal linkage involved. Harold Wilensky has summarized the dominant view as follows:

Over the long pull, economic level is the root cause of welfare state development, but its effects are felt chiefly through demographic changes of the past century and the momentum of the programs themselves, once established.... Social security growth begins as a natural accompaniment of economic growth and its demographic outcomes; it is hastened by the interplay of political elite perceptions, mass pressures and welfare bureaucracies.⁴

In spite of the apparent consensus among academics that economic development is the best predictor of the level of public expenditures, the concept of economic development has been ambiguous and ill-defined. Numerous alternate measures of the concept have been proposed including: urbanization, industrialization, energy consumption, gross national product, median education, income and literacy.⁵ However, as several commentators have noted, these measures are not in themselves inputs as many of the studies have argued.⁶ Such a conceptualization relies uncritically on Easton's systems theory as a framework, whether it is employed as a classification scheme or an explanatory theory.⁷ Rather, these variables may be thought of as environmental factors

which may lead to the articulation of demands and supports from the population, as well as providing a measure of the government's capacity to respond. Since most of these economic and demographic variables reflect common trends, studies which do not specify the causal linkages between the level of economic development and public expenditures are highly suspect. While one or more of these measures may be related causally to the level of public expenditures, the remainder may simply be indicative of spurious association. There is a real danger that statistical measures of association may have replaced explanation in many of the policy output studies.⁸ For example, one study reports that the level of public expenditures is correlated highly with per capita energy consumption. However, since little explanation is provided regarding the nature of the presumed causal linkage involved, one wonders what conclusions can or should be drawn from this finding.⁹ In commenting on one of the best of these studies by Thomas Dye, Jacob and Lipsky note:

We conclude from reading his analysis that by some magic a high level of economic development becomes transformed into a high level of expenditure. The processes by which this transformation takes place remains in the shadows although it has been the traditional task of political scientists to illuminate them.¹⁰

The fact that many authors have resorted to factor analysis in order to discern the dimensions of economic development is illustrative of the lack of a clearly formulated theory of the relationship between economic development and public expenditures. The underlying assumption of most studies appears to be that material goods must be generated and available in some quantity before they can be redistributed.¹¹ This argument rests on the assumption that economic development influences the supply rather than the demand for public expenditures.

The general approach of several studies has been to factor analyze a large number of economic, demographic and social variables. The resulting factor solution is then employed to create a measure of the dimensions of economic development. The difficulty with this procedure is that there is seldom any clear rationale for deciding which variables to enter into the factor analysis and little theory as to the presumed dimensions of economic development yielded by the factor solution.¹² However, since the influence of economic development on the supply of public expenditures is generally stressed, one wonders why variables which probably measure demand influences are included. The danger of proceeding without theory is evident.

A further complication is the lack of agreement regarding the appropriate dependent variable for analysis. Some authors have employed public expenditures as a percentage of

the national income, while others have utilized public expenditures per capita and public expenditures in total. The problem arises because studies which have employed different measures of the dependent variable have yielded different results. However, the tendency has been to treat the three measures of public expenditure as interchangeable.

The major difficulty with employing public expenditure as a percentage of the national income is that it is doubtful whether decision-makers utilize this measure in the decision-making process. Budgets are expressed in dollars and it is likely that this is the currency which is relevant to decision-makers and not fractions of the national income.

In addition, the use of public expenditure as a percentage of the national income does not provide a useful measure of service levels. To be sure, dollar expenditures are not much better in this respect, but at least they measure a known quantity. Given the well-known problems with the measurement of national income, it is difficult to place much confidence in the denominator of this fraction.¹³

Unfortunately, little attention has been paid to the question of the most appropriate measure of public expenditures.

Economists disagree over which national income concept should be used, gross domestic product (GDP), or gross national product (GNP), and whether the indicator chosen should be measured at market prices or factor cost. As Jackson has argued:

An appreciation both of the arithmetic and the economics involved in constructing government expenditure ratios would greatly enrich the debate and may reduce the frequency with which outrageous statements are made.¹⁴

Measures of the ratio of social security expenditures to GNP are perhaps even more difficult to interpret than the more general case of the ratio of total public expenditures to GNP, particularly if cross-national comparisons are desired. The first difficulty that arises is whether measures of GNP can be considered comparable across nations with differing economic systems or levels of development. Second, in order to interpret the data, the goals of social security must be specified. For example, the ratio of social security expenditures to GNP may be expected to fall with rising levels of economic development if the aims of social policy are to provide a minimum absolute standard of consumption, while the ratio will remain constant or rise if the aim is to provide a certain relative equality of income. As was noted in the previous chapter, poverty and inequality are not synonymous. It is quite possible to have a high degree of income equality in a society in which the majority of the population have poverty level incomes. For example, an examination of Wilensky's data indicates that in 1966 the United States (1966 GNP \$3542 per capita U.S. dollars) spent approximately 7.9% of GNP on social security, while Brazil (1966 GNP \$192 per capita U.S. dollars) spent about 8.2%.¹⁵ It is unclear what conclusions one is expected to draw from

such data, but it seems apparent that constant dollar expenditures would yield more comparable figures in terms of the actual level of services provided.

In general, the relationship between public expenditures as a fraction of GNP and the level of economic development has been found to be positive. However, Bird, Musgrave and Gupta report that any positive cross-national relationship between economic growth and government share of GNP disappeared when the analysis was confined to the wealthier nations of the world. Apparently, there exists an upper threshold to the scope of public expenditures relative to GNP beyond which further increases in spending are unlikely to occur.¹⁶ Wilensky argues that the degree of expansion of the public economy varies inversely rather than directly with economic growth. When growth is increasing, increased demand for public services can be met by applying a constant share to a larger economic product. When economic growth is slow, increased demands lead to increases in the public share of the national economy.¹⁷ It is much easier politically to direct increments in the national income to low-income groups than it is to redistribute a static income.¹⁸

A study by Cutright of social security development in seventy-six nations indicated that social security coverage was related to the level of economic development. However, the author did not examine changes in the level of expenditures or measures of economic resources other than energy

consumption.¹⁹ In another cross-national study of social security expenditures, Aaron found that income and the age of the social security system were important predictors of social security expenditures, but they were not significant predictors of the proportion of the national income spent on social security.²⁰

In contrast with the mixed results which have been obtained in studies of the relationship between economic development and the ratio of public expenditures to GNP, the results of studies of the relationship between economic development and public expenditure have been unambiguous. The level of economic development has generally been found to vary positively with the level of public expenditure.²¹

THE EFFECTS OF RISING INCOME ON THE SUPPLY AND DEMAND FOR PUBLIC EXPENDITURES

Income is perhaps the most widely employed environmental variable in studies of the relationship between economic development and public expenditures. While there is widespread agreement that rising incomes are somehow linked to the level of public expenditures, economists and others disagree over the question of whether income affects the supply or the demand for public expenditures. In formal terms, the dispute centers around the question of whether income effects expenditure levels via the income elasticity of demand or via the income elasticity of revenues.²⁴

The concept of the income elasticity of demand will be examined first. The level of public expenditures is said to be income elastic if it increases more than proportionately with a given increase in national income. According to this view, rising consumer incomes might be expected to lead to increased demand for government goods and services. The higher an individual's personal income, the larger is the fraction of his income that he is willing to spend on government services. A significant proportion of the goods and services provided by governments are in a sense luxury or superior goods and are thus income elastic in character. For example, Bird reports that expenditures on health and education in Canada are more income elastic than are expenditures on debt services or defence.²⁵

The logic of this argument can perhaps be best illustrated by way of a simple example. Suppose A has a low income. Since he cannot afford an automobile and walks everywhere, his demand for highways is very low. However, as his income increases A purchases an automobile and is now much more interested in the state of the nation's highways and he petitions his government for improved highways. The major difficulty with this argument is that since no market exists to satisfy consumer demand for government services, the question of how individual demands are collectively satisfied is left unanswered.²⁶

The income elasticity of revenues is thought to influence the supply of public expenditures. On the supply side, the effect of the tax structure in generating government revenues is stressed. A given increase in the national income generates different rates of increases in revenues depending upon the tax system. Continuous automatic increases in revenues that occur because of income-elastic tax systems are politically less painful than additional revenues raised by explicit increases in tax rates or tax bases. The growth of the economy raises government tax revenues each year without changes in tax rates. This "fiscal dividend" is crucial to the government since it is obtained at no political cost.²⁷

The faster the economy grows, the greater will be the fiscal dividend or built-in revenue gain with constant rates of tax. Given the likely asymmetry of political behavior in which voters are more willing to reduce tax rates than to raise them, a rising absolute level of public expenditures becomes permissible as the economy grows.²⁸ Of course, the rate of expenditures increase is not governed by the elasticity of the revenue structure but whatever the desired level of expenditures it is politically easier to achieve it when revenues grow faster than the growth of the national income.²⁹ In addition, the degree of invisibility of taxation rises with inflation. Given rising inflation and the delay in adjusting tax allowance to take account of the fall in their real value, the rate of taxation tends to increase without people realizing it.³⁰

While economists tend to stress the political costs of raising government revenues, sociologists and others tend to emphasize the class interests of elites. The importance of elite concessions in order to maintain their dominant position is described by Lenski as follows:

In an expanding economy, an elite can make economic concessions in relative terms without necessarily suffering any loss in absolute terms. In fact, if the concessions are not too large, and the rate of the economy's growth is great enough, relative losses can even be accompanied by substantial absolute gains... If we assume that the majority of men would willingly make modest relative concessions for the sake of substantial absolute gains, and if we also assume that leading members of the elite in industrial societies have an awareness of the benefits they can obtain from concessions, then we can only predict that they will make them.³¹

If the percentage increase in the budget is less than percentage increase in GNP, then the political consequences of a budget increase will probably be minimal, since a tax increase will not be required.³²

While the income elasticity of revenue thesis is more plausible, at least at first glance, than is the income elasticity of demand argument, it too suffers from a crucial flaw. As Richard Bird explains:

...the bulk of the available evidence appears to indicate that the existence of a revenue constraint... has not up to now been a long-run barrier to expanding government spending. It is therefore legitimate to study the expenditure side alone without further reference to tax constraints for a country like Canada.³³

For understanding Canada's recent expenditure history, however, one is probably still safe in placing less emphasis on revenue constraining expenditures than on direct influence on the expenditure side. Certainly one cannot explain the trend of government expenditures through considering the revenue side alone.³⁴

What this suggests is that neither the income elasticity of demand nor the income elasticity of revenues provides a completely satisfactory explanation for the growth of public expenditures. Nevertheless, income continues to appear as the most important predictor of public expenditures in statistical analyses. Unfortunately, economists have not as yet been able to separate the demand from the supply influence of this variable. This is not a particularly satisfactory state of affairs for the researcher, but this appears to be the state of the field at the moment. As Bird observes:

Income... may... be taken to reflect either the demand for public services or the supply ("fiscal capacity") side: it is in any case almost invariably positively associated with government expenditure. Given the impossibility of taking any of these variables to reflect either costs or demand influences alone, the only safe interpretation is that they reflect some indeterminate composite of the factors....³⁵

The fact that the effect of rising incomes on the supply and demand for public expenditures cannot be easily separated poses some difficulties in selecting the appropriate measure of income to be used. If the income elasticity of demand argument is preferred, then real personal disposable income

per capita would appear most appropriate. However, if the income elasticity of revenue thesis is accepted then real personal income per capita is preferable. Fortunately, the simple correlation between the two measures is very high ($r=.99$), and thus, while the indicators are conceptually distinct they are undifferentiated empirically. Real personal disposable income per capita was selected for this thesis as the measure to be employed, since the evidence suggests that a revenue constraint in Canada has not been a problem. The hypothesis to be examined is as follows:

H₁: The level of public expenditures in the current year varies directly with the level of real personal disposable income per capita in the previous year.

The lag is incorporated into the analysis since the estimates are tabled in the House of Commons in February of each year. Thus decision-makers must make budgetary decisions on the basis of data for the previous year.

POPULATION GROWTH AND THE ABILITY TO CONTROL EXPENDITURES

Radical changes in the size and/or composition of the government budget are unlikely from one year to the next. This state of affairs reflects the fact that much of the current year's budget has been determined by actions taken previously. A large proportion of public spending is uncontrollable, since the government has made legal commitments that must be met.³⁶ In this sense only a small part

of government spending is discretionary in any year, the remainder is automatic because of past commitments.

It is necessary to distinguish between uncontrollable and controllable expenditures in order to examine the impact of political factors on spending patterns.³⁷ Controllability reflects the extent to which outlays in any given year can be increased or decreased under existing law. If expenditure levels cannot be changed without changes in the enabling legislation, then they are said to be uncontrollable. A recent study of the American federal budget for the 1977 fiscal year found that according to this definition, approximately 77% of budgetary expenditures were uncontrollable. Transfer payments to individuals constituted the largest proportion of this uncontrollable total.³⁸ For example, if the number of people over retirement age increases, then the government is committed by existing legislation to further expenditures on old age pensions.³⁹

Other spending, while not mandatory, is resistant to change since the program may be highly popular or supported by powerful interests, both inside and outside the government. By way of example, it is highly unlikely that a Canadian government of any of the major parties would seriously contemplate either eliminating or significantly reducing old age pension benefits. As the number of beneficiaries and/or employees of a government program grows, the probability

increases that there will be an increasing percentage of the population in favour of further growth in these expenditures. Past growth in the size of the constituent group implies that a larger percentage of the voting population will favour the program, and hence the pressure for further public expenditures will increase. The current constituents of a program are likely to support increased spending on currently existing beneficiaries and the larger their numbers the larger will be their political weight.⁴⁰

In addition to the pressure for increased expenditures by program recipients, the members of a government bureaucracy tend to resist any changes in the structure of expenditures because expenditure cuts threaten to undermine the positions of the bureaucracy's most important members. Government employees have a clear interest in the continuous expansion of public expenditures and employment as this increases their income and influence.⁴¹ In addition, the client groups on whom the various departments depend for support judge the respective agencies by their ability to obtain benefits for the group.⁴²

Expenditures can be expected to increase in any given year if one or more of three conditions are met. These conditions are as follows:

- (1) the number of beneficiaries increases;
- (2) benefit levels are increased; or
- (3) eligibility conditions are relaxed.

The first condition will automatically lead to an increase in expenditures without government action, while the latter two conditions require legislative changes. If expenditures are measured in current dollars then it is evident that budgetary outlays will vary positively with the number of program recipients. However, if expenditures are measured in constant dollars, then the direction of the relationship between expenditures and the number of program recipients becomes more difficult to discern. The relationship between the number of program recipients and public expenditures can be expected to be positive if the rate of increase in constant dollar expenditures exceeds the rate of increase in the size of the constituent group.

One method which decision-makers can employ to reduce the relative or absolute growth of expenditures is to neglect to adjust benefit levels to the cost of living. For example, family allowance payments were allowed to decline so far in real value during long periods of the plan's operation that absolute expenditures in constant dollars actually declined. This was in spite of the fact that the number of program recipients increased from the program's inception until after 1966. Benefit levels were only increased in real terms after the absolute number of beneficiaries began to decline, after 1966. Thus one might speculate that the government

only became willing to provide more generous levels of family allowance support after the absolute number of beneficiaries began to decline. Anton has suggested two possible explanations why benefit levels might be increased only after the absolute number of beneficiaries declined. According to the author, failure to spend all of the current year's appropriation implies that it was unnecessary in the first place. The program may then become a prime candidate for expenditure reductions in the future. Second, the author argues that program managers will never request less than the current appropriation. It is much easier to find other ways to spend the appropriated funds than it is to explain why a reduction is requested. A reduction in appropriations may indicate that the program is not growing, an embarrassing admission for many administrators.⁴³ In the case of the family allowance program, an absolute decline in the number of recipients after 1966 meant that expenditure levels would decline dramatically in constant dollars unless expenditure levels were raised or eligibility conditions were relaxed.

Three measures of the number of beneficiaries for each program have been selected in order to provide a measure of the controllability of expenditures. They are as follows:

- (1) Unemployment Insurance: the number of unemployed persons (000's).
- (2) Old Age Pension: the number of persons over 70 years of age (000's).
- (3) Family Allowances: the number of recipients under 16 years of age (000's).⁴⁴

These measures provide a baseline against which discretionary changes can be measured. As was noted previously, expenditures can be increased by altering the eligibility conditions for receipt of benefits or by increasing benefit levels. In the case of family allowances and old age security, the major changes in eligibility conditions have been extensions in the age of eligibility for benefits. Family allowance benefits were extended to persons under 18 years of age from the original 16 years of age. Old age security benefits were extended to persons over 65 years of age from the original 70 years of age. Unemployment insurance benefits were extended to a larger group through an expansion in the insured population. Thus the proportion of the labour force eligible for unemployment insurance benefits was increased over the years. The intention is to provide a measure of the number of persons who would have received benefits under the original legislation. This portion of expenditures is deemed uncontrollable. Departures from basic eligibility conditions and increases in benefit levels are controllable and it is hoped to capture the effects of these expenditure changes with other variables such as income and lagged expenditures.

Expenditures on each of the three programs can be expected to rise automatically with increases in the number of constituents unless the government takes legislative action. However, this conclusion does not hold if the rate of increase in constant dollar expenditures falls behind the rate of

increase in the size of the constituent groups. Data on the mean annual percentage rate of growth of the number of unemployed persons, the number of persons under 16 years, the number of persons over 70 years, the implicit price index for government current expenditures on goods and services and the growth of expenditures in current dollars are contained in Table 40.

TABLE 40

Mean Annual Percentage Change in Constituent Group Size, the Implicit Price Index for Government Current Expenditures on Goods and Services and Current Dollar Expenditures

	Estimation Period	Growth Rate %	R^2
U.I. expenditures	1941-1977	17.0	.81
Price Index	1941-1977	5.4	.97
No. of unemployed	1941-1977	6.0	.84
FA/YA expenditures	1945-1977	5.8	.84
Price Index	1945-1977	5.4	.97
No. of persons under 16 years	1945-1977	5.4	.97
OAS/GIS expenditures	1951-1977	12.2	.95
Price Index	1951-1977	5.5	.95
No. of persons over 70 years	1951-1977	2.6	.99

The table provides regression estimates of the average annual percentage change in each of the variables. Thus unemployment insurance expenditures in current dollars increased at a rate of 17% per year during the period between 1941 and 1977. The $\bar{R}$'s are presented as summary measures of the "goodness of fit" of the equations. In general, a high $\bar{R}^2$ suggests that the time series has followed a smooth exponential growth over the estimation period. In other words, a high $\bar{R}^2$ means that the variable has been increasing at a constant rate over the time period, while a lower $\bar{R}^2$ means that the variable has increased at a varying rate or declined in some years.

The table indicates that the growth rate of expenditures in constant dollars has exceeded the growth of the size of the constituent group for both the unemployment insurance and old age security programs. However, family allowance expenditures in constant dollars have fallen behind the rate of growth in the size of the constituent group (the number of persons under 16 years of age). This finding suggests three hypotheses:

- H₂: The level of unemployment insurance expenditures will vary directly with the number of unemployed persons.
- H₃: The level of OAS/GIS expenditures will vary directly with the number of persons over 70 years of age.
- H₄: The level of FA/YA expenditures will vary inversely with the number of persons under 16 years of age.

Given hypothesis 4, it might be expected that expenditures would tend to increase after the size of the constituent group had declined in absolute terms. According to this complementary hypothesis, the change in expenditure resulting from a unit increase in the size of the constituent group would be different from the change resulting from a unit decrease. In other words, the government's response in terms of expenditure levels is expected to be different depending on whether the number of recipients is rising or falling. Governments can afford to provide generous benefit levels when they are secure in the knowledge that the number of recipients is declining in absolute terms. In formal terms, an asymmetric response hypothesis is posited. This hypothesis can be stated as follows:

H₅: The level of FA/YA expenditures varies directly with the rate of decline in the number of persons under 16 years of age.

Thus, it is expected that expenditure levels will increase as the number of program recipients declines. This result would be due to increased benefit levels for a smaller number of recipients.

BUDGETARY INCREMENTALISM

Budgeting is incremental, that is, the most important determinant of the size and/or composition of the current budget is the previous year's budget.⁴⁵ Studies of budgeting in a large number of nations, international organizations,

and American states support this view.⁴⁶ Two types of evidence have been marshalled in support of this contention. First, a study of public expenditures in fourteen communist and capitalist nations by Pryor found that the best predictor of health and welfare spending was the age of the social security system.⁴⁷ In other words, the longer health and welfare programs were in operation the larger was the amount of money allocated to these programs. Wilensky and others have reported similar results in their cross-national studies of social security spending.⁴⁸ Second, studies by Sharkansky, Wildavsky, Ames and others have demonstrated that public expenditures in the current year are related positively to public expenditures in the previous year.⁴⁹

Dye, Lindblom, Wildavsky and others have posited the following explanation for these findings. According to these authors, constraints of time, cost and intelligence prevent policy makers from identifying the full range of policy alternatives and their consequences. Thus, decision-makers do not annually review the range of existing and proposed policies, identify societal goals, calculate cost-benefit ratios for alternate policies and then rank order all possibilities before making a decision.⁵⁰ Rather, decision-makers direct most of their attention to marginal increases or decreases in existing programs.⁵¹

Through their acceptance of previous levels of expenditures as primary decision criteria, decision-makers are able

to simplify the decision-making process.⁵² The base of previous expenditures represents the sum of past decisions, habits and earlier accommodations. Rather than reconsidering all aspects of a budget during an annual review, incrementalism accepts the legitimacy of established programs and agrees to continue the previous level of expenditure.⁵³ For this reason, the greatest part of any budget is based on last year's budget with special attention being given to a narrow range of increases or decreases from this base.⁵⁴ Wildavsky has summarized the incrementalist position quite succinctly as follows:⁵⁵

...the men who make the budget are concerned with relatively small increments to an existing base. Their attention is focused on a small number of items over which the budgetary battle is fought.

Once enacted, a budget becomes a precedent; the fact that something has been done once vastly increases the chances that it will be done again. Since only substantial departures from the previous year's budget are normally given intensive scrutiny, an item that remains unchanged will probably be carried along the following year as a matter of course.⁵⁶

To date, there have been no Canadian studies of budgeting which have relied on an explicitly incremental perspective as the conceptual framework. However, at least one Canadian study by Chandler employed the percentage change in expenditures as the dependent variable in his analysis. According to Chandler, his choice of change in spending as the dependent variable was based on the fact that levels of

spending cannot fluctuate greatly in the short-run, the reasoning being that standing appropriations and fixed costs make much of the budget uncontrollable in the short-run.⁵⁷

While empirical studies of public expenditures from an incrementalist perspective have been lacking in Canada, the testimony of participants in the budgetary process may aid our understanding of the Canadian situation. A former deputy secretary of the Treasury Board has described the Canadian budgetary process as follows:

Unless there is an in-depth policy review of a program (and these reviews are few and far between), it is tacitly assumed that all existing permanent programs should continue to operate year after year, providing the same quantity and quality of output per client.⁵⁸

The incrementalist position can be stated more formally in the form of a hypothesis:

H₆: The level of public expenditures in the current year varies directly with the level of public expenditures in the previous year.

METHOD

Before proceeding the statistical techniques to be employed in the data analysis must be outlined. Particular attention is paid to the statistical problems which may arise in a time series analysis and how these will be overcome. The verbal hypotheses which were discussed earlier are stated more formally and tested through the use of a series of estimating equations.

The statistical technique employed in the data analysis was single equation ordinary least squares (OLS) multiple regression. Multiple regression was employed to choose a set of coefficients such that the predicted value of the dependent variable is expressed as a linear combination of the independent variables, plus a constant term. Mathematically, this can be written as:

$$\hat{Y} = \hat{b}_0 + \hat{b}_1 x_1 + \hat{b}_2 x_2 + \dots + \hat{b}_k x_k + e \quad (1.1)$$

$$\text{where (residual) } e = (Y - \hat{Y}) \quad (1.2)$$

the coefficients $\hat{b}_0, \hat{b}_1, \dots, \hat{b}_k$ are chosen so as to minimize the sum:

$$\begin{aligned} \text{(error sum of squares) SEE} &= (Y - \hat{Y})^2 \text{ or} \\ &\text{equivalently } (e)^2. \end{aligned} \quad (1.3)$$

It has been demonstrated that coefficients chosen according to the above criteria will be consistently unbiased and efficient both for a finite sample and asymptotically provided that a set of basic assumptions are satisfied.⁵⁹

The most important of these assumptions, for our purposes, is that the error terms must be independent for successive observations (non-autocorrelation), that is:

$$\text{Covariance } (e_+, e_+ - m) = 0, + \neq + - m, \quad (1.4)$$

Second, the regressor must also be independent of the error term, namely:

$$\text{Covariance } (e_+, x_+) = 0. \quad (1.5)$$

The rationale for these assumptions is that, in a stochastic model there is only one systematic factor (namely X_+), the independent variable acting on the dependent variable (Y_+). If the error terms were related to each other this would obviously not be the case. For example, if e_+ was correlated negatively with its immediately preceding value, $e_{+ -1}$, then the value of Y_+ would depend systematically on the value of X_+ and the value of $e_{+ -1}$ would at least in part determine e_+ .⁶⁰ This makes sense intuitively if it is remembered that the error terms are assumed to consist of two components: measurement error and stochastic error attributable to the inherent irreproducibility of social phenomena.⁶¹

In order to be able to assess the consequences of autocorrelation, it is necessary to specify the nature of the relationship between the error terms. By far the most common relationship between the error terms is called a first order autoregressive process, or simple Markov chain, where:

$$e_+ = p e_{+ -1} + V_+ \quad \text{and} \quad |p| < 1 \quad (1.6)$$

where e_+ = error at time +

$e_{+ -1}$ = error at time + -1

p = regression coefficient

V_+ is a "perturbation" or random variable with a zero mean, constant variance, and zero correlation with the other errors.⁶²

Thus, when $p = 0$, $e_+ = V_+$ and possesses all of the qualities of V_+ . The regression coefficient p (ρ) is more or less equivalent to the simple Pearson's r between e_+ and $e_{+ -1}$.⁶³

The consequences of violating the assumption of non-autoregression (1.4) are unfortunately quite severe. If the disturbances are interdependent, OLS regression yields biased estimates of the coefficient variances. Since the bias is generally negative, the estimated variances and standard errors will tend to understate the true variances and standard errors. This produces inflated t and F -ratios and may lead to spurious attribution of significance to the independent variables and to the regression line as a whole. Moreover, the OLS estimate of the variance of the disturbance is also biased, and since the bias is again typically negative, the R^2 as well as the t and F -statistics will be inflated.⁶⁴ As a result, one is likely to overestimate the strength of the relationship between the dependent and interdependent variables. In other words, given the typical case (positive autocorrelation), the probability of accepting the basic hypothesis when it is not true (Type II error) is increased markedly.⁶⁵ In brief, autocorrelation can have an important impact on the quality of inferences derived from an empirical analysis. Nevertheless, a number of studies of comparative public policy by political scientists have ignored these problems. The likelihood that these studies contain serious Type II errors is thus very high indeed.⁶⁶

The problem of autocorrelation is further compounded by the presence of lagged dependent variables in an equation. This problem arises here because the incrementalist theory

suggests that the previous level of expenditure is a major determinant of the current level of expenditure. The combination of lagged Y values and autocorrelated disturbances results in inconsistent OLS estimates. As Johnston explains:

Autocorrelated disturbances without lagged Y values do not produce biased estimates even in small samples; lagged Y values with random disturbances will give OLS estimators which are consistent, though biased in finite samples; the combination of the two problems, however, throws OLS off-beam and gives inconsistent estimators.⁶⁷

The main reason ~~for~~ the difficulties described by Johnston is that the lagged dependent variable $Y_{+ -1}$ is correlated with the current disturbance term e_{+} . This occurs because Y_{+} depends directly on e_{+} , $Y_{+ -1}$ on $e_{+ -1}$ and so on. Since e_{+} and $e_{+ -1}$ are directly related, $Y_{+ -1}$ is related to e_{+} . In brief, autocorrelation in the presence of a lagged dependent variable means that the explanatory variable will be correlated with the current disturbance.⁶⁸ The probable effect of this violation of the basic regression assumption is that the impact of $Y_{+ -1}$ will be exaggerated.⁶⁹

Since autocorrelation poses serious problems for the use of OLS, it is extremely important to test for its presence in a given sample. Unfortunately, the most commonly employed test for detecting the presence of autocorrelation, the Durbin-Watson d statistic is not appropriate if a lagged dependent variable is included in the estimating equation.

The use of Durbin-Watson's d in such circumstances is erroneous because the statistic will be biased toward 2.0 (the value for random disturbances). In other words, the researcher is likely to conclude that autocorrelation is not a problem when in fact there are serious problems with the equation in question. Thus, one is likely to overestimate the effects of the coefficient for Y_{t-1} and to underestimate the effects of the X_t 's.⁷⁰ Again, unfortunately, some researchers have ignored these problems and thus the validity of their results is in some doubt.⁷¹

The appropriate test statistic for the presence of autocorrelation when a lagged dependent variable is included in the equation is Durbin's h statistic.⁷² Although Durbin's h is an asymptotic test, it has been found to be acceptably powerful in small samples.⁷³ If the Durbin's h statistic indicated the presence of significant autocorrelation, a variant of generalized least squares (GLS) developed by Dhrymes was employed.⁷⁴ Dhrymes' method provides a correction procedure for the estimation of single equation models with autocorrelated errors and lagged dependent variables.⁷⁵ The decision whether to employ generalized least squares estimation procedures was based on a decision rule proposed by Rao and Griliches. The authors suggest that for small samples, GLS procedures should be employed if the value of ρ (the first order serial correlation coefficient) exceeds $\pm .30$.⁷⁶ This decision rule was applied if the value of ρ exceeded

$\pm .30$ and the associated $\pm$ ratio for ρ was statistically significant at the 5% level.

In order to determine the statistical significance of ρ , it was necessary to employ the Fisher r to Z transformation. Fisher demonstrated that for virtually any value of r , for samples of moderate size, the sampling distribution of Z is approximately normal. Thus the hypothesis that the population correlation coefficient is equal to any value can be tested. This test is carried out in terms of the test statistic

$$\sqrt{\frac{Z - p}{1/(N - 3)}}$$

where p is the population correlation coefficient. The value taken for $E(Z)$ or p depends on the value given for r by the null hypothesis, in this case $r = 0$. In a normal sampling distribution, a standard score of 1.96 in absolute value is required for rejecting the hypothesis at the 5% level with a two-tailed test. In brief, the test made in terms of Z leads to an inference in terms of r (the first-order serial correlation coefficient).⁷⁷

FINDINGS

This section applies the methods described earlier in order to test the various hypotheses concerning the level of public expenditures. The three programs: unemployment insurance, family and youth allowances and old age pensions are examined in chronological order, with the programs which

have been in existence the longest being examined first. The hypotheses relating to each program are recapitulated in verbal form and then translated into equations in order to allow for empirical testing.

Unemployment Insurance

Following the hypotheses described earlier, unemployment insurance expenditures in the current year were expected to vary directly with lagged expenditures, the number of unemployed persons and the level of real personal disposable income per capita in the previous year. These hypotheses were tested with the following estimating equation:

Equation (1):

$$UI_+ = a + b_1 UI_{+ -1} + b_2 PI_{+ -1} + b_3 NU_+ + e_+$$

where

UI_+ = unemployment insurance expenditures in constant dollars at time +

$UI_{+ -1}$ = lagged unemployment insurance expenditures at time + -1

$PI_{+ -1}$ = real personal disposable income per capita at time + -1

NU_+ = number of unemployed persons at time +

e_+ = stochastic error term

The hypothesized signs of the coefficients are

$$b_1 > 0, b_2 > 0, \text{ and } b_3 > 0.$$

Equation 1 was estimated using ordinary least squares multiple regression. The results of this procedure are

presented in Table 41. Table 41 indicates that the three variables explain 91% of the variance in expenditure levels. However, only the coefficient representing the effect of lagged expenditures was statistically significant at the 5% level. This result appears to be due to the fact that the simple correlation between the number of unemployed persons and personal disposable income was .92. Such a high correlation between the two independent variables makes it difficult to separate statistically the effects of each of these two variables. Given the high correlation between the number of unemployed persons and personal disposable income, it was decided to delete the income variable from the regression equation. This decision was based on the fact that the coefficient representing the number of unemployed persons was almost significant at the 5% level, while the coefficient representing income was not. The results of the regression between unemployment insurance expenditures, lagged expenditures and the number of unemployed persons are presented in Table 41. This table indicates that both of the regression coefficients are now statistically significant at the 1% level, with no loss in the amount of explained variance. Overall, the table indicates that lagged expenditures are a better predictor of expenditure levels than the number of unemployed persons. The standardized regression coefficient representing lagged expenditures is approximately twice the magnitude of the coefficient representing the number of

unemployed. The Durbin's h statistic suggests that autocorrelation is not a problem in this estimating equation.

TABLE 41

OLS Regression between Unemployment Insurance Expenditures
Lagged Expenditures, Real Disposable Income,
and the Number of Unemployed Persons
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-308.49	226.64	-	-1.36
U.I. spending _{+ -1}	.63	.14	.60	4.51**
Real disposable income _{+ -1}	.23	.22	.16	1.05
No. of unemployed persons ₋₂	.75	.47	.23	1.58

$R^2 = .91$
 $S.E.E. = 199.77$
 $F = 113.91$
 $\rho < .01$
 Durbin's $h = 1.54$ First order $\rho = 0.15$ $\rho > .05$
 $N = 35$

** $p < .01$ two-tailed test

TABLE 42

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures, and
the Number of Unemployed Persons
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficients	+ -ratio
Intercept	-83.03	73.83	-	-1.12
U.I. spending _{+ -1}	.70	.12	.66	5.71**
No. of unemployed persons ₋₂	1.04	.38	.31	2.70**

$R^2 = .91$
 $S.E.E. = 200.11$
 $F = 169.75$
 $\rho < .01$
 Durbin's $h = 1.15$ First order $\rho = 0.13$ $\rho > .05$
 $N = 35$

** $p < .01$ two-tailed test

Family and Youth Allowances

The level of family and youth allowances expenditures in the current year was hypothesized to vary directly with lagged expenditures and real personal disposable income in the previous year and inversely with the number of persons under 16 years of age and declines in the number of persons under 16 years of age. The latter variable, declines in the number of persons under 16 years of age, has an asymmetric response interpretation. This means simply that decision-makers are hypothesized to respond differently depending on whether the number of persons under 16 years of age is declining or increasing. This variable can be incorporated into a regression equation by introducing a binary variable.

In the simple regression model $Y_+ = a + b X_+ + e_+$, a unit increase in X_+ leads to a change in $E(Y_+)$ equal to b . Similarly, a unit decrease in X_+ leads to a change in $E(Y_+)$ equal to $-b$. The response to $E(Y_+)$ can be made asymmetric as follows:

$$Y_+ = a + b X_+ + \gamma X_+^- Z_+ + e_+$$

$$Z_+ = 1 \text{ when } X_+ < X_+^- - 1$$

$$= 0 \text{ otherwise.}$$

The test of the asymmetric response hypothesis is equivalent to testing that $\gamma = 0$.⁷⁸ This hypothesis can be stated verbally as follows:

H₇: The level of family and youth allowance expenditures varies directly with the rate of decline in the number of persons under 16 years of age.

The equation employed to test the hypothesis concerning the level of family and youth allowances expenditures is as follows:

Equation (2):

$$FA_{+} = a + b_1 FA_{+ -1} + b_2 PI_{+ -1} - b_3 NC_{+} - b_4 DP_{+} + e_{+}$$

where

$FA_{+ -1}$ = Family and Youth Allowance Expenditures in constant dollars at time +

$PI_{+ -1}$ = real personal disposable income per capita at time + -1

NC_{+} = number of persons under 16 years of age at time +

DP_{+} = declining population under 16 years of age at time + (Asymmetric response)

e_{+} = stochastic error term

The hypothesized signs of the coefficients are

$$b_1 > 0, b_2 > 0, b_3 < 0 \text{ and } b_4 < 0.$$

Equation 2 was estimated with ordinary least squares multiple regression. The results of this procedure are presented in Table 43. The table indicates that all of the coefficients are statistically significant at the 5% level and all have the expected signs. Higher levels of expenditure were associated with higher expenditures in the previous year, higher levels of personal disposable income, and declines in the number of persons under 16 years of age.

Lower levels of expenditures were associated with increases in

the number of persons under 16 years of age. Overall, the equation explains some 58% of the variance in family and youth allowances expenditures. An examination of the standardized regression coefficients indicates that real personal disposable income and declines in the number of persons under 16 years of age had the greatest influence on expenditure levels, followed by the number of persons under 16 years of age and lagged expenditures. The level of the Durbin's h statistic is some cause for concern, but the value of rho although it was .30 was not statistically significant at the 5% level.

TABLE 43

OLS Regression Between Family and Youth Allowances
Expenditure, Lagged Expenditure, Real Disposable
Income, Population Under 16 years of Age, and
Declines in the Population Under 16 years of Age
1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	363.3	159.5		2.28*
Lagged expenditures _{+ -1}	.33	.16	.33	2.00*
Personal disposable income _{+ -1}	.38	.12	1.03	3.23**
Population under 16 years of age	-.06	.03	-.36	-2.20*
Asymmetric response declining population	-.03	.01	-.59	-2.30*

$R^2 = .58$

S.E.E. = 108.0

F = 11.6 .01 $p < .01$

Durbin's $h = 4.45$ First Order rho = 0.30 $p > .05$

N = 32

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

Old Age Pension/Guaranteed Income Supplement

The level of OAS/GIS expenditures in the current year was hypothesized to vary directly with lagged expenditures, the level of real personal disposable income in the previous year and the number of persons over 70 years of age.

The estimating equation for the level of Old Age Pension/Guaranteed Income Supplement expenditures is as follows:

Equation (3)

$$OP_+ = a + b_1 OP_+ -1 + b_2 PI_+ -1 + b_3 NO_+ + e_+$$

OP_+ = Old Age Security/Guaranteed Income Supplement expenditures in constant dollars at time +

$OP_+ -1$ = lagged expenditures at time + -1

$PI_+ -1$ = real personal disposable income per capita at time + -1.

NO_+ = number of persons over 70 years of age at time +

e = stochastic error term

The hypothesized signs of the coefficients are

$$b_1 > 0, b_2 > 0 \text{ and } b_3 > 0.$$

Equation 3 was estimated with OLS multiple regression.

The results of this procedure are presented in Table 44.

An examination of the table reveals that only the coefficient for the lagged expenditure variable was statistically significant at the 5% level. The sign of the coefficient was positive as predicted by the hypothesis. Overall, the equation explains some 96% of the variance in OAS/GIS expenditures. The Durbin's h statistic indicates the presence of

some autocorrelation, however, the coefficient of rho (rho = .31) was not statistically significant at the 5% level. This suggests that the use of OLS is acceptable in these circumstances.

Given the fact that neither of the coefficients for real personal disposable income nor the number of persons over 70 years of age was statistically significant, the equation was re-estimated minus the real personal disposable income variable. This variable had the lowest $\pm$ -ratio, while the $\pm$ -ratio for the number of persons over 70 years of age was nearly significant at the 5% level. The results of this procedure are presented in Table 45. Table 45 indicates that the amount of variance explained was identical to that of Table 43, but again only the coefficient for lagged expenditures was statistically significant. Given this result, the equation was re-estimated after deleting the number of persons over 70 years of age variable. The final equation is contained in Table 46. Again the coefficient for lagged expenditures was positive and statistically significant. Overall, the amount of variance explained declined slightly to 95%. The Durbin's h statistic indicates that autocorrelation is not a problem in this equation.

TABLE 44

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures, Real Personal Disposable
Income, and the Number of Persons
over 70 years of age
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-536.22	401.54	-	1.34
Lagged expenditures + -1	.63	.19	.65	3.24**
Real Personal Disposable Income + -1	-.46	.23	-.03	-0.20
No. of persons over 70 years	1.28	.75	.36	1.70

$R^2 = .96$

$F = 186.98$ $p < .01$

S.E.E. = 136.59

Durbin's h = 9.59 First Order rho = 0.31 $p > .05$

N = 26

** $p < .01$ two-tailed test

TABLE 45

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures and the Number of Persons
over 70 years of age
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-538.62	392.87	-	-1.37
Lagged expenditures _{t-1}	.62	.18	.64	3.39**
No. of persons over 70 years	1.21	.66	.35	1.83

$R^2 = .96$

$F = 292.70$ $p < .01$

S.E.E. = 133.70

Durbin's h = 4.41 First Order rho = 0.33 $p > .05$

N = 26

** $p < .01$ two-tailed test

TABLE 46

OLS Regression Between OAS/GIS Expenditures
and Lagged Expenditures
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	172.97	65.578	-	2.64*
Lagged expenditures + -1 ✓	.94	.41	.98	23.02**

$R^2 = .95$

F -ratio = 529.8 $p < .001$

S.E.E. = 140.1

Durbin's h = .74 First Order rho = 0.14 $p > .05$

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

N = 26

SUMMARY AND CONCLUSIONS

The chapter began with a discussion of the constraints which may influence the behaviour of decision-makers in the budgetary process. Three possible constraints were identified: the level of economic development, demographic change in the population and budgetary incrementalism. It was argued that while the dominant view in the literature appears to be that economic development is the most important predictor of the level of public expenditures, the theoretical basis for this view has been deficient or lacking. It was noted that the lack of a clear theory has resulted in the use of a large number of indicators for this concept. The use of factor analysis as a tool to uncover the dimensions of economic development was criticized.

The chapter then discussed the probable effects of rising incomes on the levels of public expenditures. It was noted that while the supply and demand influence of this variable are not easily separable, other indicators of economic development suffer from more serious deficiencies. The distinction between controllable and uncontrollable expenditures was emphasized, and it was noted that much of the current budget is uncontrollable because legal commitments must be met. Increasing numbers of persons in the constituent groups of each program mean that expenditure levels will rise, unless the legislation is changed. Finally, the probable effects

of budgetary incrementalism on the level of public expenditures was discussed. It was argued that one of the major determinants of the size of the current year's budget is the previous year's budget. The reasons why such a situation might be likely to occur were described.

The statistical methods employed in the data analysis were described and a list of proposed hypotheses were outlined. The hypotheses concerning the growth of expenditures were tested empirically through the use of a number of estimating equations. The major findings of the statistical analysis were that lagged expenditures and demographic change proved to be the best predictors of expenditure levels with the level of economic development being of lesser importance except in the case of the family allowance program. The amount of variance in expenditure levels explained by each of the three equations was found to be quite high. However, the amount of variance explained in expenditure levels by the several independent variable varied across policy areas. In addition, the importance of different independent variables in explaining expenditure levels also varied across policy areas.

The following chapter examines the influence of political and particularly electoral variables on expenditure levels. The results of the present chapter are used as a basis from which to begin that exercise.

NOTES

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3. See Solomon Fabricant, The Trend of Government Activity in the United States Since 1900 (New York: National Bureau of Economic Research, 1952), pp.112-219; Thomas R. Dye, Politics, Economics and the Public (Chicago: Rand McNally, 1966); Dale H. Poel, "Canadian Provincial and American State Policy: A Qualitative Explications of an Empirical Difference." Paper presented at the Canadian Political Science Association Meeting, June 1972; James B. Hogan, "Social Structure and Public Policy: A Longitudinal Study of Mexico and Canada," Comparative Politics, 4, (July 1972), pp.477-510; Robert W. Jackman, Politics and Social Equality (New York: John Wiley, 1975); Harold L. Wilensky, The Welfare State and Equality (Berkley: University of California Press, 1975); Frederic L. Pryor, Public Expenditures in Communist and Capitalist Nations (Homewood, Ill.: Irwin, 1968).
4. Wilensky, Welfare State and Equality, p.47.
5. See John W. Fenton and Donald W. Chamberlayne, "The Literature Dealing with the Relationships between Political Processes, Socio-economic Conditions and Public Policies in the American States: A Bibliographical Essay," Polity, 1, (Spring 1969), pp.388-404; Herbert Jacob and Michael Lipsky, "Outputs, Structure, and Power: An Assessment of Changes in the Study of State and Local Politics," Journal of Politics, 30, (May 1968), pp.510-538; R. Kenneth Godwin and W. Bruce Shepard, "Political Processes and Public Expenditures: A Re-examination Based on Theories of Representative Government," American Political Science Review, 20, (December 1976), pp.1127-1135; Jackman, Politics and Social Equality.
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7. Bruno S. Frey, "Towards a More Theoretical Foundation for Empirical Policy Analysis," Comparative Political Studies, 11, (October 1978), pp.311-336.
8. Jenkins, Policy Analysis, p.53.
9. Jackman, Politics and Social Equality, ch.3.
10. Jacob and Lipsky, "Outputs, Structure and Power," pp.516-517.
11. Jackman, Politics and Social Equality, p.7.
12. See Richard I. Hofferbert, "Socioeconomic Dimensions of the American States: 1890-1960," Midwest Journal of Political Science, 3, (August 1968), pp.401-418; Allan Kornberg, David J. Falcone and William Mishler, Legislatures and Societal Change: The Case of Canada (Beverly Hills: Sage Publications, 1973); William Mishler and David B. Campbell, "The Healthy State: Legislative Responsiveness to Public Health Care Needs in Canada, 1920-1970," Comparative Politics, 10, (July 1978), pp.479-497. For a discussion and critique of the use of composite measures and the interpretation of such measures emerging from factor analysis, see A. Prezeworski and H. Teune. The Logic of Comparative Social Inquiry (New York: Wiley, 1970), pp.100-106; H. Tuckman and S. Ford, The Demand for Higher Education (Lexington: Heath, 1973).
13. See Richard M. Bird, The Growth of Government Spending in Canada (Toronto: Canadian Tax Foundation, 1970); A.R. Prest, "Government Revenue, the National Income and all that," in R.M. Bird and J. Head, eds. Modern Fiscal Issues (Toronto: University of Toronto Press, 1972), pp.137-163.
14. Peter M. Jackson, "Comparative Public Sector Growth: A United Kingdom Perspective," in Meyer W. Bucovetsky, ed. Studies in Public Employment and Compensation in Canada (Scarborough: Butterworth and Co. for the Institute for Research on Public Policy, 1979), p.127.
15. Wilensky, Welfare State and Equality, pp.122-124.
16. Richard M. Bird, "Wagner's 'Law' of Expanding State Activity," Public Finance, 26, (1971), p.19; Richard A. Musgrave, Fiscal Systems (New Haven: Yale University Press, 1969), pp.112-113; and Shibshankar P. Gupta, "Public Expenditures and Economic Development," Finanzarchiv, 28, (1968), pp.26-41.
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19. Phillips Cutright, "Political Structure, Economic Development, and National Social Security Programs," American Journal of Sociology, 70, pp.537-550.
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24. Foot, Provincial Public Finance in Ontario, p.163.
25. Bird, Growth of Government Expenditures in Canada, pp.87-90.
26. Ibid., pp.89,91,93.
27. See Hartle, Theory of the Expenditure Budgetary Process, pp.6,92; Foot, Provincial Public Finance in Ontario, p.163.
28. Musgrave, Fiscal Systems, p.87; Bird, Growth of Government Expenditure in Canada, pp.117,119.
29. Bird, Growth of Government Expenditure in Canada, p.119.
30. Rudolph Klein, "The Politics of Public Expenditure: American Theory and British Practice," British Journal of Political Science, 6, (October 1976), pp.420-421.
31. Gerhard Lenski, Power and Privilege (New York: McGraw-Hill, 1966), pp.314-315.
32. Wilensky, Welfare State and Equality, p.233.
33. Bird, Growth of Government Expenditures in Canada, p.119.
34. Ibid., p.122.

35. Ibid., p.210.

36. Dennis S. Ippolito, The Budget and National Politics (San Francisco:W.H. Freeman, 1978), p.12.

37. See William M. Chandler, "Canadian Socialism and Policy Impact: Contagion from the Left?" Canadian Journal of Political Science, 10, (December 1977), p.769; John R. Gist, "'Increment' and 'Base' in the Congressional Appropriations Process," American Journal of Political Science, 21, (May 1977), p.342.

38. Ippolito, Budget and National Politics, p.18.

39. Klein, "Politics of Public Expenditure," p.424.

40. See Kenneth V. Greene and Vincent G. Munley, "Generating Growth in Public Expenditures: The Role of Employee and Constituent Demand," Public Finance Quarterly, 7, (January 1979), pp.92-93; R. Craswell, "Self-Generating Growth in Public Programs," Public Choice, 21, (Spring 1975), pp.91-97.

41. Bruno S. Frey and Friedrich Schneider, "An Empirical Study of Politico-Economic Interaction in the United States," Review of Economics and Statistics, 60, (May 1978), p.178; Anthony Downs, Inside Bureaucracy (Boston:Little, Brown, 1967); W.A. Niskanen, Bureaucracy and Representative Government (Chicago:Aldine-Arheitor, 1971).

42. Wildavsky, Budgeting, p.7.

43. Thomas Anton, The Politics of State Expenditure in Illinois (Urbana:University of Illinois Press, 1966), pp.49-53.

44. Data on the number of persons under 16 and over seventy years of age were obtained from various issues of the Census of Canada. Data were available for the years 1941, 1951, 1956, 1961, 1966, 1971 and 1976. The figures were interpolated to obtain population estimates for the intervening years. While this is admittedly not the perfect solution, annual data were not available.

It should be noted that the number of persons under 16 years of age was not identical with the number of family allowance recipients, even when the age of eligibility was 16 years of age. This discrepancy is due to a residency requirement for non-citizens and to the fact that recipients were only eligible if they were attending school in accordance with provincial law. Similarly, the number of persons over 70 years of age was not identical to the number of old age security recipients, even when the age of eligibility was over 70 years of age. This discrepancy was due to residency requirements.

An estimate of the exact number of persons who would have been eligible for benefits under the original legislation would have been preferable. However, it was not possible to calculate this data. In addition, given the fact that age structure data was interpolated from seven observations, the ratio of recipients to age groups would not be very reliable. In brief, while the age structure data contains some error, attempts to calculate the number of persons who would have been eligible under the original legislation would probably be subject to greater error.

45. Aaron B. Wildavsky, The Politics of the Budgetary Process, (Boston: Little Brown, 1964), p.13.
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53. Sharkansky, Spending in the American States, pp.12-14.

54. Wildavsky, Budgeting, p.6
55. Wildavsky, Politics of the Budgetary Process, p.15.
56. Ibid., p.3.
57. Chandler, "Canadian Socialism and Policy Impact," p.768.
58. Hartle, Theory of the Expenditure Budgetary Process, p.41.
59. See Jan Kmenta, Elements of Econometrics (New York:Macmillan, pp.201-205).
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62. Ibid., pp.140-142.
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CHAPTER FIVE

THE IMPACT OF SOCIAL DEMOCRATIC PARTIES,
LABOUR UNIONS AND STRIKE ACTIVITY
ON SOCIAL SECURITY EXPENDITURES

CHAPTER FIVE

INTRODUCTION

Chapter four argued that decision-makers operate under a number of constraints in devising the current year's expenditure budget. These include the level of economic development, demographic changes in the population and budgetary incrementalism. The data analysis revealed that a large proportion of the variance in expenditure levels was accounted for in a statistical sense by these variables. This chapter examines the effects of support for the CCF/NDP, the presence of minority parliaments, labour union strength and strike activity on public expenditure levels. The central question to be answered in this chapter is whether these additional political variables contribute anything to the explanation of expenditure levels after the effects of the level of economic development, demographic change and budgetary incrementalism have been considered. The chapter commences with a discussion of the relationship between the electoral strength of social democratic parties, the organizational activities of labour unions and the level of social security expenditures.

Many writers have argued that social democratic parties and labour unions have been responsible directly or indirectly

for the expansion of social security programs in most western democracies. Social democratic parties and labour unions, it is argued, derive disproportionate support from lower income groups and their success depends on their ability to obtain material benefits for their members. Social democratic parties have two basic means at their disposal which can be employed to further the interests of their members. They can either secure election in their own right, or they can garner sufficient electoral support to pressure/threaten/cajole the government of the day to implement measures which benefit low income voters.

Labour unions also have two weapons in their arsenal which can be employed to obtain material benefits for their members. First, they can bargain with employers in the marketplace for higher wages and fringe benefits, through the use of, or the threat of, the use of the strike weapon. Second, the use of the strike weapon in disputes with employers may also result in the adoption of more favourable government policies for labour because large wage settlements are often thought to be inflationary. While inflationary wage settlements are generally thought to be only a recent concern, the evidence suggests that government decision-makers were worried about this problem as early as the Second World War. Since both strike activity and rising prices have been found to hurt government popularity, governments may raise social security expenditures in an effort to reduce strike

activity and the wage demands which are thought to lead to inflation.¹

The second option open to labour is to directly pressure the government for policies which are favourable to their interests, and/or to affiliate themselves with political parties of the left in order to secure concessions. In Canada, the NDP has a direct affiliation with the labour movement, an option which its predecessor the CCF did not adopt.

In either case, the success of labour unions in achieving their goals will depend on the size of their membership relative to the labour force. Increased union membership means larger strike funds, greater bargaining authority with employers and greater recognition from government officials.¹⁻⁵ Of course, it is likely that labour unions will pursue both of these strategies simultaneously. This chapter examines the relationship between support for the CCF/NDP in the opinion polls, labour union strength, strike activity, and the level of social security expenditures.

THE IMPACT OF SOCIAL DEMOCRATIC PARTIES

Most studies of the effects of political, and particularly electoral variables on public expenditures patterns, have employed one of two loose hypotheses which can be labelled ideological self-interest and electoral self-interest. According to the first, differing ideologies lead political parties to introduce and promote dissimilar policies when

they achieve power. From this perspective, it might be expected that social democratic parties would behave differently while in office than would conservative parties. For example, a social democratic government would be expected to spend more on welfare and less on defence than a more conservative government. By way of contrast, the electoral self-interest hypothesis attempts to explain public expenditures as a function of party competition. According to Downs, political parties will pursue those policies which will ensure their re-election. He writes:

...parties formulate policies in order to win elections, rather than win elections in order to formulate policies.²

Downs' model largely ignores the role of party ideology. Instead, his model is designed to explain why political parties will behave in the same way, regardless of ideology. If party ideology did explain public expenditure levels, the degree of party competition would not be important.

At least on the surface, these two theories appear incompatible and almost mutually exclusive. However, this need not necessarily be the case. It might be argued that political parties ought to behave ideologically in their own self-interest in devising their public expenditure policies. Since the electoral support of parties differ, it might be rational to concentrate benefits on party supporters. Thus, conservative political parties might be expected to confer benefits on the middle class not only because this is

preferred ideologically, but also because conservative parties rely on this group for electoral support. Downs' theory of party policy-making suggests that groups must be politically purchasable at a reasonable price. One would not expect an NDP government to attempt to buy the votes of independent insurance agents, or a Liberal government to seek to buy the votes of the Monarchist League. It is much cheaper to attempt to retain existing supporters than it is to recruit new ones. New policy appeals might alienate existing supporters without guaranteeing the support of new voters.³

An electoral strategy which attempts to retain existing supporters instead of recruiting new ones is desirable only if the political party in question has a sufficiently large number of supporters to ensure its re-election. When a political party is confident of winning the forthcoming general election, it can afford to pursue policies in accordance with its ideology.⁴ Thus, a secure conservative party might be expected to pursue conservative policies and a secure social democratic party to pursue socialist policies. On the other hand, when a political party's perceived re-election chances are low, they might be expected to pursue policies which would increase their popularity with the electorate. However, these policies need not necessarily be in accord with the ideology of the party. For example, an insecure conservative party might spend more on social

security than it would prefer in order to maintain itself in office. Similarly, an insecure social democratic party might be expected to spend less than a secure one. In brief, when government popularity is high enough, the government can afford to pursue ideologically-oriented policies, which need not always be popular with the electorate.⁵ Political parties are thus hypothesized to maximize their utility (through implementing their ideology), subject to a probability of re-election constraint.

In order to understand the policies which the several Canadian political parties might be expected to pursue in the absence of a re-election constraint, the positions of the parties on the political spectrum must be ascertained. Given our previous emphasis on the redistributive effects of social security policies, the left-right axis will be stressed.

Inter-party differences in public expenditure policies are of considerable interest to political scientists for two reasons. First, there has been a lack of scholarly agreement regarding the relative positions of the national political parties in a left-right axis. Second, scholars differ on which criteria are relevant for deciding the spatial location of each party. It is unclear whether party positions should be determined on the basis of the attitudes of parliamentary leaders, party performance while in office, sources of campaign funds, electoral base or on some other criterion.⁶

This level of analysis problem tends to confound the analyst of the party system because Canadian political scientists have been very willing to assign positions to the parties on a left-right axis. The problem is that in doing so they have seldom stated explicitly the criteria on which such a placement was made, or considered the case for alternate placements based on different criteria.⁷

If there is a dominant view about the redistributive nature of Canadian political parties, it is that the policies of the CCF/NDP are the most egalitarian, while the policies of the other parties are more or less equally non-egalitarian. Canadian political scientists have long recognized the ideological distinctiveness of third parties such as the CCF/NDP, although it has been alleged that their uniqueness has been muted in the struggle for electoral success. In any event, there is little disagreement that the CCF/NDP is to the left of the Liberals and Conservatives, although some commentators allege that CCF/NDP's performance while in office at the provincial level belies their leftist rhetoric.⁸

There has been considerable scholarly disagreement on whether meaningful differences exist between the Liberal and Conservative parties. Some authors have taken the position that the Liberals and Conservatives are wholly power-oriented brokerage parties, while others have argued that there are subtle but nevertheless meaningful differences

between these parties. However, within the latter group, there is further disagreement over the relative positions of these parties on a left-right axis. Some authors place the Liberals to the left of the Conservatives, while others argue that the Conservatives are to the left of the Liberals.⁹ The criteria on which such placements are made are seldom explicit, so it is difficult to determine their validity.

Given the earlier discussion of the link between the electoral threat and political ideology hypotheses, it might be hypothesized that the Liberals and Conservatives would spend more on social security when their electoral position was threatened by the CCF/NDP, and less when it was more secure. This line of argument follows if it is conceded that the CCF/NDP would prefer higher social security spending than would either the Liberals or the Conservatives. Thus the Liberals and Conservatives are expected to pursue their preferred policies when they are electorally secure and to move closer to the policies of the CCF/NDP through increased social security spending when their perceived re-election chances are low. Increased social security spending would be aimed at undermining the policy appeal of the CCF/NDP.

In Canada, arguments have been advanced which suggest that the growth of support for the CCF/NDP has led the Liberal and Conservative parties to devote more financial resources to social security than they would have otherwise.

This is held to be most evident during minority parliaments.¹⁰ One of the primary functions of a third party in Parliament is to attempt to gain concessions from the government. While the ultimate goal of the CCF/NDP has undoubtedly been to achieve major party status, its immediate goal has often been to influence legislation and, if possible, to hold the balance of power in the House of Commons.¹¹

Unemployment insurance, family allowances and universal old age pensions were all initially advocated and popularized by the CCF long before the other parties were willing to implement these policies.¹² Numerous historical accounts have established the role of J.S. Woodsworth and A.A. Heaps in pressuring MacKenzie King to introduce means-tested old age pensions in 1926. At the time, the Labour group held the balance of power in a closely divided Parliament.¹³ In fact, the CCF attempted to justify its existence throughout the 1950's on the basis of its alleged success in wresting legislative concessions from the government. As Leo Zakuta explains:

At meeting after meeting, in every federal campaign of the 1950's, its speakers tirelessly revived a tale of thirty years earlier--how J.S. Woodsworth had wrested old age pensions from MacKenzie King... when he and a colleague had held the balance of power in the House of Commons in 1926... It took every opportunity to inform the public and remind its followers of its indispensable role in securing welfare legislation... its *raison d'être* increasingly became to force its rivals to adopt welfare measures.¹⁴

The party also took credit for the introduction of unemployment insurance in 1941, universal old age pensions in 1951, and family allowances in 1944.¹⁵ The Liberal reforms in labour legislation and the introduction of family allowances in the early 1940's have been widely interpreted as being the result of pressure from the CCF. MacKenzie King's diaries appear to support this conclusion. As Horowitz reports:

...his diaries suggest that the reforms came when they did because CCF pressure became so threatening that it could no longer be ignored by King's right-wing colleagues, so threatening King felt able to surrender to it without jeopardizing the unity of his party. King writes in his diary: "I have succeeded in making declarations which will improve the lot of... farmers and working people... I think I have cut the ground in large part from under the CCF... The great number of people will see that I have been true to them."¹⁶

In addition to these two concrete instances of a clear link between the electoral strength of the CCF/NDP and policy change, at least one former NDP Member of Parliament has claimed that the NDP was able to pressure the Liberals into increasing family allowances and old age pension benefits during the 1972-1974 parliament.¹⁷ The fact that the NDP held the balance of power in the House of Commons at the time lends some credence to this claim. Nevertheless, since neither the CCF nor the NDP has ever held office at the federal level, it is unknown whether they would implement the policies they have espoused in opposition, if they achieved office.

The Canadian data appear to be indicative of a more general phenomenon which Duverger has deemed "contagion from the left."¹⁸ This phenomenon occurs when the right in its own self-defense and in order to protect its electoral position adopts some of the policies advocated by the left. Duverger appears to have had party organization and ideology in mind when he coined this term, but the extension of the concept to policy outputs does not appear unreasonable.¹⁹ Of course, party ideology and policy outputs are not synonymous. As Edelman has argued, electoral activity by the left may merely result in the increased use of redistributive symbols by the right, rather than in concrete measures to lessen inequalities.²⁰ However, there is some evidence in a number of countries of instances where an electoral threat from the left resulted in policy change by the governing party. Governments which perceive opposition threats to their continuing hold on power may use their control over the policy process to undermine the position of the opposition by adopting all or part of their program.²¹ Perhaps the classic case of this strategy was the social legislation introduced by Bismarck in Imperial Germany in the 1870's.²² According to several accounts, Bismarck introduced social insurance as a means of undermining the strength of the Social Democrats and of building working class loyalty to the state.²³ Similar tactics have been attributed to Lloyd George in the United Kingdom at the beginning of this century.²⁴ The

"Tory Democracy" or "Tory Socialism" of Disraeli and other leading British Conservative politicians also bears some resemblance to the strategy adopted by Bismarck.²⁵

In Canada, the introduction of legislation giving trade unions legal recognition in 1872, has been interpreted as an attempt by Macdonald's Conservatives to discredit George Brown's Liberals and attract working class support to the Conservative party.²⁶ Similarly, Caplan's history of the CCF in Ontario outlines two methods adopted by the Liberals and Conservatives to undermine the appeal of the CCF. The two methods were adoption of CCF policies in whole or in part and "red scare" campaigns.²⁷

In addition to the several case studies which provide some evidence of "contagion from the left," there have been a number of quantitative studies of the relationship between partisanship, electoral competition and policy outputs. The results of the quantitative studies have been mixed, some report evidence of a relationship between political variables and expenditure levels which others have reached the opposite conclusion. Evidence from studies in Britain, Germany, the United States and Latin America appears to indicate that public expenditures and macroeconomic policies were related to political factors,²⁸ including electoral competition, the ideological stripe of the party in power, and the proximity of elections. However, several other studies, mostly of American state policy, have

reached the opposite conclusion.²⁹ The latter group of studies report that neither electoral competition nor partisanship were influential in explaining policy outputs.

The results of the few studies which have analyzed the effects of political variables on policy outputs in Canada have yielded contradictory findings. Studies by Poel, and McCready and Winn have concluded that political variables were not very influential in explaining provincial tax and expenditure policies.³⁰ However, Chandler reports evidence of party policy differences at the provincial level, particularly between the NDP and the other parties. Hogan, Falcone and Mishler, and Mishler and Campbell, have also provided evidence which suggests that political variables were influential in explaining policy outputs.³¹ There have been only two published studies of the relationship between political variables and policy outputs at the federal level.³² A study by Kornberg, Falcone and Mishler concluded that the Liberal party passed more redistributive legislation than the Conservative party in the period between 1867 and 1968.³³ However, since the authors failed to provide any empirical evidence regarding the nature of the redistribution resulting from this legislation, these results are not very useful. A second study by Falcone employed the same data as the first and is subject to the same problems.³⁴

The following section examines the relationship between support for the CCF/NDP in the public opinion polls, the presence of minority parliaments and the level of social security expenditures. Since the results of the previous studies have been varied and there have been few studies at the national level, these findings may help resolve the debate over the existence of policy differences between the Canadian political parties. Two hypotheses are suggested for testing. They are as follows:

H₈: Public expenditures will be higher during minority government years than during majority government years.

H₉: The level of public expenditures in the current year varies directly with the level of support for the CCF/NDP in the public opinion polls in the previous year.

It could be argued that support for the CCF/NDP in the public opinion polls is merely a proxy measure for public support for redistributive policies. However, as chapter six demonstrates, public support for unemployment insurance, family and youth allowances and old age pensions has been remarkably stable over the years, while CCF/NDP support has fluctuated greatly.

Given our discussion of the redistributive effects of unemployment insurance, family allowances and old age pensions in chapter three, it might be expected that the strength of the relationship between the political variables in hypotheses 8 and 9 would be greatest in the more redistributive

policy areas. Support for the CCF/NDP and minority government years should have the greatest impact on old age pension expenditures and the least impact on family allowance expenditures. This follows from the fact that OAS/GIS was found to be the most redistributive of the three programs and family and youth allowances were found to be the least redistributive.

THE IMPACT OF CCF/NDP SUPPORT
AND MINORITY GOVERNMENT ON
SOCIAL SECURITY EXPENDITURES

The level of support for the CCF/NDP in the public opinion polls was operationalized as the mean level of support for the CCF/NDP (as a percentage) in the Gallup Poll in the calendar year preceding the tabling of the Main Estimates of the House of Commons. This figure includes only those respondents who expressed an opinion to the question: "If a federal election was held tomorrow, which party's candidate do you think you would favour?"³⁵ The presence of a minority government was represented by a binary variable which had a value of one if the governing party had a minority of seats in the House of Commons at the time of the tabling of the Main Estimates and zero otherwise.

Each of the programs will be discussed in chronological order beginning with the unemployment insurance program. It was hypothesized that unemployment insurance expenditures would vary directly with support for the CCF/NDP and the

presence of minority governments. Tables 47 and 48 contain data in the tests of hypotheses 8 and 9 for the unemployment insurance program. Table 47 indicates confirmation of hypothesis 9 and rejection of hypothesis 8. Support for the CCF/NDP in the previous year was correlated positively and significantly with unemployment insurance expenditures in the current year, after the effect of the other variables, including lagged expenditures and the number of unemployed persons had been controlled statistically. The table indicates that a 1% change in support of the CCF/NDP was followed typically by a \$16 million increase in unemployment insurance expenditures in constant dollars. An examination of the standardized regression coefficients (beta weights) indicates that lagged expenditures and the number of unemployed persons were better predictors of expenditure levels than support for the CCF/NDP although the latter was nevertheless important. However, no statistically significant difference in unemployment insurance expenditures was found between majority and minority parliaments, as indicated by the *t*-ratio for this variable in Table 48. Apparently, governments did not tend to increase expenditures on unemployment insurance during minority government years, as was predicted by hypothesis 8.

Data on the tests of hypothesis 8 for the family and youth allowances program are contained in Table 49. It was hypothesized that family and youth allowances expenditures would be higher during minority government years than during

TABLE 47

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures,
Number of Unemployed Persons and CCF/NDP
Support
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-350.12	142.77	-	-2.45*
Lagged Expenditures _{t-1}	.69	.12	.66	5.95**
Number of unemployed persons	1.06	.37	.32	2.92**
CCF/NDP support _{t-1}	16.71	7.79	.11	2.15*

$R^2 = .92$

$F = 127.46$ $p < .001$

S.E.E. = 189.70

Durbin's $h = 0.72$ First Order $\rho = 0.09$

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

$N = 35$

TABLE 48

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures, Number of
Unemployed Persons and Minority Government
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-64.31	75.14	-	-0.86
Lagged expenditures _{t-1}	.72	.12	.68	5.84**
Number of unemployed persons	1.02	.38	.31	2.66*
Minority Govern- ment/not _{t-1}	-91.40	78.16	-.06	-1.17

-2

R = .91

F = 114.92 $p < .001$

S.E.E. = 198.97

Durbin's h = 1.18 First Order rho = 0.14

* $p < .05$ two-tailed test** $p < .01$ two-tailed test

N = 35

majority government years. Table 49 indicates that the presence of a minority parliament was significantly and positively correlated with the level of family and youth allowances expenditures. The presence of a minority parliament was associated typically with a \$116 million increase in family and youth allowances expenditures in constant dollars. The standardized regression coefficients suggest that the influence of a minority parliament was somewhat less in magnitude than the other variables, although the amount of variance explained did increase somewhat.

Hypothesis 9, which predicted a positive relationship between support for the CCF/NDP and family and youth allowances expenditures was tested by adding this variable to the equation in Table 49. The results of this test are contained in Table 50 which indicates that the coefficient representing CCF/NDP support was not statistically significant at the 5% level. However, the coefficient representing declining population was no longer statistically significant. Since the *t*-ratio for the declining population variable was lower than the *t*-ratio representing CCF/NDP support, the equation was re-estimated minus the declining population variable. The resulting equation is contained in Table 51. Table 51 indicates that support for the CCF/NDP varies inversely rather than directly with the level of family and youth allowances, as was predicted by the hypothesis. In other words, increases in support for the CCF/NDP were associated with declines

TABLE 49

OLS Regression Between FA/YA Expenditures
Lagged Expenditures, Personal Disposable
Income, Constituent Group Size, Declining
Constituent Group Size and
Minority Government
1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	467.37	151.75	-	3.08**
Lagged Expenditures _{t-1}	.40	.15	.40	2.61**
Personal Disposable Income _{t-1}	.36	.11	.98	3.32**
Population under 16 years	-.09	.03	-.54	-3.26**
Declining Population	-.03	.01	-.49	-2.04*
Minority Government/not _{t-1}	116.33	46.52	.32	2.50*

$R^2 = .65$

$F = 12.3$ $p < .01$

S.E.E. = 98.85

Durbin's $h = 2.91$ First Order rho = 0.26

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

N = 32

TABLE 50

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Personal Disposable
Income, Population Under 16 years, Declining
Population, CCF/NDP Support and Minority
Government 1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ - ratio
Intercept	856.6	313.6		2.73*
Lagged Expenditures $+ - 1$	.37	.15	.37	2.48*
Personal Disposable Income $+ - 1$	.34	.11	.93	3.20**
Population Under 16 years	-.12	.03	-.73	-3.46**
Declining Population	-.006	.03	-.12	-0.33
CCF/NDP Support $+ - 1$	-13.9	9.9	-.32	-1.47
Minority Government/not $+ - 1$	140.9	48.9	.39	2.88**

$R^2 = .66$

$F = 11.01, p < .01$

S.E.E. = 97.02

Durbin's h = 2.23

First order rho = 0.21 $p > .05$

** $p < .01$ two-tailed test

* $p < .05$ two-tailed test

N = 32

TABLE 51

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Personal Disposable
Income, Population Under 16 years, CCF/NDP
Support and Minority Government 1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t-ratio
Intercept	930.8	211.8		4.40**
Lagged Expenditures _{t-1}	.39	.14	.39	2.75**
Personal Disposable Income _{t-1}	.32	.08	.87	3.95**
Population Under 16 years	-.12	.03	-.76	-4.09**
CCF/NDP Support _{t-1}	-16.4	6.5	-.37	-2.53*
Minority Government/not _{t-1}	146.9	44.5	.40	3.30**
$\bar{R}^2 = .67$				
$F = 13.66 \quad p < .01$				
S.E.E. = 95.33				
Durbin's h = 1.85 First-order rho = 0.20 p > .05				

** p < .01 two-tailed test

* p < .05 two-tailed test

N = 32

TABLE 52

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures and CCF/NDP Support
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-79.77	90.50		-0.88
Lagged expenditures $t-1$	.82	.05	.85	16.88**
CCF/NDP Support $t-1$	28.80	8.26	.18	3.49**

$R^2 = .97$

$F = 394.12$ $p < .001$

S.E.E. = 115.79

Durbin's $h = 0.01$ First Order rho = -0.01

** $p < .01$ two-tailed test

N = 26

rather than increases in family and youth allowances expenditures. This result is rather perplexing since no theoretical explanation is evident. It may be that the two variables are statistically rather than causally related because increases in CCF/NDP support in the 1960's coincide with declines in the real value of family and youth allowances expenditures during this period. There is no evidence that the CCF/NDP position on family and youth allowances changed over time.

Data on the tests of the hypotheses for the Old Age Security/Guaranteed Income Supplement program are contained in Tables 52 and 53. It was hypothesized that OAS/GIS expenditures would vary directly with support for the CCF/NDP and the presence of a minority parliament. Tables 52 and 53 lead to the acceptance of the hypotheses concerning CCF/NDP support and to the rejection of the hypothesis concerning the presence of minority parliaments. Support for the CCF/NDP was found to be significantly and positively correlated with OAS/GIS expenditures. A 1% increase in support of the CCF/NDP was associated typically with a \$28 million increase in OAS/GIS expenditures. However, the standardized regression coefficients again suggest that the effect of CCF/NDP support was of lesser magnitude than the other variables. Table 53 provides no support for the hypothesis that OAS/GIS expenditures would be higher during minority government years than in majority government years. An examination of the *t*-ratio for this variable in Table 53 suggests that this hypothesis should be rejected.

TABLE 53

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures and
Minority Government
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	159.75	66.65	-	2.40*
Lagged expenditures	.93	.04	.97	22.75**
Minority Government/not	60.88	58.11	.04	1.05

$\bar{R}^2 = .96$

$F = 266.52$ $p < .001$

S.E.E. = 139.86

Durbin's $h = 0.53$ First Order $\rho = 0.10$

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

N = 26

Overall, these findings suggest the presence of a minority parliament led to increased expenditures on family and youth allowances, but had no apparent effect on unemployment insurance or old age pensions. This result may be due, in part, to the imperfect correlation between seats and votes resulting from the Canadian electoral system. Thus, the position of the CCF/NDP has generally been weaker in terms of parliamentary representation than it has in terms of popular support at the polls. In addition, the CCF/NDP has only held an undisputed balance of power position in the House of Commons during two parliaments: 1957-58 and 1972-74. During the parliaments of 1962-63, 1963-65 and 1965-68, the CCF/NDP shared the balance of power position with the Social Credit party and, as a consequence, their influence was probably lessened.

A comparison of the effects of CCF/NDP support on expenditure levels in the three policy areas indicates that CCF/NDP support was associated positively with the two most redistributive programs, old age pensions and unemployment insurance, but was associated negatively with the least redistributive program, family and youth allowances. This finding suggests that the impact of CCF/NDP support on expenditure levels varies with the redistributive effect of the policy area in question.

THE IMPACT OF TRADE UNION STRENGTH
AND STRIKE ACTIVITY ON SOCIAL
SECURITY EXPENDITURES

The expectation that the organizational strength and activities of the trade union movement might be related to the level of social security expenditures is based on two considerations. First, in most western democracies the trade union movement is affiliated with the major social democratic party. While the formal endorsement of the labour movement may not always translate into electoral support for social democratic parties, this possibility always exists. In addition, the very fact that the labour movement has become better organized and represents more workers means that conservative parties must pay at least tacit attention to their concerns. A failure to do so might result in a loss of electoral support. Second, the trade union movement in Canada and elsewhere has consistently supported the introduction of social security programs and more generous program provisions once these programs were implemented. Thus, in order to garner trade union support, or to undermine the effect of the formal endorsement of social democratic parties by the trade union movement, conservative parties might be expected to spend more in social security than they would prefer. In Canada, the trade union movement did not formally align itself with the CCF until the creation of the NDP in 1961. Nevertheless, formal endorsement of the CCF by the

trade union movement was always a real possibility and the implicit support by labour of the CCF was well known.

There is some evidence from other countries that the labour movement has been successful in lobbying for social security reforms. For example, Pryor's cross-national study of social security programs found that the degree of unionization was the only factor which was related positively and significantly to the establishment of either pensions or national health insurance.³⁶ Studies of Britain and Sweden suggest that collective demands for social policies by the labour movement were effective in obtaining reforms in these countries. The Beveridge report on social security in Great Britain was apparently written in close consultation with the union movement.³⁷ In the early years, American labour unions opposed sickness and unemployment insurance since they feared that these reforms would weaken union influence over their members and create a dependence on the government. However, this opposition soon disappeared and the labour union movement was consistently in the forefront in advocating social security programs.³⁸ In Europe, instead of reacting to union demands, governing parties adopted a pre-emptive strategy aimed at undercutting left-wing political parties and their labour allies.³⁹

The situation in Canada resembled more closely the United States than Europe. Labour unions pressured the government for pensions as early as the 1870's and 1880's.⁴⁰

The current unemployment insurance program was preceded by schemes developed in the 19th century by trade unions and mutual benefit or friendly societies. Each member of the trade union or friendly society contributed to the fund, and withdrew benefits when unemployed.⁴¹ The Trades and Labour Congress (TLC) supported public pensions as early as 1905 for the poor, aged and disabled who were unable to maintain themselves.⁴² Throughout the 1920's, the TLC pressed unsuccessfully for universal old age pensions and sickness and disability insurance.⁴³ After a federal-provincial system of means-tested pensions was introduced in 1927, the TLC recommended a lower age limit and urged all provinces to participate.⁴⁴ The TLC was always supportive of unemployment insurance and pensions, but initially opposed family allowances on the grounds that they would depress wages. However, they reversed their position in 1944 after the Liberals had decided to introduce family allowance payments.⁴⁵

Like its predecessor, the TLC, the Canadian Labour Congress (CLC) consistently supported more liberal social security policies. An examination of the proceedings of the CLC Constitutional Convention held every two years since 1956 makes this evident. Almost without exception, each convention passed a number of resolutions in support of more generous unemployment insurance, old age pensions, and family allowance benefits.⁴⁶

Given the evidence of the continued efforts of organized labour to promote further social security spending, it might be hypothesized that the level of social security spending would vary directly with the organizational capacity of labour to press its demands. The theoretical rationale for this concept can be found in Olson's analysis of collective action. Olson's analysis demonstrated that whether individuals ever organize to pursue common interests is problematic rather than given, as is often assumed, because of the well-known "free rider" problem.⁴⁷ Other authors have extended this argument by stating that the frequency and magnitude of collective action depends largely on the organizational strength of the group concerned. For example, in their study of strike activity in France, Shorter and Tilly defined labour's organizational strength as control over resources and represented it by union membership as a percentage of the labour force. Union membership was treated as a proxy variable for control over members' loyalties, strike funds and the like. Greater union membership was expected to increase the economic leverage of unions, increase worker solidarity and the ability to outlast employers.⁴⁸

STRIKE ACTIVITY

Another factor related to union organization which might be expected to effect expenditures on social security is the frequency of strikes. Alford and Hibbs have argued that one consequence of the success of social democratic and labour

parties in western democracies has been a reduction in either the number or intensity of strikes. Where class interests are not expressed explicitly through political parties, they are more likely to be demonstrated elsewhere as in strikes. Thus, when a labour party exists, class issues will tend to be moved from the bargaining arena to the political arena.⁴⁹ According to Hibbs, political competition between left- and right-wing political parties in the political marketplace has replaced, to a significant degree, the bargaining between labour and employers in the private sector (economic marketplace). In socializing the consumption and final distribution of the national income, governments have shifted the distributional conflict from the private marketplace to the public arena.⁵⁰ Hibbs reports evidence of a strong negative correlation between a composite measure of the volume of strike activity in eleven industrial democracies and the proportion of the national income passing through the public sector (excluding defence and nationalized industries). He suggests that because left-wing political parties have been more willing to increase the size of the public sector than conservative parties, strike activity has declined during periods when left-wing parties were in office. However, what is crucial, according to the author, is not the electoral strength of left-wing parties but the ratio of public expenditures to the Gross National Product (GNP).⁵¹ In brief, strike volume declines where governing parties have

created the welfare state.⁵² If, as Hibbs argues, increases in the relative size of the public sector tend to lead to decreases in the amount and intensity of strike activity, then policy makers might be expected to use their control over the public purse to dampen strike activity.

As was noted in chapter two, policy makers in Canada during the Second World War hoped to avoid the pattern of labour strife which had followed the end of the First World War by introducing social security programs. One of the key considerations in introducing the family allowance program was the belief that providing family allowance would be less inflationary than a general rise in wages. Since the desire of policy makers to avoid wage inflation and labour strife appears to have played a central role in the initiation of social security policies, it seems reasonable to suppose that they may have had some effect on the growth of social security spending.

A study of the American social security system by Piven and Cloward provides evidence that American policy in this area was motivated by a desire to dampen public unrest. The authors write:

Historical evidence suggests that relief arrangements are initiated or expanded during the occasional outbreaks of civil disorder produced by mass unemployment, and are then abolished or contracted when political stability is restored. ...expansive relief policies are designed to mute civil disorder, and restrictive ones to reinforce work norms.⁵³

In addition, several studies have concluded that changes in the Consumer Price Index and strike activity tend to reduce the government's popularity in the opinion polls.⁵⁴ For this reason, the government might be expected to respond to labour strife by increasing social security expenditures. Increases in social security spending might in turn reduce strike activity and dampen union members' wage demands. Since the government's popularity depends, at least in part, on curbing inflation and avoiding labour strife, this would appear to be a wise electoral strategy.

Strike activity was operationally defined as the number of strikes per one million members of the labour force.⁵⁵ This indicator is a measure of the "decision" to strike rather than the "impact" of a strike, such as the number of man-days lost due to strike activity. Given our discussion of the relationship between union strength, the frequency of strikes, and the level of social security expenditures, the following two hypotheses are proposed:

H₁₀: The level of public expenditures in the current year varies directly with the level of union membership in the previous year.

H₁₁: The level of public expenditures in the current year varies directly with the frequency of strikes in the previous year.

Each of the programs will be discussed in chronological order beginning with the unemployment insurance program. Following the two hypotheses described previously, unemployment insurance expenditures were expected to vary directly with union membership as a percentage of the labour force and strike frequency. Each of these variables was added to the basic regression equation described in the previous chapter. The results of this procedure for the unemployment insurance program are contained in Tables 54 and 55.

The tables indicate that both hypotheses must be rejected for the unemployment insurance program. No statistically significant relationship was found between unemployment insurance expenditures and either union membership or strike frequency. An examination of the t -ratios in Tables 54 and 55 reveals that neither variable was even close to being significant at the 5% level. The Durbin's h statistic indicates that no significant autocorrelation was present in either of the two equations. The data on the tests of the hypotheses for the family and youth allowances programs are contained in Tables 56 and 57. It was hypothesized that family allowance expenditures would vary directly with union membership as a percentage of the labour force and strike frequency. The tables suggest that both of these hypotheses must be rejected for the family and youth allowances program. No statistically significant relationship was found between family and youth allowances expenditures and either union

TABLE 54

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures,
Number of Unemployed Persons,
CCF/NDP Support and
Union Membership
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-972.27	505.29	-	-1.92
Lagged expenditures $t-1$	.65	.12	.62	5.52**
Number of unemployed persons	.85	.40	.26	2.13*
CCF/NDP Support	21.80	8.67	.14	2.52*
Union Membership $t-1$	20.52	16.0	.12	1.28

$\bar{R}^2 = .92$

$F = 97.99 \quad p < .001$

S.E.E. = 187.76

Durbin's $h = 0.32$ First Order rho = 0.04

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

N = 35

TABLE 55

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures,
Number of Unemployed Persons,
CCF/NDP Support and
Strike Frequency
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-377.36	145.63	-	-2.59*
Lagged expenditures _{t-1}	.72	.12	.68	6.01**
Number of unemployed persons	1.15	.38	.35	3.06**
CCF/NDP Support _{t-1}	23.37	10.38	.15	2.25*
Strike Frequency _{t-1}	-2.14	2.20	-.08	-0.97

$R^2 = .92$

$F = 95.66$ $p < .001$

S.E.E. = 189.87

Durbin's $h = .07$ First Order $\rho = 0.01$

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

N = 35

4

TABLE 56

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Personal Disposable
Income, Population Under 16 years, CCF/NDP
Support, Minority Government and Union
Membership 1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ - ratio
Intercept	907.6	383.0		2.37*
Lagged Expenditures $+ - 1$	.39	.15	.39	2.67*
Personal Disposable Income $+ - 1$	.31	.11	.86	2.85**
Population Under 16 years	-.12	.03	-.76	4.01**
CCF/NDP Support $+ - 1$	-16.0	7.5	-.37	-2.15*
Minority Government/not $+ - 1$	148.3	49.4	.41	3.00**
Union membership $+ - 1$	.84	11.45	.01	0.07

$\bar{R}^2 = .66$

F = 10.95 p < .01

Durbin's h = 1.98

First-order rho = 0.20 p > .05

** p < .01 two-tailed test

* p < .05 two-tailed test

N = 32

TABLE 57

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Personal Disposable
Income, Population Under 16 Years, CCF/NDP
Support, Minority Government and Strike
Frequency 1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ - ratio
Intercept	945.35	324.71		2.91**
Lagged Expenditures _{+ - 1}	.38	.20	.38	1.92
Personal Disposable Income _{+ - 1}	.32	.10	.86	3.09**
Population Under 16 years	-.12	.03	-.77	-3.72**
CCF/NDP Support _{+ - 1}	-16.74	8.86	-.38	-1.89
Minority Government/not _{+ - 1}	146.93	45.41	.40	3.23**
Strike Frequency _{+ - 1}	.14	2.35	.02	0.06
$\bar{R}^2 = .66$				
$F = 10.95$ $p < .01$				
S.E.E. = 97.22				
Durbin's h = in calculable				
First-order rho = 0.20 $p > .05$				

** $p < .01$ two-tailed test

* $p < .05$ two-tailed test

N = 32

membership or strike frequency. The Durbin's h statistic indicates some positive autocorrelation in both equations, but the value of ρ was under .30 in both cases.

Data on the results of the two hypotheses for the Old Age Security/Guaranteed Income Supplement programs are contained in Tables 58 and 59. It was hypothesized that the level of OAS/GIS expenditures would vary directly with union membership and the frequency of strikes. The tables indicate that these hypotheses must also be rejected for the OAS/GIS program. An examination of the t -ratios of the two measures indicates that neither is close to being statistically significant at the 5% level of security. The Durbin's h statistic was well below the value indicating positive autocorrelation in both cases, so this was not a cause for concern.

SUMMARY AND CONCLUSIONS

The chapter began with a discussion of the reasons why support for social democratic parties, the organizational capacity of labour to press its demands, and strike activity might be associated positively with social security expenditures. It was suggested that two hypotheses have been proposed which relate support for social democratic parties to increases in social security expenditures. The first emphasizes political ideology, while the second stresses electoral threat. It was argued that while these two theories have often been viewed as conflicting, this need not necessarily be the case. Rather, governing parties are expected

TABLE 58

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures, CCF/NDP Support
and Union Membership
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	515.14	439.18	-	1.17
Lagged expenditures _{t-1}	.88	.06	.91	13.73**
CCF/NDP support _{t-1}	24.74	8.61	.15	2.87**
Union membership _{t-1}	-18.93	13.69	-.07	-1.38

-2

R = .97

F = 273.81. $p < .001$

S.E.E. = 113.56

Durbin's $h_1 = 0.42$ First Order rho = -0.08** $p < .01$ two-tailed test

N = 26

TABLE 59

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures, CCF/NDP Support
and Strike Frequency
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-90.38	91.60	-	-0.98
Lagged expenditures _{t-1}	.77	.07	.80	11.06**
CCF/NDP support _{t-1}	27.28	8.45	.17	3.22**
Strike frequency _{t-1}	1.59	1.75	.06	0.90

-2

R = .97

F = 261.01 p < .001

S.E.E. = 116.23

Durbin's h = 0.53 First Order rho = 0.10

** p < .01 two-tailed test

N = 26

to pursue policies consistent with their ideology when their choices of re-election are good, and to alter their policies in the face of an electoral threat.

The literature on the positions of the Canadian political parties on a left-right axis was outlined. The conclusion was that, while controversy surrounds the relative position of the Liberal and Conservative parties, the CCF/NDP has generally been viewed as being to the left of the two major parties. A review of the role of the CCF/NDP in proposing social security measures and pressing the government of the day for their adoption led to the hypothesis that social security expenditures vary positively with the level of CCF/NDP support. Thus, it was expected that the governing party would increase social security expenditures when the CCF/NDP was strong and reduce or slow their rate of increase when the CCF/NDP was weak. Social security expenditures were also expected to be higher during minority rather than majority governments, since the ability of the CCF/NDP to influence government policy might be expected to be greater when the governing party requires their votes to survive in the House of Commons.

A second factor which was expected to vary directly with the level of social security expenditures was the organizational capacity of labour to press for its demands. It was argued that the trade union movement has constantly supported higher social security expenditures. Increases in the ratio of trade

union membership as a percentage of the civilian non-agricultural labour force were expected to lead to increases in social security expenditures as the government attempted to undercut the links between the labour movement and the CCF/NDP, and attract labour votes.

A final factor which was expected to be positively related to social security expenditures was the frequency of strikes. Empirical studies have found strike activity to be inversely related to government popularity. In addition, the evidence suggests that strike activity tends to decline as the ratio of government civilian expenditures to GNP increases. In the Canadian case, policy makers appear to have been motivated to adopt social security policies as a means to curtail labour strife and the wage demands which were thought to lead to inflation. Since increases in the consumer price index have also been found to vary inversely with government popularity, this provides an additional motive for increasing social security expenditures.

The major findings of the chapter may be summarized as follows:

- (1) Support for the CCF/NDP was related positively to expenditures on unemployment insurance and old age pensions and negatively to expenditures on family and youth allowances.
- (2) Family and youth allowances expenditures were higher during minority parliaments than during majority parliaments. However, there was no relationship between expenditures on old age pensions and unemployment insurance and the presence of a minority government.

(3) No statistical significant relationship was found between union membership as a percentage of the civilian non-agricultural labour force and expenditures on any of the three programs.

(4) No statistically significant relationship was found between the frequency of strikes and expenditures on any of the three programs.

The finding that support for the CCF/NDP in the public opinion polls was related positively to old age pensions and unemployment insurance but negatively to family allowances was consistent with the hypothesis that the effect of CCF/NDP support would vary with the redistributive effect of the program in question. Chapter three argued that old age pensions were the most redistributive of the three programs and family allowances were the least redistributive. The finding that CCF/NDP support had the greatest impact on old age pension expenditures (as indicated by the standardized regression coefficients) and a negative effect on family allowances support this contention. The finding that family allowance expenditures were higher during minority than majority parliaments was as predicted by the hypothesis. However, the finding that the presence of a minority parliament had no discernible effect on expenditures on old age pensions or unemployment insurance was not anticipated. There appears to be no readily available or plausible explanation for this finding. The finding that neither the size of the unionized labour force nor the frequency of strike were related to expenditures in any of the three policy areas.

provides fairly conclusive evidence that these hypotheses should be rejected.. It should be noted that simple regressions between strike frequency, union membership, and public expenditure levels yielded statistically significant results in the direction predicted by the hypotheses. However, in multiple regressions between expenditure levels and several independent variables, the relationship between strike frequency, union membership and expenditure levels disappeared..

The following chapter examines several self-interest theories of government decision-making. The relationship between electoral competition, the political business cycle, the composition of government revenues and the level of social security expenditures are examined. Following the procedures discussed previously, the final equations developed in this chapter are employed as a basis of departure for the next.

NOTES

1. Canadian data are difficult to obtain. For a study which relates several economic variables to the opinion polls in Canada, see Kenneth D. Hart, Robert J. Drummond and Thomas H. Atkinson, "Fluctuations in Government Popularity: Electoral Cycles." Paper presented at the Annual Meeting of the Canadian Political Science Association, 1975; Roger Douglas, "Economy and Polity in Australia: A Quantification of Commonsense," British Journal of Political Science, 5, (July 1975), pp.341-361; Douglas A. Hibbs, "On the Political Economy of Long-Run Trends in Strike Activity," British Journal of Political Science, 8, (April 1978), pp.153-175; Bruno S. Frey, Modern Political Economy (Oxford: Martin Robinson, 1978). The simple Pearson's r between government popularity and strike frequency lagged one year in Canada between 1941-1977 is $-.52$.
- 1.5 Public sector unions occupy a unique position in this respect, since government is the employer. However, collective bargaining and the right to strike were only introduced in the federal public service in 1967.
2. Anthony Downs, An Economic Theory of Democracy (New York: Harper and Row, 1957), p.28.
3. See Rudolph Klein, "The Politics of Public Expenditure: American Theory and British Practice," British Journal of Political Science, 6, (October 1976), p.406; Virginia Grey, "The Effect of Party Competition in State Policy, a Reformulation: Organizational Survival," Polity, 7, (Winter 1974), pp.248-263.
4. See Bruno S. Frey, "A Politico-Economic Model of the United Kingdom," Economic Journal, 88, (June 1978), p.244.
5. Ibid., p.244.
6. See Conrad Winn and James Twiss, "Some Levels of Analysis Problems in the Spatial Analysis of Political Cleavage." Paper presented at the International Political Science Association Congress, Edinburgh, 1976; Conrad Winn and James Twiss, "The Spatial Analysis of Political Cleavages and the Case of the Ontario Legislature," Canadian Journal of Political Science, 10, (June 1977), pp.287-310; Allan Kornberg, William Mishler and Joel Smith, "Political Elite and Mass Perceptions of Party Locations in Issue Space: Some Tests of two Positions," British Journal of Political Science, 5, (April 1975), pp.161-185.

7. For an analysis of the various theories of the party system and their proponents, see Conrad J. Winn, "Spatial Models of Party Systems: An Examination of the Canadian Case." (Ph.D. Dissertation, University of Pennsylvania, 1972); On the left-right axis, see David J. Elkins, "The Perceived Structure of the Canadian Party Systems," Canadian Journal of Political Science, 7, (September 1974), pp.502-524.
8. See Seymour M. Lipset, Agrarian Socialism, Rev.ed. (Berkeley:University of California Press, 1971); Walter Young, The Anatomy of a Party (Toronto:University of Toronto Press, 1967); Conrad Winn and John McMenemy, Political Parties in Canada (Toronto:McGraw-Hill, 1976), ch.12.
9. For example, Robert Alford, Party and Society (Chicago:Rand-McNally, 1963), and Allan Kornberg, Canadian Legislative Behavior (New York:Holt, Rinehart and Winston, 1967) place the Liberals to the left of the Conservatives. Denis Smith, "Prairie Revolt, Federalism and the Party System," in Hugh G. Thorburn, ed. Party Politics in Canada, 2nd ed. (Toronto:Prentice-Hall, 1967) pp.189-200, places the Conservatives to the left of the Liberals.
10. See Kornberg, Falcone and Mishler, Legislatures and Societal Change, pp.35-46; Gad Horowitz, Canadian Labour in Politics (Toronto:University of Toronto Press, 1968), ch.1; Walter D. Young, The Anatomy of a Party (Toronto:University of Toronto Press, 1969), pp.247, 250.
11. Gad Horowitz, Canadian Labour in Politics (Toronto:University of Toronto Press, 1968), p.47.
12. Stanley Knowles, The New Party (Toronto:McClelland and Stewart, 1961), pp.12-13, 54-55.
13. See Max Saltsman, "Party Politics and Social Policy: The Party in Opposition," in Shankar A. Yeleja, ed. Canadian Social Policy (Waterloo:Wilfrid Laurier University Press, 1978), p.265; Horowitz, Canadian Labour in Politics, p.48; Walter D. Young, The Anatomy of a Party (Toronto:University of Toronto Press, 1968), p.245; Knowles, The New Party, p.29; Ivan Avakumovic, Socialism in Canada: A Study of the CCF-NDP in Federal and Provincial Politics (Toronto:McClelland and Stewart, 1978), p.41.
14. Leo Zakuta, A Protest Movement Becalmed (Toronto:University of Toronto Press, 1964), pp.88-89.
15. Young, Anatomy of a Party, p.245; Avakumovic, Socialism in Canada, p.73.

16. Horowitz, Canadian Labour in Politics, p.38.
17. Saltsman, "Party Politics and Social Policy," in Canadian Social Policy, p.267.
18. Maurice Duverger, Political Parties (New York:Wiley, 1954), pp.xxvii, cited in Chandler, "Canadian Socialism and Policy Impact," p.755.
19. See Chandler, "Canadian Socialism and Policy Impact," p.755.
20. Murray Edelman, The Symbolic Uses of Politics (Urbana, Ill.: University of Illinois Press, 1964), Ch.2.
21. Chandler, "Canadian Socialism and Policy Impact," p.755.
22. See Ibid., p.758; P.R. Kaim-Caudle, Comparative Social Policy and Social Security (London:The Pitman Press, 1973), p.45.
23. Arnold J. Heidenheimer, Hugh Heclo and Carolyn Teish-Adams, Comparative Public Policy (New York:St. Martin's Press, 1975), p.193.
24. Arnold J. Heidenheimer, "The Politics of Public Education, Health and Welfare in the U.S.A. and Western Europe: How Growth and Reform Potentials Have Differed," British Journal of Political Science, 3, (July 1973), p.317.
25. Chandler, "Canadian Socialism and Policy Impact," p.758.
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27. Gerald L. Caplan, The Dilemma of Canadian Socialism: The CCF in Ontario (Toronto:McClelland and Stewart, 1973), pp.29-33, 69, 71, 78.
28. See Frey, "Politico-Economic Model of the United Kingdom," Douglas Hibbs, Jr., "Political Parties and Macroeconomic Policy," American Political Science Review, 71, (December 1977), pp.1467-1487; Bruno S. Frey and Werner W. Pommerehne, "Towards a More Theoretical Foundation for Empirical Policy Analysis," Comparative Political Studies, 11, (October 1978), pp.311-336; Bruno S. Frey and Friedrich Schneider, "An Empirical Study of Politico-Economic Interaction in the U.S.," Review of Economic and Statistics, 60, (May 1978), pp.174-183; Barry Ames, "The Politics of Public Spending in Latin America," American Journal of Political Science, 21, (February 1977), pp.149-176; Frances G. Castles and R.D. McKinley, "Public Welfare Provision, Scandanavia and the Sheer Futility of the Sociological Approach to Politics," British Journal of Political Science, 9, (April 1979), pp.157-171.

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37. Heidenheimer, Heçlo and Adams, Comparative Public Policy, p.202.
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39. Heidenheimer, "The Politics of Public Education, Health and Welfare in the U.S.A. and Western Europe," p.317.
40. Robert Laxer, Canada's Unions (Toronto:James Lorimer and Company, 1976), p.258.
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45. Ibid., pp.475,479.
46. See Canadian Labour Congress, Report of the Proceedings, Biennial Constitutional Convention 1956-1978.
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50. Hibbs, "On the Political Economy of Long-Run Trends in Strike Activity," pp.154,165; see also Michael Shalev, "Strikers and the State: A Comment," British Journal of Political Science, 8, (October 1978), pp.479-492.
51. Hibbs, "On the Political Economy of Long-Run Trends in Strike Activity," p.167.
52. Ibid., pp.154,165.
53. Francis Fox Piven and Richard A. Cleward, Regulating the Poor: The Functions of Public Welfare (New York:Random House, 1971), p.xiii.

54. See Note 1.

55. This measure was suggested by John Vanderkamp. See John Vanderkamp, "Economic Activity and Strikes in Canada," Industrial Relations, 9, (February 1970), pp.215-230.

CHAPTER SIX

SELF-INTEREST THEORIES OF
GOVERNMENT DECISION-MAKING

CHAPTER SIX

INTRODUCTION

Previous chapters examined the effects of a number of economic, demographic, institutional and political variables on the level of social security expenditures in three policy areas. Chapter four began this task with an analysis of the relationship between the level of economic development, demographic change, budgetary incrementalism and the level of social security expenditures. The chapter concluded that the three independent variables, either individually or in combination, were strongly correlated with the level of social security expenditures. Chapter five explored the question of whether support for the CCF/NDP, the presence of minority parliaments, labour union strength and strike activity could explain any additional variance in expenditure levels beyond that explained by the variables in chapter four. It was found that support for the CCF/NDP and the presence of minority parliaments did indeed contribute to the explanation of expenditure levels beyond the effects of the various constraints imposed by economic, demographic and organizational variables. Chapter six continues the analysis by considering the question of whether three additional political variables can contribute to the explanation of expenditure levels beyond the effects of the several variables which were discussed in chapters four and five.

This chapter describes and tests several "self-interest" theories of public finance as outlined by Anthony Downs, Albert Breton and others.¹ While economic theories of politics have received considerable attention from political scientists in recent years, empirical verification has been meagre. The authors of these "self-interest" or public choice theories have placed more emphasis on theory construction than on empirical research.² This chapter attempts to redress this gap by subjecting several self-interest theories of public finance to empirical tests.

Most self-interest theories of politics rest on a number of key axioms. Two key assumptions are that all actors are rational and self-interested and that most actors are forced to make decisions under conditions of uncertainty. Three hypotheses follow from these basic axioms, the first of which is that inter-party electoral competition induces political parties to make public expenditure decisions which are supported by the majority of voters.

The second hypothesis posits the existence of a "political business cycle" wherein the governing party alters its public expenditure policies in accordance with the proximity of elections. Governing parties husband scarce resources and increase public expenditures close to the electoral contest as a means of increasing their popularity, and ensuring their re-election.

The third hypothesis tests the existence of a "fiscal illusion" whereby voters are induced by government to over-estimate the benefits from government expenditures and under-estimate the costs of taxation. According to this hypothesis, higher levels of public expenditures are associated with revenue structures which rely on less visible means of taxation. Revenue structures which rely on less visible revenue sources are thought to allow government decision-makers to spend more than they would if the tax structure were simple and clearly visible to the public. In other words, the structure of the revenue system may lower the perceived tax price of a given level of public expenditure.

In the last two decades, political scientists have become increasingly attracted to the notion of a "scientific" approach to politics. The behavioural revolution in political science, as it has been called, has been accompanied by a gradual shift from inductive to deductive modes of explanation. The deductive approach appears to have become more attractive because it appears to be more consistent with the "covering law" view of scientific explanation as outlined by Nagel, Kaplan and other philosophers of science, than does the inductive approach.³ According to the covering law view of scientific explanation, there is a fundamental unity of scientific method across the natural and social sciences. The purpose of science is the explanation of events. An event is said to be explained when its occurrence is deductively subsumed

under law-like statements and statements of initial conditions. Scientific progress is then based on the discovery of law-like statements and on their integration into broader theories. Of course, scientific explanation is an ideal which is not likely to be met in actual practice. Furthermore, even though the "dismal science" of economics has lost some of its lustre in recent years, some political scientists are impressed with the apparent elegance, simplicity and rigour of economic theory and analysis.⁴

ECONOMIC THEORIES OF POLITICS AND PUBLIC FINANCE: THE BASIC TENETS

Economic theories of politics seek to explain collective decisions in terms of the self-seeking behaviour of rational individuals. The standard formulation generally includes two basic assumptions. Rationality is assumed on the part of all agents, and self-interest is said to be the chief characteristic of all agents' motivations.⁵

Rationality, or more precisely instrumental rationality, requires only that all agents choose the most efficient means to their ends. They attempt to maximize their outputs for a given input, or more simply they weigh the costs against the benefits of any given action. However, rationality applies only to an agent's means and not his ends. Knowledge of an agent's ends is employed to calculate the most reasonable way of achieving his goals.⁶ Bartlett explains the meaning of rationality as follows:

By rational we mean only that the course of action taken by any agent will be an attempt to move closer to, rather than further from, the attainment of whatever goal he has chosen.^{6, 5}

The second assumption is that all agents are motivated chiefly by self-interest. Since individuals are assumed to be selfish, rational behaviour is directed primarily towards selfish ends. All individuals seek to maximize their utility (satisfaction). This does not mean that they spend most of their time calculating minute advantages, but rather when expected gains exceed expected costs, individuals acquire information and seek to further their ends.⁷

In addition to the basic assumptions of rationality and the pursuit of self-interest, most authors include a third assumption, that all agents in the system suffer from a greater or lesser degree of uncertainty relative to the economic and political decisions they must make. Because of uncertainty, all actors must balance the cost of obtaining information against the benefits of making a correct or incorrect decision. Uncertainty means a lack of secure knowledge about the course and consequence of various events or decisions.⁸

It may be argued, of course, that these key axioms are unrealistic and not close to descriptive accuracy. There is no doubt that this is in fact the case. However, the purpose of any political theory is to simplify and clarify thinking, to direct inquiry and to suggest explanations for political

phenomena. As Downs has written:

Theoretical models should be tested primarily by the accuracy of their predictions rather than by the reality of their assumptions.⁹

In other words, while many of the assumptions of economic theories of politics may be unrealistic, this fact does not differentiate them from other theories of politics. All theories offer a simplified version of reality and thus fail to provide an exhaustive account of empirical phenomena. Theory construction requires some abstraction from the real world and a focus on a few significant aspects of reality.

There are two basic actors in Downs's theory: citizen-voters and politicians. All citizens are assumed to attempt to maximize their utility income from government activity. According to Downs:

Each voter in our model votes for the party he believes will provide him with a higher utility income than any other during the coming election period.¹⁰

In order to decide which party to support, the voter compares the utility he believes he would receive were each party in office. The most important determinant of the vote is the "current party differential." This term refers to the difference between the utility income the voter actually received in the current period and the utility income he believes he would have received if another party had been in office. Since it is assumed that every citizen has more intense feelings about policies that affect him directly in a material

way than he does about other broad, indirect or symbolic policies, citizens will decide how to vote on the basis of the personal impact of government activity rather than on its global impact.¹¹ Thus, while the government must obtain the support of a majority or at least a plurality of the electorate in order to be re-elected, it must remain cognizant of the fact that minorities with intense preferences may be more important electorally than majorities with less intense preferences.

A second determinant of the citizen's vote is his perception of the probability that his vote will influence the outcome of the election. Since voters are said to view elections mainly as a means of selecting governments, they vote only if they believe they can influence the outcome. Because the probability that an individual voter will determine the outcome is very low, it may not be worthwhile to be well-informed on all issues because the low return from casting a ballot may not justify the cost in scarce resources.¹² In other words, the costs of becoming informed may exceed the benefits of voting correctly (more rationally). Voters are thus expected to be best informed about policies which affect them directly. In general, voters do not evaluate a budget on the basis of its total size but mainly by the particular benefits and costs it passes on to them.¹³

In order to avoid the high costs of becoming well-informed, voters may seek to reduce their information costs.

According to Downs:

...some men habitually vote for the same party in every election. In several preceding elections, they carefully informed themselves about all the competing parties, and all the issues of the moment; yet they always came to the same decision how to vote. Therefore, they have resolved to repeat this decision automatically without becoming well-informed, unless some catastrophe makes them realize it no longer expresses their best interests.¹⁴

Alternatively, voters can employ a political ideology to decide how to vote, Downs observes:

The man who uses his ideological differential as a costsaver knows something about current affairs. But he does not know as much as a citizen using issues to make his decisions, because there are many more issues than philosophic axioms in politics.¹⁵

While voters are assumed to maximize their utility from government activity, politicians in the governing party are assumed to maximize the probability of their re-election.¹⁶ It is important to note, however, that re-election is not generally thought to be an end in itself, but rather it is viewed as a means of achieving other ends. According to Downs, the actions of the governing party are motivated by self-interest. They are motivated largely by the desire for power, prestige and income. However, they cannot achieve any of these goals unless their party is elected to office. Therefore, the primary objective of party members is to be elected. Given this perspective, government policy-making is understood as follows:

The party which runs the government manipulates its policies and actions in whatever way it believes will gain it the most votes without violating constitutional rules. Clearly such behavior implies that the government is aware of some direct relationship between its policies and the way people vote.¹⁷

However, as was argued in chapter four, politicians act under a number of constraints and thus their discretion in policy making is limited. For this reason, even vote-maximizing politicians cannot operate independently of prevailing economic conditions, statutory commitments and previous policy decisions. Thus a vote-maximizing strategy must be pursued within certain limits, which cannot be altered greatly in the short-run.

In order to avoid being defeated by the opposition parties, the governing party will choose policy alternatives supported by the majority. The governing party uses a variety of means, including personal contact, correspondence, the opinions of party members, intuition and opinion polls, to ascertain the opinion of the electorate on particular policy issues and then chooses the option which is preferred by the majority.¹⁸ Nevertheless, there are several factors which shield the governing party from the preferences of the majority. These include an election period of non-zero length, the fact that election campaigns are not based on single issues, and the existence of a multiparty system in Canada.¹⁹

Since election campaigns generally occur only every four to five years in Canada, politicians can afford to ignore the preferences of some voters during the interim.²⁰ Given that the governing party has a number of years until the next election, it can pursue whatever policies it prefers if it chooses not to be influenced by either the opposition parties or the electorate.²¹ Second, voters are usually not asked to vote on single issues at election time, but instead are presented with a bundle of policies by each party. While they may oppose party X's position in one issue, they may support the remainder of its policies. Thus voters are presented with a package of policies, some of which they oppose and some of which they support. However, in order to obtain the policies they desire, voters are forced to accept a number of other policies which they may reject.²² Finally, the presence of a multiparty system and the "first past the post" decision rule means that the governing party may be elected with the support of only a plurality and not a majority of the votes cast.²³ This means that it is quite possible to obtain a majority of the seats in the House of Commons with only a plurality of the popular vote. The vagaries of the Canadian electoral system were illustrated clearly in the 1979 federal general election when the Conservative party was able to obtain a plurality of the seats in the House of Commons with only 36% of the popular vote, 4% less than the popular vote received by the Liberal party.

In brief, the governing party is shielded from the wishes of the majority in a number of ways. While this does not imply that the governing party can consistently ignore the wishes of the majority, it does mean that the government has some leeway on discretion in its actions. In this sense, the government can be viewed as an institution with its own preferences, some in harmony with the private sector and some not. It cannot be assumed, however, that the government always seeks the "public interest." Within specific constraints, governments seek to maximize goals of their own.²⁴

Given these basic axioms concerning the expected behaviour of citizen-voters and politicians, several hypotheses about government behaviour under varying conditions may be deduced. The following pages examine three hypotheses concerning the effect of electoral competition, the political business cycle and the fiscal illusion on public expenditure levels. These hypotheses follow from the basic axioms concerning citizen and government behaviour.

ELECTORAL COMPETITION

Downs and other public choice theorists assume that members of the governing party are concerned primarily with ensuring their re-election. As was noted previously, re-election serves only as a means to an end because party members can only realize their private ends if they are re-elected. Downs argues that members of the governing party will pursue whatever policies are required in order to gain

re-election. In practice, this means they attempt to implement policies desired by the majority of voters on all issues, to do otherwise courts defeat by opposition parties. However, since incumbent politicians are concerned primarily with re-election, it follows that they will be most sensitive to the wishes of the electorate if they are threatened electorally. Thus insecure governments are more likely to be concerned with the wishes of the majority than are secure ones, because a secure government may pursue unpopular policies, at least in the short-run, without fear of being defeated at the polls.²⁵

Any government which is interested in remaining in office must prepare itself for future elections by informing itself of the probable outcome of that contest. One means at the government's disposal for this purpose is the regular Gallup poll which provides the government with one indicator of the current standing of the government with voters.²⁶ In addition, the Gallup organization frequently canvasses voters' opinions on major questions of public policy, including unemployment insurance, family and youth allowances and old age pensions. If on the basis of current Gallup reports on the government's popularity, the governing party is uncertain whether it will win the forthcoming election, it attempts to use its control over the policy process and the public purse to increase its popularity. On the other hand, if the government is confident of winning the forthcoming election, it may pursue policies in accordance with its own preferences.²⁷

Most previous research on the determinants of government popularity indicates that voters evaluate the governing party primarily on the basis of prevailing economic conditions. Evidence from the United States, the United Kingdom, Germany, Austria and Canada indicates that government popularity in the public opinion polls varies with economic conditions, particularly changes in real personal disposable income.²⁸ The literature suggests that since the costs of obtaining information are high for voters, they adopt a simple decision rule in evaluating the economic performance of the government. According to Frey and Schneider, voters assume that the government is indeed responsible for economic events, regardless of whether this is in fact the case. Second, voters punish the governing party for recession and reward them for economic prosperity.²⁹ In addition, at least in the United States, voters reward very good economic times considerably more than moderately good times.³⁰

However, according to these same authors, voters tend not to consider how the opposition parties would have performed in similar circumstances and they do not consider whether underlying economic conditions are favourable or not; governments may be punished or rewarded for economic events which are outside their control. Finally, voters are said to have short memories so they employ current or slightly lagged economic conditions as the basis for their evaluation of the government's economic performance. Past performance is

discounted rather quickly.³¹ In brief, rational voters evaluate the government on the basis of its perceived past and expected future economic performance and support the opposition if they are dissatisfied.³²

This same body of research on the relationship between economic conditions and government popularity also suggests that incumbent politicians in a number of countries are aware of the fact that the government's popularity depends largely on the state of the economy, or at least they act "as if" they were aware of this fact.³³ Incumbent politicians seek to determine the location and timing of economic benefits in order to promote the fortunes of their party.³⁴ Studies by Tufte, Hibbs, Frey and his colleagues and others, indicate that governing parties in the United States, the United Kingdom, Germany and Latin America have attempted to improve their re-election chances by reducing unemployment and/or inflation and maximizing per capita incomes near the electoral test.³⁵ In other words, while it is unknown whether the various governing parties are aware that their re-election chances are influenced by economic conditions, policy makers appear to act "as if" voters respond in a predictable way to economic conditions.

Information is a crucial factor. In order to form popular policies, the government must know what the citizenry wants and in order to vote rationally, each citizen must know

what policies the government and its opponents espouse.³⁶

In order to test hypotheses concerning the governing party's expenditure program, it is necessary to discover the public's preferences regarding the three programs. It is hypothesized that if the government uses its control over the policy process in order to increase its popularity, politicians must find a means of ascertaining the public's policy preferences. Fortunately, the Canadian Institute of Public Opinion (Gallup) has conducted a number of surveys over the years concerning old age pensions, family and youth allowances, and unemployment insurance. This information is presented in the following pages.³⁷

Following the public choice perspective, it might be expected that the popularity of these programs would vary directly with the likelihood that any individual would receive benefits. Thus, all citizens expect to grow old and while all citizens may not live until retirement age, old age pensions are likely to be viewed positively by most voters. Family allowances might be expected to be less popular because, while all citizens expect to grow old, not all plan to have children. Nevertheless, since most voters do have children, family allowances might be expected to be only slightly less popular than old age pensions. Finally, unemployment insurance might be less popular than the other two programs because many citizens do not expect to become unemployed. An alternate possibility is that while the unemployment insurance program

per se might be popular, unemployment insurance recipients might be viewed as lazy or undeserving. It will be remembered that several of the studies of the unemployment insurance program discussed in chapter three reported evidence of a significant amount of "unemployment insurance induced unemployment."³⁸ Thus, public skepticism concerning the motives of many recipients of unemployment insurance may have some factual basis.

Data on public attitudes towards each of the three programs will be considered in turn beginning with the old age pension program. The various surveys are discussed chronologically. In a few cases, the use of Gallup data has a serious shortcoming since the exact wording of the questions asked is unavailable as many of the early surveys were destroyed. Non-responses have been excluded from the tables.

OLD AGE PENSIONS

August 1951 #212

- 1) Next year, every Canadian 70 years of age or over will start getting a pension of \$40.00 per month regardless of their financial position. Do you approve or disapprove of this?

Approve	83%
Disapprove	17%
N	1898

March 1957 #256

- 2) As you may know, the old age pension has been raised from \$40.00 a month to \$46.00 a month. What do you feel about this amount - do you think it is too high or too low?

Too high	2%
Too low	82%
About right	<u>16%</u>
N	1987

January 1970 #339

- 3) Let us think about some of the services provided by our governments, and paid for by people like you in a number of ways. Do you think you do, or do not get good value for old age pensions?

Good value	58%
Not good value	<u>42%</u>
N	628

May 1970 #341

- 4) Do you think that old age pensions are too high, too low, or about right?

Too high	1%
Too low	78%
About right	<u>21%</u>
N	683

September 1974 #345

- 5) If it were your job to decide how much money an old age pensioner with no other regular income should receive from the government each month, what amount would you choose? A current pensioner gets \$112.00 per month.

Mean = \$407.52

N = 822

FAMILY ALLOWANCES

During the period between 1943 and 1955, Canadians were asked on five successive occasions whether the family allowance program "is a good thing," or "not a good thing."³⁹ The responses are as follows: (The poll numbers are unavailable)

	<u>1943</u>	<u>1947</u>	<u>1948</u>	<u>1950</u>	<u>1955</u>
Is a good thing	49%	74%	75%	84%	90%
Not a good thing	42	16	13	9	6
Undecided	<u>7</u>	<u>10</u>	<u>12</u>	<u>7</u>	<u>4</u>
Total	100	100	100	100	100

January 1970 #339

- 1) Let us think about some of the services provided by our governments and paid for by people like you in a number of ways. Do you think you do, or do not, get good value for the baby bonus?

Good value 67%

Not good value 33%

N 586

January 1971 #345

- 2) Will you tell me if you approve or disapprove of these suggestions. That annual taxable payments of \$500.00 for each child under 16 be paid to mothers?

Approve	58%
Disapprove	<u>42%</u>
N	

(The annual family allowance payment per child in 1971 ranged from \$72.00 to \$96.00 depending on the age of the child and was not taxable.)

UNEMPLOYMENT INSURANCE

January 1959 #273

- 1) If a man or woman quits work, or is fired, and makes no immediate effort to find work again, do you feel that it is all right for them to collect unemployment insurance?

Yes	24%
No	72%
Qualified	<u>4%</u>
N	653

November 1961 #292

- 2) Have you heard or read anything about the Unemployment Insurance Plan which was started in Canada some years ago (U.I.C.)?

Yes	78%
No	<u>22%</u>
N	688

If yes, what are your views on this? Do you think that generally speaking it is a good plan or not a good plan?

Good plan	54%
Poor plan	25%
Qualified	<u>21%</u>
N	500

January 1970 #339

3) Let us think about some of the services provided by our governments and paid for by people like you in a number of ways. Do you think you do, or do not, get good value for unemployment insurance?

Good value	68%
Not good value	<u>32%</u>
N	535

October 1972 #356

4) As you may know, unemployment insurance benefits have been increased recently. In general, do you approve of this or not?

Approve	61%
Dissapprove	<u>39%</u>
N	594

October 1972 #356

5) Do you think that the government has been strict enough, or not, in checking on applicants for unemployment insurance benefits?

Yes, strict enough	29%
No, have not	<u>71%</u>
N	568

August 1975 #379

- 6) It has been suggested that we can cut down on government spending as one way to help control inflation. Other than a possible improvement in general efficiency, do you think there are or are not specific areas of government spending where saving should be made?

Yes	92%
No	<u>8%</u>
N	897

If yes, which ones? (open-ended) multiple responses.

Welfare	30%
Unemployment insurance	23
Foreign aid	20
Military, Armed Forces	11
Energy research	5
Environmental programs	5
Family allowance	5
Medical care	<u>2</u>
N	1217

January 1976 #384

- 7) Do you think that the government has been strict enough or not in checking on applicants for unemployment benefits?

Yes, strict enough	25%
No, not strict enough	<u>75%</u>
N	918

November 1976 #394

- 8) Do you feel there is or is not a significant group of Canadians who use the unemployment insurance plan simply as a means of getting a "paid vacation" and who do not seriously look for work while the benefits last?

Yes (is)	90%
No (is not)	<u>10</u>
N	961

October 1977 #405

- 9) Do you think the current unemployment benefits are
(1) too high, (2) about right, (3) too low?

Too high	31%
About right	54
Too low	<u>15</u>
N	803

An examination of the results of the various surveys on each of the three programs suggests several conclusions. First, a large majority of Canadians surveyed over the years were strongly supportive of old age pensions. In addition, a large majority favoured a significant increase in the basic old age pension. Similar results were obtained with respect to the family allowance program. With the exception of a single survey which was conducted two years before the program was enacted, all surveys indicated that a large majority favoured the program. One survey documents that

about 60% of respondents would support a five-fold increase in the basic family allowance payment.

The results of surveys concerning the unemployment insurance program were somewhat different. While a majority of respondents appear to support the program in principle, at least at existing benefit levels, an overwhelming majority of respondents appear to believe that many people receive benefits who are not entitled to them. Overall, these findings suggest that the public would be supportive of increases in old age pensions and family allowances. However, although increases in unemployment insurance payments were also favoured, a large number of respondents apparently believed that many of those who presently receive benefits should be disqualified. This suggests that the public would be supportive of decreases in unemployment insurance expenditures, if this reduction was achieved through stricter eligibility conditions.

Given the preceding discussion regarding the probable effect of electoral competition on public expenditure levels and the public opinion data on the three programs, three hypotheses are proposed for testing.

H₁₂ The current level of unemployment insurance expenditures varies directly with the size of the government's lead over the largest opposition party in the public opinion polls in the previous year.

H₁₃: The current level of family and youth allowance expenditures varies inversely with the size of the government's lead over the largest opposition party in the public opinion polls in the previous year.

H₁₄: The current level of old age security/guaranteed income supplement expenditures varies inversely with the size of the government's lead over the largest opposition party in the public opinion polls in the previous year.

In other words, the governing party is expected to increase expenditures on old age pensions and family and youth allowances when electoral competition is high and to reduce them when competition is low. Conversely, it is expected that the governing party will reduce unemployment insurance expenditures when electoral competition is high and increase them when competition is low. These results follow from the fact that old age pensions and family and youth allowances are viewed positively by a majority of voters, while unemployment insurance is viewed negatively by the majority. The government's lead over the largest opposition party was operationalized as the average percentage support for the government in the opinion polls in the previous year minus the average percentage support for the largest opposition party in the previous year. In practice, this meant the Liberal and Conservative parties, since the CCF/NDP was never the largest opposition party during the period in question. The measure may be negative as well as positive, since the governing party was behind the major opposition party in the opinion polls on a number of occasions. The measure was based on responses to the Gallup Poll's standard question:

"If a federal general election were held today, which party's candidate would you favour?" Non-responses were excluded from the analysis.

Data on the results of the three hypotheses are contained in Tables 60 through 62. The tables indicate that only in the case of the unemployment insurance program was the hypothesis confirmed. Unemployment insurance expenditures tended to increase about \$9 million with each percentage increase in the government's lead in the opinion polls, and to fall by the same amount with a percentage decrease in the government lead. This result might be attributed to the fact that insecure governments tend to tighten eligibility conditions for unemployment insurance. However, the magnitude of the expenditures involved was quite low relative to total expenditures, so this may suggest that such gestures are more symbolic than substantive. In other words, an insecure government may reduce unemployment insurance expenditures marginally in order to please the majority, but such reductions are probably not large enough to alienate program recipients. No statistically significant relationship was found between electoral competition and expenditures on old age pensions and family and youth allowances as indicated by Tables 61 and 62. This is surprising since both programs were supported strongly by large majorities in virtually all of the public opinion polls.

TABLE 60

OLS Regression Between Unemployment Insurance Expenditures,
Lagged Expenditures, Number of Unemployed Persons,
CCF/NDP Support and Government Lead
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-528.67	160.23	-	-3.30**
Lagged expenditures _{+ -1}	.69	.11	.65	6.25**
Number of Unemployed Persons	1.15	.35	.35	3.29**
CCF/NDP Support _{+ -1}	19.16	7.49	.12	2.56*
Government Lead _{+ -1}	8.86	4.24	.10	2.09*
R ² =				
F = 107.03 $p < .001$				
S.E.E. = 180.15				
Durbin's h = -0.15 First Order rho = -0.02 $p < .05$				

* $p < .05$ two-tailed test

** $p < .01$ two-tailed test

N = 35

TABLE 61

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Personal Disposable
Income, Population under 16 years,
CCF/NDP Support, Minority Government
and Government Lead
1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	1066.8	233.4	-	4.57**
Lagged expenditures _{+ -1}	.34	.14	.34	2.60*
Personal Disposable Income _{+ -1}	.33	.08	.89	4.07**
Population under 16 years	-.13	.03	-.81	-4.32**
CCF/NDP Support _{+ -1}	-16.9	6.4	-.39	-2.65*
Minority Government/not _{+ -1}	123.5	47.4	.34	2.60*
Government Lead _{+ -1}	-3.6	2.7	-.16	-1.31

$R^2 = .68$

$F = 11.97$ $p < .01$

S.E.E. = 94.07

Durbin's h = 1.69

First Order rho = 0.18 $p < .05$

** $p < .01$ two-tailed test

* $p < .05$ two-tailed test

N = 32

TABLE 62

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures, CCF/NDP Support
and Government Lead
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ - ratio
Intercept	-48.12	97.56	-	-0.49
Lagged Expenditures _{+ -1}	.80	.05	.84	15.50**
CCF/NDP Support _{+ -1}	30.45	8.50	.19	3.58**
Government Lead _{+ -1}	-2.73	3.05	-.03	-0.89

$R^2 = .97$

$F = 260.72$ $p < .001$

S.E.E. = 116.30

Durbin's h = -0.33 First Order rho = -0.06 $p < .05$

** $p < .01$ two-tailed test

N = 26

THE POLITICAL BUSINESS CYCLE

In the previous pages, it was postulated that individual voters act rationally in politics, and that incumbent politicians seek to maximize their chances of re-election. In order to achieve re-election, incumbent politicians use their control over the public purse and the policy process to produce those policies which they believe will ensure their re-election. However, since scarce resources must be conserved and because elections occur only infrequently, government efforts to win the support of voters might be expected to peak around election time. The direct interest of the governing party in its own survival is probably greatest immediately before an election. Thus, the number of years which have passed since the previous election may provide one measure of the temporal urgency of taking action.⁴⁰ In addition, previous research suggests that current economic conditions are more closely associated with government popularity than past conditions so a strategy of vote maximization may be most effective if it is implemented as close to the election as possible.⁴¹ A strategy of providing economic benefits to voters far in advance of an election may be unproductive, because voters may forget past government largesse as time passes. Thus, the government's best strategy may be to promise immediate benefits just prior to the election and to postpone the costs until some time after the election.

It has long been part of political folklore in Canada that incumbent politicians time expenditure increases strategically in order to improve the government's standing in upcoming elections. Thus, election year tax cuts, promises of public works and increased transfer payments are often attributed to the electoral motives of the governing party. Academic observers have deemed the phenomenon the "political business cycle."⁴²

The political business cycle refers to economic fluctuations which result from the efforts of incumbent politicians to ensure their re-election through the provision of election year economic benefits to voters. Thus, as one author has observed, pre-election "years of plenty" are often followed by post-election "years of famine."⁴³ Like most political folklore, these loose intuitive hypotheses have seldom been examined empirically. As Richard Bird has observed:

...it has even been suggested that changes in social expenditure programs have been sometimes so timed as to win elections for the party in power. Although in principle this contention should be testable, the evidence is not very clear for Canada on this point.⁴⁴

The following pages represent a preliminary attempt to test for the existence of a political business cycle in Canada.

The government has three basic economic policy instruments at its disposal which can be employed to improve its chances of re-election. These include: fiscal policy, monetary policy, and transfer payments. Most previous research suggests

that voters reward the government for prosperity and punish it for recession. Recession and prosperity have generally been operationalized as the rate of unemployment, the rate of change in consumer prices and the rate of change in real personal disposable incomes. Research in other countries tends to indicate that government popularity varies directly with the growth of real personal disposable income and inversely with the rate of change in consumer prices (inflation) and the unemployment rate.⁴⁵ Thus a government interested in its survival might be expected to attempt to lower unemployment and inflation and to increase real personal disposable income at election time. According to previous studies of the political business cycle, a policy which lowers the level of unemployment and inflation before an election and creates higher inflation after the election is likely to yield more political support than a constant level of inflation and unemployment over the entire inter-election period.⁴⁶ Such a strategy is made possible by the presumed trade-off between unemployment and inflation and the lags which occur before the adverse effects of such a strategy are felt. Thus an expansionary policy prior to the election may yield lower unemployment in the short-run but will likely result in higher inflation in the long-run, after the election has passed. Once the election is over, a deflationary policy may be employed to lower inflation again because high unemployment is less important in non-election years.⁴⁷

In other words, the government is assumed to be willing to face higher inflation after the election in order to obtain low unemployment just prior to the election. There is some evidence which indicates that such a scenario accurately describes inter-election swings in unemployment and inflation in a number of western democracies.⁴⁸

However, such a strategy is not without its dangers, and it may not be the most efficient means of garnering political support. Despite the Keynesian revolution, it is evident that neither fiscal nor monetary policy have been particularly effective in influencing the business cycle in recent years. In addition to the fact that fiscal and monetary policy may not yield the desired results, both involve time lags before they take effect. From the government's perspective, what is required are policy tools which have a quick start-up time and which yield clear and immediate economic benefits to a large number of voters or some specific group at election time.⁴⁹ After all, what the government wants is low unemployment and inflation during the election year. Low unemployment and inflation in the year after the election is of little value to the government.

Tufte and Wagner have argued that concentrating on increasing the real personal disposable income of voters is likely to be more certain and efficient than employing fiscal and monetary policy for electoral purposes. Real personal disposable income can be increased quickly and at precisely

the right time through tax reductions or increases in transfer payments. Unlike fiscal and monetary policy, tax reductions and increases in transfer payments can be legislated and implemented quickly with some assurance that they will have the desired effect at precisely the right time.⁵⁰ In particular, transfer payments more surely improve voters' economic well-being, and targeting economic benefits to particular groups allows incumbents to claim that they have done something for a specific group.⁵¹

Since Downs argues that government decision-makers attempt to maximize the visible benefits of expenditure and minimize the visible costs of taxation, it is likely that the purer the public good the less benefit it will appear to provide to the voter. Voters may have difficulty assigning a particular benefit to expenditures on defence policy, but the benefits from transfer payment are clear and unequivocal.⁵²

Since expenditures on transfer payments are probably the most visible aspect of government expenditures, it appears reasonable to assume that they might constitute one part of the government's electoral strategy. Therefore, the level of transfer payments might be expected to vary over the legislative period with the highest level occurring just before the election. Tufte reports that in 19 of 27 western democracies he examined, increases in real personal disposable income were most likely to occur in election years.⁵³ A similar pattern was found to hold in the United States where

most increases in transfer payments occurred in election years, usually just before the election.⁵⁴ Ames and Frey report evidence of similar findings in a number of other nations.⁵⁵

The political business cycle has three basic causes:

- (1) the restricted time-horizons of voters;
- (2) the restricted time-horizon of politicians; and
- (3) the time lags involved before the adverse consequences of election year largesse are felt.⁵⁶

First, voters are assumed to have a declining memory of the past and to be concerned primarily with the current election period.⁵⁷ In evaluating government policy, voters tend to weigh recent experiences more heavily than past experiences.⁵⁸ Thus a policy which increases public expenditures before an election and levies the taxes to pay for these increases after the election is likely to yield more political support than a constant level of public expenditure over the entire electoral period. In this sense, some voters are myopic because they neither give enough weight to the long-term consequence of short-term expenditure increases nor recognize the strategic implications of the government's behaviour.⁵⁹

Second, incumbent politicians are assumed to attempt to maximize their party's share of the vote at the next election. If the government fears that it may lose the next election, its time-horizon will end at the next election date.⁶⁰

According to Hartle:

Timing is of crucial importance, costs should either be imposed as far in advance of an election as possible, so that they can be capitalized and forgotten, or postponed for such a long period that their present value is low (borrowing). The converse is true of benefits.⁶¹

Given the short memory of citizens, the government's best strategy is to promise immediate economic benefits and postpone the costs. However, incumbent politicians must be careful not to provide benefits so far in advance of an election that they will be forgotten before the election occurs.⁶²

Finally, myopic voters appear to forget that short-term benefits are likely to be followed by harder times in the long-term. If the government is uncertain of being re-elected, it will not place great importance on the tax increases or budgetary deficits which will likely be required to pay for election year largesse. Of course, these adverse consequences of election year policies will in all probability be deferred until after the election.

Given the preceding discussion, three hypotheses are proposed:

- H₁₅: Unemployment insurance expenditures will be higher in election years than in non-election years.
- H₁₆: Family and youth allowances expenditures will be higher in election years than in non-election years.
- H₁₇: Old Age Security and Guaranteed Income Supplement expenditures will be higher in election years than in non-election years.

Data on the tests of these hypotheses are contained in Tables 63 through 65. The tables indicate that a statistically significant increase in election year expenditures was only apparent in the unemployment insurance program. Unemployment insurance expenditures typically increased about \$205 million in election years, after the effects of the other variables had been controlled statistically. This suggests that the government reduced unemployment insurance expenditures marginally in the face of electoral competition, but increased them dramatically during election years. This decision was based presumably on the view that recipients of unemployment insurance were intensely supportive of the program, while the majority of voters, although hostile, did not feel that strongly about the program. No statistically significant relationship was found between old age pension or family and youth allowances expenditures and election years, as indicated by Tables 64 and 65. In neither case was the t -ratio for this variable close to being statistically significant at the 5% level.

TABLE 63

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures, Number of
Unemployed Persons, CCF/NDP Support, Govern-
ment Lead and Election Year/not
1941-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-708.66	149.22	-	-4.75**
Lagged expenditures _{+ -1}	.70	.10	.67	7.33**
No. of unemployed persons	1.18	.30	.36	3.89*
CCF/NDP Support _{+ -1}	21.10	6.51	.13	3.24**
Government lead _{+ -1}	14.17	4.01	.16	3.53**
Election Year/Not	205.35	62.16	.15	3.30**

$R^2 = .94$

$F = 116.16 \quad p < .001$

S.E.E. = 156.19

Durbin's $h = 1.07$ First Order $\rho = 0.15 \quad p < .05$

** $p < .01$ two-tailed test

N = 35

TABLE 64

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Personal Disposable
Income, Population under 16 Years,
CCF/NDP Support, Minority Govern-
ment and Election Year/not
1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	913.4	215.0	-	4.25**
Lagged Expenditures _{+ -1}	.40	.14	.39	2.78**
Personal Disposable Income _{+ -1}	.32	.08	.87	3.93**
Population Under 16 years	.12	.03	-.77	-4.06**
CCF/NDP Support _{+ -1}	-.16.1	6.5	-.36	-2.47*
Minority Government/not _{+ -1}	137.5	46.7	.38	2.95**
Election Year/not	28.9	39.2	.08	0.74

$R^2 = .67$

$F = 11.27$ $p < .01$

S.E.E. = 96.19

Durbin's h = 2.12

First order rho = 0.22 $p < .05$

** $p < .01$ two-tailed test

* $p < .05$ two-tailed test

N = 32

TABLE 65

OLS Regression Between OAS/GIS, Expenditures,
Lagged Expenditures, CCF/NDP Support,
and Election Year/Not

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-74.88	95.11	-	-0.79
Lagged Expenditures _{+ -1}	.82	.05	.85	16.52**
CCF/NDP Support _{+ -1}	28.75	8.44	.18	3.41**
Election Year/Not	-10.70	48.88	-.08	-0.22

$R^2 = .97$

$F = 251.88$ $p < .001$

S.E.E. = 118.26

Durbin's $h = 0.19$ First Order $\rho = 0.04$ $p < .05$

** $p < .01$ two-tailed test

$N = 26$

FISCAL ILLUSION

According to popular wisdom, elected officials are much more willing to accept the credit for spending money on projects for their constituents, than they are to incur the responsibility for imposing taxes. Taxes are universally unpopular, but public expenditures generally earn popular acclaim. Following this logic, Downs and other public choice theorists argue that vote maximizing governments arrive at a budget by arranging all expenditures by their vote-gain potential and all proposed revenue items by their vote-loss potential and strike a balance which will be popular with the electorate.⁶³ According to Downs:

...because government in our model wishes to maximize political support, it carries out those acts of spending which gain the most votes by means of those acts of financing which lose the fewest votes.

In other words, expenditures are increased until the vote gain of the marginal dollar spent equals the vote-loss of the marginal dollar financed.⁶⁴

Since public expenditures are popular and taxes unpopular, vote maximizing politicians might be expected to attempt to conceal the true tax cost of increases in public expenditures. This task may be accomplished by changes in the method used to finance public output. In other words, the institutional means by which taxes are paid may affect taxpayers' perceptions of the price of government output and hence the size of the public sector.⁶⁵ According to the theory of fiscal illusion,

the accuracy of citizen's perceptions of tax levels vary inversely with the complexity of the revenue structure and the visibility of taxation. Complex tax structures and revenue systems which rely on less visible taxes are said to systematically produce a higher level of public output than would be observed under simpler payment structures and more visible taxes.⁶⁶

Fiscal illusion refers to the systematic misperception by individuals of the burden of taxation and the benefits from public expenditures.⁶⁷ While in theory it is quite possible that taxpayers might underestimate the tax burden and overestimate the benefits from public expenditure, in practice most theorists appear to believe that on balance taxpayers underestimate the burden of taxation. The existence of a fiscal illusion is mainly attributable to the costs of obtaining accurate information about the prevailing level of taxation.⁶⁸ Because it is a costly and time-consuming task to acquire information about taxation and public expenditures, the electorate is generally ignorant of the costs and benefits of many actual and proposed government policies.⁶⁹ This result is due to the fact that the benefits of acquiring correct information probably do not exceed the benefits from being informed. While individual citizens have some influence over their private purchases, they have little influence over the size and composition of the public goods that their taxes purchase.⁷⁰ In the private sector, transactions are

generally on a *quid pro quo* basis, but in the public sector benefits are usually divorced from the revenues that makes them possible. In this sense, there is little link between costs and benefits in the public sector.⁷¹

Without a knowledge of actual tax prices, citizens must make their voting choice on the basis of the perceived tax price of public goods. If the perceived tax price is less than the actual tax price, more public goods will be demanded than they would if voters had perfect information.⁷² For this reason, competitive political processes will tend to lead to higher public expenditures than would be preferred by the fully informed voter.⁷³

There are three sorts of information costs which may accrue to citizens attempting to assess their actual tax burden. First, there are information costs which arise from the mode of assessment or arrangement of public revenue. It is frequently argued that citizens will be much more aware of direct taxes, such as the personal income tax, than of indirect taxes, such as the excise tax and the manufacturers' sales tax which are included in the price of products and are thus hidden from view. However, the visibility of such highly "visible" taxes as the personal income tax is partly obviated by the withholding provision whereby taxes are deducted at source. Since the income tax is paid gradually and because the tax is deducted at source, citizen's perceptions of the tax burden may be reduced.⁷⁴ A second source of

information costs is due to the timing of revenue assessment. It has been argued that taxes which are paid infrequently and therefore in large amounts (property tax) are probably perceived more clearly than those which are paid frequently in smaller amounts. For many taxpayers, especially the retired, property tax payments may be higher than the personal income tax.⁷⁵ It is noteworthy that the so-called "tax-revolt" surrounding Proposition 13 in California was based on opposition to high property taxes. This may be due to the fact that, unlike the personal income tax, property taxes are generally paid annually or quarterly. Thus citizens' perceptions of the actual tax burden may be higher.⁷⁶ A third source of information costs result from the complexity of the revenue system. It is likely that taxpayers will have greater difficulty in assessing their tax burden if the revenue structure is complex than if it is simple. For example, a revenue system which relies on a large number of separate taxes will make calculation of the tax burden more difficult than one which relies on a single revenue source. Under a complex revenue structure, citizens may base their assessment of their tax burden on the personal income tax or other highly visible taxes and thus may neglect the impact of that part of the corporate income tax passed on to consumers, or excise taxes, sales taxes or a host of other taxes.⁷⁷

While all three of these sources of increased information costs suggest testable hypotheses, and all are plausible,

at least at first glance, several difficulties are apparent. First, it is not at all obvious which taxes are visible and which ones are not. While it has traditionally been assumed that direct taxes are more visible than indirect taxes, the effect of the withholding provision is unknown, and empirical studies of the visibility of taxation are not available.

Pommerehne and Schneider have argued that:

The question of a person's knowledge of the individual revenue items has not been settled satisfactorily as he may be quite well informed on the true tax burden even in the case of taxes which are included in the product price. This is especially the case if the underlying goods are those with low price elasticity of demand (cigarettes, liquor, fuel, etc.), and/or if the sellers have strong incentives for informing buyers about the raised taxes in order to justify price increases.

It may even be the case that there is only a marginal difference between the perceived and actual total fiscal burden, even if there is a bias toward misperception for some of the individual revenue items.⁷⁸

Second, although higher information costs may arise from the timing of revenue assessment, it is unknown whether taxes which are collected infrequently in large amounts are perceived more clearly than those which are paid frequently in small amounts. In fact, it is difficult to think of any federal taxes which are collected in this manner. Moreover, it is unclear whether the frequency of collection or the amount paid is the key determinant of the visibility of taxation. In brief, the timing of revenue assessment argument does not provide sufficient information with which to devise an empirical test.

The hypothesis relating the complexity of the revenue structure to the level of public expenditures is much more promising. The hypothesis is clear and plausible and the direction of the posited relationship is not in doubt. A more complex revenue structure is expected to lead to an expansion of public expenditures. In fact, studies of the fiscal illusion hypothesis have tended to concentrate on the complexity of the revenue structure component of the fiscal illusion hypothesis. Studies by Buchanan, and Pommerehne and Schneider report that higher expenditures were associated with a more complex revenue structure, while Greene and Munley provide support for the null hypothesis 'no effect'.⁷⁹

Buchanan, and Pommerehne and Schneider provide evidence from a number of American and Swiss municipalities that jurisdictions which rely on a larger number of revenue sources tend to spend more than those with fewer revenue sources. Buchanan's article was criticized by Greene and Munley for failing to include a relevant independent variable, population size, in the estimating equation. Greene and Munley re-analyzed Buchanan's data and were able to demonstrate that the effect of the complexity of the revenue structure was no longer statistically significant after the population variable was included in the estimating equation.

Given the difficulties associated with the hypotheses relating the visibility of taxation and the timing of revenue assessment to the level of public expenditures, it was decided

to test only the hypothesis relating the complexity of the revenue structure to the level of public expenditures. The following two hypotheses are proposed:

H₁₈: The level of Family and Youth Allowances expenditures in the current year varies directly with the complexity of the revenue structure in the previous year.

H₁₉: The level of Old Age Security/Guaranteed Income Supplement expenditures in the current year varies directly with the complexity of the revenue structure in the previous year.

Unemployment insurance expenditures were not included in the analysis since they are funded primarily through employer and employee contributions and thus do not come out of the government's general revenues. Although the government does contribute some monies to the unemployment insurance account, this sum is determined by a formula which depends on a moving average of the unemployment rate in the past several years.

The complexity of the revenue structure was defined operationally by Douglas Rae's index of fractionalization. The Rae Index of Fractionalization is defined as:⁸⁰

$$F = \frac{1 - \sum_{i=1}^6 R_i^2}{5} \quad F = \text{revenue fractionalization}$$

where R_i^2 is the share of total federal government revenues generated by a particular source of revenue. The possible range of the index is from 0 to 1 with a more complex revenue structure registering close to the high end of the scale.

For this purpose, federal government revenues were divided

into six categories employed in the National Income and Expenditure Accounts:

(1) direct taxes persons	(2) direct taxes corporations
(3) withholding taxes	(4) indirect taxes
(5) transfers from persons, and	(6) investment income. ⁸¹

While the order of magnitude changed greatly over the years, the largest revenue sources were: direct taxes persons, indirect taxes and direct taxes corporations. Rae's fractionalization index is not, of course, a perfect measure of the complexity of the revenue structure. For example, a revenue system which relied exclusively on the corporate profits tax would receive the same score as one which relied exclusively on the personal income tax. Nevertheless, the measure does appear to represent much of what is meant by the complexity of the revenue system. Since there is no agreement on which taxes are most visible to taxpayers, the Rae index appears satisfactory for our purposes.

There are three basic sources of data on federal government revenues, each of which utilize different definitions of government.⁸² For this reason, each data source provides a different measure of federal government revenues. The Public Accounts provide the major source of information on government revenues. Unfortunately, accounting procedures have changed over time and this makes the construction of a consistent time-series difficult. Some functions have been transferred to and from independent agencies that are not included in the

Public Accounts and other functions have been transferred to and from the private sector. For example, revenues derived from the Old Age Security Fund, the Unemployment Insurance Account and the Canada Pension Plan are not included as part of government in the Public Accounts. The second source of government revenue data is the public finance statistics published by Statistics Canada. The definition of government employed here is somewhat broader than in the public accounts but unfortunately this data is not available for the entire time period considered here. The third source of revenue data and the one which is employed here is the National Income and Expenditure Accounts. The definition of government employed here is broader than that employed by either the Public Accounts or the public finance statistics. Moreover, a consistent series is available for the entire time period considered here. The decision to employ the National Income and Expenditure Accounts as the source of federal government revenue data was based on two considerations. First, the National Accounts includes non-budgetary revenue sources which are directly relevant to our concerns here, in particular, the Old Age Security Fund. Since non-budgetary revenues cannot realistically be excluded from government because of accounting conventions, the National Accounts provides a more accurate measure of government than the Public Accounts. Second, the National Accounts provides a more consistent time-series of government revenues than does the Public

Accounts.⁸³ However, since National Accounts data are presented on a calendar year basis, it was necessary to adjust this data to obtain data on a fiscal year basis. This was accomplished by summing total revenues in the second, third and fourth quarters of each year and revenues in the first quarter of the next year. The federal fiscal year ends on March 31 of each year.

Having discussed the operational definition of the complexity of the revenue structure and the source of the data, the tests of hypotheses 18 and 19 may be described. It will be remembered that the two hypotheses posited a positive relationship between family and youth allowances expenditures, old age pension expenditures and the complexity of the revenue structure. The data on the tests of hypotheses 18 and 19 are contained in Tables 66 and 67. The tables indicate that both hypotheses must be rejected. In neither case was the t -ratio for the complexity of revenue structure variable statistically significant at the 5% level.

TABLE 66

OLS Regression between FA/YA Expenditures, Lagged Expenditures, Personal Disposal Income, Population under 16 years, CCF/NDP Support, Minority Government and Complexity of Revenue Structure 1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-1430.0	1596.9	-	-0.90
Lagged Expenditures _{+ -1}	.32	.14	.32	-2.22*
Personal Disposable Income _{+ -1}	.46	.11	1.19	3.92**
Population under 16 years	-.13	.03	-.83	-4.42**
CCF/NDP Support _{+ -1}	-17.33	6.36	-.39	-2.72**
Minority Government/not _{+ -1}	131.85	44.65	.36	2.95**
Complexity of Revenue Structure _{+ -1}	3356.9	2251.5	.29	1.49

$R^2 = .69$

$F = 12.29 \quad p < .01$

S.E.E. = 93.17

Durbin's h = 2.20 First order rho = 0.22 $p < .05$

** $p < .01$ two-tailed test

* $p < .05$ two-tailed test

N = 32

TABLE 67

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures, CCF/NDP Support, and
Complexity of Revenue Structure.
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	2476.0	2084.6	-	1.19
Lagged Expenditures _{+ -1}	.76	.07	.79	10.94**
CCF/NDP Support _{+ -1}	28.92	8.17	.18	3.54**
Complexity of Revenue Structure _{+ -1}	-3607.6	2939.8	-.08	-1.23
$\bar{R}^2 = .97$ $F = 269.03$ $S.E.E. = 114.54$ $Durbin's h = 0.35$ $First\ order\ rho = 0.06\ p < .05$				

** $p < .01$ two-tailed test.

N = 26

SUMMARY AND CONCLUSIONS

The chapter began with a discussion of some of the reasons for the new interest in deductive rather than inductive theories of politics. The essential tenets of most self-interest theories of politics and public finance were outlined. These tenets included the view that all actors are rational and self-interested and that they are forced to act under conditions of uncertainty. It was argued that the main tenets of self-interest theories of politics lead to testable predictions about the behaviour of citizen-voters and politicians. In brief, citizen-voters are expected to act rationally in politics and to seek to maximize their utility income from government activity. Incumbent politicians are expected to attempt to maximize the probability of their re-election.

Governments are thus expected to use their control of the policy process and the public purse in order to improve their chance of re-election in upcoming elections. This is necessary because government popularity is said to be largely dependent on prevailing economic conditions. Voters reward governments for economic prosperity and punish them for economic recession by supporting opposition parties.

Three basic electoral strategies open to the government to improve its standing with the voters are identified. According to the first, the government evaluates its standing in the public opinion polls and, if it is seriously challenged, it adopts public expenditure policies favoured by the majority.

In doing so, it must remain cognizant of the intensity of preferences of both the majority and the minority. The government will always adopt policies favoured by intense majorities, but if majority opinions are not strongly held, it may be wise to adopt policies favoured by intense minorities. Gallup poll data on the standing of the government in the opinion polls and surveys of public opinion towards unemployment insurance, family and youth allowances and old age pensions are employed to test these propositions.

The second option open to the government to further its re-election goal is to attempt to influence the timing of public expenditure increases. According to the political business cycle hypothesis, election year increases in transfer payments will yield larger electoral gains than increases in non-election years. Such a strategy is dictated by the short-time horizon of governments concerned only with the next election. It is also facilitated by the myopia of voters who quickly discount the past and who are apparently unconcerned with the future. Thus voters appear to reward election year economic largesse even though pre-election years were years of recession and even if election year decisions may have adverse economic consequences in the long-term.

The third strategy available to the government is to attempt to conceal the actual tax cost of public expenditure policies through the creation of a fiscal illusion. Because voters appear to reward governments for increases in public expenditure and to punish them for tax increases, the government may be strongly motivated to adjust the institutional means through which governments raise revenues to conceal the true cost of taxation. Accordingly, complex revenue structures which rely on less visible taxes are expected to lead to an expansion in the level of public expenditures, an expansion which would not be observed if the tax structure was simpler and based on more visible taxes.

The major conclusions of the data analysis employed to test these three hypotheses were as follows:

- (1) Unemployment insurance expenditures in the current year were related positively to the size of the government lead in the opinion polls in the previous year. In other words, electorally secure governments tended to increase unemployment insurance expenditures, while insecure ones tended to reduce these expenditures.

This conclusion appears to follow from the results of various Gallup polls which indicated that while the unemployment insurance program *per se* was popular, large majorities apparently believed that the eligibility conditions for the program were lax.

- (2) There was no evidence that expenditures on family and youth allowances and old age pensions were related to the government's lead over the largest opposition party in the public opinion polls.
- (3) Unemployment insurance expenditures were found to increase significantly during election years.
- (4) There was no evidence of election year increases in family and youth allowances or old age pension expenditures.
- (5) The fiscal illusion hypothesis was not confirmed. No statistically significant relationship was found between the complexity of the revenue structure and either family and youth allowances or old age pension expenditures. The unemployment insurance program was not examined because the program is not funded out of the government's general revenues.

Overall, these results provide some evidence that electoral competition and the political business cycle did exert some influence on public expenditure levels. However, the fiscal illusion hypothesis was not confirmed, although it was argued that an appropriate empirical test of this hypothesis is elusive. The data analysis indicated that electoral considerations appear to have entered into decisions regarding the level of unemployment insurance expenditures. The data analysis in chapter five, which demonstrated that support for the CCF/NDP and the presence of minority parliaments influenced old age pensions and family and youth allowances underscores the wisdom of examining each program separately. It appears that different factors were influential in explaining expenditure levels in the three policy areas.

The concluding chapter reviews the findings of previous chapters, discusses some proposed avenues for future research and examines the significance of the findings reported here in light of previous research.

NOTES

1. See Anthony Downs, An Economic Theory of Democracy (New York:Harper and Row, 1957); Albert Breton, The Economic Theory of Representative Government (Chicago: Aldine, 1975); William H. Riker and Peter C. Ordeshook, An Introduction to Positive Political Theory (Englewood Cliffs:Prentice Hall, 1973).
2. Two recent empirical works include: Edward R. Tufte, Political Control of the Economy (Princeton:Princeton University Press, 1978); Bruno S. Frey, Modern Political Economy (Oxford:Martin Robinson, 1978).
3. See Carl G. Hempel, Aspects of Scientific Explanation (New York:The Free Press, 1965); Ernest Nagel, The Structure of Science (New York:Harcourt, Broa and World, 1961); Abraham Kaplan, The Conduct of Inquiry (San Francisco: Chandler, 1964).
4. See William C. Mitchell, "The Shape of Political Theory to Come: From Political Sociology to Political Economy," in Seymour Lipset, ed. Politics and the Social Sciences (New York:Oxford University Press, 1969), pp.101-114.
5. Douglas Hartle, A Theory of the Expenditure Budgetary Process (Toronto:University of Toronto Press for the Ontario Economic Council), p.12; Randall Bartlett, Economic Foundations of Political Power (New York:The Free Press, 1973), p.22.
6. Hartle, Theory of the Expenditure Budgetary Process, p.57.
- 6.5 Bartlett, Economic Foundations of Political Power, p.22
7. Downs, Economic Theory of Democracy, p.27; Hartle, Theory of the Expenditure Budgetary Process, pp.57-63.
8. Bartlett, Economic Foundations of Political Power, pp.24,31; Downs, Economic Theory of Democracy, p.77.
9. Downs, Economic Theory of Democracy, p.21.
10. Ibid., p.38.
11. Ibid., pp.38,40,53,68.
12. Ibid., p.259.

13. Anthony Downs, "Why the Budget is too Small in a Democracy," World Politics, 12, (July 1960), p.544.
14. Downs, Economic Theory of Democracy, p.85.
15. Ibid., p.100
16. Breton, Economic Theory of Representative Government, p.18.
17. Downs, Economic Theory of Democracy, p.31.
18. Ibid., p.54.
19. Breton, Economic Theory of Representative Government, p.43.
20. Ibid., pp.124-135.
21. Ibid., pp.48-49.
22. Ibid., pp.50,56.
23. Ibid., p.45.
24. Barry Ames, "The Politics of Public Spending in Latin America," American Journal of Political Science, 21, (February 1977), p.152.
25. See Bruno S. Frey and Friedrich Schneider, "On the Modelling of Politico-Economic Interdependence," European Journal of Political Research, 3, (1975), pp.339-360; Frey, Modern Political Economy, Chpts. 10, 11.
26. Bruno S. Frey and Werner W. Pommerehne, "Toward a More Theoretical Foundation for Empirical Policy Analysis," Comparative Political Studies, 11, (October 1978), pp.322-323.
27. Frey, Modern Political Economy, p.143.
28. See C.A.E. Goodhart and R.J. Bhonsali, "Political Economy," Political Studies, 18, (March 1970), pp.43-106; W. Miller and M. Mackie, "The Electoral Cycle and the Asymmetry of Government and Opposition Popularity," Political Studies, 21, (September 1973), pp.263-279; Gerald Kramer, "Short-Term Fluctuations in U.S. Voting Behavior, 1896-1964," American Political Science Review, 65, (March 1971), pp.131-143; Howard S. Bloom and H. Douglas Price, "Voter Response to Short-Run Economic Conditions: The Asymmetric Effect of Prosperity and Recession," American Political Science Review, 69, (December 1975), pp.1240-1254; Bruno S. Frey, "An Econometric Model with an Endogenous Government Sector," Public Choice, 33, (1978); Roger Douglas, "Economy and Polity in Australia: A Quantification of Common Sense," British Journal of Political Science, 5, (July 1975), pp.341-361.

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30. Tufte, Political Control of the Economy, p.126.
31. Frey and Schneider, "Politico-Economic Interaction in the United States," Review of Economics and Statistics, p.175.
32. Bruno S. Frey, "Politico-Economic Models and Cycles," Journal of Public Economics, 9, (1978), p.204.
33. Tufte provides direct evidence of the economic theory of elections held by American politicians. See Tufte, Political Control of the Economy, pp.5-9; Frey, Modern Political Economy, pp.149-154 provides evidence that politicians act "as if" they believed voting behaviour were influenced by economic conditions.
34. Tufte, Political Control of the Economy, pp.4-5.
35. See Tufte, Political Control of the Economy; Douglas Hibbs, Jr., "Political Parties and Macroeconomic Policy," American Political Science Review, 71, (December 1977), pp.1467-1487; Bruno S. Frey, "Politico-Economic Model of the United Kingdom," Economic Journal (June 1978), pp.243-253; Frey, "An Econometric Model;" Ames, "Politics of Public Spending in Latin America."
36. Downs, "Why the Budget is Too Small in a Democracy," p.544.
37. The data were obtained from the Social Science Data Archive, Department of Sociology, Carleton University.
38. See Herbert G. Grubel and Michael A. Walker, eds., Unemployment Insurance: Global Evidence of its Effects on Employment, (Vancouver, The Fraser Institute, 1978).
39. James Vadakin, Family Allowances: An Analysis of their Development and Implications, (Carol Gables, Florida: University of Miami Press, 1968), p.114.
40. Ames, "Politics of Public Spending in Latin American," p.153.
41. Frey, Modern Political Economy, p.96.

42. See William D. Nordhaus, "The Political Business Cycle," Review of Economic Studies, 42, (April 1975), pp.169-190; C. Duncan MacRae, "A Political Model of the Business Cycle," Journal of Political Economy, 85, (April 1977), pp.239-263; Bennett T. McCallum, "The Political Business Cycle: An Empirical Test," Southern Economic Journal, 44, (1978), pp.504-515.
43. See Yoram Ben-Porath, "The Years of Plenty and The Years of Famine: A Political Business Cycle," Kyklos, 28, (1975), pp.400-403.
44. Richard M. Bird, The Growth of Government Spending in Canada, (Toronto:Canadian Tax Foundation, 1970), p.161.
45. Downs, "Why the Budget is Too Small in a Democracy," p.397.
46. Wagner, "Economic Manipulation for Political Profit: Macroeconomic Consequences and Constitutional Implications," Kyklos, 30, (1977), p.397.
47. Frey, Modern Political Economy, pp.127-131.
48. See Nordhaus, "Political Business Cycle."
49. Tufte, Political Control of the Economy, p.9.
50. Tufte, Political Control of the Economy, p.10; Richard E. Wagner, "Economic Manipulation for Political Profit, pp. 401, 407."
51. Tufte, Political Control of the Economy, p.57.
52. Rudolph Klein, "The Politics of Public Expenditure: American Theory and British Practice," British Journal of Political Science, 6, (October 1976), p.405.
53. Tufte, Political Control of the Economy, p.11.
54. Ibid., p.30.
55. See Ames, "Politics of Public Spending in Latin America;" Frey, Modern Political Economy, pp.136-141.
56. Frey, Modern Political Economy, p.132.
57. Bruno S. Frey, "Politico-Economic Models and Cycles," Journal of Public Economics, 9, (1978), p.209.
58. Wagner, "Economic Manipulation for Political Profit," p.399.
59. McRae, "Political Model of the Business Cycle," p.241.

60. Frey, Modern Political Economy, p.132.
61. Hartle, Theory of the Expenditure Budgetary Process, p.87.
62. Ibid., p.88.
63. Downs, Economic Theory of Democracy, p.52.
64. Ibid., p.52.
65. Richard E. Wagner, "Revenue Structure, Fiscal Illusion, and Budgetary Choice," Public Choice, 25, (Spring 1976), pp.45-46.
66. James M. Buchanan and Richard E. Wagner, Democracy in Deficit, (New York:Academic Press, 1977), p.129.
67. Werner W. Pommerehne and Friedrich Schneider, "Fiscal Illusion, Political Institutions, and Local Public Spending," Kyklos, 31, (3), p.381.
68. Ibid., p.383.
69. Downs, "Why the Budget is Too Small in a Democracy," p.541.
70. Charles J. Goetz, "Fiscal Illusion in State and Local Finance," in Thomas E. Borcharding, ed., Budgets and Bureaucrats: The Sources of Government Growth, (Durham, N.C.: Duke University Press, 1977), p.176.
71. Downs, "Why the Budget is Too Small in a Democracy," p.542.
72. Vincent G. Munley and Kenneth V. Greene, "Fiscal Illusion, the Nature of Public Goods and Equation Specification," Public Choice, 33, (1978), p.95.
73. Pommerehne and Schneider, "Fiscal Illusion, Political Institutions and Local Public Spending," p.386.
74. Ibid.
75. Ibid.
76. Ibid., p.383.
77. Ibid.
78. Ibid., pp.386-387.
79. Buchanan, "Revenue Structure, Fiscal Illusion, and Budgetary Choice," pp.45-61; Pommerehne and Schneider, "Fiscal Illusion, Political Institutions, and Local Public Spending," pp.381-408; Munley and Greene, "Fiscal Illusion, the Nature of Public Goods and Equation Specification," pp.95-100.

80. Douglas Rae, The Political Consequences of Electoral Laws, (New Haven: Yale University Press, 1967), pp.53-58.
81. See Canada, Department of Finance, Economic Review 1979; (Ottawa: Minister of Supply and Services Canada, 1979); Statistics Canada, National Income and Expenditure Accounts, Vols.1,2, (Ottawa: Information Canada, 1976).
82. See Bird, Growth of Government Spending in Canada, pp.227-234.
83. See Statistics Canada, National Income and Expenditure Accounts, Vol.3, (Ottawa: Information Canada, 1976).

CHAPTER SEVEN

THE POLITICS OF SOCIAL SECURITY
IN CANADA: AN OVERVIEW

CHAPTER SEVEN

INTRODUCTION

This dissertation represents an attempt to specify and estimate a model of the determinants of long-term variations in the level of social security expenditures in Canada. Social security expenditures in three policy areas were considered: unemployment insurance, aid to dependent children and old age pensions. Because of the absence of a well-developed and integrated theory or set of theories which might explain public expenditure levels, it was necessary to adopt an incremental approach to model building.

The literature on the determinants of public expenditures was divided into three main exploratory modes. These were in declining order of generality: socio-economic, organizational and political. According to the socio-economic explanation trends in public expenditures largely reflect such factors as economic development and demographic change. The organizational explanation emphasizes the organizational setting within which government expenditure decisions are made. The theory of budgetary incrementalism holds that it is the interaction between organizational routine and the inherited legacy of past expenditure decisions which best explain current public expenditure levels. The political explanation directs attention

to the autonomy of political decision-makers and looks to party ideology and the competition between political parties and interest groups as the key to explaining public expenditure levels.

Because the literature indicated that socio-economic and organizational factors are the most important determinants of public expenditure levels, these factors were considered first. The rationale for this decision was that the discretion of policy makers to adjust to socio-economic and organizational factors may be limited. Thus, constraints on decision-makers must be considered before beginning an examination of the influence of political factors on spending patterns.

The final results of the data analysis which examined the combined effect of socio-economic, organizational and political variables on public expenditure levels in the three policy areas are contained in Tables 68 through 70. While these tables do represent a summary of the results of the investigation, they do not include the results of hypotheses which were rejected as inconsistent with the data. Since the study examined a series of relatively discrete but not unrelated hypotheses, the fact that many if not most hypotheses were rejected is of considerable theoretical interest in itself. The following pages briefly review the main arguments of the first three chapters, outline the major research findings of chapters four through six, suggest possible directions for

TABLE 68

OLS Regression Between Unemployment Insurance
Expenditures, Lagged Expenditures, Number of
Unemployed Persons, CCF/NDP Support, Government
Lead and Election Year/Not
1942-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ -ratio
Intercept	-708.66	149.22	-	-4.75**
Lagged Expenditures _{+ -1}	.70	.10	.67	7.33**
Number of Unemployed Persons	1.18	.30	.36	3.89**
CCF/NDP Support _{+ -1}	21.10	6.51	.13	3.24**
Government Lead _{+ -1}	14.17	4.01	.16	3.53**
Election Year/Not	205.35	62.16	.15	3.30**

$\bar{R}^2 = .94$

$F = 116.16$ $p < .001$

S.E.E. = 156.19

Durbin's h = 1.07 First Order rho = 0.15 $p < .05$

** $p < .01$ two-tailed test

N = 35

TABLE 69

OLS Regression Between FA/YA Expenditures,
Lagged Expenditures, Real Personal Disposable
Income, Population under 16 years, CCF/NDP
Support and Minority Government
1945-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	+ - ratio
Intercept	930.8	211.8		4.40**
Lagged Expenditures _{+ - 1}	.39	.14	.39	2.75**
Personal Disposable Income _{+ - 1}	.32	.08	.87	3.95**
Population Under 16 years	-.12	.03	-.76	-4.09**
CCF/NDP Support _{+ - 1}	-16.4	6.5	-.37	-2.53*
Minority Government/not _{+ - 1}	146.9	44.5	.40	3.30**
$R^2 = .67$				
$F = 13.66 \quad p < .01$				
S.E.E. = 95.33				
Durbin's h = 1.85 First-order rho = 0.20 $p > .05$				

** $p < .01$ two-tailed test

* $p < .05$ two-tailed test

N = 32

TABLE 70

OLS Regression Between OAS/GIS Expenditures,
Lagged Expenditures and CCF/NDP Support
1951-1977

Variable	Coefficient	Standard Error	Standardized Coefficient	t -ratio
Intercept	-79.77	90.50	-	-0.88
Lagged expenditures _{t-1}	.82	.05	.85	16.88**
CCF/NDP Support _{t-1}	28.80	8.26	.18	3.49**

$R^2 = .97$

$F = 394.12$ $p < .001$

S.E.E. = 115.79

Durbin's h = 0.01 First Order rho = -0.01

** $p < .01$ two-tailed test

N = 26

future research, and discuss the major implications of the findings reported here.

RESEARCH FINDINGS AND OVERVIEW

In Chapter one it was argued that the study of social security expenditures requires more attention by political scientists than it has received in the past. There are several reasons why the study of social security merits academic scrutiny. These include the overall magnitude of spending in this area, the rapid growth of government initiatives in the social security field and the growing public protest concerning rising taxes and public expenditure in recent years. It was asserted that previous studies of this question in other national contexts are deficient in a number of respects. The utility of analyzing highly aggregated measures of policy output, for example, total spending in health, education or welfare was questioned. The chapter went on to demonstrate that a longitudinal analysis of public expenditure offers several advantages over most of the traditional cross-sectional studies, and the difficulties involved in attempting to derive longitudinal inferences from cross-sectional studies were discussed. Some major methodological problems which have marred earlier cross-sectional studies were outlined.

Chapter two analyzed some of the reasons for federal government initiatives in the social security field during the 1940's and 1950's. These included a lack of provincial financial resources, the fear of electoral defeat, the prospect of large scale unemployment and civil unrest and the maintenance of a mixed capitalist economy. In other words, federal initiatives were essentially conservative in intent and came from within the government itself, rather than as a result of widespread public pressure. The importance of the influence of Keynesian economics on the thinking of key policy-makers was stressed. It was noted that economic rather than social considerations were paramount in the initiation of social security policies, although social security was frequently promoted among the public on equity grounds.

Chapter three examined the literature on the redistributive effects of the three social security policies under examination here. It was argued that most of the studies of the effect of government expenditure and taxation on the distribution of income do not yield reliable quantitative estimates of income redistribution, which could be employed in a statistical analysis. The estimates derived from these studies represent qualitative or ordinal measures of income redistribution. Thus, proposals by political scientists for quantitative studies of the redistributive effect of government policies are premature, given the present theoretical and methodological

problems in the literature. For this reason, uninformed borrowing from the economics literature by political scientists has yielded a number of studies, the results of which are questionable at best. After reviewing the literature, the chapter concluded that old age pensions are the most redistributive of the three programs under consideration and family and youth allowances are the least redistributive, with unemployment insurance occupying an intermediate position.

Chapter four began by examining various organizational, economic and demographic constraints in political choice. First, since it was argued that the budgetary process in Canada and elsewhere is characterized by incrementalism, it was expected that the current year's budgeting allocation would be associated positively with the previous year's allocation. The data analysis tended to confirm this hypothesis. In all cases, expenditures in the current year were found to be positively and significantly associated with expenditures in the previous year.

A second possible constraint on public expenditure levels was the level of real personal disposable income per capita. Rising incomes were expected to affect public expenditure levels in two ways. First, rising consumer incomes were assumed to lead to increased demand for government goods and services, much as they do in the private sector. Second, on the supply side, rising incomes raise government revenue each year without

changes in tax rates because of the effect of the progressive tax system. This hypothesis was only confirmed for the family and youth allowances program. Finally, it was hypothesized that changes in the demography of the population might influence expenditure levels. If the rate of increase in constant dollar expenditures exceeds the rate of increase in the relevant population group this effect would be expected to be positive.

However, if the rate of increase in the relevant population was less than the rate of increase in constant dollar expenditures, the effect might be expected to be negative. The level of public expenditures on unemployment insurance was found to vary directly with the number of unemployed persons. However, no relationship was detected between the number of aged persons and the level of expenditures on old age pensions. In the case of family and youth allowances, the number of persons under 16 years of age was found to vary inversely with expenditure levels. This result was apparently due to the failure of successive governments to adjust benefit levels to the cost of living.

Taking the models implied by the results of Chapter four as a point of departure, Chapter five proceeded to examine the effects of a series of political variables on expenditure levels. First, the effects of support for the CCF/NDP in the public opinion polls in the previous year and the presence of minority governments were examined. The data analysis indicated

that support for the CCF/NDP was correlated positively with expenditures on old age pensions and unemployment insurance and negatively with expenditures on family and youth allowances. The latter result was apparently due to the fact that declines in the size of the population under 16 years of age and rising levels of inflation which reduced real expenditures, coincided with years of relatively high support for the CCF/NDP. This finding was inconsistent with the hypothesis and appears to be the result of spurious association rather than evidence of a causal relationship. The hypothesis that expenditure levels would increase in minority government years was not confirmed for either the old age pensions or unemployment insurance program. However, expenditures on family and youth allowances were found to increase substantially during minority parliament years.

The finding that increases in support of the CCF/NDP were associated with increases in expenditures on old age pensions and unemployment insurance and that expenditures on family and youth allowances increased significantly during minority parliaments is particularly noteworthy. Chapter three argued that of the three programs considered in this dissertation, only old age pensions result in a significant vertical redistribution of income. Thus, while increased support for the CCF/NDP and minority parliaments appear to be associated with higher expenditures in some policy areas, this expenditure

increase has probably not contributed greatly to income equality.

Finally, the chapter examined the possible effects of increases in trade union membership as a percent of the labour force and the frequency of strikes as predictors of social security expenditures. The data analysis indicated that both of these hypotheses must be rejected as inconsistent with the data. Neither increases in trade union membership nor strike activity were found to be associated with increases in expenditures on old age pensions, unemployment insurance or family and youth allowances.

Chapter six continued this process of incremental model building and employed the final results of Chapter five as a point of departure. The chapter discussed the possible effects of electoral competition, the proximity of elections and the complexity of the revenue structure as determinants of social security expenditures. The effects of electoral competition on public expenditure levels were discussed first. The level of electoral competition was found to vary directly with expenditures on unemployment insurance as predicted by the hypothesis. A positive relationship was expected because the various public opinion polls indicated hostility towards unemployment insurance expenditures on the part of the majority of the electorate. Thus insecure governments were expected to reduce unemployment insurance expenditures and secure governments were expected to increase expenditure levels. The

hypotheses that the level of electoral competition would vary inversely with expenditures on old age pensions and family and youth allowances, programs viewed favorably by a majority of the electorate, were not confirmed. A similar result was obtained with respect to the hypothesis that spending in election years would be higher than spending in non-election years.

Unemployment insurance expenditures were found to increase substantially in election years. However, expenditures on old age pensions and family and youth allowances did not appear to increase in election years as predicted by the hypothesis.

The final hypothesis which predicted that the complexity of the revenue structure would vary directly with the level of old age pensions and family and youth allowances expenditures was rejected. This hypothesis was found to be inconsistent with the data.

In order to simplify the task of the reader, a statistical summary of the results of the data analysis for each policy area is contained in Tables 71 through 73. The tables outline the variables examined, whether they were statistically significant, the direction of the predicted relationship, the observed direction of the relationship, whether the hypothesis was confirmed or rejected, and the relative importance within each equation of those variables which were statistically significant. The relative importance of each of the various

TABLE 71

The Determinants of Unemployment Insurance
Expenditures 1941-1977: A Statistical Summary

Variable	Statistically Significant?	Predicted Sign	Observed Sign	Hypothesis Confirmed or Rejected	Relative Import- ance
Lagged Expend- itures	yes	+	+	confirmed	1
Number Unemployed	yes	+	+	confirmed	2
Government Lead	yes	+	+	confirmed	3
Election Year/not	yes	+	+	confirmed	4
CCF/NDP Support	yes	+	+	confirmed	5
Minority Government/not	no			rejected	
Union membership	no			rejected	
Strike Frequency	no			rejected	
Personal Disposable Income	no			rejected	
Percent of Variance Explained = 94%					

TABLE 72

The Determinants of Family and Youth
Expenditures 1945-1977: A Statistical Summary

Variable	Statistically Significant?	Predicted Sign	Observed Sign	Hypothesis Confirmed or Rejected	Relative Import- ance
Personal Dispo- sable Income	yes	+	+	confirmed	1
Population Under 16 years	yes	-	-	confirmed	2
Minority Government/not	yes	+	+	confirmed	3
Lagged Expenditures	yes	+	+	confirmed	4
CCF/NDP Support	yes	+	-	rejected	5
Declining Population	no			rejected	
Union Membership	no			rejected	
Strike Frequency	no			rejected	
Electoral Competition	no			rejected	
Election Year/not	no			rejected	
Complexity of Revenue Structure	no			rejected	

Percent of Variance Explained = 67%

TABLE 7.3

The Determinants of Old Age Security/Guaranteed
Income Supplement Expenditures 1951-1977:
A Statistical Summary

Variable	Statistically Significant?	Predicted Sign	Observed Sign	Hypotheses Confirmed or Rejected	Relative Import- ance
Lagged Expend- itures	yes	+	+	confirmed	1
CCF/NDP Support	yes	+	+	confirmed	2
Number of Persons Over 70 years	no			rejected	
Personal Disposable Income	no			rejected	
Minority Government/not	no			rejected	
Union Membership	no			rejected	
Strike Frequency	no			rejected	
Election Year/not	no			rejected	
Government Lead	no			rejected	
Complexity of Revenue Structure	no			rejected	
Percent of Variance Explained = 97%					

independent variables was measured by the standardized regression coefficients in each equation.

This research underscored the utility of disaggregating public expenditures. The fact that expenditures on unemployment insurance, family and youth allowances and old age pensions were not explained by the same set of variables lends credence to a disaggregated approach. Nevertheless, the results of the data analysis for each policy area were remarkably similar in several respects. The influence of budgetary incrementalism (as measured by the previous year's level of expenditure) was important in all three policy areas and was the most important determinant of expenditures on unemployment insurance and old age pensions. Socio-economic variables such as personal income and demographic change were found to be the most important determinants of expenditures on family and youth allowances. In the case of the unemployment insurance program, the influence of the number of unemployed persons was an important, although not the most important predictor of expenditure levels. Economic and demographic variables did not appear to exert a statistically significant independent effect on old age pension expenditures. Political variables, particularly support for the CCF/NDP, the presence of minority governments and elections and the level of electoral competition were found to have an independent effect in each policy area, although the exact variables differed.

Overall, these findings suggest that socio-economic and organizational variables restrict the discretion of policy makers, but that within this area of discretion, political variables enter into the decision-making process. This finding stands in contrast with most previous cross-sectional research studies, which have tended to conclude that political variables exert little or no influence on spending patterns. Having described the major conclusions of the study, it is perhaps worthwhile to outline its limitations, suggest some possible directions for future research and describe the implications of the study for theories of the growth of public expenditures.

POSSIBLE LIMITATIONS OF THE STUDY

The study attempted to draw causal inferences from time-series non-experimental data from a population, not a sample. In this respect, this research is very similar to much published research which has employed significance tests to test hypotheses about a population. Hubert Blalock has argued that significance tests are appropriate for data on a population in order:

...to make inferences about the causal processes that may have generated the population data.¹

Nevertheless, the population data base makes it difficult to generalize to other contexts because the analysis depends on observed means, variances and so forth. For this reason, it would be useful for future researchers to replicate this

study in other national contexts, different time periods and/or different policy areas. It is quite possible that such replications might lead to different conclusions or that other studies might find that some of the specific hypotheses which were rejected here are confirmed elsewhere.

The present study was in large part devoted to generating theory relevant to data. Thus, many of the limitations of the study were theoretical in nature. There have been few attempts in political science to develop systems of inter-related hypotheses about the determinants of the growth of public expenditures. Consequently, this study examined a series of relatively discrete but not unrelated hypotheses. For this reason, the study may be open to the question because of the possibility of specification error. In particular, one can never be certain if all relevant variables have been included and the results cannot be said to be final or definitive. Thus, future studies might revise or reformulate the theoretical model of public expenditures which was examined here.

In addition to the question of the theoretical adequacy of the model, it is necessary to determine the empirical question of whether the correct number of variables have been included in the final regression equations for each policy area. There are two principal means of variable selection which might be employed in a study of this type. They are forward selection and backward elimination. The former

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method involves introducing the independent variables into a regression equation one at a time and continuing the process until the t -ratio for the last variable introduced is no longer statistically significant. A variant of this procedure which was employed here, combines forward selection with deletion of variables that are no longer statistically significant at each successive step. Backward elimination involves the elimination of independent variables one by one from a regression equation that initially included all independent variables.² While the dissertation employed the forward selection procedure, it is possible that backward elimination might not yield identical results. In order to test for this possibility both procedures were employed and fortunately both yielded identical results for each of the three equations. Similarly, it is possible that the functional form of the posited relationships might be open to question. Other theories might suggest non-linear relationships as contrasted with the linear ones which were posited here. However, until a theoretical rationale for such a change is provided, the linear form examined here appears satisfactory.

As a final empirical test of the possibility that one or more of the equations might be mis-specified, that is including too many or too few variables or employing an incorrect functional form, the residuals from each equation were analyzed. An examination of the residuals for each equation (the difference between the observed and predicted

values of the dependent variable for each year) revealed no apparent systematic pattern of over or under prediction of the value of the dependent variable. It is thus unlikely that any important independent variables were omitted from the equations, or that the expected functional form was incorrect.

DIRECTIONS FOR FUTURE RESEARCH

It is important to note that this study dealt only with direct government expenditures. Tax incentives and tax preferences via the tax system were not considered. The government can intervene in the economy directly through direct expenditures, but also by providing special or selective tax relief for certain groups of taxpayers. These tax preferences or tax incentives have been deemed tax expenditures.

Tax expenditures which may include exclusions, omissions, deductions, credits, deferrals and preferential rates are more or less equivalent to direct payments by government to taxpayers, be they individual or corporate.³ The evidence suggest that tax expenditures have increased markedly in the past several last years and some authors speculate that this increase may be an attempt to conceal the true level of public spending from public scrutiny. The major difference between direct expenditures and tax expenditures is that while the former are included in the budget, there is no

record of the latter. Tax expenditures are particularly relevant here because much of the money directed to the aged, the young and the unemployed now takes place via the tax expenditure route. A preliminary report on tax expenditures in Canada by the federal Department of Finance provide the following figures for federal revenue losses due to personal income tax provisions in these three areas alone.⁴ (See Table 74.)

As can be seen from Table 74, these tax expenditures amount to a sizeable outlay of public funds. Moreover, it could also be argued that the tax expenditures for Registered Pension Plans (RPP) and Registered Retirement Savings Plan (RRSP) are intended to serve the same objectives as old age pensions. The tax expenditures for RPP's and RRSP's were \$1.4 billion in 1976 and \$2.0 billion in 1979.⁵ Therefore, it is quite possible that direct cost payments to the aged and to dependent children might in fact be less than the tax expenditures on behalf of these same groups. Moreover, these figures seriously underestimate the cost of these tax provisions because they do not include provincial revenue losses.

The present study employed expenditure levels as the dependent variable. However, subsequent analyses might usefully attempt to evaluate the effects of expenditure levels on other variables, for example, government popularity. A large part of the dissertation examined the question of

whether the government used its control over the policy process and the public purse to improve its standing with the electorate. In brief, the question of the political determinants of government actions was considered. A related question is the extent to which the state of the economy and public expenditure policies influence the popularity of the governing party and the opposition. For example, Chapter five demonstrated that old age pension expenditures were increased when CCF/NDP support increased in the polls. It would be interesting to know whether this action resulted in an increase in government popularity or a decline in the popularity of the CCF/NDP. Of course, such an undertaking would require an explicit theory of the determinants of government popularity. Having outlined some possible directions for future research, the remaining pages review the implications of the findings reported here for theories of the determinants of public expenditures.

TABLE 74

Summary of Relevant Tax Expenditures
Under the Federal Personal Income Tax
System (\$ million)

	1976	1979
\$1000 pension income deduction	\$ 78	\$100
Age Exemption	128	185
Exemption for wholly dependent children	609	870
Child Tax Credit	-	810
Childcare Expense Deductions	35	40
Deductibility of Unemployment Insurance Premiums	215	240

Source: Department of Finance, Government of Canada Tax Expenditure Account (Department of Finance, Canada, 1979), pp. 33-47.

SUMMARY AND IMPLICATIONS

A major theme of this study, and one which was supported by the data analysis, is that decision-makers operate under numerous constraints. An identification of these constraints is a necessary precursor to the development of theories which emphasize the importance of political factors as determinants of spending patterns. As Rudolph Klein has argued:

...it would be misleading to concentrate exclusively on what the men in the life-boat are doing without taking into account the sea current or the direction of the wind.⁶

It seems apparent that even Downs' vote-maximizing politicians act at the margins. All decision-makers find themselves in a particular economic situation and all inherit a legacy of past decisions which are beyond their immediate control. Nevertheless, public expenditure is the outcome of many decisions. It reflects pressure from a variety of sources including the environment, political parties, service-providers, service-recipients, and competing groups. It is therefore not surprising that this discussion of the Canadian case did not uncover any mode of explanation capable of accounting for the overall pattern of social security expenditure. Rather, the dissertation suggested that each explanatory mode, whether socio-economic, organizational or political, focuses on a different aspect of reality. It is the interaction among the three that determines expenditure.

outcomes. The explanatory power of each theory is likely to vary depending on whether the focus is on total expenditure or individual programs. The basic question to be resolved then is not which is the single most useful explanation but rather how and in what manner these approaches can complement one another.

NOTES

1. Hubert M. Blalock, Jr., Social Statistics, Second Edition (New York: McGraw Hill, 1972), pp.238-239.
2. Samprit Chatterjee and Bertram Price, Regression Analysis by Example (New York: John Wiley and Sons, 1977), pp.200-206.
3. See Roger S. Smith, Tax Expenditures: An Examination of Tax Incentives and Tax Preferences in the Canadian Federal Income Tax System (Toronto: Canadian Tax Foundation, 1979).
4. Department of Finance, Government of Canada Tax Expenditure Account (Department of Finance Canada, 1979), pp.33-47.
5. Ibid., pp.33-47.
6. Rudolph Klein, "The Politics of Public Expenditures: American Theory and British Practice," British Journal of Political Science, 6, (October 1976), p.402.

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