INCOME SECURITY IN CANADA AND THE GUARANTEED INCOME

ABSTRACT

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POVERTY IN CANADA: THE EXISTING INCOME SECURITY SYSTEM AND THE GUARANTEED MINIMUM INCOME

Despite sizeable government outlays on Income Security measures, the incidence of poverty remains high in Canada. The aim of this thesis is to show to what extent one particular redistributive scheme, called the guaranteed minimum income, would be an improvement over the present methods of dealing with poverty. The common variables underlying the various versions of the guaranteed minimum income plan are explained, and cost estimates of several possible plans are developed. The last part of this thesis deals with some of the administrative problems involved in implementing a guaranteed minimum income plan.

POVERTY IN CANADA: THE EXISTING INCOME SECURITY SYSTEM AND THE GUARANTEED MINIMUM INCOME

by

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PREFACE

In preparation of this thesis, my main debt of gratitude is to Professor Christopher Green for his continued encouragement and assistance. I also want to express my appreciation to Professor Lee Soderstrom for his detailed reading of several versions of the manuscript. Thanks are due also to Mrs. Gale Oja of the D.B.S. who helpfully supplied some unpublished data. The typing burden was borne cheerfully by Miss Lynn McNeely.

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INTRODUCTION

Efforts to reduce the incidence of poverty in Canada have not been very successful. Over the past few years, studies have provided a statistical picture of the poor population, and we are now familiar with many of their characteristics. We know who they are, where they are located, and we have some information on their background, such as the level of their average educational achievements, the type of housing available to them, the composition and size of their households, and records of their employment activities.

These studies have revealed quite clearly that poor individuals and families are not homogeneous. Many of them live on transfer payments, because they are old, disabled, or handicapped in one way or another. But a sizeable proportion of poor families have at least one member in the labour force working full time, but not earning enough to keep himself and/or his family out of poverty.

In Canada, income security programs have been mainly criticized on the ground that they provide insufficient assistance to the poor, both inside and outside of the labour market. The purpose of this thesis is to show how one particular redistribution measure, called the guaranteed minimum income, would contribute to reducing the incidence of poverty in Canada.

Our first task will be to review the present system of income security and to indicate where it fails to deal effectively with the

low income aspect of poverty. As will be made clear in the ensuing discussion, the guaranteed minimum income (GMI) is an alternative to or complement to the existing income maintenance system. Under a GMI income would be systematically redistributed on the basis of only two criteria: family income and family size. There is, however, no unique guaranteed minimum income plan, and an important objective of this thesis is to discuss in detail the common characteristics of the various forms a guaranteed minimum income may take and to show how these plans operate. The analysis will reveal that there is an inescapable constraint in the design of any GMI plan, which leaves policy-makers with a difficult choice to make when designing the scheme and specifying its dimensions. Briefly, all GMI plans have three common variables, each of which is important from the point of view of program design. However, the selection of any two variables automatically determines the third, so that there is no scope for designing a plan where target values (if any) can be assigned simultaneously to all three policy variables.

This policy conflict has been demonstrated in the formulation and costing of several specific GMI plans for Canada. The plans embody several different characteristics and have been drawn up to demonstrate some of the choices available.

Finally, a chapter has been devoted to the discussion of important administrative aspects of the GMI. That chapter indicates that a GMI does raise some problems from an administrative standpoint, but it will be shown that the difficulties are not insurmountable.

One important conclusion emerges from this study. It will be seen that the often-made allegation that the guaranteed minimum income is not

viable because it is too costly is an oversimplification: it is possible to design one or many GMI plans which would involve an outlay comparable, for instance, to what Canada is presently spending on Family and Youth Allowances. Furthermore, if the GMI is such that it could replace or reduce some existing income maintenance programs, the savings resulting from the elimination or reduction of these programs would reduce the additional outlay necessitated by the GMI. Even with such a modest-size guaranteed minimum income plan, resources would be better utilized in coping specifically with the needs of the poor.

CHAPTER ONE

THE EXISTING SYSTEM OF INCOME SECURITY

Present Income Security programs in Canada redistribute income through a number of techniques. The intent of this chapter is twofold: first, to examine the operation of Income Security programs, and second, to evaluate their contribution to the goal of reducing the incidence of low-income among families and individuals.

In a market economy, most individuals attempt to earn a living for themselves and their families by supplying the services of their labour in exchange for a monetary income. In Canada, governments have adopted over the years a series of social policies which are aimed at replacing or supplementing personal incomes.

In broad terms, it is useful to differentiate between two basic sets of policies:[1] (a) policies providing economic security and economic growth and (b) policies providing income security. The first set of policies attempt to stabilize and/or increase personal incomes by stabilizing employment, prices and wages over time. Among these belong

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[1] The discussion to follow is inspired from several government publications. Two good sources of information are: (a) Department of National Health and Welfare, Income Security for Canadians, White Paper, Ottawa, 1970; and (b) Department of National Health and Welfare, Social Security in Canada 1969, Memorandum No. 18, Research and Statistics Directorate, Ottawa, 1969.

general fiscal and monetary policies, regional expansion policies, manpower and retraining schemes, and legislation in the area of industrial relations. The second set of policies directly attempt to raise or maintain individual incomes by one of two techniques: income protection, and income support measures.

A. Income protection policies are aimed mainly at people who are or have been in the labour force. These policies comprise social insurance programs and universal payments also known as demogrants. The former include Unemployment Insurance, Veterans' Pensions, The Canada Pensions Plan (CPP),[1] provincially administered Workmens' Compensation plan, while the latter include Old Age Security, Family and Youth Allowances (Quebec and Newfoundland also provide supplementary Family Allowances). The aims of these income protection policies are manifold.

Unemployment insurance attempts to reduce the uncertainty arising from the risk of income loss. Except in the case of specified occupations or employments, all workers must contribute a portion of their income to the Unemployment Insurance fund. Employers contribute the same amount. If they become unemployed, workers can draw benefits under this plan. Under the recently proposed revisions of the Unemployment Insurance Act,[2] all members of the labour force, except for the self-employed, would

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[1] The CPP is for all provinces with the exception of Quebec, which runs its own plan, called the Quebec Pension Plan. It is virtually similar to the CPP and a contributor can move from any province into Quebec, or vice-versa, without any loss or discontinuity.

[2] For a detailed review of the old system and the suggested changes, see White Paper on Unemployment Insurance in the 70's, Queen's Printer, Ottawa, 1970.

contribute to the Plan. Also, full benefits will be payable to any worker who has been employed 20 weeks out of the past 52, and partial benefits will be payable if the person has worked for at least 8 weeks in the last 52. To be a claimant on full benefits means that two-thirds of the salary, up to a maximum of $100 a week, are payable in compensation. Moreover, 12 weeks of maternity benefits can be drawn by expectant mothers who must withdraw from the labour force.

The Canada Pension Plan, Veterans' Pensions, and Workmens' Compensation attempt to alleviate financial hardships resulting either from old-age or from disabilities incurred while working. The Canada Pension Plan is designed to provide an earnings-related retirement pension for members of the labour force, and is starting to provide some disability and survivors' benefits to the family of the affected contributor. The Plan will not pay out full retirement pensions until 1976, when it becomes completely operational. In the meantime, it is supplemented by a temporary programme, called the Guaranteed Income Supplement to the Aged, which will be discussed below. Briefly, the CPP covers all persons who earn over $600 a year,[1] and is financed from contributions of employees, employers, and self-employed persons. These contributions are paid on income between $600 and a contributary limit which was $5200 in 1967. A retirement pension of 25% of the contributor's average pensionable earnings will be paid after 1976 to any contributor between 65 and 70, provided he has retired from regular employment. If the contributor is over 70 years of age, he will be entitled to the full

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[1] $600 in the case of employees and $800 in the case of self-employed persons.

amount of the pension, irrespective of whether he is gainfully employed or not.

Workmen's Compensation is provincially administered. Benefits are payable when, in an employment within the scope of the program, a worker sustains personal injury in the course of his employment. Benefits for disability are based on 75% of average weekly earnings, subject to an annual ceiling ($7800 in 1970). The costs of compensation are paid solely by employers, which contribute an annual assessment to the Provincial Board administering the plan. Also, pensions and allowances are provided in respect of disability or death resulting from injury or disease incurred during or attributable to service with Canadian Armed Forces in wartime or directly connected with service in peacetime. These are payable to veterans and eligible civilians according to the degree of disability and number of dependants.

Universal payments, such as Old Age Security (OAS), Family Allowances (FA), Youth Allowances (YA), or other supplementary Family Allowances, attempt to reduce poverty by building a floor under the income of individuals or families who are either retired or have dependants. Benefits are payable to all those who fit in these categories, with no restrictions except for minimum residence requirements. Payments are financed from general revenue or from earmarked taxes.

Old Age Security payments are made to all persons age 65 and over, and the monthly payment was $79.58 in 1970.[1] Family Allowances,

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[1] When the plan was introduced in 1967, the maximum monthly benefit was $75. Since then, yearly adjustments have been made for increases in the cost of living. This is why the monthly maximum was $79.58 in 1970.

paid to all mothers or guardians of children, transfered $6 or $8 a month in 1970, depending on whether the child was under 10, or between 10 and 16 years of age. Quebec provides supplementary family allowances.[1] Youth allowances, equal to $10 a month, are paid in respect of youth age 16 and 17 if they are still in school. However, it should be added at this point that the Family Allowance and Youth Allowance programs may be modified soon, since major legislative changes to this effect are now being prepared by Ottawa.

In summary, then, social insurance programs and demogrants provide some income protection to Canadians. There is also a second level of policies which bring further protection to personal incomes in the form of income support.

B. Income support policies. Programs in this category include the Guaranteed Income Supplement to the Aged, and Social Assistance. These policies aim at alleviating poverty and reducing dependancy among those who have no means or limited means of support from earnings, income protection measures mentioned above, or from other sources.

The Guaranteed Income Supplement (GIS) paid to persons receiving Old Age Security amounted to a monthly maximum of $31.83 in 1970. This program is income-conditioned, in the sense that the maximum amount is payable if the O.A.S. recipient has no other source of personal income, and is reduced at the rate of one dollar for each two dollars of personal income. As mentioned earlier, the GIS, introduced in 1967, is

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[1] For qualifying persons, the following allowances are paid every six months in respect of children under 16: $15 for 1 child, $32.50 for 2, $52.50 for 3, $77.50 for 4, $107.50 for 5, $142.50 for six, and an extra $35 for each child after the sixth. For children between 12 and 16 years of age, add $5 to these sums.

a transitional measure designed to provide some protection to individuals who receive little or no protection from the Canada or Quebec Pension Plan. It will be phased out in 1976. As of now, elderly persons with no personal income are entitled to a maximum monthly transfer of $111.41 from the O.A.S. and G.I.S., or, in other words, $1337 a year.

Social Assistance (SA) provides help of the last resort to persons incapable of earning adequate incomes and to their dependants, and/or insufficiently benefiting from income protection measures or from the G.I.S.. All programs are under provincial administration, with federal cost sharing. Social Assistance programs comprise two categories of plans: general assistance, and assistance for special groups. General assistance includes the Canada Assistance Plan (C.A.P.), Unemployment Assistance, and assistance to needy mothers with dependant children, and payments under these plans are individually determined by provincial or local authorities on the basis of a detailed needs test. Assistance for special groups is provided to certain categories of people, such as the blind, the disabled, needy veterans, and Indians and Eskimos; payments are determined on the basis of a means test, usually by the federal or provincial authorities.

Income Security measures, then, redistribute income by utilizing four techniques: social insurance, universal payments, guaranteed income, and social assistance. Table 1 shows how total transfer payments are distributed among the various income security programs for selected years.[1]

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[1] The reader can find in the Appendix a detailed breakdown of expenditures under each program. See Table A7.

TABLE 1

TOTAL AND PERCENTAGE DISTRIBUTION OF EXPENDITURES BY THE FEDERAL AND PROVINCIAL GOVERNMENTS BY INCOME SECURITY MEASURES 1964-65, 1967-68, AND 1969-70[a]

	1964-65		1967-68		1969-70[b]	
INCOME SECURITY MEASURE	TOTAL EXPENDITURE $ MILLIONS	%	TOTAL EXPENDITURE $ MILLIONS	%	TOTAL EXPENDITURE $ MILLIONS	%
Social Insurance	639.6	24.5	757.7	21.1	1,008.1	23.1
Demogrants	1,469.6	56.3	1,841.1	51.3	2,201.5	50.5
Social Assistance	501.5	19.2	758.0	21.1	891.2	20.4
Guaranteed Income Supplement[c]	-	-	234.8[d]	6.5	263.0	6.0
TOTALS	2,610.7	100.0	3,591.6	100.0	4,363.8	100.0

a. Source: Income Security for Canadians, op. cit., p. 57.

b. As estimated in above publication.

c. GIS for OAS recipients, which began in January 1967.

d. This figure was obtained in Department of National Health and Welfare, Quarterly Statistical Bulletin, Vol. 3, No. 4, May 1971, Table 3.

As indicated by these statistics, only 6% of all payments are of the guaranteed income type, and only the aged are eligible. In the next chapter, it is suggested that this type of plan be extended to other segments of the population.

Despite the fact that Canada is spending billions of dollars on income security measures, the effectiveness of the whole system in dealing with poverty is far from clear. Indeed, one can still find poverty on a large scale. In 1967, nearly one-fifth of all families and

two-fifths of all unattached individuals were living in poverty. As defined by the Economic Council of Canada, a household is said to be poor if it is below the low-income cut-offs shown in Table 2.

TABLE 2

LOW-INCOME CUT-OFFS, 1967

SIZE OF UNIT	LOW-INCOME CUT-OFF IN DOLLARS
Unattached individual	1740
Two person unit	2900
Three person unit	3480
Four person unit	4060
Five (or more) person unit	4640

Source: Economic Council of Canada, Fifth Annual Review, Ottawa 1968, Chapter 6.

Two questions arise: (a) how adequate is the level of payments presently made to recipient individuals and families under Canada's income security programs, and (b) is the system adequate in coverage, that is to say, are some persons who are poor excluded from the scope of the programs?

The first question can be approached by examining to what extent transfer payments reduce poverty: if one considers households whose major source of income consists of transfer payments, and if payments are adequate, then it is reasonable to expect that the proportion of low-income households in this category will be small. But this is not the case, as evidenced in Table 3, where the incidence of low income among families and individuals by major source of income is shown.

TABLE 3

LOW INCOME AMONG FAMILIES AND UNATTACHED INDIVIDUALS BY MAJOR SOURCE OF INCOME, IN ABSOLUTE AND PERCENTAGE TERMS, 1967.[a]

Major source of income	Number of families			Number of Unattached Individuals		
	Low Income (1)	All (2)	Proportion with low income % (1)/(2)	Low Income (1)	All (2)	Proportion with low income % (1)/(2)
No income[b]	14,200	14,200	100	54,100	54,100	100
Wages and salaries	317,000	3,541,100	9.0	166,500	915,100	18.2
Self-employed[c]	177,800	439,400	40.5	21,200	52,500	40.4
Transfer payments	280,500	370,100	75.8	301,100	340,000	88.6
Investment income	19,600	75,000	26.1	24,500	76,600	32.0
Pensions	16,900	64,600	26.2	13,000	48,500	26.8
Miscellaneous	5,600	12,900	43.4	4,700	14,100	33.3
TOTALS	831,600	4,517,300		585,100	1,500,900	

a. Reference: Survey of Consumer Finances, Income Distribution and Poverty in Canada, 1967, Preliminary Estimates, DBS, Ottawa, 1970, unpublished.

b. Presumably these units share other units' dwellings.

c. Including income form room and board.

Note: For a definition of what elements are listed in income, refer to DBS, Income Distribution by Size in Canada, 1965, No. 13-528, Queen's Printer, Ottawa, 1968, pp. 20 and 21.

Of the 370,000 family units whose major source of income consisted of transfer payments, 76% were unable to reach the low-income cut-off lines, while 89% of unattached individuals subsisting mainly on transfers were below those cut-off lines. What this means, then, is that if one cannot work and must fall back mainly on transfer payments to subsist, chances are very high one will still be recorded in the statistics as "poor".

The incidence of poverty among families with a member in the labour force is high in absolute, if not relative terms. In 1967, there were approximately 3.5 million families and 900,000 individuals whose main source of income was wages and salaries. Of these, 317,000 families (9%) and 166,500 individuals (18%) had incomes sufficiently low to place them in the "poor" category. These "working poor" households comprised 40% of all low-income families (317,000 out of 831,000) and 30% of all low-income unattached individuals (166,000 out of 585,100). The working poor have been described as follows:

> "The men work at the myriad jobs in manufacturing, construction and service industries that are the special domain of the semi-skilled and unskilled worker. They have, on average, a Grade Nine education, and, even if they are not middle-aged, they know that all the options of upward mobility are already closed to them. At the bottom end of the wage scale, they know about welfare and living on the pogey during winter unemployment. At the upper end, they moonlight every hour they can, because more than a quarter of their income is gobbled up by exorbitant rents or payments on a wooden frame house that in all probability won't last as many years as the mortgage. They are the working poor, the lower midle-class, or to use the inhuman jargon of sociologists, the lower socio-economic levels without status."[1]

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[1] From Ian Adams, The Poverty Wall, McLelland and Stewart Limited, Toronto, 1970, p. 141-2.
The book was written by someone who shared the life of the poor, and makes the statistics come painfully alive.

The working poor receive little assistance in the form of transfer payments, and what they receive is insufficient to bring them out of poverty.

Income security programs, then, leave a substantial number of the poor without minimum adequate incomes. Furthermore, the programs have characteristics which limit their effectiveness in reducing the incidence of poverty.

The revised Unemployment Insurance program offers more flexibility and pays out more than it did previously, but it has some drawbacks. The plan, for example, is of least assistance to the young worker who, because he is just entering the labour force, has not had time to build up insurance benefits: to draw full benefits, he must have been employed for at least 20 weeks over the past 52. This is particularly troublesome in the light of the fact that unemployment casualties are the highest among the age group between 14 and 25.[1] But perhaps most inescapable is the fact that payments are directly related to earnings: if the worker has earned a low salary, his benefits are low, and thus not necessarily related to his needs.

Universal payments such as OAS and Family and Youth Allowances have mainly become the object of criticism because their rigid universality inevitably leads to a somewhat doubtful use of scarce resources. They are, of course, very costly: in 1969-70, Canada was spending $2.2 billion on these three programs, which represents one-half

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[1] Between September 1970 and June 1971, the seasonally adjusted unemployment rate for individuals between the ages of 14 and 24 hovered between 11.0 and 12.3% for Canada as a whole. In some provinces, it was much higher.
Source: DBS, The Labour Force, #70-001, Ottawa, June '71.

of the total expenditures on income security.[1] This is understandable, since all Canadian families with children in specific age brackets receive payments under FA and YA, and all retired Canadians over 65, subject to some residence requirements, are entitled to OAS pensions. It can be reasonably asked if this is a judicious way of spending these funds. On the one hand, benefits under any of these programs are designed to serve only as complements to personal income: an average family, for example, with three children under 16, would receive between $216 and $288 a year in Family Allowances. A citizen over 65 would receive per year about $960 in OAS payments. On the other hand, FA, YA, and OAS benefits are extended to affluent households which have little need for them. Alternatively, if benefits terminated at a given income level (say at three times the low-income cut-offs), it would be possible, with no change in total outlay, to turn these savings into higher benefits to households at the lower end of the income scale.

The Guaranteed Income Supplement to OAS recipients is a recent development in Canada's Income Security programs. It is the only measure which systematically redistributes cash solely on the basis of an income (and age) criterion. The maximum level of benefit is payable to the recipient unit[2] with zero personal income[3]. A rate is set by which

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[1] See Table 1 above.

[2] This term is used interchangeably with "household" and applies to unattached individuals as well as families.

[3] "Income" can be defined in a number of ways. There might be exclusions, as there are in the case of the GIS for example. In that program, OAS pensions are excluded from the measure of income.

benefits are reduced as a unit's income rises, and benefits terminate at an income level determined by the level of the maximum benefit and the magnitude of the rate selected. This type of program has the advantage of tying payments directly to need, and of confining benefits to those that need financial assistance. In its present form, however, the GIS is too low to keep out of poverty those persons who have no other source of income. The poverty line for an unattached individual in 1967 was $1740, and the annual floor set by OAS and GIS combined was $1260 in that year ($75 per month for OAS plus $30 per month for the GIS). Persons in this situation have to fall back on supplementary welfare payments if they are to reach the poverty thresholds.

Social assistance, in turn, poses a paradox: it is the traditional way of dealing with the worst cases of poverty and yet it is the least acceptable method to recipients. Some applicants can be arbitrarily denied help, if only for the fact that the federal law does not clearly specify what exactly is the nature of the right to assistance, the amount of help which can be made available, and the procedures for administration and appeal. This is due to the fact that, while the Federal Government, through cost sharing agreements, pays roughly half of the welfare bill, the provinces nevertheless have the sole authority to administer the welfare budget. In some provinces, responsibility to deal with short-term needs is further delegated to local administrations: as a result, there is a maze of rules and regulations which stiffle the operations of welfare offices. Not only is the bureaucratic procedure often unclear, but it is also humiliating to recipients:

> "The investigatory processes which are required by law, and that must be carried out are in themselves humiliating. The persistent inquiry into a person's circumstances, the inquiry over and over again into:

> How much do you earn? What have you done? When did you last work? Why have you not worked? Why have you not done this? - all tend to humiliate people. This checking up process does nothing, in our opinion, to enhance the inherent dignity of the individual. There is at all times a very delicate situation and a matter of acute embarrassment and discomfort for people and yet these are areas in which we have to probe..."[1]

Low-wage recipients of welfare, moreover, have little encouragement to work, since benefits are often reduced by the full amount of any part-time earnings:

> "Applicants have to declare earnings, and if they do not and we find out, the result is a reduction of their allowance. It destroys any incentive that is likely to be there or that might be developed, because they will say what is the point of getting a job if the moment I do so you are going to take away what little I might earn?"[2]

Finally, families or individuals whose only source of income consists of social assistance benefits generally remain poor. In the Province of Quebec, for example, the needy Mothers' Assistance Act provides assistance to needy widows, abandoned wives, and spouses with invalid husbands. Under this scheme, in 1967-68, the maximum monthly allowance for a mother with one child was $95, with an extra $20 per additional child. In that year, there were 18,185 recipients receiving an average of $129.88 per month.[3] Also in Quebec, the Blind Person

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[1] R.S. Godrey, Commissioner of the Social Welfare Department of Ottawa reported this opinion to the Senate Committee on Poverty. Source: Last Post, the Renegade Report on Poverty, Montreal, Vol. 8, No. 1, Summer 1971, p. 27.

[2] Ibidem, p. 26.

[3] Source: Ministère de la Santé et du Bien-Etre Social, Rapport Annuel, 1967-68, Québec, 1969, Table 8.

Allowance Act paid in that year an average of $77.92 monthly to 2508 blind persons. Finally, there were 18,964 beneficiaries of total invalidity payments, who received on the average $77.41 per month.[1]

In other provinces, payments are comparable. These individuals or families who are incapable of adequately complementing these transfer payments are unable to escape from poverty.

There are, of course, various ways of improving the income security system in order to reduce the incidence of poverty. In the White Paper on Income Security, the two major recommendations were as follows: first, to increase the maximum GIS benefits to $55 a month for an individual and to $95 a month for a married couple; second, to replace the universal Family Allowance by the Family Income Security Plan (FISP). The latter plan's objective is to increase the basic level of the benefit for each child, but benefits would be reduced as the family's income rises.

Another possible means of improving the situation of the poor is to devise a guaranteed minimum income plan (GMI) as a replacement or complement to some of the existing programs. It is true that the GMI will not eliminate the ultimate causes of poverty. Nevertheless, there are advantages to the GMI which are not found in the existing system.[2]

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[1] Source: Ministère de l'Industrie et du Commerce, Annuaire du Québec, 1970, Bureau de la Statistique du Québec, 1969, p. 231-232.

[2] While the Family Income Security Plan (FISP) cannot yet be considered as part of the 'existing' system of income maintenance, it is fair to say that it does however embody some characteristics of the GMI. The plan, for example, ties payments to income and family size and thus redistributes income systematically in favour of low-income families with children. On the other hand, FISP in some sense discriminates against poor unattached individuals and childless families, since these two groups are not covered under the plan.

In particular, as the next chapters will show, the GMI operates with a minimum of administrative rules and gives to recipients greater economic incentives than some of the present income support measures do. The GMI also brings assistance to the working poor, who receive the least assistance from our Income Security programs. On the other hand of course, the impact of a GMI plan on the income level of current welfare recipients cannot be ascertained a priori: it is necessary beforehand to specify the dimensions of the GMI plan and to establish which programs (if any) among the present income maintenance schemes would be discarded.

It is possible to design different types of GMI plans and we will be exploring two major varieties in the chapters to follow. Nevertheless all GMI plans have similar basic characteristics as discussed below. The purpose of the next chapter is to explain the mechanism underlying all GMI plans, in order to develop a framework within which specific versions of the plan can be formulated and costed.

CHAPTER TWO

THE GUARANTEED MINIMUM INCOME

The idea of a guaranteed minimum income is not new. Basically, a GMI can take one of two different forms.[1] One form, sometimes called the social dividend, would involve making periodic cash payments to all households regardless of their income. The other, called negative income taxation, would make payments to households in relation to their income and size, perhaps using the tax system as a vehicle for paying families as well as taking income from them in the form of taxes.

Because it makes cash payments to everybody, the social dividend would seem to involve huge costs. However, once the distinction is made between the gross and net cost of a social dividend plan, it becomes obvious that the negative income tax (NIT) and the social dividend plans enbody the same basic features and are therefore essentially similar.

Both the negative income tax and the social dividend plans involve three key variables: (1) a minimum income guarantee, Y_G, which can be high or low, (2) a tax rate (s), t, applicable to income derived from sources other than the allowance, and (3) a break-even level of income, Y_b, at which allowances have declined to zero. The tax rate is

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[1] Pioneering work in this area was done in the United States. In his book, Negative Taxes and the Poverty Problem, Brookings, Washington, D.C., 1967, Professor C. Green gives an historical account of the GMI, and reviews its key features.

called an "allowance" tax rate under the NIT, and it is referred to as the "finance" tax rate under the social dividend. These three variables are interdependant, as expressed in the simple equation (1). This equation will be derived below, and it holds for both the NIT and the social dividend.

$$Y_b = Y_g/t \qquad (1)$$

What this implies is that, once any two variables have been selected, the magnitude of the third is automatically determined. This feature, as will be indicated later, presents difficulties for program design. In the following discussion, simple models of the NIT and social dividend plans are analyzed and compared.[1]

NEGATIVE INCOME TAXATION

Under an NIT plan, individuals and family units receive the maximum amount of the allowance guarantee if they receive no other income during the accounting period. For higher levels of personal income, the allowance is partially reduced for every dollar of earned income. The size of the reduction depends upon the size of the allowance tax rate, t,. If t is equal to 40%, each extra dollar of personal income means a forty cents reduction of the allowance. Ultimately, the allowance vanishes when income reaches the break-even level.

A recipient household's income would consist of two parts: personal income Y_o (i.e. wages, salaries, investment income, pensions, etc.), and income derived from the allowance, Y_A.

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[1] In more sophisticated models, there can be variable tax rates imposed on income derived from sources other than the GMI: the purpose of variable rates is to provide greater work incentives to persons in specific income groups.

Thus,

$$Y_{net} = Y_o + Y_A \qquad (2)$$

The size of the allowance, Y_A, depends upon the magnitude of the tax rate, t, and upon the difference between Y_o and the applicable break-even levels.

$$Y_A = t\,(Y_b - Y_o) \qquad (3)$$

$$\text{if } Y_b - Y_o > 0$$

As Y_o increases the size of the allowance declines. Substituting (3) into (2):

$$Y_{net} = Y_o + t\,(Y_b - Y_o)$$

$$\text{for } Y_b > Y_o)$$

$$Y_{net} = tY_b + (1 - t)\,Y_o \qquad (4)$$

$$\text{for } Y_b > Y_o$$

if Y_o is nil, then in equation (3),

$$Y_A = tY_b$$

In this case, the recipient family or individual unit is entitled to the maximum allowance or the income guarantee,

$$Y_A = Y_g$$

so that $Y_g = tY_b$ (5)

Equation (4), then, can be rewritten

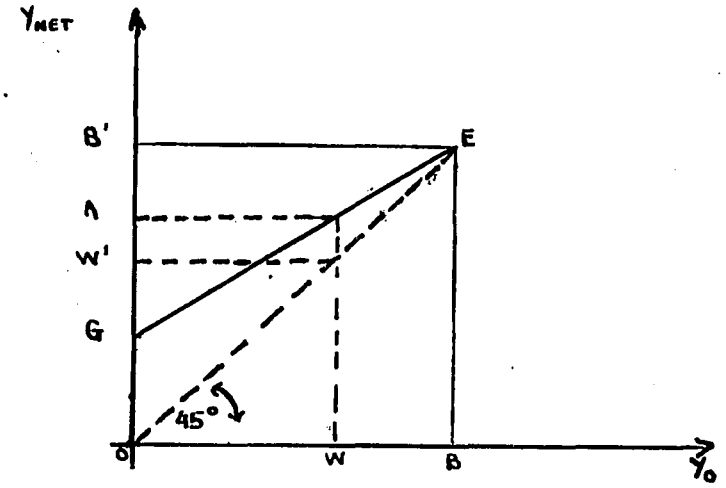
$$Y_{net} = Y_g + (1-t)\,Y_o \qquad (6)$$

$$\text{for } Y_b > Y_o$$

The result of (6) can be illustrated by means of Diagram 1.

DIAGRAM 1

The Effect of a NIT on a Unit's Disposable Income



The horizontal axis shows pre-allowance personal income. On the vertical axis is the recipient unit's [1] net or disposable income following the reception of the allowance. OE is a 45^o line. OG is the minimum income guarantee Y_g, and the slope of GE in relation to the 45^o line is the allowance tax rate. From equation (6), we find that if $Y_o = 0$, the unit's net income position is:

$$Y_{net} = Y_g + (1 - t)\, Y_o$$

$$Y_{net} = Y_g = OG$$

If $0 < Y_o < Y_b$, the allowance falls: in the diagram, the allowance payable at each level of income up to the break-even level of income OB is represented by the distance between GE and OE. For example, if the unit's pre-allowance income is OW, the allowance it receives is W'A. Since OW = OW', the unit's net income is equal to

[1] "Unit" is the shorter term that will be used for individuals and family units.

$OW' + W'A = OA$. If $Y_o > Y_b$, the individual or family unit receives no allowance, and ultimately incurs tax liabilities some fraction of the revenue from which would go towards financing the plan.

SOCIAL DIVIDEND PLANS

As mentioned earlier, a social dividend scheme is another form of GMI. The social dividend differs from the NIT in that each household in the country receives a cash benefit of a stated level at periodic intervals over the year. However, when the financing of the plan is considered, the social dividend can be seen to have the same basic characteristics as the NIT. Even though an allowance is payable to every household, this guarantee constitutes a gross level of payment or entitlement for which the household is eligible. Every household is also taxed on its pre-allowance income in order to contribute to the financing of the plan. Each unit's net benefit (Y_a) is the difference between the universal allowance or gross benefit (Y'_G), and taxes on pre-allowance income ($t'Y_o$).

$$Y_a = Y'_G - t'Y_o \qquad (7)$$

Depending upon the unit's pre-allowance income, the net benefit may be positive or negative. For some pre-allowance income level, taxes paid on pre-allowance income will just equal the allowance received, thus determining a "break-even" level of income Y'_b: equation (7) becomes

$$Y'_G - t'Y_o = 0$$

so that if $Y_o = Y'_b$,

$$Y'_G = t'Y_o \qquad (8)$$

or

$$Y'G = t'Y'_b \qquad (9)$$

The similarity of the NIT and SD schemes can now be made clear. First, equation (9) expresses the interdependance between the three

basic variables of the social dividend scheme; equation (5) expresses a similar interdependance under a NIT scheme.

Second, under either scheme, net benefits decline as pre-allowance income rises, as indicated by equations (3) and (7).

Third, under either scheme, there is a redistribution of income from those having a pre-allowance income exceeding the break-even level (Y_b or Y'_b) to those having a pre-allowance income less than the break-even level. This is perhaps clearer under the NIT scheme than under a SD scheme. But equation (8) indicates that all family units with income in excess of the break-even level will incur a net tax liability; their tax payments exceed their universal allowance. Similarly all family units and individuals with $Y_0 < Y'_b$ will receive net payments. There is of course a superficial difference between these schemes because only under the SD plan would all units with $Y_0 > 0$ both pay taxes and receive payments. But it is the net benefits, however, that affect the units' net or disposable (after tax and transfer) income. Thus, the 'net' cost of the SD plan is the amount transferred between the two income groups, and not the much larger total allowances paid. The net cost of a NIT plan can be calculated by summing the benefits defined by equation (3) paid to all recipients; the net cost of a social dividend plan by summing the benefits defined by equation (7).

Fourth, if any two of the basic variables of each scheme were equal, the NIT and social dividend programs would be identical. Because of equation (5) and (9), the third basic variable is determined once two are specified. The allowances under each scheme are $t(Y_b - Y_0)$ for the NIT and $Y'_G - t'Y_0$ for the social dividend. Since $Y'_G = t'Y'_b$ from (9),

$$Y'_G - t'Y_0 = t'Y'_b - t'Y_0 = t'(Y'_b - Y_0)$$

But if $t = t'$ and $Y_b = Y'_b$, then:

$$Y'_G - t'Y_o = t\,(Y_b - Y_o) \qquad (10)$$

and $$Y_a = Y_A \text{ for } Y_o \leq Y_b.$$

The net benefits for those having $Y_o \leq Y_b$ would be the same under either scheme. This would imply, furthermore, that the total costs, as measured by income redistributed between income groups, would be equal, ignoring any difference in administrative costs or incentive effects of the two programs.

It has been demonstrated above that there is a fundamental interdependance between the three basic variables Y_G (or Y'_G), t (or t'), and Y_b (or Y'_b) under both NIT and SD schemes. This interdependance poses some difficulties from the point of view of program design: it is possible to select values for only two of those variables, because the third one is automatically determined. The problem is the following: if there is a target value for each of these variables from a policy standpoint, it is inevitable that a conflict of goals arises. Target values are here assumed to be values which produce high or adequate levels of payments, minimum disincentives to work, and ensure that most of the payments are received by the poor. Selecting targets with these characteristics is readily understandable.

First, if we assume for the sake of argument that the plan is going to replace most existing forms of income support, the allowance guarantees, Y_G, in a welfare-minded country, might conceivably be set to assure poverty free or near-poverty free incomes.

Second, if incentives to work are to be maintained, a family or an individual unit's earnings should be taxed a rate (t) well below 100%, so that each dollar of employment income does not result in a one dollar

reduction of the allowance. Otherwise, individuals will probably not be motivated to work, or to work as much, as they could. There is no single rate for which a case can be made on a priori ground, although suggestions for similar plans in the U.S. have ranged from 33% to 75%. Basically, the trade-off is between selecting a tax rate (t) high enough to keep Y_b at a reasonably low level, but low enough not to affect work incentives materially.

Finally, if payments are to be confined mainly to the poor, the break-even lines should not be at such a high level that allowances are paid on a large scale to households who are by no means poor.

That a conflict can exist between these goals is relatively easy to grasp.

First, a high guarantee and any tax rate substantially below 100% means that Y_b exceeds poverty lines. The higher the guarantee and the lower the tax rate, the greater the number of non-poor receiving payments.

Second, a low guarantee and a tax rate below 100% confine payments mainly to the poor, but any such scheme will necessitate supplementary assistance programs; the lower the guarantee, the greater the need for extra assistance.

Third, a high guarantee and a tax rate near 100% brings the various Y_b's closer to the low-income cut-off lines, but only at the cost of virtually eliminating monetary incentives to work.

In summary, no solution exists that would allow us to select values for all three variables to achieve simultaneously all goals. Because of this trade-off problem, some concessions will have to be made in terms of at least one of the variables. A good illustration of this constraint is provided in the next chapter, where the formulating

and costing of several possible GMI plans for Canada has been carried out. The programs which are suggested comprise NIT and social dividend schemes and they cover a variety of cases from the standpoint of assigning values to the three basic variables.

CHAPTER THREE

COSTING POSSIBLE GUARANTEED MINIMUM INCOME PLANS

How much would it cost to have a guaranteed minimum income in Canada? There is of course no single answer to this question. The cost depends on the magnitude of the three basic variables of the GMI as well as the distribution of personal incomes in Canada. Moreover, if some existing programs are eliminated, it is necessary to modify the pre-GMI income distribution accordingly. When savings resulting from the elimination of specific programs are considered, one can arrive at the net increase in government outlay required by the implementation of a GMI.

Table 4 shows the key features of the six GMI plans that have been formulated here. Plans 1 to 3 are of the negative income tax type; Plans 4 to 6 are of the social dividend variety, but would be administered along the lines of a NIT. For each of these six plans, Table 4 indicates the minimum income guarantee and the tax rate at which GMI benefits would be reduced.

Plan 1 is a modest sized NIT version of the GMI. The minimum income guarantees are set at roughly half the level of the low-income cut-off lines for that year.[1] Benefits are reduced at the rate of one dollar for each two dollars of income, and payments consequently terminate at break-even levels close to those low-income cut-offs. The relatively low

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[1] See Table 2.

TABLE 4

BASIC FEATURES OF THE SIX PLANS EXAMINED:

Y_G (MINIMUM INCOME GUARANTEE) AND

t (TAX RATE AT WHICH GMI BENEFITS ARE REDUCED)

FAMILY SIZE	PLAN 1		PLAN 2		PLAN 3[a]				PLAN 4		PLAN 5		PLAN 6	
	Y_G $	t	Y_G $	t	Y_G $	t_1 after zero rate bracket	t_2		Y_G $	t	Y_G $	t	Y_G $	t
1	750	0.5	1740	0.5	500	0.5	0.33		750	0.254	1000	0.339	1250	0.408
2	1500	0.5	2900	0.5	750	0.5	0.33		1500	0.254	2000	0.339	2500	0.408
3	1750	0.5	3480	0.5	1000	0.5	0.33		1800	0.254	2400	0.339	3000	0.408
4	2000	0.5	4060	0.5	1250	0.5	0.33		2100	0.254	2800	0.339	3500	0.408
5 or +	2250	0.5	4640	0.5	1750	0.5	0.33		2700	0.254	3600	0.339	4000	0.408

a. Plan 3 is different from the other plans in that pre-allowance income begins to be taxed only when the household's income equals or exceeds roughly half of the 1967 low-income cut-off applicable for the specific household size. In other words, the minimum income guarantee is paid in full up to that level of income and benefits fall thereafter.

income guarantees help assure that Plan 1 fulfills the objective of confining payments mainly to the poor.

Plan 2 is a quite ambitious NIT scheme: since the minimum income guarantees are set at the poverty lines for 1967, the plan would have eliminated the income inadequacy asked of poverty in that year. Considering, however, that benefits are reduced at the rate of 50% as income rises, payments would be extended to many non-poor households.

Plan 3 is a variant of the basic NIT scheme. It can be called a "working poor" plan because it is designed to provide special help to

low-income earners. What differentiates this plan from the others is that the minimum income guarantee is payable in full to any household whose income is less than half the 1967 low-income cut-off line applicable for this household size. If the household's income exceeds 50% of the applicable poverty line, benefits are reduced at the rate of one dollar for each two dollars of income in version I of the plan, and at the rate of one dollar for each three dollars of income in the plan's second version. The advantages of this plan are manifold. First, the zero rate bracket, combined with the moderate rates applicable to income above the exempted levels, should provide an inducement, or at least a minimum disincentive, to earn income. Second, the plan offers a schedule of low guarantees, and it is quite likely that few families would rely solely on the guarantee as their source of income. Finally, break-even levels of income are either roughly equal (as in version I), or slightly in excess of (as in version II), the low-income cut-offs for that year.

Plans 4, 5, and 6 are plans of the social dividend type. One interesting characteristic of these three plans is that a low guarantee is combined with a low tax rate, and vice-versa. Because of this symmetry, and because all the three tax rates are substantially below 50%, the break-even levels of income are quite high in each of the plans. These three plans are interesting for the further reason that they have been described and their costs estimated elsewhere in the literature by Professors R.W. Crowley and D.A. Dodge.[1] My estimates of the cost of these plans differ, and the discussion below will explain why.

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[1] See R.W. Crowley and D.A. Dodge, "Cost of the Guaranteed Minimum Income", Canadian Tax Journal, Nov. 1969, p. 395-408.

Table 5 provides an estimate for the unadjusted cost of Plans 1 to 6, that is, assuming that no existing programs are eliminated, and that there is therefore no reduction in household pre-GMI income. Calculations are for 1967, which was the most recent year for which data was available. There are two separate estimates shown in Table 5. The same sources were used for the two estimates, but column (2) estimates are based on a definition of income from which social assistance income has been excluded. Because of administrative complexities[1], social assistance should be unrecorded in the income base for the purposes of qualifying for the GMI and determining the level of the payments a household can receive under the GMI plan. The estimates in Column 2, then, are the appropriate ones. Comparing Column (1) and (2) estimates reveals the difference in unadjusted cost imposed by excluding social assistance from the income base. Details of calculations can be found in Tables A1, A2, A3I to A3IV, A4 to A6, and A4I to A6I in the thesis appendix.

In presenting the cost estimates of Table 5, some technical complexities were inevitably brought in. Before launching into the specifics of each plan, it is imperative that we look more closely at (a) the data used in costing the plans and (b) the procedure used in constructing the estimates.

THE UNDERLYING DATA

For all six plans, computation of the cost estimates is based on data published by DBS on income distribution by size of family. This data was generated from a sample survey of 20,000 households conducted in

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[1] See the section on Administration of the GMI in Chapter 4 of this thesis.

TABLE 5

UNADJUSTED COST[a] OF PLANS 1 TO 6, 1967,

IN MILLIONS OF DOLLARS[b]

	When Social Assistance is Recorded in the Income Base	Excluding Social Assistance from the Income Base[c]
Plan 1	723	1,102
Plan 2	4,682	5,061
Plan 3 version I	1,129	-[d]
version II	1,509	-[d]
Plan 4	2,870	2,864[e]
Plan 5	3,853	3,834[e]
Plan 6	4,577	4,470[e]

a. Assuming no existing welfare program is discarded, and that there is no reduction in household pre-GMI income.

b. For tables of calculations and their meaning, cf. following section (costing Methodology) and Tables in the appendix of the thesis.

c. In excluding SA, it was assumed that all payments were made to households with income less than the break-even levels. This appears legitimate in view of the fact that (a) social assistance in help of the last resort (cf. Chapter 1, p. 16 to 18) for persons in absolute need, and (b) that for five of the plans, break-even levels of income are either roughly equal to, or in excess of, poverty-line incomes. For the case of Plan 3, see footnote d.

d. Plan 3 presents a difficult estimation problem. It was not possible to obtain data on the distribution of social assistance by income bracket. Since determining whether a household will receive full or partial GMI benefits is based on whether its income is less than, or in excess of, the zero rate bracket, it is crucial to find out if the absence of SA income would make it qualify for full or partial benefits. In the absence on the distribution of SA among these units, this cannot be specified and the most that can be said is that the cost estimates based on the exclusion of SA from income will be higher. By how much is unknown.

e. There is practicajly no difference in the two cost estimates. This is easily understood by referring to (a) the section on cost methodology below and (b) Tables A4 to A6, and A4I to A6I in the Thesis Appendix. SA must be subtracted from both columns (5) and (10). Aggregate money income falls and thus gross payments necessitate a higher "financial" tax rate. This produces lower break-even levels of income. Consequently, income below the break-even levels will be lower, but the lower figure for column (10) is multiplied by the higher tax rate of column (6). The difference is therefore offset.

1968[1]. A few words of caution are in order. As indicated in Appendix One to this thesis, the sample survey is said to include government transfer payments as an income item. In arriving at the estimates of Table 5, it is assumed that no existing welfare program is eliminated and the sample definition of income is therefore adequate. In the event, however, that some welfare programs are discarded, Table 5 estimates must be adjusted according to a procedure explained in the discussion on methodology below.

From a definitional point of view, it should also be emphasized that a definition of income[2] broader than the one used presently for income tax purposes is desirable in (a) determining eligibility for the GMI and (b) deciding on the level of payments a household will receive under the plan. Otherwise, some blatant inequities may be created and costs would inevitably rise.[3] It will be argued in Chapter Four that Social Assistance receipts probably represent the only serious item which should be completely excluded from the income base of potential GMI recipients.

Another possible source of complication is the definition of the family unit for GMI purposes. D.B.S. supplied two sources of data, one based on the "economic" family unit, the other on the "census" family

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[1] Income Distribution and Poverty in Canada, 1967 Preliminary Estimates, op. cit. See Thesis Appendix for a description of sample and of the aggregation method.

[2] When talking about income, we mean "gross" income, that is income before exemptions and deductions.

[3] For a more detailed review of the problem, see Chapter 4, first section, of this thesis.

unit[1]. The census family, which is narrower than the economic family, was selected here because data based on it was fully edited, unlike the data using the economic family. As explained in Chapter 4, the census family unit is also better for GMI purposes than the family unit definition recognized under the present law.

COSTING METHODOLOGY

The construction of cost estimates is reflected in Tables (6) and (7). Table 6 shows the distribution of families and unattached individuals by income groups and size of family for 1967, both in percentage terms and in absolute numbers. Table 7 reports the distribution of total income of family units by family size and by income bracket: this was arrived at by multiplying the number of units in each income bracket (found in Table 6) by the mid-point of this income class. Table 7 is the key-table underlying all my cost computations. A cost estimate for each of the plans was calculated as follows:

(1) Calculate the sum hypothetically needed if each household with income less than Y_b had no income and was to be brought by a cash subsidy to an income equal to the relevant break-even level.

(2) Take the aggregate difference between this hypothetical subsidy and the total money income of households whose income is below the applicable break-even level.

(3) Multiply the result of step (2) by the allowance tax rate, t, since the GMI benefits, as pre-allowance incomes rise towards the break-even levels of income, are in fact reduced at the rate of t cents for every

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[1] The census family includes only: (a) a husband and a wife with or without children of any age who have never married, (b) a parent with one or more children of any age who have never married. The "economic" family definition includes also all relatives living with the family, such as grandfather, uncle, aunt, etc.

TABLE 6: DISTRIBUTION OF FAMILIES AND UNATTACHED INDIVIDUALS

BY INCOME CLASS AND SIZE OF FAMILY, IN PERCENTAGE FORM AND IN ABSOLUTE NUMBERS, 1967[a]

MONEY INCOME BRACKETS (DOLLARS)	UNATTACHED INDIVIDUALS		FAMILIES OF SIZE							
			2		3		4		5 or more	
	ABSOLUTE NUMBER	%[b]	ABSOLUTE NUMBER	%[b]	ABSOLUTE NUMBER	%[b]	ABSOLUTE NUMBER	%[b]	ABSOLUTE NUMBER	%[b]
Under $1000	405,015	20.1	46,900	3.5	20,493	2.3	13,188	1.4	20,730	1.5
1000-1499	403,000	20.0	44,220	3.3	10,692	1.2	6,594	0.7	9,674	0.7
1500-1999	163,215	8.1	65,660	4.9	16,038	1.8	17,898	1.9	17,966	1.3
2000-2499	120,900	6.0	83,080	6.2	27,621	3.1	17,898	1.9	27,640	2.0
2500-2999	110,825	5.5	116,580	8.7	26,730	3.0	20,724	2.2	33,168	2.4
3000-3499	116,870	5.8	73,700	5.5	32.076	3.6	25,434	2.7	41,460	3.0
3500-3999	118,885	5.9	69,680	5.2	32,967	3.7	29,202	3.1	55,280	4.0
4000-4499	96,720	4.8	64,320	4.8	39,204	4.4	39,564	4.2	62,190	4.5
4500-4999	96,720	4.8	60,300	4.5	42,768	4.8	42,390	4.5	63,572	4.6
5000-5499	92,690	4.6	72,360	5.4	57,024	6.4	54,636	5.8	71,164	5.2
5500-5999	54,405	2.7	65,660	4.9	51,678	5.8	51,810	5.5	88,448	6.4
6000-6499	66,495	3.3	62,980	4.7	60,568	6.8	63,114	6.7	85,684	6.2
6500-6999	38,295	1.9	58,960	4.4	48,114	5.4	61,230	6.5	81,538	5.9
7000-7999	46,345	2.3	105,860	7.9	99,792	11.2	108,330	11.5	161,694	11.7
8000-9999	48,360	2.4	147,400	11.0	153,252	17.2	163,908	17.4	223,884	16.2
10,000-14,999	26,185	1.3	156,780	11.7	131,868	14.8	166,734	17.7	236,322	17.1
15,000 and over	10,075	0.5	45,560	3.4	39,205	4.4	58,404	6.2	100,886	7.3
TOTALS	2,015,000	100.0	1,340,000	100.0	891,000	100.0	942,000	100.0	1,382,000	100.0
SAMPLE SIZE	6,233		5,401		3,544		3,699		5,681	

a. Source: Income Distribution and Poverty in Canada, 1967 Preliminary Estimates, op. cit., unpublished table. The family definition is the census definition.

b. May not add up exactly due to rounding.

TABLE 7: TOTAL INCOME OF FAMILIES AND UNATTACHED INDIVIDUALS BY INCOME CLASS AND FAMILY SIZE, 1967[a]

(MILLIONS OF DOLLARS)

MONEY INCOME BRACKET (DOLLARS)	INCOME OF UNATTACHED INDIVIDUALS	INCOME OF FAMILIES OF SIZE			
		2	3	4	5 or more
Under $1000[b]	304	35	15	10	15
1000-1499	504	55	13	8	12
1500-1999	286	115	28	31	31
2000-2499	272	187	62	40	62
2500-2999	305	321	74	57	91
3000-3499	379	240	104	83	135
3500-3999	445	261	124	109	207
4000-4499	411	273	167	168	264
4500-4999	459	286	203	201	302
5000-5499	487	380	299	287	377
5500-5999	313	377	297	298	509
6000-6499	416	394	379	394	536
6500-6999	258	398	325	413	550
7000-7999	336	794	748	812	1212
8000-9999	435	1252	1303	1393	2015
10,000-14,999	327	1960	1648	2084	2954
15,000 and over[c]	252	1139	980	1460	2522
TOTALS	6189	8467	6769	7848	11794

GRAND TOTAL:
$41,067 millions

a. Same Source as for Table 5. Numbers are obtained by multiplying the number of households in each income class by the mid-point of the income class.

b. A figure of $750 hasbeen used as the average income, instead of the $500 mid-point. This figure accounts for the likelihood that few individuals live on incomes close to zero.

c. We have assumed $25,000 as the representative income in that bracket.

dollar of pre-allowance income. Using the simple algebraic terminology developed in Chapter 2, these three steps can be expressed in the following fashion:[1]

$$\text{Cost} = t \left\{ \sum_i [(Y_{bi} \cdot U_i^*) - Y_i^*] \right\}$$

where t = allowance tax rate.

Y_{bi} = break-even level of income for units of size i.

U_i^* = number of units of size i whose income is less than Y_{bi}.

Y_i^* = total money income of units in U_i^*.

This equation yields the additional cost to government of the GMI, assuming no changes in existing welfare programs.[2] But if any number of existing programs is discarded, cost estimates must be modified as follows:

(1) Recipients of payments under these programs experience a fall in income. As a result, these households are eligible for a higher GMI allowance than estimated originally: we know that $Y_A = t\ (Y_b - Y_o)$ under the NIT, and if Y_o falls to $Y_o^* < Y_o$, then $Y_A^* = t\ (Y_b - Y_o^*)$ and $Y_A^* > Y_A$. A similar relationship holds for the social dividend. The cost of the plan therefore goes up.

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[1] See Equations (3) and (7), on pages 22 and 24, respectively, and the discussion on page 25.

[2] There are two further points of clarification which should be made at this point. First, as indicated in the Appendix to the thesis, no statistical test of the population parameters associated with the sample statistics on income distribution was reported by D.B.S.. The test I have in mind is primarily a confidence interval test. Errors in cost estimates due to this factor cannot be detected as a result. Second, the use of mid-points as representative of average income for any income class was arbitrary. However, this is probably a reasonable compromise in the light of the fact that no information was available on interbracket income distribution.

(2) This higher cost, which is adjusted for higher GMI payments, does not take into account that the discarded programs liberate funds which, when directed towards the financing of the new GMI plan, will reduce the new higher cost arrived at in (1). Thus it is necessary to adjust the cost figures in Table (5) for (a) the higher GMI payments that would be made if the pre-GMI income of some families is decreased due to a reduction in the size or to the elimination of some existing income maintenance programs, and (b) the reduction in government outlay for income maintenance made possible by the reduction in the outlay for those other programs. The "adjusted" cost figures referred to below represent the combination of adjustments (a) and (b). This "adjusted" cost reflects the net increase in government outlay for income transfer programs resulting from the adoption of a given GMI plan. Since the GMI with, say, a 50% rate replaces only 50 cents of each dollar of other welfare income lost, program savings will exceed the increase in the GMI outlay caused by the elimination or reduction in the size of programs concerned.[1] Therefore, the "adjusted" cost of the GMI to government[2] will be in general less than the unadjusted cost presented before in the context of Table 5.

(3) Cost adjustments may also be necessary if the GMI creates work disincentives, thereby reducing pre-allowance income of some families and making them eligible for higher allowances. No adjustments have been carried out for such effects, mainly because of the lack of precise

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[1] Notice that it is not possible to determine on a priori grounds whether the fall in transfer income will be greater or smaller than the increased level of the GMI allowance to any affected household. The answer will depend on both the dimensions of the GMI plan and the specific programs which are to be eliminated.

[2] No allowance has been made for possible differences in administrative costs.

evidence concerning the magnitudes involved.

We are now in a position to take a closer look at the cost estimates of Plans 1 to 6. Are there any existing programs which could have been substantially reduced in size or replaced by these GMI plans?

The guideline used here is that the elimination of any present income maintenance programme should make no sizeable body of low-income recipients worse off. Also, the suggested elimination should be considered against the background of political constraints. Finally, Social Insurance programs are excluded from the discussion, since they are partly or wholly financed by private contributions, and thus serve a purpose of their own (these programs include CCP, QPP, Unemployment Insurance, Workmens' Compensation and Veterans' Pensions).

Plan 1 offers a schedule of modest guarantees and could hardly have replaced any of the existing demogrant schemes or the guaranteed income supplement to the aged. To do so would have made low-income recipients worse off (in the case of GIS) or would have been politically unfeasible. Break-even levels of income in Plan 1 are approximately equal to the poverty lines for 1967. About 30% of all families with children had income below these lines[1] and would have thus qualified for benefits; only 5% of these households would have received full benefits. Taking away Family and Youth Allowances would have been especially hard on the middle income families (say up to $10,000) which comprised over

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[1] 1965 was the most recent year for which this statistic could be found. See D.B.S., Income Distribution by Size in Canada, 1965, No. 13-528, Queen's Printer, Ottawa, 1968, Table 14.

75% of all families with incomes in excess of Plan One's break-even levels. The Old Age Security Plan could not have been discarded without making low-income pensioners worse off, since guarantees under Plan 1 and lower than the O.A.S. pension ($750 versus $900 in 1967). With the low guarantees of Plan 1, it is unlikely that all of Social Assistance could have been eliminated.[1] Assuming, however, that (a) 50% of Social Assistance payments would have become redundant due to the introduction of Plan 1, and (b) that all of Social Assistance went to households with incomes under the break-even levels in Plan 1, the cost of the Plan to government, after adjusting for the reduction in the cost of Social Assistance would have been $723 million. This is shown in Table 8.

Plan 2 is quite an ambitious plan, since it purports to close the poverty gap. Its unadjusted cost is $5,061 million[2], and the guarantees range from $1740 to $4640, with benefits being reduced at a 50% rate as pre-allowance income rises. Break-even levels of income are thus quite high. The only programs which could have been eliminated without making anyone financially worse off are the G.I.S. and Social Assistance. Problems quickly arise when one thinks of eliminating Family and Youth Allowances, and Old Age Security. About 40% of payments under these three programs go to households with incomes in excess of the GMI's break-even levels of income.[3] It might be unfair as well as politically impractical to reduce

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[1] For example, a widow with three children having no other source of income than the GMI could not have survived on GMI payments of $166 a month ($2000 per year). Other examples could surely be found.

[2] When based on exclusion of SA from the definition of income.

[3] Based on data from Income Distribution by Size in Canada, 1965, op. cit., Table 26.

TABLE 8

COST TO GOVERNMENT OF PLAN 1, FOR 1967,

ASSUMING A 50% REDUCTION IN SOCIAL ASSISTANCE OUTLAYS

$ MILLIONS

1. Cost of Plan 1, if superimposed on 1967 programs[a]	1,102
2. Minus savings in Social Assistance[b]	379
3. Cost of the plan to Government, after adjusting for the reduction in thecost of Social Assistance	723

a. As indicated in Column 2 of Table 5 above. This means that SA is not recorded in income.

b. As a result of (a), the size of the GMI households can receive will not change if their SA receipts fall. Savings can thus be directly subtracted from the cost shown in item 1 above. In 1967, Social Assistance expenditures amounted to $758 million (see Table A7, in thesis appendix). Since a 50% saving is assumed, the amount saved would have been $379 million.

the income of numerous families and aged persons, and I have therefore worked out two separate cost adjustments to the estimate of Table 5. In the first case, Social Assistance and the GIS are the only programs discarded; in the second case, Family Allowances, Youth Allowances and Old Security are eliminated along with the GIS and Social Assistance. These adjustments appear in Table 9.

It can be seen that under the first assumption, the cost to government of Plan 2, adjusted for higher GMI payments and for the reduction in cost due to the elimination of the programs mentioned, would have been $4,186 million; under the second assumption, $2,897 million.

TABLE 9

COST TO GOVERNMENT OF PLAN 2, FOR 1967, UNDER TWO ASSUMPTIONS:

I. Guaranteed Income Supplement to Old Age Security Recipients and Social Assistance are Discarded.

II. Guaranteed Income Supplement to Old Age Security Recipients, Social Assistance, Family Allowances, Youth Allowances, and Old Age Security are Discarded.

	Millions of Dollars	
1. Unadjusted cost of Plan 2[a]	5061	
2. Cost adjusted for increased GMI payments		
(a) if GIS[b] and SA[c] are discarded	5179	
(b) if GIS[b], SA[c], FA, YA, and OAS are discarded[d]		5731
3. Savings from		
(a) GIS and SA	993	
(b) GIS, SA, FA, YA, and OAS		2834
4. Cost to Government[e], after adjusting for the reduction in cost due to programs which are discarded: (2)-(3)		
Case A	4186	
Case B		2897

a. As stated in Column 2 of Table 5: Social Assistance is not included in the definition of income.

b. GIS expenditures totalled $234.8 million in 1967. We assume as stated above that the units affected received 100% of total GIS payments. The new level of GMI payments due to elimination of GIS can be calculated using the formula:

$$t\left\{\sum_i [(Y_{bi} \cdot U_i^*) - \text{Adjusted } Y_i^*]\right\}$$

c. Since SA is excluded from the definition of income, the elimination of SA will not increase the original GMI allowance of SA recipients. Social Assistance expenditures totalled $758 million in 1967.

d. Expenditures on FA, YA, and OAS were as follows for 1967: FA: $616.7 million; YA: $71.1 million; OAS: $1,153 million. We assume, as stated in the text, that households with income below the break-even levels received 60% of total payments under these programs. The same formula as in footnote (b) applies for the determination of the new level of GMI payments.

TABLE 9 (Cont'd)

e. For details on the methodology of steps 1 to 4, see text on pages 35 and following and appendix tables.

Plan 3 focuses especially on the working poor, that is, households with a member, usually the household head, working most of the year, but with low employment income. Plan 3 has a schedule of low guarantees (comparable to those of Plan 1) and the allowance is payable in full to all households with pre-allowance income less than a specified minimum. In Plan 3, this minimum level is set at approximately half the level of the low-income cut-offs for 1967.[1] Benefits are reduced at the rate of 50% in version I of the plan, and at the rate of 33-1/3% in version II, if pre-allowance incomes exceed that level. There is really no hard case for eliminating any of the existing programs with the introduction of Plan 3. For example, in trying to eliminate OAS and FA and YA, we would run up against the same problems discussed in relation to Plans 1 and 2. Furthermore, the low guarantees of Plan 3, especially for small family units, would certainly not allow the elimination of GIS, without making recipients of the GIS worse off. Again because of the plan's low guarantees, and because the plan is designed for the working poor, it would be impractical to eliminate SA, which is designed for families without an earner, who would thereby be made worse off. Plan 3, then, does not call for the elimination of any existing program, and its 'unadjusted' cost estimate is as follows: $1,129 million in version I, and $1,509 million in version II.[2] It is reasonable to expect, however, that the introduction of Plan 3 would reduce part of the expenditures

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[1] Other levels can be selected, depending on the objective of the plan. A lower level, equal to a uniform $1000 exemption for all household sizes, has been used to cost a similar plan. See Appendix Tables A3III and A3IV for a comparison of costs.

[2] As stated in Table 5, in the first column: Social Assistance is included in the definition of income.

on Social Assistance, perhaps by as much as one-half, as was assumed in the case of Plan 1, which has a comparable schedule of guarantees. This would have reduced these cost estimates somewhat, but by how much is difficult to say.[1]

In summary then, these three plans would have cost taxpayers less than originally estimated, once savings resulting from the elimination of some of the present programs are taken into account. Also, as expected from the discussion in Chapter Two, none of the three plans combine values of the variables which would satisfy all targets or goals. For a given tax rate, break-even levels of income confining benefits to the poor are only possible if the plan offers a schedule of low guarantees; and higher guarantees will extend payments to many non-poor units, given the same tax rate. On the other hand, lowering the negative or offset tax rate can be done only at the expense of a lower guarantee schedule, given the break-even levels of income, or a higher break-even level of income, given the income guarantees. Nevertheless, in turns of upgrading the income of the poor, any of these three plans would have redistributed payments more systematically and to a greater number of low-income units than programs under the existing system of income maintenance. Financing these plans from general revenues would have necessitated tax rates ranging from 5% to 20% on incomes above break-even levels.[2]

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[1] In the absence of data on the distribution of Social Assistance payments by income bracket, adjustments of income cannot be carried out (see Table 5, footnote D).

[2] The size of the proportional tax rate called for by any GMI plan is found by dividing the cost to government of the plan, adjusted (a) for higher GMI payments necessitated by the elimination of a program and (b) for the consequent reduction in the cost brought about by these savings, by money income (as reported in D.B.S., survey on Income Distribution and Poverty, op. cit.) above the break-even levels (less the portion of transfers eliminated which went to these units) in Canada. If aggregate money income above Y_B also includes an estimate for non-included income (such as capital gains), the tax rate will be slightly lower.

The last three plans examined (Plans 4, 5, and 6) stem from the illustrative GMI's discussed by Professors Crowley and Dodge in an essay on a GMI for Canada.[1] According to the authors, their scheme purports to be a variant of the universal demogrant: all Canadian residents 20 years of age and over would receive a monthly payment of a fixed amount, with heads of households receiving in addition smaller payments for each child under 19. Regardless of his past or current income, the unit would receive its cheque. The plans would be financed through a proportional tax on comprehensive gross income.[2] While this is not mentioned by the authors, the features of this plan make it a scheme of the social dividend variety.

Crowley and Dodge have three variants of the plan, each one having a different per capita allowance: Plan A's schedule of allowances is $750 per year per adult and $300 for each child; Plan B, $1000 per year per adult and $400 for each child; Plan C, $1250 per year per adult and $500 for each child. The authors assume that administrative costs would not differ from the present administrative cost of income security plans, and they proceed to estimate the cost of the three plans for 1964 and 1968. Their cost estimates were:

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[1] R.W. Crowley and D.A. Dodge, "Cost of the Guaranteed Minimum Income", Canadian Tax Journal, Nov. 1969, p. 395-408.

[2] This is an assumption made by the authors: see Crowley and Dodge, ibidem, p. 398. "Comprehensive" refers to the fact that most forms of income presently excluded for tax purposes (e.g. capital gains) would have been included in the income base. The authors do not clearly indicate however whether they would also include transfer income under existing programs.

PLANS	CROWLEY AND DODGE'S COST[1] IN MILLIONS OF DOLLARS	
	1964	1968
A (or 4)	10,637.2	13,185.2
B (or 5)	14,231.6	17,096.0
C (or 6)	17,833.6	20,999.0

How were these estimates arrived at? Crowley and Dodge assume that the following welfare expenditures would be eliminated:

(a) at the federal level

1. Social Welfare

Aid to the aged (OAS and OAA)

Aid to unemployed employables and unemployables

Family allowances

National Employment Service and the U.I.C.

2. Health: Subsidization of health care from general revenue.

(b) at the provincial level

1. Social Welfare

Aid to the aged

Aid to the unemployed

Mothers' allowances

Child welfare

2. Health: Subsidization of health care from general revenue.

(c) at the municipal level

1. Social Welfare

Aid to the aged

Aid to the unemployed

Child welfare

2. Health: Subsidization of hospital care from general revenue.

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[1] Crowley and Dodge, op. cit., p. 400, and ibidem, Table A1, p. 408, item 1. These cost estimates are referred to as "net" costs by the authors.

Without going deeply into the appropriateness of these deletions, it nevertheless seems questionable that some of the plans they list should be discarded, such as for example OAS, Unemployment Insurance, or FA. This is especially true in the case of Plan A, which has relatively low levels of the guarantee, compared to OAS. Furthermore, their assumption becomes more doubtful when one considers that this "demogrant" is really a gross payment which does not take into account that households with pre-allowance incomes greater than zero will concurrently have to bear taxes in order to finance this plan. The result is that the size of the "net" benefit (Gross Benefits - taxes financing the social dividend) will of course be reduced, and some households could conceivably be made worse off than under the present system. Also, why include in welfare the provision of health services?

They then account for the disappearance of tax revenues earmarked for these expenditures and conclude as to whether this would have resulted in a positive or negative saving in that year. Table 10 shows how Crowley and Dodge have calculated what they term the "net" cost of Plans A, B, and C. They have added all the "demogrants", or gross benefits, paid out to each individual in Canada (item 5 of Table 10), plus administration cost, and called this figure the "gross" cost of the plan. Their "net" cost is arrived at by adding to the gross cost the net cost (+) or saving (-) resulting from the elimination of earmarked personal income tax revenues and welfare expenditures listed above (items 2, 3, and 1, respectively, in Table 10)

The Crowley and Dodge estimates only tell us what the gross cost would be if the plans were actually administered along demogrant lines, that is to say, with full payments being made to all families regardless

TABLE 10

CROWLEY AND DODGE'S CALCULATION OF THE COST OF PLANS A, B, AND C

MILLIONS OF DOLLARS

	1964	1968
1. Expenditures on Welfare[1]	3,225.3	4,660.0
Revenue from Current taxes[2] on Personal Income		
2. Federal & OAS	2,535.2	4,337.0
3. Provincial	507.7	1,730.0
4. Net cost (+) or Saving (-) resulting from the elimination of current personal income tax revenues and welfare expenditures	-182.4	1,407.0
5. Gross Cost of		
a. Scheme A		
Population X Demogrant	10,784.6	11,742.0
Administration	35.0	35.0
	10,819.6	11,777.0
b. Scheme B		
Population X Demogrant	14,379.0	15,654.0
Administration	35.0	35.0
	14,414.0	15,689.0
c. Scheme C		
Population X Demogrant	17,981.0	19,557.0
Administration	35.0	35.0
	18,016.0	19,592.0
6. Net cost (4 + 5) of		
a. Plan A	10,637.2	13,185.2
b. Plan B	14,231.6	17,096.6
c. Plan C	17,833.6	20,999.0

[1] For details on these figures, see Crowley and Dodge, op. cit., Table 2, p. 400. They include some expenditures of health services, which is inaccurate, if we are interested in income security statistics.

[2] Earmarked taxes.

This table is adapted from the authors' Table A1 on p. 408. I have shown exactly their procedure by providing the reader with a step-by-step approach which they omitted in the original article.

of income. The important point is that their estimates do not indicate how much income is actually redistributed from households with incomes in excess of break-even levels to households with incomes below these levels: this is a key feature of a GMI plan.[1] While we need to know what the gross cost of the plan is in order to calculate the tax rate that will finance the plan, the relevant cost figure is the one that reflects net (gross GMI minus GMI tax liabilities) payments. The plan, of course, need not be administered along the lines of a GMI of the NIT type (that is, with payments confined to families whose social dividend benefits exceed social dividend tax liability). Indeed it is possible to pay out the full amount of the allowance, and then use the tax system to finance the cost of gross payments. Those families and individuals which expect their pre-GMI income to exceed the break-even levels of income might sensibly forego receiving their GMI, and use it rather as a credit against the amount they will be paying in "social dividend" taxes.[2] Even if the plan is administered along these lines, the aggregate gross amount of the GMI payments is not the cost in "net" terms. After social dividend taxes have been raised to finance the payment of the full amount of the guarantee, only families and individuals whose income is below the break-even levels will have received a net positive benefit from the GMI.

In order to show how much the Crowley and Dodge plans would cost

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[1] See Chapter Two, pages 24-26.

[2] See C. Green and R. Lampman, "Schemes for Transferring Income to the Poor", Industrial Relations, 1967, University of California at Berkeley Reprint, p. 126. This credit formula can also apply in filing for a NIT: see J. Tobin, J.A. Pechman and P.M. Mieszkowski, "Is a Negative Income Tax Practical?" Yale Law Journal, Vol. 77, No. 1, Nov. 67, p. 22.

if administered along NIT lines, estimates have been made using a procedure similar to the one used to cost plans 1, 2, and 3 above.[1]

First, gross payments are calculated by multiplying the demogrant applicable to each unit of size i by the number of units of this size, and summing over all i units.

Second, since the plan is financed by a tax on pre-allowance income, the ratio of gross payments over-estimated aggregate pre-allowance income yields the flat tax rate necessary to finance gross payments.

Third, the guarantee was explicitly stated in step 1, and with the tax rate determined in step 2, the break-even level of income is implicitly equal to Y_g/t. Above this level of income, family units incur net tax liabilities.

Four, once Y_B is determined, the redistributional cost of the plan is equal to the sum of net benefits (gross social dividend allowance minus social dividend tax liability) to households with income below the break-even levels. This redistributional cost is the cost involved when the plan is administered along the lines of a GMI of the NIT type. Table 11 compares Crowley and Dodge's cost estimate with those derived in the foregoing fashion.

These estimates are unadjusted for (1) the reduction in recipients' estimated income which would result from the elimination of some existing programs, and (2) for savings from the removal of these programs. This adjustment has not been carried out here because it would complicate

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[1] Detailed tables of calculations are found in Tables A4I, A5I, and A6I in the appendix to this thesis.

TABLE 11

COMPARISON OF CROWLEY AND DODGE'S COST ESTIMATES

WITH COST ESTIMATES OF THEIR PLANS IF ADMINISTERED

AS A GUARANTEED MINIMUM INCOME OF THE NEGATIVE INCOME TAX TYPE

FOR 1967-68

Plans	COST IN $ MILLIONS	
	Administered as a Demogrant	Administered as a GMI of the NIT type
A (or 4)	11,742[a]	2,864
B (or 5)	15,694[a]	3,834
C (or 6)	19,557[a]	4,470

a. See items 5a, 5b, 5c of Table 10. Since my cost calculations do not include corrections for the elimination of existing welfare schemes, they are compared to Crowley and Dodge's "gross" cost.

matters unnecessarily[1], and would tend to obscure the main point made.

Under the assumption then that either of these three plans is superimposed on the existing schemes without any modifications in the composition of the latter, some interesting observations can be made.

Plan 6 redistributes $4.47 billion, and Plan 5 $3.834 billion. This is a relatively small difference ($636 million), when one takes into account that the allowance guarantees are substantially higher in Plan 6 than in Plan 5. The reason for this result is that a plan with a higher allowance (as in Plan 6) may actually produce little more redistribution, once financing is considered, than a plan with lower allowance guarantees

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[1] The procedure to be used is essentially similar to that adopted for Plans 1 and 2. Notice again that my cost estimates are based on the definition of income which excludes SA. See Table 5, footnote e.

but with a lower tax rate (as in Plan 5) on pre-allowance incomes. Indeed, in comparing the break-even levels of income for Plans 5 and 6, one notices that they are approximately the same.[1] This, of course, means that the GMI benefits in both plans will be going roughly to the same households. The difference in cost is accounted for by the fact that households under Plan 6 receive higher net benefits than households under Plan 5; the net benefits of Plan 6, however, are reduced at a faster rate than the smaller benefits of Plan 5, because the tax rate is 41% in Plan 6 and 34% in Plan 5.[2] This is why the break-even levels of both plans are approximately the same.

The comparison of Plans 2 and 6 provides another illustration of the fact that two different plans may involve comparable levels of redistribution, once financing is considered. Plan 6 has a much lower schedule of minimum income guarantees than Plan 2, and yet both plans redistribute substantially the same amount of money: $5,061 million in the case of Plan 2, and $4,470 million in the case of Plan 6.[3]

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[1] See Appendix Tables A5I and A6I, Column 7.

[2] In this sense, it could be possible to produce a multitude of plans with a combination of different levels of the guarantee and tax rate that produced the same amount of income redistribution. This would mean transferring a given sum of income in any given way, but always changing the number of households affected (because of different levels of Y_B), the rate at which net benefits are being reduced, and the size of the minimum allowance guarantee.

[3] These two cost estimates assume that social assistance payments are excluded from income. The level of gross payments necessitated by Plan 6 is $17,366 million (see Table A6I, Col. 4, in the appendix to this thesis). The tax rate that will finance gross payments determines break-even lines, and thus the cost of making the net GMI payments to households with incomes below these lines.

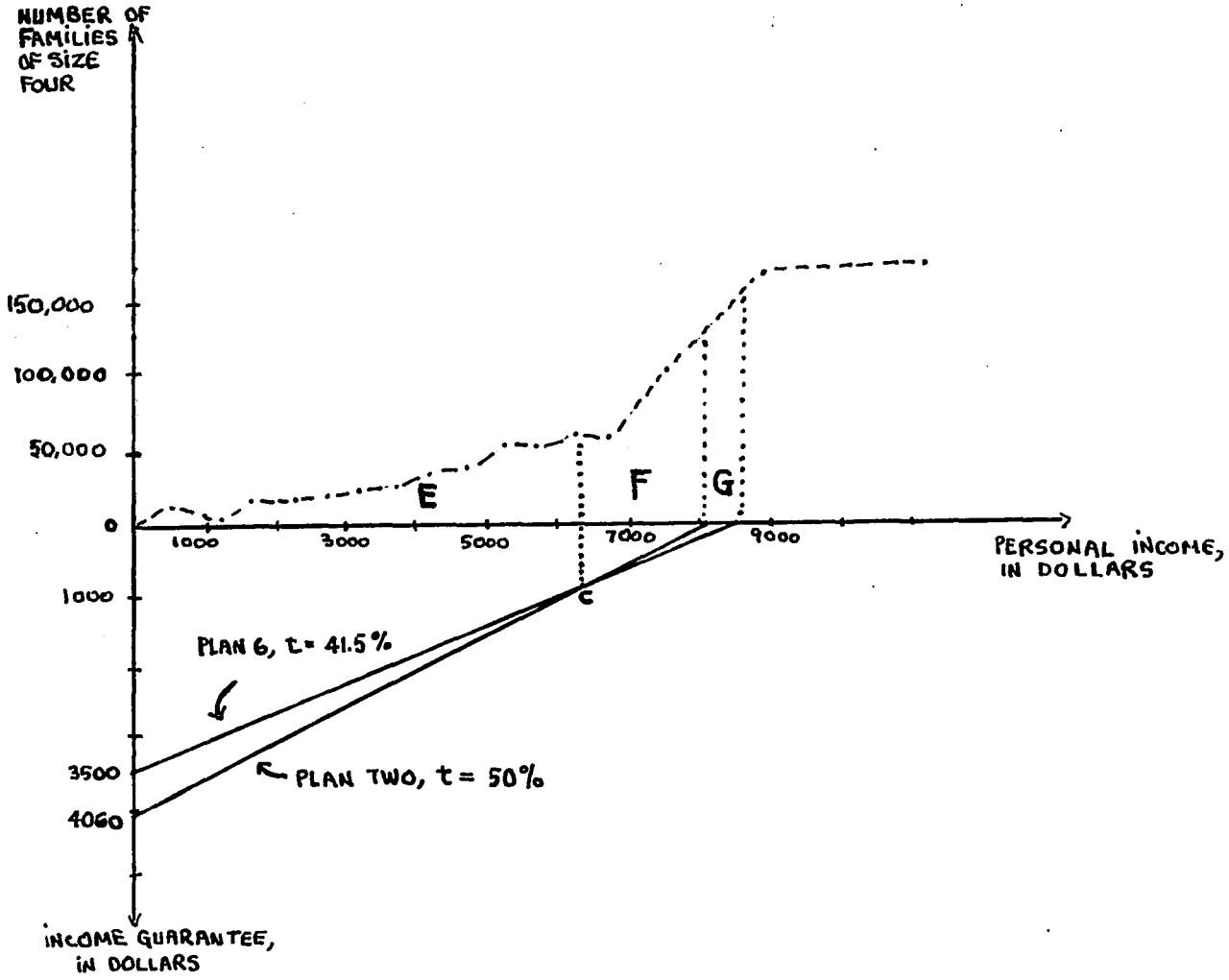
This is due to the fact that the tax rate of Plan 2 is higher than the rate of Plan 6: 50% in the case of Plan 2, and 41.5% in the case of Plan 6. As a result, the plan with the lower tax rate and the lower schedule of guarantees will have break-even levels of income higher than those of the plan with a higher schedule of guarantees but with a higher tax rate.

Diagram 2 shows that net payments under Plan 6 continue to be made

DIAGRAM 2

INCOME REDISTRIBUTION EFFECTS OF PLANS 2 AND 6, 1967

IN THE CASE OF A FAMILY OF FOUR



beyond the break-even levels of income at which the net payments of Plan 2 terminate. The diagram illustrates the case for a typical four-person family. The distribution of pre-allowance income for four-person families in 1967 is plotted in the upper portion of the diagram. The lower portion of the diagram indicates the net allowance received by this size family for various levels of income. Net payments terminate at $8120 under Plan 2, and at $8450 under Plan 6. Before the point at which the schedule of rates cross (Point C), net payments are higher under Plan 2. After this point, however, Plan 6 makes higher net payments than Plan 2. Moreover, under Plan 6, payments continue to be made to those four-person families whose income exceeds Plan 2's break-even levels of income of $8120, but is less than the break-even level of income of $8450 of Plan 6. In the diagram, all households in area E are better off under Plan 2 than under Plan 6. The reverse is true of households in area F. Households in area G receive no benefits under Plan 2, but continue to benefit under Plan 6.

In summary, the higher schedule of guarantees of Plan 2 does not produce a great deal more redistribution than the lower schedule of Plan 6, because the different tax rate at which benefits are reduced produces a significant difference in break-even levels of income and therefore in the number of families eligible to receive allowances.

Finally, no adjustments have been made in any of these estimates for the possibility that the GMI might cause reduction in the supply of work effort. If this happened, and GMI payments based on consequently lower pre-allowance incomes were to be made, costs would inevitably rise. Two factors can create potential work disincentives: (1) the level of

the guarantee and (2) the allowance tax rate. The higher they are, the greater the possibility of a reduction in the supply of work effort. The theoretical justification for predicting a reduction in work effort stems from the fact that the GMI assures a minimum income, adds to the eligible unit's disposable income, and reduces its net wage; the resultant income and substitution effect should be adverse to work effort in the context of the familiar work-leisure model.[1] The important question is how large is this potential disincentive. No empirical study has been made for Canada, but studies based on U.S. data suggest that the size of the effect of a GMI on the supply of work effort of the male working head can vary from anywhere between 0 and 20%[2]. Until more research is done in this area, it is not possible to quantify this factor precisely.

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[1] For an explanation of the mechanics of this effect, see C. Green and A. Tella, Effect of Nonemployment Income and Wage Rates on the Work Incentives of the Poor, Review of Economics and Statistics, Vol. LI, No. 4, Nov. 69, p. 399-400. The authors explain this effect by using the work-leisure margin trade-off: under a NIT plan, workers in families covered by the NIT would be expected to reduce their hours worked in response both to the supplementation of income and to the fall in the marginal wage.

[2] Some studies published so far include: C. Green and A. Tella, op. cit., p. 399-406; M.S. Cohen, S.A. Rea Jr., and R.I. Lerman, A Micro Model of Labour Supply, Bureau of Labour Statistics, Staff Paper No. 4, U.S. Dept. of Labour, 1970 (see p. 60-4); and D.H. Greenberg and M. Kosters, Income Guarantees and the Working Poor, The Effects of Income Maintenance Programs on the Hours of Work of Male Family Heads, Office of Economic Opportunity, Rand Corporation, Santa Monica, December 1970. See also the preliminary report of GMI experiments on small communities in the United States, in American Economic Association, Papers and Proceedings, May 1971.

CHAPTER FOUR

ADMINISTERING A GUARANTEED MINIMUM INCOME PLAN

If a guaranteed minimum income plan is to be successfully implemented, it is necessary to clear up important administrative issues. In this respect, the crucial problems to be examined are: (a) the definition of income for GMI purposes; (b) the appropriate unit for determining eligibility to receive the GMI allowance; (c) the rules concerning the method and frequency of payments; (d) reconciling the GMI with the present income tax structure.

THE DEFINITION OF INCOME

In any GMI plan, the size of the net benefit a household receives depends upon family income and family size. Our first objective should then consist in defining these two terms precisely. In determining eligibility for GMI payments, and in specifying the level of payments a household can qualify for, it is reasonable to expect that a broad definition of income should be used. Under this type of definition, all cash receipts which increase the spending power of households would be termed income. A broad definition is necessary for the simple reason that inequities will be created if some forms of income are excluded.[1]

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[1] There are of course excellent reasons to exempt on a partial basis some forms of income, especially when the cost of administering and enforcing exceeds the tax intake on it.

Two households may have the same economic spending power but arising from different income sources. If some forms of revenues are excluded from the definition of income, clearly one household may qualify for a higher GMI payment, even though its money income is the same as the other. This is surely undesirable. If this happened on a large scale, the cost of the GMI plan would also be higher than estimated originally. It should be made clear however that broadening the definition of income for GMI recipients does not require general tax reform. It is possible to use two different definitions of income: one for households with incomes below the break-even levels, and one for households with incomes in excess of the break-even levels, where the present tax law would apply.[1] This can be fairly simple if the GMI is to be administered separately from the positive income tax. Nevertheless, one important advantage of having a unique definition of income is that the GMI can become completely integrated under the authority of the Department of National Revenue. As will be shown later on, this would simplify both the administration of the GMI and the structure of (positive and negative) income tax rates. In fairness to all GMI recipients, then, the amount of most cash receipts should be treated as income, irrespective of their source. This would

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[1] The present tax system could conceivably be used to raise revenues for purposes other than financing the GMI plan. In financing a GMI plan, however, we have assumed that tax rates would be applied on the "gross" income (i.e., before exemptions and deductions and after transfers) of households in excess of the break-even levels. If the present tax system was used to finance the GMI, and if exemptions and deductions were therefore allowed, it follows that tax rates on income above Y_b would be slightly higher than originally estimated. See the section on the integration of positive and negative income taxation below.

chiefly necessitate the inclusion of those forms of transfer payments[1] which are at present not included in the tax definition of income, such as family allowances, youth allowances, unemployment insurance benefits, and payments running under the coverage of Workmens' Compensation.

Items presently included in the definition of income under the tax law would also be termed income for GMI purposes. They include wages and salaries, receipts from self-employment, investment income, benefits derived from annuities, pensions, or retirement benefits, dividends and interest on government obligations. There is really no theoretical grounds to accept the wholesale exclusion of certain forms of income which at present are not recorded as income, or which receive preferential treatment. These items comprise awards and prizes, support and alimony payments, fellowships and scholarships, supply by the employer of allowances for food, lodging or vehicles, and strike benefits.[2]

Social Assistance poses special problems to the administrator of the GMI. If some amount of social assistance needs to be maintained after the introduction of a GMI plan, and if it is desired to minimize its role while making maximum use of the GMI scheme in redistributing income to the poor, then it is preferable to exclude SA payments from

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[1] Except for Social Assistance, as explained below.

[2] The case is undoubtedly clear on equity grounds. It is of course difficult and perhaps unduly costly to enforce and police this type of requirement. Therefore, from an administrative point of view it is probably desirable not to include small amounts appropriated through any of these sources. This could sensibly be done by setting a basic exemption level for these forms of income; only amounts in excess of the exemption would have to be reported.

the income base.[1]

If GMI allowances are paid in the same year as income is received, and if social assistance is included in income, welfare agencies are in a quandary. For each dollar of reduction in SA payments, the GMI allowance can be increased by 50 cents, assuming a 50% allowance tax rate: this means that the amount of the GMI allowance that will be paid out will depend partly on the amount of assistance that welfare agencies decide to grant. The welfare agency can do one of two things: (a) if it stops making payments, the GMI takes over completely, but recipients may end up worse off than they were under the Social Assistance plan before the GMI;[2] (b) the welfare agency can prevent any one from being made worse off by supplementing the GMI. In turn, this can be achieved in two different ways. On the one hand by granting assistance which will of course be recorded in the GMI recipient's income, and which would force a decline in GMI payments; if it wanted to maintain the previous levels of income of this family, the welfare agency would be forced to add a further supplement. On the other hand, the welfare agency could wait until it was "sure" that the maximum GMI allowance would be paid before paying any further supplement. Unnecessary complications are created either way.

Alternatively, if GMI allowances are made with a one year lag, and if social assistance is included in income, then what welfare agencies did in one year would determine what the GMI administration would do the

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[1] The following discussion is inspired from C. Green, Negative Taxes and the Poverty Problem, Brookings, Washington, D.C. 1967, p. 86-92.

[2] As could likely happen in the case of Plan 1, or Plan 3 examined in Chapter 3.

following year. As the welfare agency makes assistance payments, it reduces the GMI payments made the next year.[1]

Including Social Assistance in income creates unnecessary administrative work. It also shackles the programs with an ambiguity as to the respective roles of the GMI and Social Assistance. Finally, excluding SA from income would leave welfare agencies free to decide quickly on the size of the supplement, if any, a household could receive in addition to its income including its GMI allowance, and without any administrative complications which could be disastrous to low-income households.

THE FAMILY UNIT

The second factor which determines the level of GMI allowances is family size. In Canada, income earned by the members of a family has historically been taxed on an individual, and not a family basis: the tax liability falls on the recipient of income, be he (or she) a single person, a married individual, a minor, or a person of any other status. There are good reasons why the recipient unit, for purposes of determining eligibility for and the level of GMI payments should not be defined in the same manner as the present tax unit. The recipient unit should be defined to consist of husband, wife, and children under 21 living at home. Failure to include at least the husband and wife (or other guardian) in the unit creates an incentive for non-earners in a family to separate from earners for the purposes of filing for GMI payments. This problem is especially serious if two members of the same family could

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[1] See the hypothetical example worked out in C. Green, op. cit., p. 88.

file separately and obtain a greater payment than they would otherwise get by filing for an allowance for a two-person family.[1] Also, a family's economic welfare is a function of the aggregate income of the family. Thus, in determining the level of GMI a family can receive, the income of all its members should be pooled. In order to do this, the family must of course be defined as comprising husband, wife, and children.

ADMINISTRATION OF THE GMI

The contention that the guaranteed annual income is a superior means of redistributing income to the poor is true only if the GMI can be administered relatively efficiently. An effective administration of the GMI requires that, within reasonable cost constraints, the following issues be dealt with satisfactorily: (a) ensuring an accurate recording of all income; (b) making payments available when need for assistance exists, and, in the same vein, (c) an appropriate frequency of payments. It will be seen, however, that these problems appear mainly in the context of a NIT plan, since a social dividend plan avoids most of these complications and therefore offers more administrative flexibility than the NIT.

A potential GMI recipient will have to file an income statement with the GMI authorities. It is traditionally found, for instance, that farm income and proprietors' income is under-reported under the present income tax system. Also, some individuals either fail to produce an income tax form, purposely, or because of ignorance, or falsify their

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[1] This is possible in the case, say, where the GMI for an unattached individual is $1250 and it is less than $2500 for a two person family. Of course, some cases may arise where it would be difficult to judge if family splitting is really due to this artificial incentive. It is necessary to remain open-minded in enforcing this requirement.

reports by understating their earnings. Unfortunately, no fool-proof system has yet been devised and evasion cannot be entirely avoided. In this sense, one advantage of having the administration of the GMI integrated under the authority of the Department of National Revenue is that this organization already has the machinery and the capacity to process and screen claimants' files without unnecessary additional cost. It is important therefore that (a) the GMI law states very clearly all the forms of income that must be reported by a GMI claimant, and (b) steps be taken to insure a rapid and efficient processing of the files submitted to the GMI authorities by claimants. On the other hand, an educational campaign will be necessary to make all citizens aware of their newly acquired rights in the simplest possible terminology. It has been done for Medicare, and there is no reason it cannot be done for the GMI, although the mental gymnastics of the GMI are admittedly more demanding to the potential recipient.

This brings us to the next important question: what will be the basis for determining the amount of the GMI allowance? The problem is the following: should eventual claimants estimate at the beginning of the year the amount of income they will receive during the year, so as to claim the GMI allowance currently on the basis of this forecast, or will payments be made currently, but only on the basis of a statement as to how much income they have earned in the previous year?

If payments were made currently on the basis of a beginning-of-the-year statement projecting income for that year, then equal portions of the allowance, as determined by the GMI authorities, could be mailed to claimants at the beginning of each specific payment period. Some households will have correctly anticipated their pre-allowance income for

the year, but others will have underprojected or overprojected. If the income they actually earn turns out to be higher than their projected income, a settlement must be reached with the GMI authorities at the end of the accounting period: households can either settle their liability then, or, if they are again eligible for GMI payments in the next year, their liability can be deducted from their cheque in the following year. If, on the other hand, the claimant overestimated its income, he would presumably be paid on the day of settlement a lump-sum compensation for his error.

It can legitimately be argued that these types of error could be quite disastrous to the poor, since so much time can elapse between the appearance of need and the day the GMI payment is adjusted. Clearly it would be advisable to have more than one settlement period in any given year. By reducing the time interval between various income projections, the possibility of prediction errors is decreased, and any such error can be remedied relatively quickly. Surely quarterly or even bi-yearly filing would be an efficient way of dealing with this problem from the standpoint of the poor. If there are administrative economies of scale, the additional administrative cost should not be undesirably high.

What about the second method of determining GMI payment levels? If benefits are paid currently on the basis of reported income in the previous year, we are again faced with the possibility that payments are not in relation to current needs. For those low-income families whose income tends to fluctuate substantially from year to year, this method may not be appropriate. But even for poor families with relatively steady incomes, the appearance of new needs after they have filed their tax return

will not make them eligible for higher GMI payments until the next year, unless the GMI administration is willing to revise the family's break-even level of income in the course of the year.[1] Again, one way of bringing payments and needs in relation with one another is to have more than one settlement day per year. This would also allow early rectifications for needs that have disappeared since the first filing day.[2]

But irrespective of the method which is finally adopted, there is no way to avoid a lag of some sort between payments and the appearance of needs; it is only possible to shorten it. As a complementary measure, perhaps it could be possible to subsidize the financing of low-interest bank loans to families who legitimately qualify for higher GMI payments, but who must wait, say, 3 or 6 months before receiving the adjustment to their allowance. Furthermore, the GMI law will have to stipulate the frequency with which payments can be drawn by recipients. It is sometimes argued that the poor would have difficulty administering their household with payments spaced at long intervals, and that payments should therefore be made at least on a monthly basis, and perhaps on a bi-monthly basis. Monthly payments are certainly feasible, with computer facilities in existence. Family Allowances, for example, are computer-processed and paid at monthly intervals. Such a frequency of payments, however, would generate considerably more paper-work, and is perhaps not absolutely essential in meeting the needs of the working poor:[3] here, quarterly payments

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[1] Two examples of new needs could be the birth of a child, or the housewife loosing her job if she is in the labour force.

[2] If a child leaves home, or if the working head finds a better-paying job, for example.

[3] Especially if the GMI does not replace many existing programs: Plan 1 in Chapter 3 is a case in point.

might be adequate.

Much of the foregoing discussion applies mainly to a guaranteed minimum income administered along the lines of a negative income tax. One interesting aspect of the Social Dividend (SD) is that this plan largely avoids the difficulties which arise when the timing of payments is not tied to the appearance of needs. It will be remembered that under such a plan every household in the country is entitled to receive a social dividend payment at fixed intervals (say each month) over the year, the level of which is unrelated to the household's income and is based only on the household's size. The payment, of course, is a gross payment, since households must concurrently bear 'social dividend' taxes on their income in order to finance this plan. Nevertheless, the plan's structure is such that all poor households would be receiving their social dividend cheque on a regular basis, without having to go through any complicated filing mechanism. There would thus be no delay in meeting the needs of the poor. Assuming that the social dividend plan requires a flat finance tax rate on income from all sources other than the social dividend, the necessary tax contributions can be raised in the following way.[1] Persons earning their living from wages or salaries, for example, can ask their employer to withhold social dividend taxes on their salaries according to the social dividend tax table supplied by the social dividend authorities. Those individuals who expect their income to exceed the applicable break-even

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[1] A flat finance tax rate simplifies the argument but is by no means necessary. We can think of any combination of rate schedules on pre-SD income. For example, we can have a progressive schedule of rates on income above the break-even levels, with a flat rate on income below Y_b.

level of income would presumably request not to be sent their social dividend cheque, and instead inform their employer to use the amount of their unclaimed cheque as a credit against the social dividend taxes withheld from their payroll cheque.[1] Comparable arrangements can be made for persons earning income from other sources (such as investment, pension, or self-employment income for example).

This plan does raise a problem encountered with the NIT: there would be a need for reconciliation periods for individuals who, for one reason or another, have insufficiently contributed in social dividend withholding taxes.[2] Such problems, however, are already found in the current income tax system. The only potential drawback is the size of the extra administrative overhead created by the social dividend's dual feature of giving on the one hand and taxing on the other. Whether this would end up costing more than the NIT administrative machinery is an empirical question. In any case the social dividend which allows the use of SD tax credits is definitely superior to the NIT in ensuring that administrative overhead is reduced and payments come regularly and without delay to the poor. By separating tax contributions from gross payments, the social dividend takes the burden of adjustments to income variations away from the poor, so that they can be assured of an unvariant inflow of minimum income redistribution.

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[1] The employer would probably have a second social dividend tax table for employees who opt for this formula.

[2] If he had interest income, for example, from which no taxes had been withheld.

RECONCILING THE GUARANTEED MINIMUM INCOME WITH THE POSITIVE INCOME TAX STRUCTURE

The present income tax structure raises revenues which go toward the financing of a multitude of public services. The introduction of a GMI would not change this basic function of taxation. If the GMI is to be financed through income taxation, additional taxes will have to be paid by Canadian contributors. In determining the magnitude of the proportional[1] tax rate necessary to finance a GMI of the NIT type, it was assumed in Chapter 3 that the necessary tax rate would be imposed on persons with incomes in excess of the break-even levels of income. It was also assumed that in administering the GMI, pre-GMI income referred to income in the broad sense. In other words, persons with incomes in excess of break-even levels of income would contribute to the financing of the GMI on the basis of their gross income (before exemptions and deductions)[2] instead of their "taxable" income as under the present system. If taxable income was the basis of assessment, the proportional "finance" tax rate on incomes above the break-even levels would be somewhat higher (perhaps by 2 or 3 percentage points).

There is, however, a more serious problem which can arise if there are two separate authorities, one for the administration of the GMI, and one for the regular income tax system. Inasmuch as the aim of the GMI is to redistribute income systematically to the poor, the maintenance of the present income tax structure would, in the case of some NIT plans,

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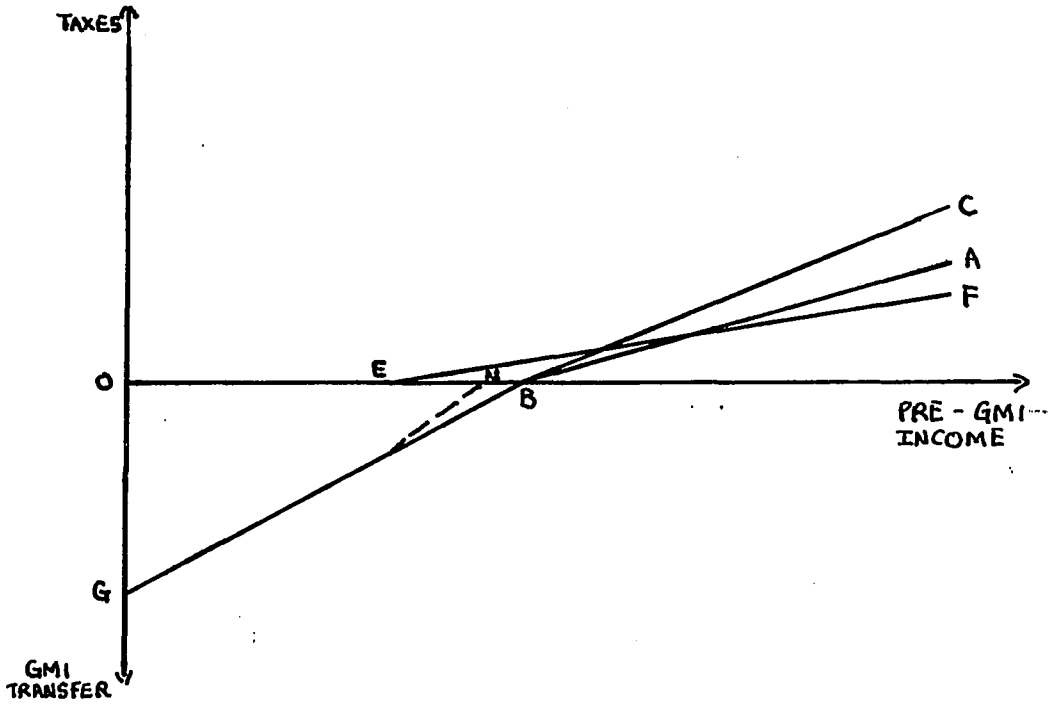
[1] For simplicity only. There probably would be a progressive schedule of rates.

[2] Although the present practise could certainly continue for purposes of assessing individuals for their other income tax liabilities.

start taxing individuals' incomes before the plan's break-even levels of income are reached. This means that the benefit of the NIT payment is effectively stopped at break-even levels of income lower than those originally calculated.

DIAGRAM 3

EFFECTIVE REDUCTION OF GMI BENEFITS IF PRESENT TAX SYSTEM IS NOT MODIFIED



In Diagram 3, the GMI is OG, and benefits are reduced at a 50% rate as pre-GMI income rises; benefits terminate at OB. Financing this plan using gross income as a basis of assessment, and not permitting deductions and exemptions, calls for a tax schedule of BA. If households with income above OB are assessed on the basis of "taxable" income, the tax schedule becomes BC. If the tax system continues to collect taxes according to the present formula, households with incomes above OE (level of exemptions and deductions) must pay taxes according to the schedule EF, which effectively reduces the GMI's break-even level of income to ON,

because of the superimposation of the positive rate EF over the negative rate GB. If it is desired that the GMI consist of a basic level of income redistribution, households with incomes below the break-even levels should not bear any direct taxes, so that income taxes start being paid only after those break-even levels.[1]

The foregoing discussion illustrates some of the complications which might arise if the GMI and the regular income tax system are administered independantly. It is desirable, even if only for administrative purposes, to invest the Department of National Revenue with the authority to administer the GMI. In this respect, perhaps one of the simplest means of reconciling the positive and negative income tax is to use the tax credit approach to taxation.[2] This method, which ought to be investigated, would have the advantages of (a) systematically redistributing income in the direction of reducing inequality, (b) minimizing incentive problems associated with high marginal tax rates under a progressive income tax, and (c) drastically reducing the complexity of the tax structure. Briefly, the credit income tax structure has two main features: (a) a system of flat-sum refundable credits, to which all residents would be entitled and (b) a general proportional income tax with no exemptions. A person's or family's net tax liability (+ or -) would be given by the formula

$$T = Yr - Cu$$

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[1] In order not to burden households with incomes only slightly in excess of the break-even levels, households at the upper end of the income scale could conceivably be taxed at a higher rate to compensate for the tax loss produced by the non-taxation of households with incomes between E and B.

[2] This is a method suggested by Earl Rolph in a similar debate over the NIT in the U.S.. See E. Rolph, The Case for a Negative Income Tax, Industrial Relations 1967, Berkeley (reprint).

where T = net tax liability (+ or -)

Y = income derived from all sources specified in the law

r = tax rate

c = size of the credit (assuming uniform per capita credits)

u = number of credits for the household

This integrated system would be administered by the Department of National Revenue, which would select appropriate levels for c and r. This plan could conceivably be designed to refund credits more than once a year and to allow revisions of assessments during the year. This plan may or may not be ideal from the standpoint of the poor, but it does guarantee a basic (even if small) level of systematic income redistribution.

In summary, administering the GMI poses some problems. But assuming that its philosophy is accepted, and that it could be financed, administrative complexities should not constitute a criterion for accepting or rejecting the plan. There are already indications that the GMI is palatable on administrative grounds in government circles. Indeed, the recently tabled Family Income Security Plan (F.I.S.P.) is essentially a negative income tax for children. F.I.S.P. will replace Family Allowances, and it conditions payments upon income and family size. The Department of National Health and Welfare has elected to make payments on the basis of last year's income (as indicated by tax returns) and family size: inasmuch as a GMI plan faces the administrative difficulty of making payments available when the need for it arises, there is no reason to expect that F.I.S.P. will be exempt from it.

CONCLUDING OBSERVATIONS

The present income security system redistributes income in a selective fashion. The selectivity is due to the fact that many families are rendered non-eligible for transfers because they do not fit in the established welfare categories.

Since a sizeable number of low-income households are in the labour market, one way to supplement their income is to make transfer payments to them in a systematic fashion. Of course, transfer payments to the abled bodied are looked upon with suspicion by people who are not poor, the major objection being the allegation that these payments will take away from the recipients any incentive to work for a living. The guaranteed minimum income plan might affect the work incentives of some recipients, especially if the guarantees of the plan are relatively high. On the other hand, GMI benefits are not reduced dollar for dollar as employment income increases, and low-income earners can thus continue to receive partials GMI benefits, even if they are working full time. Furthermore, as illustrated in one of the plans developed earlier, it is possible to pay the full amount of the GMI benefit to households who are working, and to start reducing the benefits only after a specific level of income is reached. This provides an added element of motivation to the poor in the labour market, since his GMI benefit is, up to a certain level, independant of his earnings.

It is sometimes argued that the affluent part of the Canadian

society is not ready yet to finance the huge costs that would be imposed by a GMI plan. We have seen however that there are different types of GMI plans, and the six plans formulated in this thesis necessitate outlays ranging roughly from one billion to five billion dollars, assuming that none of the present programs included in the income security system would be discarded with the implementation of the GMI plan. For all practical purposes, it is unlikely that a GMI would be simply superimposed on the present system. Ottawa, for example, has already decided to discard the system of universal Family Allowances before introducing the Family Income Security Plan. It is reasonable to expect that some existing programs would also be eliminated, or their scope would be reduced in order to decrease the added cost of the GMI. Under the assumptions made in Chapter Three as to which present programs would go, we have seen that the cost of a GMI would be lower, once money savings from the elimination of specific existing programs is taken into account. The cost may still be too high in many persons' mind. Nevertheless, in debating on how much society is willing to afford, one should not loose sight of the fact that

> "....From an economic point of view, the social costs of the credit income tax would be negative and would be negative by a large amount. Under the present system, many children are growing up without the advantages of proper food, shelter, clothing, medical care, and education. By increasing the financial means of parents, we would give offspring, on the average, higher levels of living. Society would gain in real terms in the form of greater productivity of the current generation of poor children when they become adults and of greater productivity of contemporary poor adults....
> .....Closely related, and of much greater importance than an increase in the output of goods and services, is the effect of a credit income tax on the problems arising from concentrated pockets of city poverty....Systematic redistribution in favor of lower income groups by a technique that carries no stigma would immediately end the despair of many of the city poor. This change would be a large improvement. It would also improve the finances of cities by removing

> a substantial portion of the costs of relief from city budgets, permitting cities to finance measures to assist low-income groups."[1]

This argument should apply as well to the Canadian context, even though it was formulated in the light of the U.S. effort to combat poverty. Naturally, the course that Canada will take will depend on political as well as economic factors. It is hoped that this thesis will have led to a better understanding of the guaranteed minimum income, how much it would really cost, and what problems remain to be solved before introducing it in Canada.

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[1] Earl Rolph, The Case for a Negative Income Tax, Industrial Relations Reprint, Berkeley, 1967. While his argument focuses on the credit income tax as a redistributive measure, a similar case can be made for any form of GMI.

APPENDICES

APPENDIX ONE

DESCRIPTION OF SAMPLE USED IN THE CALCULATION OF COST ESTIMATES FOR ALL PLANS ANALYZED

D.B.S. has conducted surveys on incomes of families and individuals since the early 1950's. Since 1965, these surveys have included a representative sample of all private households (with minor exceptions) whereas in the earlier years, only non-farm households were surveyed.

For the purpose of the present study, the data used was obtained in the following manner: in the spring of 1968, a survey was conducted and a random sample of individuals in over 20,000 households across the country supplied information on the amount and sources of income received during 1967. Income here means money income only, prior to deduction for taxes.

D.B.S. reported that the sample is of course subject to sampling variability, but did not compute confidence intervals for their estimates. The technique used to extrapolate aggregate figures from the sample was not reported either.

The following points should also be noted:

1. Two parallel sets of data were supplied to me by D.B.S.. The publication entitled "Income Distribution and Poverty in Canada, 1967, Preliminary Estimates", was based on partially edited data, whereas

the estimated numbers corresponding to the percentage figures appearing in the above publication were based on fully edited data (and unpublished as of last winter). The differences however were marginal. One important difference is that the data used here is based not on the economic family definition, but on the Census family. The Census family is defined to include only: (a) a husband and a wife with or without children of any age who have never married, (b) a parent with one or more children of any age who have never married. Notice that the number of persons excluded from this family definition - the so-called unattached individuals - increases from 1.5 million to 2.5 million. This is due to the fact that Preliminary Estimates used the economic family unit, whereas the fully-edited data (used in this thesis) operated with the census family.

2. Total income consists of:
   a. wages and salaries
   b. net income from self-employment
   c. investment income
   d. government transfer payments
   e. miscellaneous income

   For exclusions, see text, chapter 4.

APPENDIX TWO

TABLES

TABLE A1

COST OF A MODEST NIT PLAN, IF NO EXISTING WELFARE PROGRAMME WAS ELIMINATED, CANADA, 1967

(1) FAMILY SIZE	(2) MINIMUM INCOME GUARANTEE	(3) BREAK-EVEN LEVEL OF INCOME (t=0.50)	(4)[a] NUMBER OF HOUSEHOLDS WHOSE PRE-ALLOWANCE INCOME IS LESS THAN Y_b	(5) INCOME NEEDED FOR HOUSEHOLDS IN (4) TO HYPOTHETICALLY REACH Y_b, IF THEY HAD NO INCOME (3) . (4)	(6)[b] PRE-ALLOWANCE INCOME OF HOUSEHOLDS UNDER THE BREAK-EVEN LINES, (A) IF SA INCLUDED IN INCOME	(B) IF SA EXCLUDED FROM INCOME	(7) GAP (5) - (6) (A)	(B)	(8) NET BENEFITS TO BE PAID: t (7) (A)	(B)
	$	$		$ MILLIONS	$ MILLIONS		$ MILLIONS		$ MILLIONS	
1	750	1500	808,015	1212	808	-	404	-	-	-
2	1500	3000	356,420	1069	713	-	356	-	-	-
3	1750	3500	133,650	408	296	-	112	-	-	-
4	2000	4000	130,938	524	338	-	186	-	-	-
5 or +	2750	4500	268,108	1206	817	-	389	-	-	-
TOTALS	-	-	1,697,131	4419	2972	2214	1447	2205	723.5	1102.5

a. Source: see Table 6 in the text.

b. See Table 7 in the text. The estimate provided when SA is excluded from income is based on the assumption that all of SA goes to households with $Y < Y_b$. In the absence of information on the distribution of SA payments by income brackets, the estimate is calculated by subtracting SA payments from the total figure in case A of column 6.

TABLE A2

COST OF AN AMBITIOUS NIT PLAN, IF NO EXISTING WELFARE PROGRAM WAS ELIMINATED, CANADA, 1967

(1) FAMILY SIZE	(2) MINIMUM INCOME GUARANTEE[a]	(3) BREAK-EVEN LEVEL OF INCOME (t=0.50)	(4)[b] NUMBER OF HOUSEHOLDS WHOSE PRE-ALLOWANCE INCOME IS LESS THAN Y_b	(5) INCOME NEEDED FOR HOUSEHOLDS IN (4) TO HYPOTHETICALLY REACH Y_b, IF THEY HAD NO INCOME (3) . (4)	(6)[c] PRE-ALLOWANCE INCOME OF HOUSEHOLDS UNDER THE BREAK-EVEN LINES, (A) IF SA INCLUDED IN INCOME	(B) IF SA EXCLUDED FROM INCOME	(7) GAP (5) - (6) (A)	(B)	(8) NET BENEFITS TO BE PAID t (7) (A)	(B)
	$	$		$ MILLIONS	$ MILLIONS		$ MILLIONS		$ MILLIONS	
1	1740	3480	1,221,654	4,251	1,989	-	2,262	-	-	-
2	2900	5800	736,196	4,270	2,379	-	1,891	-	-	-
3	3480	6960	462,123	3,216	2,064	-	1,152	-	-	-
4	4060	8120	561,847	4,562	3,691	-	871	-	-	-
5 or +	4640	9280	946,282	8,781	5,593	-	3,188	-	-	-
TOTALS	-	-	3,928,102	25,080	15,716	14,958	9,364	10,122	4,682	5,061

a. Equal to the 1967 low-income cut-offs.

b. Source: see Table 6 in text.

c. Source: see Table 7 in text, and footnote (b) in Table A1 of the Appendix to this thesis.

TABLE A3I

COST ESTIMATE OF A WORKING POOR PLAN, VERSION I[a]

IF NO EXISTING WELFARE PROGRAM WAS ELIMINATED, CANADA, 1967

(1) FAMILY SIZE	(2) MINIMUM INCOME GUARANTEE	(3) INCOME LEVEL AT WHICH ZERO TAX RATE ENDS	(4) BREAK-EVEN LEVEL OF INCOME IF t=0.50	(5)[b] NUMBER OF HOUSE-HOLDS EARNING LESS THAN IN (3)	(6) BENEFITS PAYABLE TO HOUSE-HOLDS IN (5) (5).(2)	(7)[b] NUMBER OF HOUSE-HOLDS WITH INCOME GREATER THAN IN (3), BUT LESS THAN Y_b	(8) INCOME NEEDED FOR HOUSE-HOLDS IN (7) TO REACH Y_b HYPOTHETI-CALLY, IF THEY HAD NO INCOME (7) (4)	(9)[c] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (7)	(10) GAP (8)-(9)	(11) NET BENEFITS TO BE PAID (6) + t (10)
	$	$	$		$ MILLIONS		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	500	1000	2000	405,015	202	566,215	1,132	790	342	374
2	750	1500	3000	91,120	68	265,320	796	623	173	155
3	1000	1750	3750	39,204	39	110,929	416	316	100	89
4	1250	2000	4500	37,680	47	132,822	598	457	141	117
5 or +	1750	2300	5800	64,954	114	390,887	2,267	1706	561	394
TOTALS	-	-	-	-	470	1,466,173	5,209	3892	1317	1129

a. There are two versions of this plan which have been costed in the text: version I and II. Versions III and IV have been costed also as a means of comparison, but do not appear in the text. In versions I and II, the zero-rate bracket is set at half the poverty lines for 1967; version I then reduces benefits after this level at the rate of 50%, and version II at the rate of 33-1/3%. Versions III and IV will be discussed within their respective tables.

b. Source: Table 6 in text.

c. Source: Table 7 in text. No cost estimate is presented for the case where SA is excluded from the definition of income: for an explanation, see Table 5 in the text, footnote d.

TABLE A3II

COST ESTIMATE OF A WORKING POOR PLAN, VERSION II[a]

IF NO EXISTING WELFARE PROGRAM WAS ELIMINATED, CANADA, 1967

(1) FAMILY SIZE	(2) MINIMUM INCOME GUARANTEE	(3) INCOME LEVEL AT WHICH ZERO TAX RATE ENDS	(4) BREAK-EVEN LEVEL OF INCOME (t= 33-1/3%)	(5)[b] NUMBER OF HOUSE-HOLDS EARNING LESS THAN IN (3)	(6) BENEFITS PAYABLE TO HOUSE-HOLDS IN (5) (5)·(2)	(7)[b] NUMBER OF HOUSE-HOLDS WITH INCOME GREATER THAN IN (3), BUT LESS THAN Y_b	(8) INCOME NEEDED FOR HOUSE-HOLDS IN (7) TO REACH Y_b HYPOTHETI-CALLY, IF THEY HAD NO INCOME: (7)·(4)	(9)[c] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (7)	(10) GAP (8)-(9)	(11) NET BENEFITS TO BE PAID $\Sigma(6)+t[\Sigma(10)]$
	$	$	$		$ MILLIONS		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	500	1000	2500	405,015	202	687,115	1718	1062	656	-
2	750	1500	3750	91,120	68	373,860	1402	993	409	-
3	1000	1750	4750	39,204	39	188,001	893	646	247	-
4	1250	2000	5750	37,680	47	255,753	1471	1094	377	-
5 or +	1750	2300	7550	64,954	114	674,452	5092	3663	1429	-
TOTALS	-	-	-	-	470	2,179,181	10576	7458	3118	1509

a. Version II has the same schedule of zero rate brackets as version I. Here, however, the tax rate at which benefits are reduced is 33-1/3%. This rate becomes applicable when household income is in excess of the zero rate bracket applicable, and, of course, up to levels of income corresponding to the break-even level.

b. Source: Table 6 in text.

c. Source: Table 7 in text. See Table A3I, footnote c, for the explanation concerning the inclusion of SA as income in computing this cost estimate.

TABLE A3III

COST ESTIMATE OF A WORKING POOR PLAN, VERSION III[a]

IF NO EXISTING WELFARE PROGRAM WAS ELIMINATED, CANADA, 1967

(1) FAMILY SIZE	(2) MINIMUM INCOME GUARANTEE	(3) LEVEL OF INCOME AT WHICH ZERO RATE ENDS	(4) BREAK-EVEN LEVEL OF INCOME, IF t=0.50	(5)[b] NUMBER OF HOUSE-HOLDS EARNING LESS THAN IN (3)	(6) BENEFITS PAYABLE TO HOUSE-HOLDS IN (5) (5)·(2)	(7) NUMBER OF HOUSE-HOLDS WITH INCOME GREATER THAN IN (3), BUT SMALLER THAN Y_b	(8) INCOME NEEDED FOR HOUSE-HOLDS IN (7) TO REACH Y_b HYPOTHETI-CALLY IF THEY HAD NO INCOME (7)·(4)	(9)[c] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (7)	(10) GAP (8)-(9)	(11) NET BENEFITS TO BE PAID $\Sigma(6) + t\,[\Sigma(10)]$
	$	$	$		$ MILLIONS		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	500	1000	2000	405,015	202	566,215	1132	790	342	-
2	750	1000	2500	46,900	35	192,960	482	357	125	-
3	1000	1000	3000	20,493	20	81,081	243	177	66	-
4	1250	1000	3500	13,188	16	88,548	310	219	91	-
5 or +	1750	1000	4500	20,730	36	247,378	1113	802	311	-
TOTALS	-	-	-	-	309	1,176,182	3280	2345	935	777

a. In this version of the plan (mentioned in footnote (1), p. 45, there is a unique zero rate bracket, set at $1000. The tax rate reducing benefits thereafter is identical to the one in Plan 3, version I, that is, 50%. This plan costs about $350 million less than Plan 3, version I.

b. Source: Table 6, in the text.

c. Source: Table 7, in the text. See also footnote c, Table A3I.

TABLE A3IV

COST ESTIMATE OF A WORKING POOR PLAN, VERSION IV[a]

IF NO EXISTING WELFARE PROGRAM WAS ELIMINATED, CANADA, 1967

(1) FAMILY SIZE	(2) MINIMUM INCOME GUARANTEE	(3) INCOME LEVEL AT WHICH ZERO TAX RATE ENDS	(4) BREAK-EVEN LEVEL OF INCOME IF t = 33-1/3%	(5)[b] NUMBER OF HOUSE-HOLDS EARNING LESS THAN IN (3)	(6) BENEFITS PAYABLE TO HOUSE-HOLDS IN (5) (5)·(2)	(7)[b] NUMBER OF HOUSE-HOLDS WITH INCOME HIGHER THAN IN (3) BUT LOWER THAN Y_b	(8) INCOME NEEDED FOR HOUSE-HOLDS IN (7) TO REACH Y_b HYPOTHETI-CALLY, IF THEY HAD NO INCOME (7)·(4)	(9)[c] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (7)	(10) GAP (8)-(9)	(11) NET BENEFITS TO BE PAID $\Sigma(6) + t\,[\Sigma\,(10)]$
	$	$	$		$ MILLIONS		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	500	1000	2500	405,015	202	687,115	1718	1062	656	-
2	750	1000	3250	46,900	35	346,190	1125	798	327	-
3	1000	1000	4000	20,493	20	146,124	584	305	279	-
4	1250	1000	4750	13,188	16	178,509	848	596	252	-
5 or +	1750	1000	6250	20,730	36	514,504	3216	2258	958	-
TOTALS	-	-	-	-	309	1,872,442	7491	5019	2472	1133

a. This plan has the same characteristics as version III, except that benefits after the zero rate bracket are reduced at the rate of 33-1/3%, instead of 50%. Notice that the cost of this plan is almost identical to the cost of version I of Plan 3.

b. Source: Table 6 in the text.

c. Source: Table 7 in the text. See also footnote (c), Table A3I, for an explanation as to why a cost estimate has not been produced for the case where SA is excluded from the definition of income.

TABLE A4

COST ESTIMATE OF PLAN 4 (CROWLEY AND DODGE'S PLAN A)
A GMI OF THE SOCIAL DIVIDEND TYPE, ASSUMING NO EXISTING WELFARE PROGRAM IS ELIMINATED, CANADA, 1967
ESTIMATES ARE BASED ON THE ASSUMPTION THAT SOCIAL ASSISTANCE IS INCLUDED IN INCOME

(1) FAMILY SIZE	(2) INCOME GUARANTEE	(3) NUMBER OF HOUSE-HOLDS IN CANADA	(4) GROSS PAYMENTS (2)·(3)	(5)[a] PRE-ALLOWANCE INCOME IN CANADA, 1967	(6) TAX RATE NEEDED TO FINANCE THE PLAN (4)/(5)	(7) BREAK-EVEN LEVEL OF INCOME (2)/(6)	(8)[b] NUMBER OF HOUSE-HOLDS WITH INCOME BELOW Y_b	(9) AMOUNT NEEDED FOR HOUSE-HOLDS IN (8) TO HYPOTHETI-CALLY REACH Y_b (8)·(7)[b]	(10)[a] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (8)	(11) GAP BETWEEN (9) AND (10) $\Sigma[(9)-(10)]$	(12) NET GMI PAYMENTS TO BE MADE t [Σ (11)]
	$		$ MILLIONS	$ MILLIONS		$		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	750	2,015,000	1511	6189	25.4	2950	1,191,873	3516	1641	-	-
2	1500	1,340,000	2010	8467	25.4	5900	749,328	4421	2455	-	-
3	1800	891,000	1604	6769	25.4	7100	475,952	3379	2193	-	-
4	2100	942,000	1978	7848	25.4	8250	572,220	4721	3086	-	-
5 or +	2700	1,382,000	3731	11794	25.4	10650	1,075,771	11456	6820	-	-
TOTALS	-	6,570,000	10834	41067 + 1500[c] 42567	-	-	4,065,144	27493	16195	11,298	2,870

a. Source: Table 7 in text.

b. Source: Table 6 in text.

c. This is an estimate for capital gains which were not included in the definition of income. The reason this has been included is that Crowley and Dodge included them in their measure of income for the purpose of their plan.

TABLE A4I

COST ESTIMATE OF PLAN 4 (CROWLEY AND DODGE'S PLAN A)
A GMI OF THE SOCIAL DIVIDEND TYPE, ASSUMING NO EXISTING WELFARE PROGRAM IS ELIMINATED, CANADA, 1967
ESTIMATES ARE BASED ON THE ASSUMPTION THAT SOCIAL ASSISTANCE IS EXCLUDED IN INCOME

(1) FAMILY SIZE	(2) INCOME GUARANTEE	(3) NUMBER OF HOUSE-HOLDS IN CANADA	(4) GROSS PAY-MENTS (2)·(3)	(5)[a] PRE-ALLOWANCE INCOME IN CANADA, 1967	(6) TAX RATE NEEDED TO FINANCE THE PLAN (4)/(5)	(7) BREAK-EVEN LEVEL OF INCOME (2)/(6)	(8)[b] NUMBER OF HOUSE-HOLDS WITH INCOME BELOW Y_b	(9) AMOUNT NEEDED FOR HOUSE-HOLDS IN (8) TO HYPOTHETI-CALLY REACH Y_b (8)·(7)	(10)[a] PRE-ALLOWANCE INCOME OF HOUSE-HOLDS IN (8)	(11) GAP BETWEEN (9) AND (10) $\Sigma[(9)-(10)]$	(12) NET GMI PAYMENTS TO BE MADE $t\ [\Sigma\ (11)]$
	$		$ MILLIONS	$ MILLIONS		$		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	750	2,015,000	1511	6189	25.9	2900	1,180,790	3424	1610	-	-
2	1500	1,340,000	2010	8467	25.9	5800	749,328	4346	2379	-	-
3	1800	891,000	1604	6769	25.9	6950	461,162	3205	2056	-	-
4	2100	942,000	1978	7848	25.9	8100	568,402	4604	2981	-	-
5 or +	2700	1,382,000	3731	11794	25.9	10400	1,063,698	11062	6554	-	-
TOTALS		6,570,000	10834	41067 + 1500[c] - 758[d] = 41809	-	-	4,023,398	26641	15580	11,061	2,864

a. Source: Table 7 in text.

b. Source: Table 6 in text.

c. See footnote c in Table A4.

d. This is the amount of Social Assistance in 1967. See Table A7.

TABLE A5

COST ESTIMATE OF PLAN 5 (CROWLEY AND DODGE'S PLAN B)
A GMI OF THE SOCIAL DIVIDEND TYPE, ASSUMING NO EXISTING WELFARE PROGRAM IS ELIMINATED, CANADA, 1967
ESTIMATES ARE BASED ON THE ASSUMPTION THAT SOCIAL ASSISTANCE IS INCLUDED IN INCOME

(1) FAMILY SIZE	(2) INCOME GUARANTEE	(3) NUMBER OF HOUSE-HOLDS IN CANADA	(4) GROSS PAYMENTS	(5)[a] PRE-ALLOWANCE INCOME IN CANADA, 1967	(6) TAX RATE NEEDED TO FINANCE THE PLAN (4)/(5)	(7) BREAK-EVEN LEVEL OF INCOME (2)/(6)	(8)[b] NUMBER OF HOUSE-HOLDS WITH INCOME BELOW Y_b	(9) AMOUNT NEEDED FOR HOUSE-HOLDS IN (8) TO HYPOTHETI-CALLY REACH Y_b (8)·(7)	(10)[a] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (8)	(11) GAP BETWEEN (9) AND (10) $\Sigma[(9)-(10)]$	(12) NET GMI PAYMENTS TO BE MADE $t\ [\Sigma(11)]$
	$		$ MILLIONS	$ MILLIONS		$		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	1000	2,015,000	2015	6189	33.9	2950	1,191,873	3516	1641	-	-
2	2000	1,340,000	2680	8467	33.9	5900	749,328	4421	2455	-	-
3	2400	891,000	2138	6769	33.9	7100	475,952	3379	2193	-	-
4	2800	942,000	2638	7848	33.9	8250	572,220	4721	3086	-	-
5 or +	3600	1,382,000	4975	11794	33.9	10600	1,073,151	11375	6672	-	-
TOTALS	-	-	14446	41067 + 1500[c] = 42567	-	-	4,062,524	27412	16047	11,365	3,853

a. Source: Table 7 in the text.

b. Source: Table 6 in the text.

c. See footnote c, Table A4.

TABLE A5I

COST ESTIMATE OF PLAN 5 (CROWLEY AND DODGE'S PLAN B)
A GMI OF THE SOCIAL DIVIDEND TYPE, ASSUMING NO EXISTING WELFARE PROGRAM IS ELIMINATED, CANADA, 1967
ESTIMATES ARE BASED ON THE ASSUMPTION THAT SOCIAL ASSISTANCE IS EXCLUDED IN INCOME

(1) FAMILY SIZE	(2) INCOME GUARANTEE	(3) NUMBER OF HOUSE-HOLDS IN CANADA	(4) GROSS PAYMENTS (2)·(3)	(5)[a] PRE-ALLOWANCE INCOME IN CANADA, 1967	(6) TAX RATE NEEDED TO FINANCE THE PLAN (4)/(5)	(7) BREAK-EVEN LEVEL OF INCOME (2)/(6)	(8)[b] NUMBER OF HOUSE-HOLDS WITH INCOME BELOW Y_b	(9) AMOUNT NEEDED FOR HOUSE-HOLDS IN (8) TO HYPOTHETI-CALLY REACH Y_b (8)·(7)[b]	(10)[a] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (8)	(11) GAP BETWEEN (9) AND (10) $\Sigma[(9)-(10)]$	(12) NET GMI PAYMENTS TO BE MADE $t\,[\Sigma\,(11)]$
	$		$ MILLIONS	$ MILLIONS		$		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	1000	2,015,000	2015	6189	34.5	2900	1,180,790	3424	1610	-	-
2	2000	1,340,000	2680	8467	34.5	5800	749,328	4346	2379	-	-
3	2400	891,000	2138	6769	34.5	6950	461,162	3205	2056	-	-
4	2800	942,000	2638	7848	34.5	8100	568,402	4604	2981	-	-
5 or +	3600	1,382,000	4975	11794	34.5	10450	1,066,318	11143	6583	-	-
TOTALS	-	-	14446	41067 + 1500[c] - 758[d] = 41809	-		4,026,000	26722	15609	11,113	3,834

a. Source: Table 7 in the text.

b. Source: Table 6 in the text.

c. See footnote c, Table A4.

d. This is the amount of Social Assistance in 1967: see Table A7.

TABLE A6

COST ESTIMATE OF PLAN 6 (CROWLEY AND DODGE'S PLAN C)
A GMI OF THE SOCIAL DIVIDEND TYPE, ASSUMING NO EXISTING WELFARE PROGRAM IS ELIMINATED, CANADA, 1967
ESTIMATES ARE BASED ON THE ASSUMPTION THAT SOCIAL ASSISTANCE IS INCLUDED IN INCOME

(1) FAMILY SIZE	(2) INCOME GUARANTEE	(3) NUMBER OF HOUSE-HOLDS IN CANADA	(4) GROSS PAYMENTS (2)·(3)	(5)[a] PRE-ALLOWANCE INCOME IN CANADA, 1967	(6) TAX RATE NEEDED TO FINANCE THE PLAN (4)/(5)	(7) BREAK-EVEN LEVEL OF INCOME (2)/(6)	(8)[b] NUMBER OF HOUSE-HOLDS WITH INCOME BELOW Y_b	(9) AMOUNT NEEDED FOR HOUSE-HOLDS IN (8) TO HYPOTHETI-CALLY REACH Y_b (8)·(7)	(10)[a] PRE-ALLOWANCE INCOME OF HOUSE-HOLDS IN (8)	(11) GAP BETWEEN (9) AND (10) $\Sigma[(9)-(10)]$	(12) NET GMI PAYMENTS TO BE MADE $[\Sigma (11)]$ t
	$		$ MILLIONS	$ MILLIONS		$		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	1250	2,015,000	2518	6189	40.8	3050	1,219,592	3720	1709	-	-
2	2500	1,340,000	3350	8467	40.8	6100	777,056	4728	2609	-	-
3	3000	891,000	2673	6769	40.8	7350	501,811	3688	2352	-	-
4	3500	942,000	3297	7848	40.8	8600	602,126	5178	3329	-	-
5 or +	4000	1,382,000	5528	11794	40.8	9800	1,022,403	10020	6116	-	-
TOTALS	-	-	17366	41067 + 1500[c] = 42567	-	-	4,120,988	27334	16115	11,129	4,577

a. Source: Table 7 in the text.

b. Source: Table 6 in the text.

c. See footnote c, Table A4.

TABLE A6I

COST ESTIMATE OF PLAN 6 (CROWLEY AND DODGE'S PLAN C)
A GMI OF THE SOCIAL DIVIDEND TYPE, ASSUMING NO EXISTING WELFARE PROGRAM IS ELIMINATED, CANADA, 1967
ESTIMATES ARE BASED ON THE ASSUMPTION THAT SOCIAL ASSISTANCE IS EXCLUDED IN INCOME

(1) FAMILY SIZE	(2) INCOME GUARANTEE	(3) NUMBER OF HOUSE-HOLDS IN CANADA	(4) GROSS PAYMENTS (2)·(3)	(5)[a] PRE-ALLOWANCE INCOME IN CANADA, 1967	(6) TAX RATE NEEDED TO FINANCE THE PLAN (4)/(5)	(7) BREAK-EVEN LEVEL OF INCOME (2)/(6)	(8)[b] NUMBER OF HOUSE-HOLDS WITH INCOME BELOW Y_b	(9) AMOUNT NEEDED FOR HOUSE-HOLDS IN (8) TO HYPOTHETI-CALLY REACH Y_b (8)·(7)	(10)[a] PRE-ALLOWANCE INCOME OF HOUSEHOLDS IN (8)	(11) GAP BETWEEN (9) AND (10) $\Sigma[(9)-(10)]$	(12) NET GMI PAYMENTS TO BE MADE $[\Sigma (11)]t$
	$		$ MILLIONS	$ MILLIONS		$		$ MILLIONS	$ MILLIONS	$ MILLIONS	$ MILLIONS
1	1250	2,015,000	2518	6189	41.5	3000	1,202,955	3608	1671	-	-
2	2500	1,340,000	3350	8467	41.5	6000	762,460	4575	2530	-	-
3	3000	891,000	2673	6769	41.5	7250	491,832	3566	2277	-	-
4	3500	942,000	3297	7848	41.5	8450	589,832	4984	3224	-	-
5 or +	4000	1,382,000	5528	11794	41.5	9650	1,005,612	9704	5965	-	-
TOTALS	-	-	17366	41067 + 1500[c] - 758[d] = 41809	-	-	4,052,691	26437	15667	10,770	4,470

a. Source: Table 7 in the text.

b. Source: Table 6 in the text.

c. See footnote c in Table A4.

d. This is the amount of Social Assistance in 1967. See Table A7.

TABLE A7

TOTAL EXPENDITURES, UNDER FEDERAL AND PROVINCIAL GOVERNMENTS' PROGRAMS OF SOCIAL INSURANCE, DEMOGRANTS, SOCIAL ASSISTANCE, AND GUARANTEED INCOME SUPPLEMENT, 1964-65, 67-68, AND 69-70 ($ MILLIONS)

PROGRAM	1964-65		1967-68		1969-70[a]	
	Totals	Details	Totals	Details	Totals	Details
1. Social Insurance...	639.6		757.7		1,008.1	
Canada Pension Plan.....		-		1.3		48.0[b]
Quebec Pension Plan.....		-		0.4		15.0[b]
Unemployment Insurance...		335.0		388.6		542.1
Workmen's Compensation[c]		124.3		162.2		185.0
Veterans' Pensions[d]...		180.3		205.2		218.0
2. Demogrants..	1,469.6		1,841.1		2,201.5	
O.A.S.[e].....		885.3		1,153.3		1,467.0
Family Allowances..[f]		547.9		616.7		656.5
Youth Allowances..		36.4		71.1		78.0
3. Social Assistance..	501.5		758.0		891.2	
i) Assistance for special groups						
aged...		90.0		34.8		3.0
blind..		7.5		5.2		4.4
disabled		46.8		30.8		23.8
veterans		99.6		107.6		107.0
indians & eskimos		6.0		18.9		18.0
ii) General Assistance needs tested						
mothers' allowances[g]		36.4		29.3		28.0
Unemployment assistance		215.2		87.4		29.2
C.A.P.[h]		-		440.0		677.8

TABLE A7
(Cont'd)

PROGRAM	1964-65		1967-68		1969-70	
	Totals	Details	Totals	Details	Totals	Details
4. G.I.S.[i]		-	234.8		263.0	
TOTALS	2,610.7		3,591.6		4,363.8	

Source: Income Security for Canadians, op. cit., p. 58 (abridged)

a. Estimated.

b. Payments of benefits commenced January 1967.

c. Cash benefits only.

d. Pensions for disabled veterans and widows.

e. Excludes G.I.S.

f. Includes family assistance benefits for children of immigrants, and, for 1967 on, payments under Quebec's Family Allowance program.

g. From 1965-66 on, Program replaced in some provinces by social assistance and included under Unemployment Assistance.

h. Assistance payments only; excludes expenditures on health and welfare services, child welfare, and care of children in institutions.

i. Cf. Note (d) in Table 1, supra.

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